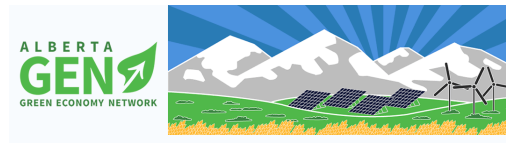

THE CASE FOR SMALL-SCALE AND COMMUNITY-OWNED RENEWABLE ENERGY IN ALBERTA



A New Opportunity for Renewable Energy

As the provincial government moves to phase-out coal and introduce more renewables onto Alberta's grid, we have a unique opportunity to change not just how our power is generated, but also how it is owned, distributed and controlled. While utility-scale commercial renewable energy generation will be a critical part of a sustainable grid, renewables owned and operated by individuals, small businesses and communities can serve an important and prominent role in meeting the province's energy needs. A renewable energy program that fosters growth in small-scale and community-owned renewable energy will help ensure maximum benefits of Alberta's electricity grid transition for everyone. This prioritization would address several government priorities, including job creation, local economic development, economic diversification, climate leadership, support for transition and community resilience.

What is Community Owned Renewable Energy?

Community-owned renewable energy ("CORE") refers to a wide range of ways that communities can develop, produce and benefit from renewable energy. This includes supply-based projects like renewable energy installations and storage, but can also include demand side projects like energy efficiency, demand management and community education. It refers to electricity generation where ownership and/or decision making involves local individuals and stakeholders and where project benefits accrue to local individuals and stakeholders. ***In short, community energy is renewable energy by and for a local community.***

The size of CORE projects can vary- most are small and medium-scale, but there are also examples of utility-scale community power around the world. The most common CORE ownership models in Canada are: community investment funds, co-operatives, virtual net metering/community solar gardens, MUSH (municipalities,

universities, schools, hospitals) sector projects, and not-for-profit entities.¹ Alberta already hosts a few pioneering CORE projects, including a 100 kW system in at the Town of Devon, the 2 MW system at the Green Acres Hutterite Colony, and the 20 kW Lubicon Lake Band Pitapan solar project.



¹ <http://peoplepowerplanet.ca/community-energy-models/>

What is Small-scale/Distributed Renewable Energy?

Small-scale renewable energy, often interchangeable with distributed generation (DG) and on-site generation (and encompassing behind-the-meter solar), is energy generated or stored by small-scale (typically 1 kW – 10 MW) decentralized, modular grid-connected devices that produce electricity at a site close to customers. **The typical owner/operator/user is an individual or business.**



Fig. 1. Benefits of Solar PV by scale (From: Rocky Mountain Institute, *Community Scale Solar – Insight Brief*, March 2016). Community-owned and small-scale (behind-the-meter) renewables can achieve many benefits that utility-scale power generation cannot.

Benefits of Small-scale and Community-owned Renewable Energy

The Alberta Green Economy Network has identified four main benefits of community-owned renewable energy for Albertans, in addition to the environmental benefits of reduced GHG emissions.

1. Economic benefits. CORE creates regional economic development opportunities, and fosters local economic decision-making. It creates the opportunity for First Nations/Métis communities, neighbourhoods, schools, municipal districts and other organizations to lower their power bills, or even make income from power production. Self-produced power also provides energy security and price stability for participants. It is also a vehicle for unrealized investment demand for renewable energy.

2. Economic fairness. Support for community- and small-scale renewables provides a business opportunity to address the economic hardship created by the previous reliance on fossil fuels, particularly in Indigenous/First Nations communities, rural communities, low-income groups and coal-producing communities.

3. Renewable constituencies. These forms of energy production contribute to local self-reliance and resilience, offering opportunities for skill development and capacity-building. They are also shown to increase energy literacy, which is linked with positive energy behaviour change. Moreover, these highly visible forms of power generation “win hearts and minds,” building constituencies of citizens who will support and champion renewables at all-scales, as well as associated low-carbon policies. They are also shown to reduce social friction around new energy developments.

4. Smart, resilient grids. Well-designed distributed and community-scale generation can increase overall grid resilience and energy security and decrease electricity transmission losses.

The Role of Government Leadership

Provincial government leadership plays a critical role in fostering a vibrant community energy sector. A forthcoming review of experiences of renewable energy co-operatives in Canada by the Toronto Renewable Energy Co-operative, conducted for Co-operatives and Mutuals Canada (CMC),² found that key barriers for community energy in Canada are: a) access to the market and electricity grid; b) capacity and start-up support; and c) access to low-cost project financing. As such, success for both small-scale and community renewables in Alberta can be better ensured in the following ways:

Policy and Regulatory

- Develop a supportive and stable policy and regulatory environment that recognizes the total economic, environmental, social and economic value of small-scale and community energy. In order to provide direction and certainty, establish targets for both small-scale and community power.
- CORE projects should not be subject to competitive bidding processes in order to receive operating support. They should be eligible to receive community feed-in tariffs (COMFITs) or equivalent financial incentives (e.g. power purchase agreements), with dedicated set-asides.
- establish community ownership mandates for commercial projects, or community energy points within auctions and calls for power for utility-scale production.
- Relevant laws should provide equitable grid access and pricing for small-scale and CORE as utility-scale enjoys.

