

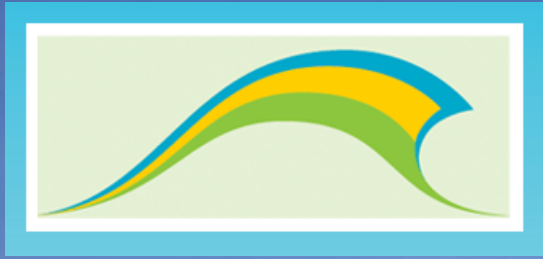
# ***Opportunities & Realities of Renewable Energy Co-op Development***

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TREC Renewable Energy Co-operative**

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**Community University Research Alliance (CURA)**  
**Measuring the Co-operative Difference**





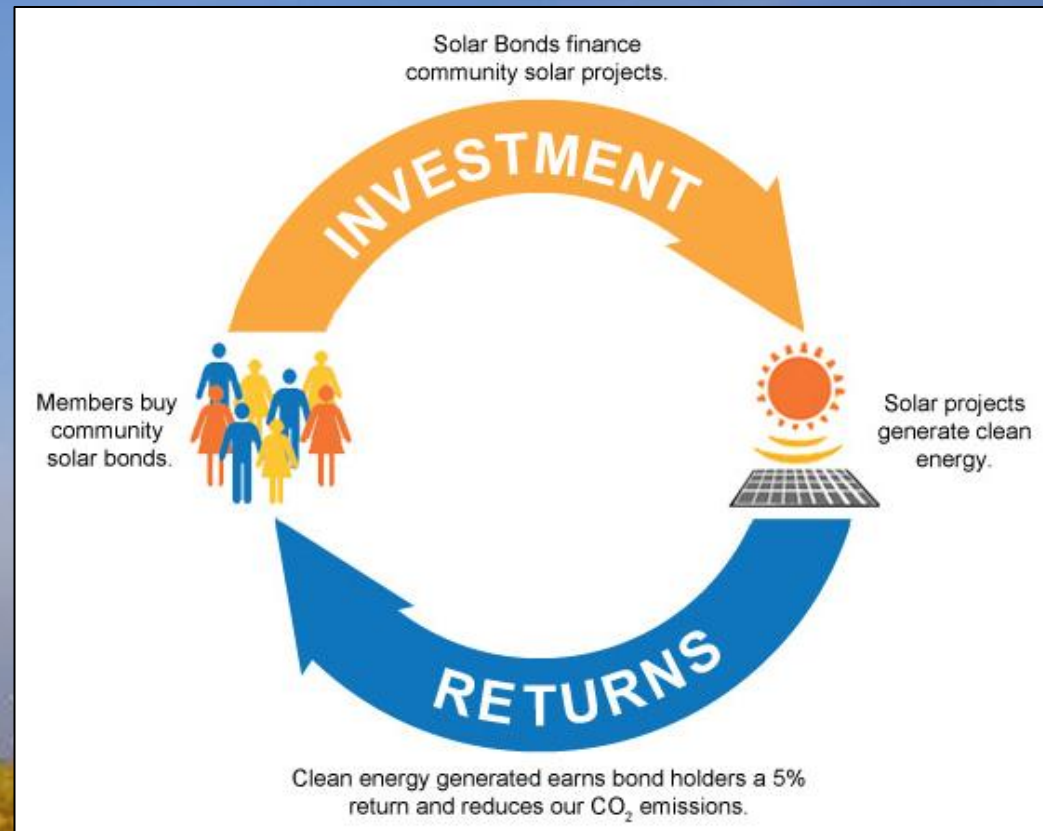
## Measuring the Co-op Difference Research Network

- SSHRC/CURA funded, multi-year study across many co-op sectors, many partners
- TREC-York partnership: examine RE co-op sector
  - Literature review, national scan, international best practice, regulatory & policy issues, measuring the difference, tools for capacity building



# About Community Power (CP)

- Sustainable energy projects (solar, wind, hydro, biomass) are initiated, implemented and owned by members of a community
- CP is located in and responsible to the local community resulting in a more distributed and egalitarian system of electricity generation and distribution
- Delivers 'triple bottom line' returns, creating economic, social and environmental benefits



Credit: SolarShare/Lianne Cote





# The Value of Co-ops

- Provide service to members (people that want to support RE)
- Democratically controlled by members (one member/one vote)
- Surplus is distributed to members (for-profit) or social good (non-profit)
- Allows broad participation in RE development & investment



# Community Potential - Germany

- FIT introduced to support farmers with small hydro early 90's
- 50% of German renewables owned by local residents and communities (farmers, co-ops)
- Almost \$5 billion community money invested
- 200,000 Germans own shares
- 2000-2010 RE increased from 5% to 17% electricity supply
- 35% expected by 2020
- 380,000 jobs created in RE



