

CHAMPIONS

FOR OUR COMMON FUTURE

Ordinary people taking extraordinary action

SOLVING HOUSING ISSUES THROUGH LISTENING AND LEARNING

Wendell Starblanket and Aura Lee MacPherson are friends. Aura Lee owns a cabin at Katepwa Lake and Wendell lives on nearby Star Blanket Cree Nation. In 2017, Wendell was visiting Aura Lee at her office when the talk turned to the United Nation's 17 Sustainable Development Goals. That conversation started the ball rolling on a project that has the promise to change the face of housing on Star Blanket Cree Nation.

Aura Lee had learned about the 17 Goals through her volunteer work with RCE Saskatchewan and was convinced that they could serve as a valuable tool in her work as a Project Manager at MacPherson Engineering. The engineering company had a history of designing mechanical systems that are energy efficient and that provide thermal comfort and good air quality. Nevertheless, Aura Lee felt that the 17 Goals could help to move some of their projects to be designed more holistically to consider all impacts of the design beyond just the mechanical system.

With a touch of scepticism, Wendell questioned whether the 17 Goals could help with the issues plaguing homes on his First Nation – namely damp cold and mold. The houses were constructed in the 1960s and although many of them were connected to natural gas, many still had to rely on expensive supplemental electrical heat to improve thermal comfort and air quality. The mold in his own home was impacting his wife's health.

Thus began an extended conversation on how to tackle the mold problem in Wendell's home that drew on the values implied in the 17 Sustainable Development Goals, the experience of MacPherson Engineering in designing radiant heating systems, the Indigenous understanding of how grandfather rocks heat teepees, and the creativity of engineering students from the University of Regina. Whatever solution they found had to make improvements that were effective, affordable, eco-

friendly, and incorporated Indigenous knowledge. Existing off-the-shelf solutions simply did not meet all these criteria, so the opportunity to be creative presented itself.

By 2018, the project was designed and installed and named 'The Blanket of Warmth' which described the work done – warming the basement with an interior blanket of hydronic heating in the walls. The existing heating system was used to create a hybrid radiant heating system that could take advantage of the thermal mass of the basement concrete floor and walls in a similar manner to how the teepee used the rocks around the fire to store and release warmth.



Heating tubes in the basement walls

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The work on Wendell's house reduced the power bills by \$900 per year, created a livable, healthy basement, reduced mold in the house, built in 12.9 hours of stored heat in case of a power outage and removed the risk of electrical space heating fires which cause 80% of deadly home fires. This project went on to win three awards. It also provides a model for retrofitting other homes in Wendell's home community.

Both Wendell and Aura Lee agree that the project's success was based on listening to and learning from each other, drawing on traditional Indigenous Knowledge and using the United Nation's 17 Sustainable Development Goals to evaluate how a course of action could improve multiple dimensions of life.

This column is a collaborative project of the Saskatchewan Environmental Society and the Regional Centre of Expertise on Education for Sustainable Development – RCE Saskatchewan.



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