



Triple Bottom Line Report

*Ontario Northern rural community aims for a net-zero
affordable housing initiatives for seniors*

Final Report
February 24, 2021

Presented By:
Kenora District Services Board

Our Mission: Dedicated to Improving Lives

Our Vision: With forward thinking and engaged employees,
we achieve consistent service and better outcomes

GMF number:	17422
Lead Applicant:	Ben Reynolds, Director of Infrastructure, Kenora District Services Board
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Date of the Report:	February 24, 2021

1. Summary of the Initiative

- a) What was the objective in preparing the funded initiative?

The objective of the “Ontario Northern rural community aims for a net-zero affordable housing initiatives for seniors” project was to evaluate the feasibility of constructing a Net Zero Energy Ready multi-unit residential building in the City of Dryden in Northwestern Ontario.

- b) Referring to the original plan for this funded initiative, please identify any changes in the approach or methodology upon implementation. For example, significant scope changes such as alterations to timeline, cost or personnel.

No changes to the approach, methodology, timeline, cost or personnel was encountered during the work. This is largely due to the fact that the project’s procurement occurred prior to submission of the application and the consultant’s fee proposal was a fixed fee. Further, KDSB accepted risk and proceeded with the work once the expenses were deemed eligible, but before the Study Grant was approved. This risk was accepted by the KDSB Board of Directors due to the shortened construction season in the North, the deep need for new housing, and the overall support for the creation of new sustainable and affordable housing in the District.

- c) Describe community engagement activities (e.g. consultations, workshops, meetings) performed for this funded initiative.

Engagement sessions during the planning of this project have been successful and have helped guide the project’s vision. Through this process, KDSB has completed several engagement sessions to both gather data for design decisions, but also to establish baselines, which can be used for future monitoring of the project’s success. Engagement included:

- Design Visioning Working Group;
- Open House;
- Seniors Survey, and;
- Municipal Engagement through the Community Improvement Plan application.

Design Visioning Working Group: To kick off the building design, a working group was formed to complete a visioning session. The first design meeting took place with the project Architect and a large group of service providers. The group included members of Patricia Region Senior Services Inc, Dryden Go Getters Activity Centre, District Mental Health Services for Older Adults-CMHA, Dryden Native Friendship Centre, Alzheimer Society of Kenora/Rainy River and the Dryden Regional Health Centre, as well as KDSB staff from Housing Services, Infrastructure and the onsite Maintenance team. Valuable insight was gathered on what new Senior’s housing should look like in the City of Dryden and the information shared has formed the bases of the building’s layout.

Open House: As part of the rezoning process, KDSB held two open house sessions. The open house was advertised as part of the zoning application; however, to encourage participation, KDSB sent invitations to neighbourhood’s residences and reached out directly to service providers and relevant special interest groups. On October 29, 2019, from 11:30am to 1pm and again from 4-

6pm, KDSB held an open house. A total of 21 community members were directly engaged during these events.

Seniors Survey: In July 2020, as the project team moved into detailed design, KDSB issued a survey to its existing senior tenants to help gain an understanding of; bathing preferences (accessible showers / tubs), accessibility scooter parking and charging requirements, vehicle parking requirements, and onsite meal provisions. KDSB received 80 completed surveys and the results have been used to make decisions on key design elements.

Municipal Engagement: Through the City of Dryden Community Improvement Plan (CIP), KDSB has completed further engagement with the project's Municipal partners in relation to the project and it's CIP application. In January 2021, KDSB staff completed a pre-application consultation meeting with the City of Dryden's Economic Development Department, and the application and project as a whole were presented to Mayor and Council on February 8th by KDSB.

Stakeholder engagement shall continue through the life of the project, not only for the construction phases, but the ongoing operations and supportive services will be a constantly changing process that will be adapted to the tenants' needs through ongoing tenant engagement. Once implemented, KDSB's Housing Services Supervisor for the Dryden area shall lead the ongoing stakeholder engagement and make recommendations for changes based on the feedback.

2. Triple Bottom Line Findings and Recommendations

a) What were the findings related to the options explored in the Study?

- Environmental, Financial, Social
- Impact on affordability
- Recommendations

Environmental: The building shall be constructed as a Net Zero Energy Ready (NZER) building and is designed to achieve a minimum of 72% reduction in energy consumption and an 85% reduction in Greenhouse Gas Emissions (GHGs). The original project targets were ambitious with a reduction goal of 41-55%+ against national building and energy code; however, the approval from FCM GMF's SAH program to proceed with the study portion of this project has allowed KDSB to significantly increase the efficiency of the building, as well as plan for future onsite renewables that will complete the NZE plan.

