

A group of people wearing safety vests and hard hats are performing a team huddle on a solar panel array. Their hands are raised and touching in the center, symbolizing teamwork and community. The background is a grid of solar panels.

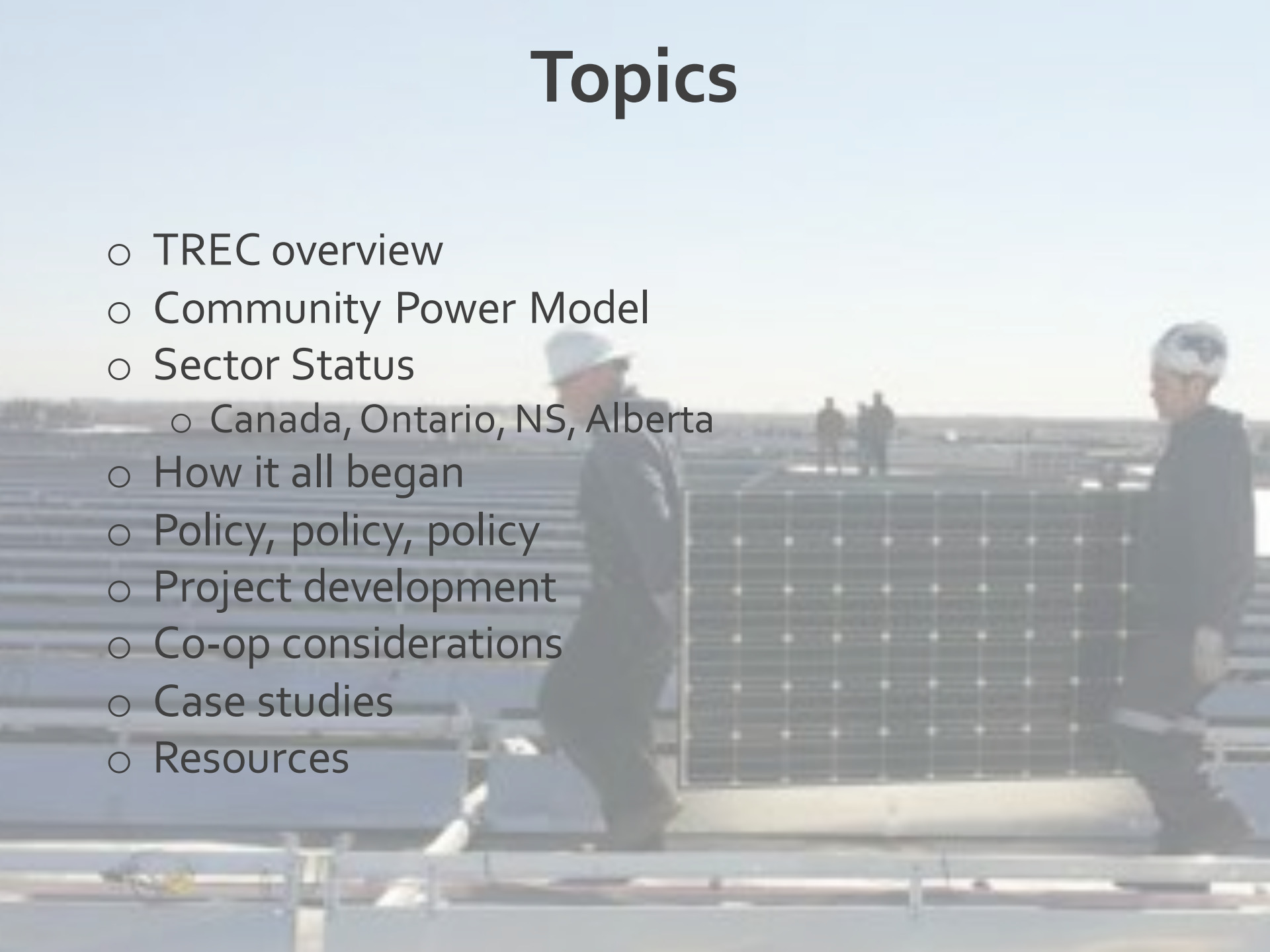
Community Power: A Growing Force for Clean Energy in Canada

Judith Lipp
February 2016



PEOPLE POWER PLANET

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
- 



Charitable Organization

- Energy literacy
- Hands-on pedagogy
- Renewable energy
- Green careers
- Community outreach



Non-Profit Co-op

- Social Enterprise
- Project Incubation
- Co-op development
- Member management
- Research
- Outreach

*Capacity building
Policy input
Awareness raising*

FCPC

Federation of Community Power Co-ops

- Voice of the Sector (Ontario)
- Resources for Co-ops
- Knowledge Sharing
- Annual Sector Survey
- Advocacy



TREC Co-ops:

 SOLARSHARE

 WindShare



Partners:

- Co-ops
- First Nations
- Social enterprises
- Municipalities

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.

