Community Power: A Growing Force for Clean Energy in Canada

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Topics

- TREC overview
- Community Power Model
- Sector Status
  - Canada, Ontario, NS, Alberta
- How it all began
- Policy, policy, policy
- Project development
- Co-op considerations
- Case studies
- Resources
Collective Effort
Like-minded individuals pool their resources to initiate renewable energy projects creating local jobs, clean power and investment opportunities.

Social Returns
Jobs and economic activity are created as projects are built. Energy literacy and skills for local self-reliance are enhanced as people become involved.

THE COMMUNITY POWER ADVANTAGE
Community-led renewable energy projects provide triple-bottom line returns for greater social, environmental and economic resiliency.

Economic Returns
The sale of power generates revenues for investment returns, lease payments and taxes, fuelling the local economy. Local benefits inspire further collective effort and re-investment in new projects, starting the cycle anew!

Environmental Returns
Zero-emission power is produced where and when it is needed locally. Communities benefit from less pollution and a more reliable, diversified energy system.

OurPower.ca
What is a Renewable Energy Co-op?

- A co-op that develops renewable energy projects
- The core business is long-term asset development
- Provides social, economic, and environmental opportunities for communities

AMBER Energy Co-operative
Community Potential - Germany

- 50% of German renewables owned by individuals and communities (farmers, co-ops) (i.e. >25 TW)
- $5 billion in community money invested
- 200,000 Germans own shares in RE projects
- Over 700 RE co-ops

Schauinsland, Germany
Paul Gipe, wind-works.org
Community Potential - Germany

Community Ownership of Renewable Energy in Germany in 2010

Total Capacity: 53,000 MW

Source: www.unendlich-viel-energie.de
## International Comparison

<table>
<thead>
<tr>
<th></th>
<th>Farmer</th>
<th>Co-op</th>
<th>Corporate</th>
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<tbody>
<tr>
<td>The Netherlands</td>
<td>60%</td>
<td>5%</td>
<td>35%</td>
</tr>
<tr>
<td>Germany</td>
<td>10%</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>Denmark</td>
<td>64%</td>
<td>24%</td>
<td>12%</td>
</tr>
<tr>
<td>Great Britain</td>
<td>1%</td>
<td>1%</td>
<td>98%</td>
</tr>
<tr>
<td>Spain</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
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</tbody>
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Source: Dave T oke, University of Birmingham, 2005, 2008
Community Power Canada

- Ontario leading with 75 MW of co-op RE and 80 MW of Aboriginal power
- NS has 200 MW of community RE (no co-ops)
- BC – some Aboriginal power + Peace Co-op
- Interest growing, but limited movement in rest of Canada
- Policy + RE targets are the main determinates of CP and AP activity everywhere
Canadian RE Co-op Activity
Indigenous Clean Energy - Canada
In the beginning
Did you know?

More than 70000 Ontarians are members of renewable energy co-operatives, helping bring clean energy to our communities.
RE Co-op Sector – Ontario, 2015

- **Sample size:** Contacted 31 RE co-ops out of an estimated 45 – results collected from 23 (71% response rate)

- **Sector Assets:** The sector has roughly $94 million in assets under management, with 18 of 23 co-operatives reporting at least some asset ownership.

- **Projects under development:** 212 FIT and 1000 microFIT projects, mostly solar, 75 MW total (with only one biogas and two wind co-ops in the mix)

- **Community Finance:** $26.8 million raised in capital securities - $15.4M in shares and $11.4M in bonds
RE Co-op Sector - Ontario

- Membership ranges from fewer than 50 to more than 1000 individuals
- Portfolio sizes range from 20 kW to more than 6000 kW
Federation of Community Power Co-operatives

- Province-wide umbrella organization for Community Power co-ops in Ontario
- Focus on advocacy, research, knowledge sharing, and best practices

FCPC member meeting, November 2014
Federation of Community Power Co-operatives

Strengthening Ontario’s community power sector co-operatively

FCPC
Federation of Community Power Co-operatives of Ontario

BECOME A MEMBER

Blog posts

SolarShare is hiring!
14 May 2015 10:34 AM • Madison

Upcoming events

OREC New Security Offer Launch & Meeting of Members
21 May 2015 7:30 PM • HUB Ottawa, 71 Bank St, 6th Floor, Ottawa ON
First Nations RE Trends (Ontario)

- More than 500 FIT contracts awarded to projects involving or led by First Nations and Métis proponents (over 800 MW).