The reference building model is based on the 2015 NECB with a total annual energy consumption of 2,521,476 kBTU and GHG emission of 242,757 lbsCO₂. The proposed building modelled the total yearly energy consumption is 701,924 kBTU and GHG emission of 36,948 lbCO₂.

Financial: The cost implications of NZER construction will be offset by the available northern grant portion of the FCM GMF Capital funding. This will maintain the original rental model and ensure affordable Senior's housing is available to all community Seniors regardless of their financial situations. Future implementation of the renewable energy sources, following payback periods, would provide KDSB the opportunity to realize significant operational savings, allowing additional resources to be leveraged to spur new development and protect stock within the District.

Social: The 65+ Population for Kenora, Dryden, Red Lake and area is projected to grow by 57% by 2025. According to the NW LHIN Demand for Seniors' Services, the changing needs of seniors in the District include:

- The changing face of seniors;
- Insufficient options for housing;
- Outmigration of workforce – youths and adults;
- In-migration of Indigenous people, and a;
- Shrinking volunteer base.

Long-term services, supports, and partnerships are needed. System Coordination brings individuals/agencies together to plan, strategize, prioritize, reach solutions, and monitor to ensure services are accessible, available, and that duplication of efforts are minimized. To do this, there is a need to balance appropriate funding with quality outputs.

By providing ongoing age-appropriate supports to this age group, we will lessen the burden on the emergency system. By ensuring that proper ongoing care and supports are provided to seniors, many events that require 911 calls will be dealt with before the situation worsens, preventing the need for costly first responders. One of the most significant factors determining if a person will require emergency medical services is where they live. The effects of housing insecurity have a profound impact on the 911 call volume trends in the District of Kenora. The lack of housing is directly contributing to these concerning trends, resulting in high social costs, impacting government spending at all levels.

By providing sustainable and appropriate housing with support services, the KDSB expects to see a decrease in EMS call volumes by ensuring that vulnerable individuals are supported by comprehensive non-emergent services when appropriate. Further, retention of our local Senior population will lead to economic security for future generations and create meaningful employment in the Health Care sector.

Impact on Affordability: KDSB is using the “cross-subsidize” model to create a sustainable mixed-market development. This project will consist of 3 distinct income groups, creating a truly diverse and inclusive building:

- 35% Deep Subsidy Rents (RGI not to exceed 80% CMHC AMR & Affordable 80% of MMR)
- 30% Affordable Market Rent (80% of Market Rent)
- 35% Full Market Rent (Market Rent as determined by KDSB)

Recommendations: The recommendation is to implement a geothermal system and provisions for solar photovoltaic system readiness into the project design. With this, the project will achieve the energy performance objectives and meet the energy conservation goals. Based on the assumptions and allowances described in the study, the building shall be constructed as a Net Zero Energy Ready (NZER) building and is designed to achieve a minimum of 72% reduction in energy consumption and an 85% reduction in Greenhouse Gas Emissions (GHGs). The study also details the feasibility and makes provisions for the installation of future onsite renewables that will complete the NZE plan.

3. Community Context

<p>Provide a profile of the community that is the object of this funded initiative (e.g. general demographics)</p>	<p>Dryden is the second-largest city in the Kenora District of Northwestern Ontario, Canada, located on Wabigoon Lake and is encompassed by the beauty of tranquil lakes, spectacular views and the boreal forest.</p> <p>Dryden, also known as the “Wilderness City”, offers something for everyone; the perfect blend of opportunities to raise a family, launch a business or enjoy retirement. It has numerous conveniences of a larger city centre with a rural feel.</p> <p>The community is situated midway between Winnipeg and Thunder Bay with easy access in either direction via the TransCanada Highway or south via Highway 502.</p>
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<p>Indicate the size and structure of the lead applicant organization and the Board of Directors</p>	<p>Established in 1999, KDSB has over 300 dedicated employees providing exceptional assistance in Ontario Works (OW), Housing Services (Community, Seniors, Transitional, Supportive and Emergency Housing), Emergency Medical Services (EMS), and Early Learning and Child Care services. KDSB owns and operates a large and diverse portfolio of assets that include Community and Affordable Housing, EMS Bases, and Childcare / EarlyON Centres</p> <p>The KDSB Board of Directors is comprised of 13 members who are appointed to the Board. They include 9 elected Municipal officials, one from each of the District's Municipalities, and 4 Unincorporated Area representatives.</p>
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4. Project Team

- a) Briefly indicate who was involved in developing this funded initiative, and their affiliations (including consultants). If a municipal housing provider, please include both municipal staff and officials who managed the preparation of the funded initiative.

