

The Role of Renewable Energy Co-ops in Advancing Energy Democracy

A few large players have traditionally controlled energy generation, but renewable energy is shaking up the status quo. A fair energy transition hinges on how renewables are rolled out and who shares in the benefits. This is where energy democracy comes in, offering a crucial framework for broad participation, equitable governance, and a transformative shift to renewable energy.

Energy Democracy is a movement advocating for the equitable distribution of power in energy systems. It empowers local communities by transitioning control from top-down corporate hegemonies to a bottom-up, community-focused model. This shift decentralizes ownership and decision-making, making the energy system more accessible and equitable. By addressing historical imbalances, energy democracy ensures that the benefits of the clean energy transition are fairly distributed among everyone.





Renewable Energy Co-operatives (REC)

Renewable Energy Cooperatives (RECs) are key to the energy democracy movement, giving citizens and communities control over their own energy systems. To understand how RECs contribute to energy democracy, let's first explore co-operatives (co-ops).

A cooperative is defined in the Statement on the Cooperative Identity as

"an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise."

Cooperatives are people-centred enterprises owned, controlled and run by and for their members to realise their common economic, social, and cultural needs and aspirations. Cooperatives bring people together in a democratic and equal way. Whether the members are the customers, employees, users or residents, cooperatives are democratically managed by the 'one member, one vote' rule. Members share equal voting rights regardless of the amount of capital they put into the enterprise.

Cooperatives allow people to take control of their economic future and, because they are not owned by shareholders, the economic and social benefits of their activity stay in the communities where they are established. Profits generated are either reinvested in the enterprise or returned to the members.

The cooperative movement is a major force in the global economy, with over 12% of people participating in one of 3 million cooperatives worldwide. In Nova Scotia, the co-operative economy is thriving and growing, with over 300 co-operatives and credit unions playing a key role in meeting local needs and fostering opportunities in diverse sectors like agriculture, affordable housing, and social finance.

The Nova Scotia Co-operative Council is key to this growth, providing essential support for co-op start-ups and expansions through business planning, financing programs, and training. Additionally, the Council advocates for co-operative interests, promotes community-focused initiatives like affordable housing, and strengthens sectors such as agriculture, renewable energy, and forestry through the cooperative model.



- I. Just-us! Coffee Roasters Co-op
- 2. Scotsburn Dairy Group
- 3. FarmWorks Investment Co-operative
- 4. East Coast Credit Union
- Compass Nova Scotia Co-operative Homes Ltd.
- 6. The Halifax Brewery
 Farmers Market



Renewable Energy Co-operatives (REC) Building on the principles of co-ops, RECs feature community-focused collective ownership and democratic structure. They enable Canadians to engage directly with the energy grid, participate in the energy transition, and benefit from it. Managed by their members, RECs make decisions based on local needs and priorities, ensuring that energy projects align with community interests. Most importantly, they introduce a degree of resilience into an energy grid that itself is becoming increasingly vulnerable to climate events.



A central theme in the vision statements of 44 Canadian RECs, as depicted in Fig 1, is the emphasis on 'Community'. Alongside RECs, municipal utilities also support the shift from investor-owned utilities to more community -centered and public ownership models.

Figure 1 (Source)

[:] Word cloud created using the data from the vision statement of forty-four RECs (The words "renewable" and "energy" were removed from the word cloud.)



45

Inactive

52

Active

Renewable Energy Co-operatives (REC) Despite their potential to contribute to Canada's energy transition and the resilience of the country's energy systems, RECs still constitute a small fraction of Canada's energy market. Since 2016, the number of active RECs has dropped by 44%, with only 49 currently operating nationwide, primarily in Ontario. To realize Canada's and Nova Scotia's ambitious 2050 net-zero emissions target, a significant expansion of RECs is imperative



Figure 2: Number of active and inactive RECs by province



Solar co-ops

Solar energy is the dominant technology for RECs in Canada, with wind and biofuels contributing to the mix. By harnessing a piece of the sun, solar co-ops offer a model for an energy transition that is not only environmentally responsible but also socially just and economically empowering. It provides significant benefits, including:



Eco-Friendly Choice



Solar energy is clean, renewable, and abundant resource with minimal land use and environmental impact, making it a greener option for REC compared to other renewables.



Scalability



Solar installations easily adjust to meet community energy needs, fitting seamlessly in both urban and rural settings with easy installation.



Smart Savings



Decreasing hardware costs, low maintenance, and supportive policies make solar energy more affordable, helping both residential and commercial consumers to lower their electricity bills.



Power in Your Hands



By collectively owning and managing solar projects, solar co-ops allow communities to control their energy use, sell excess power, and share the profits and build resilience against energy fluctuations.