Distribution of FIT contracts to date (MW)

- 78% Industry
- 18% Aboriginal
- 4% Coop
FIT contract distribution (MW)

- Aboriginal Participation
- Non-Aboriginal (including coop)

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<thead>
<tr>
<th>Source</th>
<th>Aboriginal Participation</th>
<th>Non-Aboriginal (including coop)</th>
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</thead>
<tbody>
<tr>
<td>Bioenergy</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td>Hydroelectricity</td>
<td>80</td>
<td>44</td>
</tr>
<tr>
<td>Solar</td>
<td>137</td>
<td>1242</td>
</tr>
<tr>
<td>Wind</td>
<td>599</td>
<td>2361</td>
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</table>
First Nations RE Projects

Deer Lake First Nation’s solar system on their elementary school

Dokis First Nation Okikendawt Hydro Project

Bow Lake Wind Farm, Batchewana First Nation
Green Energy & Economy Act, 2009

- Feed-in Tariff Program
  - Multiple rounds
- Changes to the Co-op Corporations Act
- Funding programs (grants)
- Domestic content (discontinued)
- Aboriginal loan guarantee

*WindShare turbine at Toronto’s Exhibition Place*
FIT Features

- Price-adders for community and Aboriginal participation
- Contract capacity set-aside for co-op and Aboriginal and municipal participation
- Application points for co-op and Aboriginal and municipal participation
- Education and capacity building funds
“2. (1) For the purposes of this Act, a renewable energy co-operative is a co-operative whose articles restrict the business of the co-operative to,

- (a) generating, within the meaning of the *Electricity Act, 1998*, electricity produced from one or more sources that are renewable energy sources for the purposes of that Act; and
- (b) selling, as a generator within the meaning of that Act, electricity it produces from one or more renewable energy sources. 2009, c. 12, Sched. I, s. 2.”
Capacity Building
Our Power: sharing CE stories

- Net Zero Energy Homes - A Revolution in Sustainable Housing
- Renewable Energy Co-operatives Grow in Ontario
Community energy in the news

**The Globe and Mail**

*Debt*
Income investing: A bond market that's seeing explosive growth

*RICHARD BLACKWELL*

**Financial Post**

How a community bond turns social capital into financial capital

*ELISA BIRNBAUM, SPECIAL TO FINANCIAL POST | December 22, 2014 | Last Updated: Dec 22 12:30 PM ET*

More from Special to Financial Post

**Toronto Star**

SolarShare grows as ‘green bonds’ heat up

*RICHARD BLACKWELL*

**Brampton Guardian**

Big Ideas: Solar panels already appearing on city-owned buildings

**CBC News**

Toronto Zoo poop slated to help generate electricity, heat

**The Standard**

Shares for sale in solar co-op

**Frontenac News**

Wintergreen Renewable Energy Co-op partners with SolarShare TREC
RE Co-op Development

- Feasibility
- Business planning
- Financial modeling
- PPA
- Offering statement
- Sales and marketing strategy

CED Co-op Member Meeting
<table>
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<th><strong>100% Co-op Owned</strong></th>
<th><strong>Partnering with Commercial Developers</strong></th>
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<td>Co-op is responsible for all aspects of project development</td>
<td>Co-ops share decision-making and financial responsibility</td>
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<tr>
<td>Must source all necessary expertise from within the co-op or hire consultants</td>
<td>E.g. joint venture, limited partnership, general partnership, subsidiary</td>
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Purchasing an RE project

- Projects may be developed from scratch OR co-ops purchase existing projects / contracts
Financing an RE project

Shares, Bonds, Member loans, Angel Investors, Lines of credit, Loan guarantees, Long term debt
Long-term Considerations

- **Co-op administration**: accounting and reporting, taxes, audits
- **Member mgmt**: privacy, record-keeping, payments, AGMs
- **Asset mgmt**: performance monitoring, project maintenance
- **End of life/contract**: Decommissioning, re-powering
Conclusions

- RE co-ops are primarily investment co-ops, offering triple bottom line returns
- Developing RE projects & co-ops is a complex process:
  - requires long lead times, various expertise
- Projects can be co-op led or in partnership
- RE co-ops are policy dependent
- FIT contracts last 20 years so long term planning is essential
Resources

- **TREC Renewable Energy Co-operative**
  www.trec.on.ca

- **Federation of Community Power Co-operatives**
  www.fcpcoops.ca

- **People, Power, Planet Partnership**
  peoplepowerplanet.ca

**Our Power**

ourpower.ca