The initiative was led by Ben Reynolds, C.E.T, CEM, Director of Infrastructure with KDSB, supported by Ryan Beaumont, EIT, KDSB's Project Manager. The Architectural and Engineering prime consultant for this project is Keewatin-Aski Ltd, led by Kelly Merke, P.Eng. The Energy sub-consultant is RVI Group, led by Cosimo Racco P.Eng. and supported by Michael Noonan, P.Eng. of AG Engineering. The project team has over 50 years of combined experience in the construction, engineering and energy sectors.

- b) Was there a Project Champion who was instrumental to the completion of the funded initiative? If so, please include their name, title and contact information, and describe their role in the funded initiative.

Ben Reynolds, C.E.T, CEM, Director of Infrastructure with KDSB was the driving force behind this initiative. Mr. Reynolds advocated within the project team and to the Board of Directors, demonstrating the need to invest in green initiatives, both from an economic standpoint as well as an environmental and ethical one. Mr. Reynolds led the funding application process as well as the study on behalf of the owner. Contact details are provided below.

5. Outcomes and Next Steps

- a) What is the next step in the implementation of this funded initiative?

The next step is to proceed to the construction stage. KDSB shall submit concurrent capital applications to CMHC's National Housing Co-Investment Fund and FCM's GMF SAH. With the previous support of both CMHC through the Seed Funding stream and FCM through the NZER Study Grant, KDSB has developed an achievable plan to commence construction in 2021 for this exciting project. With the continued support of both CMHC and FCM through capital contributions and loans, we will achieve the goal of constructing a new sustainable and affordable housing complex for Dryden's Senior population.

6. Lessons Learned and Knowledge Sharing

In answering the questions in this section, please consider all aspects of the preparation of the funded initiative — from the initial planning through each of the essential tasks until the funded initiative was completed.

- a) What lessons were learned in the course of this funded initiative? In your answer, consider how any barriers or challenges were overcome and what you might do differently.

This initiative, and the resulting recommendations and design changes were undertaken at the 50% design milestone of the planned facility, additionally, design work continued as planned as the study was undertaken. Through this process, it was evident that should the study have been conducted at the initial concept planning, the provisions would have been much easier to make.

KDSB has already taken lessons learned from this initiative and applied them to a similar project in the neighbouring community of Kenora, ON.

- b) What worked well? What would you recommend to others undertaking similar projects?

The project's subject land was well equipped to support the studies recommendations and the future onsite renewables. The original purchase of the property was part of a land banking strategy, and not purchased with a particular project in mind. Luckily, the land provided adequate space to support such items as the geothermal ground loop (added as a result of the study), as well as suitable area and southern exposure to support the future solar PV system. KDSB is a strong believer in land banking to encourage affordable housing development, and in this case, sustainable and environmentally responsible development.

- c) How do you plan to share the knowledge gained from this funded initiative? (e.g. website, conference, trainings).

KDSB is sharing the knowledge gained from this funded initiative within the District's Architecture and Engineering network by adapting lessons learned and best practices to future developments. This work is ongoing.

Mr. Reynolds is a member of the Housing Services Corporation (HSC) Energy Services Stakeholder Advisory Group, which is comprised of housing providers and Service Managers from across Ontario. Feedback from the group guides the sector's decision making and is shared with government and utilities to inform incentive programs and new policy initiatives with the goal of controlling utility costs for housing providers. The project will be shared with the group as part of the group's upcoming meetings.

Further, we anticipate that the implementation of the capital project will provide KDSB many opportunities to share.

7. Publicity and Outreach

- a) Has the funded initiative received any recognition, media coverage, or notable public support? If so, please describe.

While the NZER study was not the focus of the coverage, the project as a whole has been covered by [CKDR in Dryden \(link\)](#).

- b) Is there a website where more information about the initiative can be found? If so, please provide the web address with references to the relevant section.

Not as of writing this report.

- c) We encourage you to provide up to 10 images relevant to the funded initiative, if available.



Figure 1 - Front Rendering by Keewatin-Aski Ltd.



Figure 2 - Rear Rendering by Keewatin-Aski Ltd.



Figure 3 - Front Elevation by Keewatin-Aski Ltd.

8. Contacts

- a) Please provide the name and coordinates (title, full address, phone, fax and email) of someone who can be contacted for more information about the funded initiative.

Project contact: Ben Reynolds, C.E.T., CEM
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- b) In the event the contact is no longer available, please provide general contact information for the lead applicant, such as the administrative office of the municipal department that coordinated the Project or some other general contact for the Recipient/lead applicant.

Kenora District Services Board
General Inquires kdsb@kdsb.on.ca
Attn: Infrastructure Department, New Developments

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