Antigonish Community Energy Cooperative (ACEC)

In the small town of Antigonish, Nova Scotia, a group of residents called Antigonish Community Energy, came together to educate their community on adoption of renewable energy. Recognizing significant interest in the community on solar, they established Antigonish Community Energy Cooperative (ACEC) in 2015. ACEC was established as an ode to the Antigonish Movement of the early 20th century, which championed cooperative economic development in the region.

David shares,

"Altruism matters deeply, and if you want people to change their behavior, you need to make it easy for them and provide the right means to change."

Led and run by volunteers, ACEC aimed to reduce the upfront costs of investing in solar energy and making it accessible to community members who wanted to install solar on their property. David Morgan, a board member and staff member of ACEC, reflects on the challenges of going solar: "Installing solar panels was still quite expensive, with costs ranging from \$15,000 to \$30,000 for the hardware alone similar to buying a new car. Most of us, including myself, don't have that kind of money readily available. To ease the financial burden, we partnered with East Coast Credit to offer low-interest loans. Low-interest loans were especially helpful in the first year of our co-op, when we had no funding available for going solar." In the second year, the federal government started, Canada Greener Homes Grant, offering matching funds for solar installations, driving membership from 10 to 45 at ACEC.

500 Members

By 2019, ACEC had grown to 500 members, investing and supporting solar. They offered a competitive rate of \$2.41-\$2.77 per kilowatt(kW), when the average rate was \$3 per kW rate from the Town of Antigonish's municipal utility. ACEC also applied a 2.5% installation charge, which they donated to community organizations like the Antigonish Affordable Housing Society.

Volunteer Model

In 2019, ACEC decided to close down, though its parent organization, Antigonish Community Energy, remains active in the community. A key challenge was relying on a volunteer-based structure, which placed heavy demands on the 5-8 board members who were also ACEC employees working beyond their regular 9-5 jobs, leading to severe burnout. David reflects that if they had implemented a more sustainable business model or a non-profit structure with paid staff, ACEC's story might have unfolded differently. This highlights the importance of distinguishing co-operatives from volunteer-run organizations, as co-ops often operate with structured, sustainable models that include paid roles to ensure long-term viability.



Antigonish Community Energy Cooperative (ACEC)

Another challenge was the 10-year payback period for individual investments on solar, which discouraged people less committed to climate action to invest, as they preferred investments with a shorter payback period, typically 3–5 years.

Despite offering low-interest loans, the municipal utility's cheaper financing made competition impossible, so they abandoned the idea of becoming an energy producer altogether.

Amid these challenges, ACEC was successful in implementing Net Metering for the Town of Antigonish, allowing residents to use their self-generated electricity at any time.

David shares,

"I'm optimistic about the future of solar co-ops in Nova Scotia, especially with recent policy changes and new programs like the NS Community Solar Program. It would be great to see more funding and incentives from all levels of government. Our experience was incredibly empowering for the community. We enjoyed stable electricity prices, gained independence from Nova Scotia Power Inc., and everyone felt great about their decision to go solar."









Reflection : Moving forward for Atlantic Canada



Atlantic Canada's low number of RECs is a concern, particularly with NS's only solar co-op, ACEC, has closed down. We need more RECs in Atlantic Canada, as they embody the principles of energy democracy, empowering communities to shape their energy future and fostering a strong sense of ownership and commitment to sustainability and equitable energy solutions.

To truly amplify the impact of RECs, we must heed David's insight and seek robust support from all levels of government. We need the right tools to drive change, including policies and funding to eliminate financial barriers and make it easier for communities to embrace RECs.

New co-ops need better access to technical, financial, and legal support. Building partnerships with local businesses, non-profits, and legal, financial, and academic institutions can provide the essential resources, expertise, and funding they need to get started. These collaborations can boost credibility and attract more participants for the REC.

Furthermore, improving grid access and integration is crucial. Enhancing infrastructure for solar power and supporting net metering policies will enhance the efficiency and success of RECs.

Now is the time to act and foster a future where RECs thrive in Atlantic Canada. It's crucial to establish multi-stakeholder networks that connect diverse players in the renewable energy transition, offering the flexibility and support needed to overcome barriers, scale up RECs, and embrace energy democracy.

The Community Energy Cooperative Canada (CECC) is a dedicated organization supporting the growth of renewable energy cooperatives in Canada. By advocating for supportive policies, building networks, and providing technical, financial, and legal support, the CECC empowers communities to take the lead in renewable energy initiatives. Through these efforts, the CECC helps cooperatives overcome barriers, access resources, and successfully implement projects that benefit their communities.