
October 18, 2021, Briefing Note for Western Region CAOs:

Western REN Energy Project – Residential Retrofits

PURPOSE

The purpose of this briefing is to notify the CAOs of the seven participating units of the Western Regional Enterprise Network (Western REN) about an upcoming residential retrofit funding application, for which a Letter of Support is requested. No financial contribution will be required of the municipalities. An in-kind amount of \$1,200 is requested for staff time allocated to any data requests.

BACKGROUND

In 2019, the Western REN hired consultants from Sustainability Solutions Group (SSG) to create the Western Region Energy Investment Plan (WREIP). The plan includes benchmarks of current energy consumption data across the Western Region, and outlines 28 energy actions that would reduce energy consumption through efficiency improvements, and increase local sustainable energy generation. If implemented, these energy efficiency and generation actions would decrease energy expenditures for businesses, institutions and residents, and increase energy revenue, thereby keeping more money in the local economy, all while lowering greenhouse gas emissions (GHGs).

The WREIP identified that average household energy expenditures in the region amounted to \$5,800 in 2016. With approximately 22,800 households in the region, that means households are spending a combined total of \$132 million annually on energy, and this amount is projected to increase with the federal carbon tax. The bulk of the energy consumed in the region is largely imported from other parts of the world (in the case of oil and gas) and the province (in the case of electricity). This means that the bulk of that \$132 million is leaving our local economy annually.

The Western Region has an aging housing stock, of which 37% of homes have been constructed prior to 1961, compared to 26% provincially. The Canadian Urban Sustainability Practitioners¹ defines energy poverty as homes spending greater than 6% of their after-tax household income on home heating and electricity. They identified that that 58% of households in Digby County, 52% of households in Shelburne County, and 51% of households in Yarmouth County meet this definition of being in energy poverty.

Nova Scotia Power's transmission system in some areas of the Western Region is nearing its capacity limits, which serves as a barrier to generating energy for the purpose of exporting it out of the region. The WREIP document identified that residential buildings account for 60% of energy use of all buildings within the Western Region, including commercial and industrial buildings. As such, widespread residential retrofits represent a significant opportunity to contribute towards creating space on the transmission grid, while also lowering energy poverty and keeping dollars in the hands of residents.

The Western Region is full of potential for green energy generation projects, such as wind, solar, biomass, and tidal energy. The electricity transmission lines that connect the region to the rest of the province and Atlantic Canada are meant to allow the region to both receive electricity and transmit it. Some of the transmission lines into the Western region have low capacity and are understood to be at or near the maximum. This capacity issue limits the potential to attract businesses with high energy demands, and to build larger green energy projects that could export power out of the region.

¹ <https://energypoverty.ca/mappingtool/>

CURRENT SITUATION

Consultants from MCC Energy Strategies Inc. (MCC) have been hired by the Western REN to identify the top 2-4 opportunities identified in the WREIP, and help bring them to implementation through securing funding. The residential retrofit opportunity was identified as one of those with the largest potential impact, in that residential buildings account for 60% of electricity use of all buildings within the Western Region. Deep Energy Retrofits (DER) therefore represent a significant opportunity to contribute towards creating space on the transmission grid by lowering energy needs, thereby lowering GHGs, energy expenditures, and keeping money in the hands of residents. Such retrofits will also result in increased assessed value of the homes, resulting in an increase in tax revenue back to the municipal units, while also extending the life of these homes. SSG estimated this would create roughly 75 jobs regionwide.

The path towards this goal begins with a funding request to the Federation of Canadian Municipalities (FCM) Community Energy Fund, with four outcomes. The first is to create an inventory of the existing housing stock. This will be used to identify the most effective upgrades for homes as groups. Second will be to create an innovative financing model, complementary to PACE, that residents will be able to borrow funds from toward making their home efficiency upgrades. This model will include the formation of a [CEDIF](#) and a non-profit Public-Purpose [Energy Service Company](#) (PPESCO), with the loan repayments cycled back into the funding pools through energy savings. The third outcome will be to identify the tools, training and processes required for retrofits on this scale to be implemented efficiently, and to guide the formation of up to six privately owned shops within the region to do the job. The fourth outcome will be the development of an Energy Concierge staff position at the Western REN who would serve as the navigator for interested home owners to access funds, and identify the best upgrades fit for their home.

With 22,800 households within the Western Region, this will be a large undertaking, but will have significant economic spinoffs. The goal of this work is to set the stage for batched home retrofit programs that will then scale up to leverage capital funds from FCM and other lenders, thereby accelerating the transition to lower energy use. A draft funding application has already been reviewed by FCM, and feedback has been provided on how to improve the application.

NEXT STEPS

The FCM requires that 10% of the total project cost comes from the applicant, and the Western REN will allocate its own funds for this purpose leaving no financial ask to the municipal units at this time.

The Western REN requests Letters of Support from each of the municipalities for this project and asks that such letters include a \$1,200 in-kind contribution of staff hours to reflect any required data requests. Upon receipt of letters of support from the participating municipal units, the Western REN will submit the application to the FCM's Community Energy Fund. Additional funds have been requested from the province, amounting to roughly 16% of total costs.

When funds are secured, the work will begin in Winter of 2022, and be completed by Fall 2022. Upon completion, Western REN staff will request to present the outcomes to each of the participating municipal councils.