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

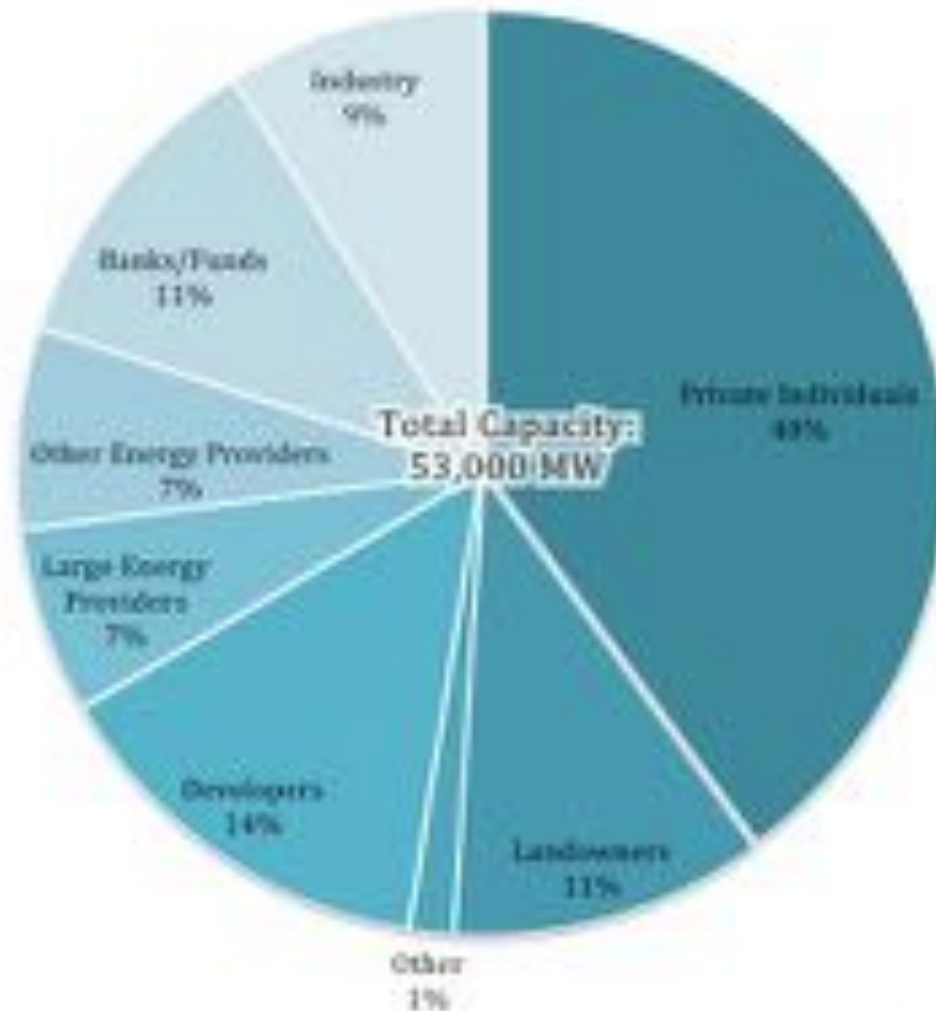


Schauinsland, Germany

Paul Gipe, wind-works.org

Community Potential - Germany

Community Ownership of Renewable Energy in Germany in 2010



Source: www.unendlich-viel-energie.de



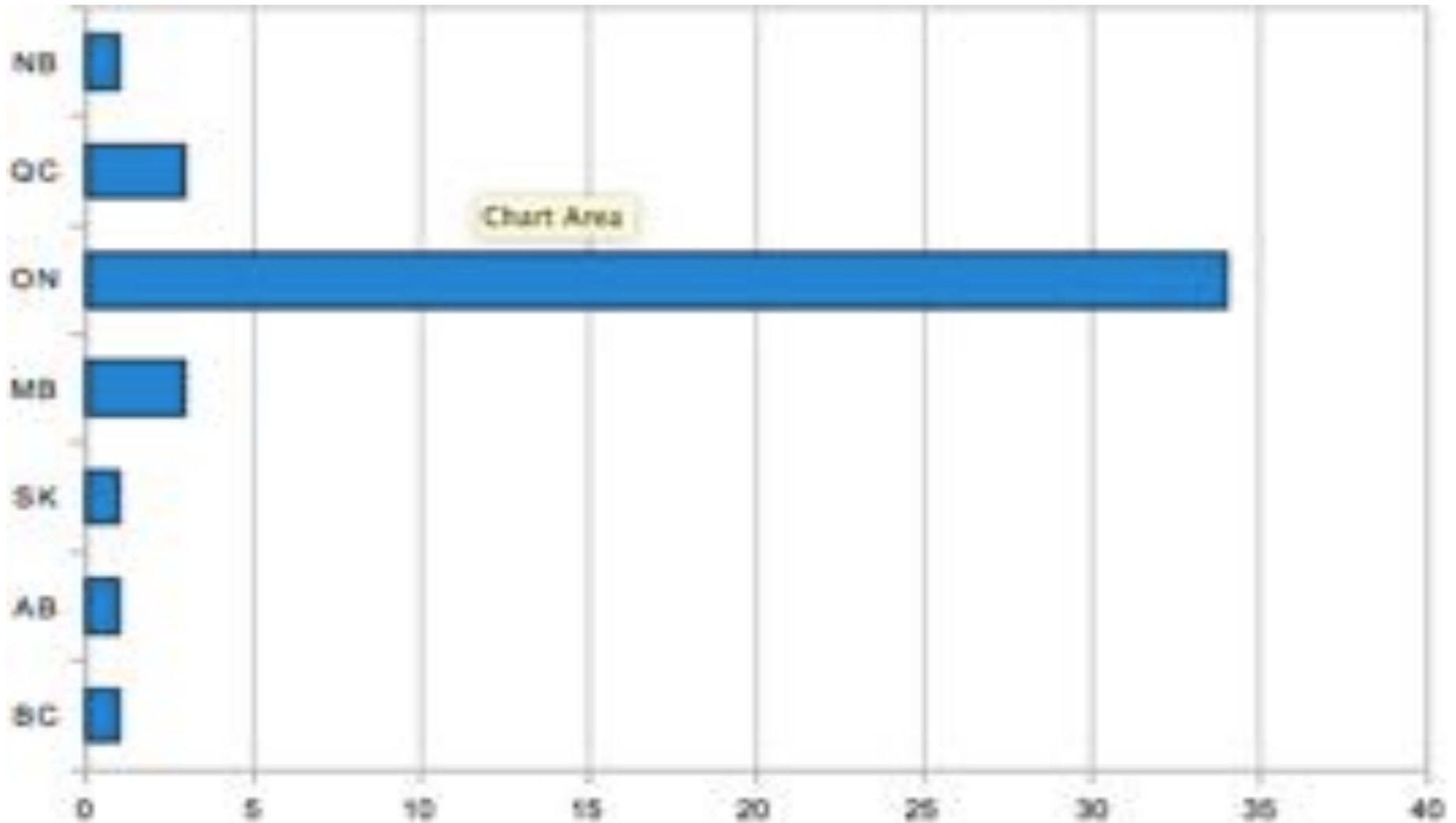
International Comparison

	Farmer	Co-op	Corporate
The Netherlands	60%	5%	35%
Germany	10%	40%	50%
Denmark	64%	24%	12%
Great Britain	1%	1%	98%
Spain	0%	0%	100%

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

7000 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 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



SolarShare staff & members

Federation of Community Power Co-operatives



FCPC member meeting, November 2014

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

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 • [Hastings](#)

Upcoming events

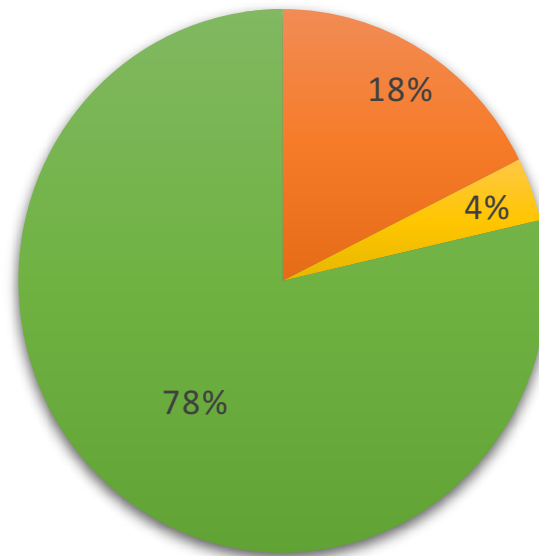
[OREC New Security Offer Launch & Meeting of Members](#)

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).

