**Big data retrofits**

*A New Brunswick-based company looks to streamline building retrofits in Nova Scotia with the help of AI.*

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Climate Story Network

Fredericton-based tech startup, Climative, is collaborating with Microsoft on AI tools that will help Canadian property owners chart a course through the deep energy retrofit market. Climative CEO, Winston Morton, says the company offers a path to net zero by using machine learning to provide “a living plan that is aware” of sudden changes in the landscape.

Working with EfficiencyOne and Nova Scotia Power, Climative uses the data they’ve gathered to generate AI-powered “no-touch mass market assessments”— a type of mass energy audit that might let us move more rapidly through the time-consuming and energy-intensive stage of assessing buildings and right to retrofitting buildings for climate action.

The biggest source of carbon in Halifax is in our building stock, which accounts for about three-quarters of the greenhouse gas emissions in the region. The use of digital tools and big data could kickstart scalable solutions to the climate emergency by boosting the efficiency of Nova Scotian homes: cheaper to power and easier to heat.

The downside of AI technology is the amount of energy it takes to run. Right now, ChatGPT alone consumes the energy associated with running 33,000 Canadian homes. That, along with the amount of water consumption and carbon emissions associated with it, means it would become part of the climate problem – even as it tries to be part of the climate solution.

The other common criticism of AI is that it will lead to a significant loss of jobs, though Morton is confident that AI tools like Climative’s will only make jobs in the retrofit industry more in-demand.

“We’re trying to make people more efficient, we’re not trying to replace people,” he says. “We need to help energy advisers talk to more customers.”

Climative’s work puts them in a category with other AI companies that are trying to speed up the transition from fossil fuels to more efficient energy systems.

Many companies are beginning to advertise that they leverage AI to help accelerate the transition to clean energy. Google has been using AI to improve energy efficiency in some of its operations and to strategize climate adaptation since at least 2014.

AI could be a real weapon in the climate fight by letting us see the big picture and zoom in on the needs of particular communities — or, in this case, the many communities that require urgent support in becoming more energy efficient while also making the move to clean energy.

AI can give us a boost in closing the knowledge gap, but the financial obstacles may still remain. Equitable and ecologically sensible AI solutions to the climate crisis could have a positive impact on the race to net zero if we implement AI to address both energy poverty and emissions reduction.