- Implement virtual net metering rules, whereby Albertans can own a system that is not on their property, having the credits reflected on their own utility bill.

Capacity and Start-up

- Provide financial support in the form of project grants for preliminary investigations and work on CORE projects, or alternatively, implement a forgivable and revolving loan program.
- Implement supportive securities legislation and/or offer reduced security payments for community-based projects.
- Simplify permitting and processes for grid interconnection and metering, streamline requirements for small-scale and community projects in a one-stop-shop approach that provide guidance, which eases soft costs.
- Provide directed policy support to First Nations and Métis communities to increase community energy capacity.

Finance

- Ease small-scale and community-scale barriers in accessing low-cost debt. This can be achieved through Community Investment Funds (CIFs) (like in Nova Scotia), or through state-insured loans.
- Other tools include investment and tax relief and enabling legal structures to allow local ownership models (e.g. non-profits or cooperatives) to be eligible for any tax or rate incentives.

² Copy can be requested from jlipp@trec.on.ca.

Renewable Energy

Alberta can take direction from other jurisdictions that have a strong and proven track record in supporting small-scale and/or community-owned power. Germany and Denmark have pioneered the way over the last 25 years, and are home to almost 80 per cent of the approximately 3000 renewable energy co-ops in Europe. Germany is a model of a democratic energy transition, where of the 73 GW of installed renewable power in 2012, 47 per cent were owned by citizens and co-ops, and 41 per cent were owned by strategic investors and institutions.³

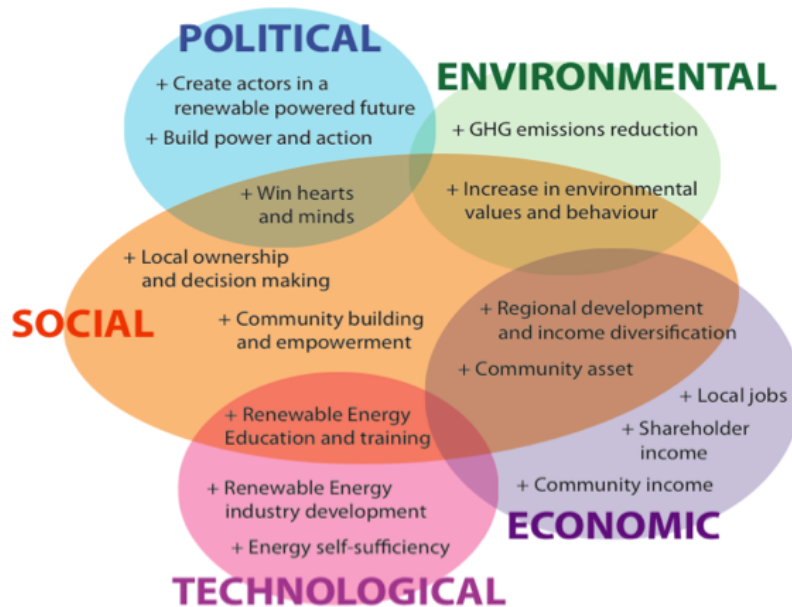


Fig. 2. Benefits of Community-owned renewable energy (From: C4CE *National Community Energy Strategy*, Appendix C). CORE provides a myriad of benefits that address multiple government priorities.

Europe's success in these areas inspired Canada's policy-makers and communities. Ontario was the first province to act to support small-scale and community-owned renewable power, introducing the *Green Energy and Economy Act* (GEEA) in 2009, which established critical supportive legislation, including a feed-in tariff. Nova Scotia introduced a COMFIT program in 2011, which has realized 200 MW of renewable power.

As jurisdictions begin to realize the myriad values of these types of power, supportive policy and legislation is following suit. For instance, in *the U.S., 14 states, plus Washington, D.C., have enacted community solar legislation, five of which enacted legislation in 2015.*⁴

The Alberta Green Economy Network has a more detail backgrounder document on community-owned renewable energy, which we are happy to provide. Please contact info@albertagen.ca

³ Heinrich Böll Foundation, <http://energytransition.de/2012/10/energy-by-the-people/>

⁴ Rocky Mountain Institute, *Community Scale Solar - Insight Brief*, March 2016