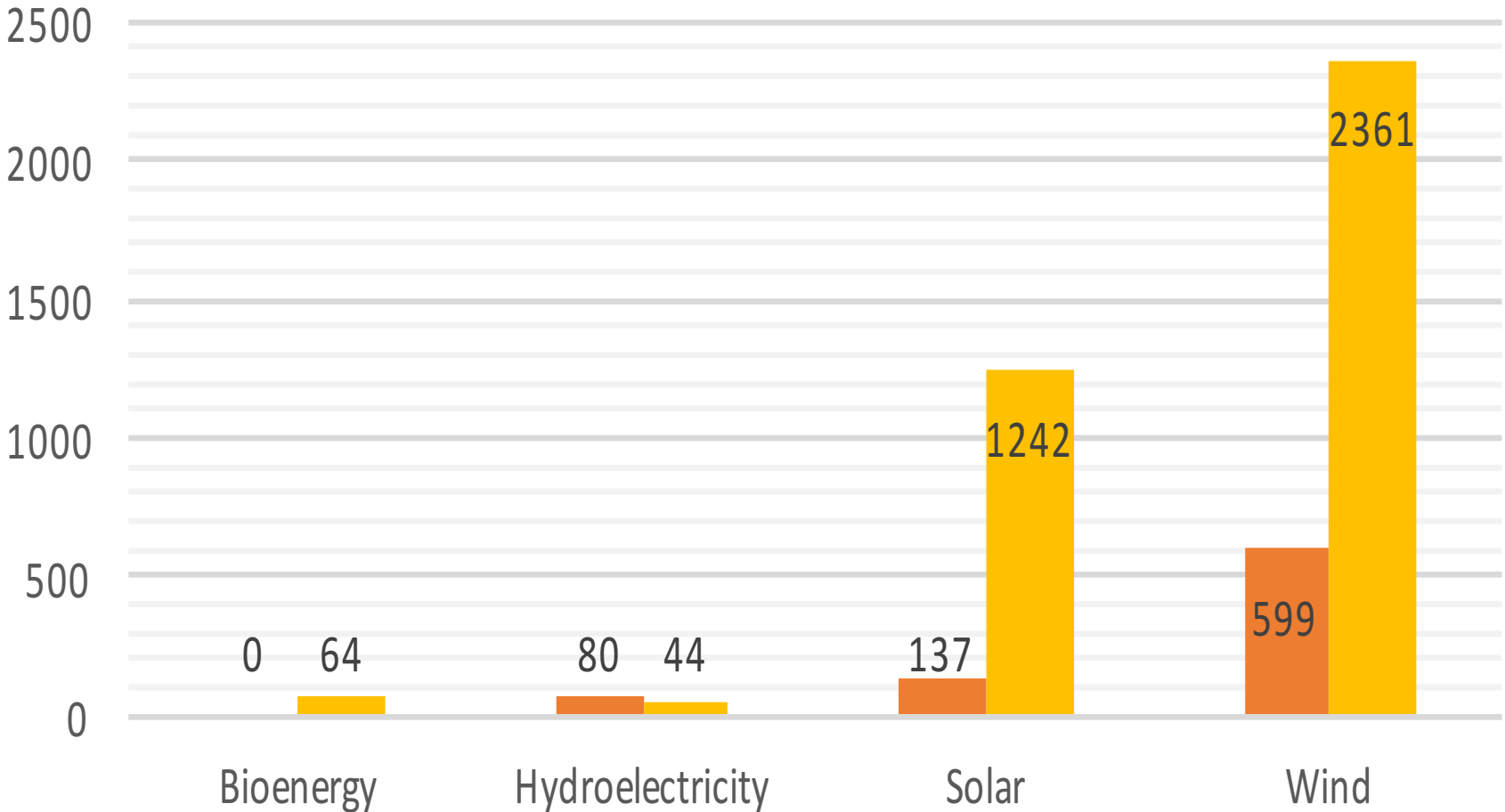
Distribution of FIT contracts to date (MW)



■ Aboriginal ■ Coop ■ Industry

FIT contract distribution (MW)

Aboriginal Participation Non-Aboriginal (including coop)



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 for co-op and Aboriginal and municipal participation
- Education and capacity building funds

Co-operative Corporations Act, 1990

“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

OurPower

People powering the
renewable energy transition

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Stories

Take Action

Educate

FAQ



Net Zero Energy Homes- A Revolution in Sustainable Housing

energy conservation, energy efficiency,
green homes, net zero homes



Renewable Energy Co-operatives Grow in Ontario

CanSIA, FIT, ontario, renewable energy
coops, solar energy



<http://ourpower.ca/video-introducing-the-renewable-energy-transition/>

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Stay tuned for the launch of Our Power's complete video series in the upcoming weeks!

 Like us on Facebook

Community energy in the news

THE GLOBE AND MAIL

DEBT

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

RICHARD BLACKWELL

SolarShare grows as 'green bonds' heat up

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:  Republish Reprint
Dec 22 12:30 PM ET
[More from Special to Financial Post](#)

TORONTO STAR

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

BRAMPTON GUARDIAN

Brampton solar installation, a shining example of renewable technology



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 Featured

RE Co-op Development

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



CED Co-op Member Meeting

100% Co-op Owned	Partnering with Commercial Developers
Co-op is responsible for all aspects of project development	Co-ops share decision-making and financial responsibility
Must source all necessary expertise from within the co-op or hire consultants	E.g. joint venture, limited partnership, general partnership, subsidiary

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
 - 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