Schauinsland, Germany

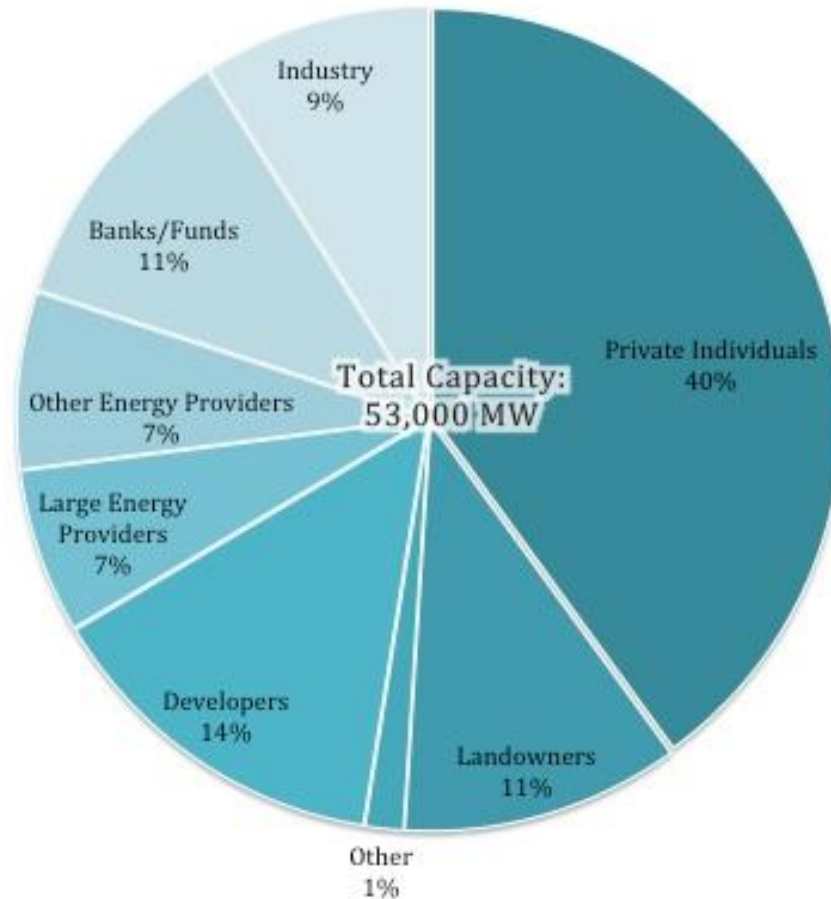
Paul Gipe, [wind-works.org](http://wind-works.org)





# Community Potential - Germany

## Community Ownership of Renewable Energy in Germany in 2010



Source: [www.unendlich-viel-energie.de](http://www.unendlich-viel-energie.de)



# International Comparison

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

Source: Dave Toke, University of Birmingham, 2005, 2008



# CP in Canada

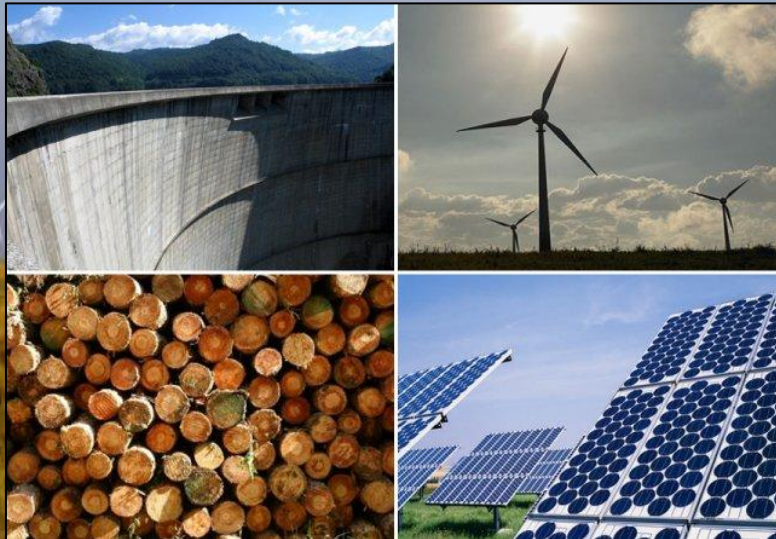
- TREC/WindShare first RE co-op in Canada, completed in 2003
- Raised \$800,000 in equity from 427 members - oversubscribed by \$250,000 (180 investors in-waiting)
- Catalyst for others, policy needed: first RESOP, now GEA/FIT – Ontario leading
- ComFIT in NS since Sep'11: 84 applications in first 5 weeks of program – 50 MW have been awarded for 20 projects
- Quebec RFP for CP in 2010 – only one co-op, Valeo, with PPA, 8 others in development
- Rest of Canada limited activity – just a handful of CP/co-op projects in each province



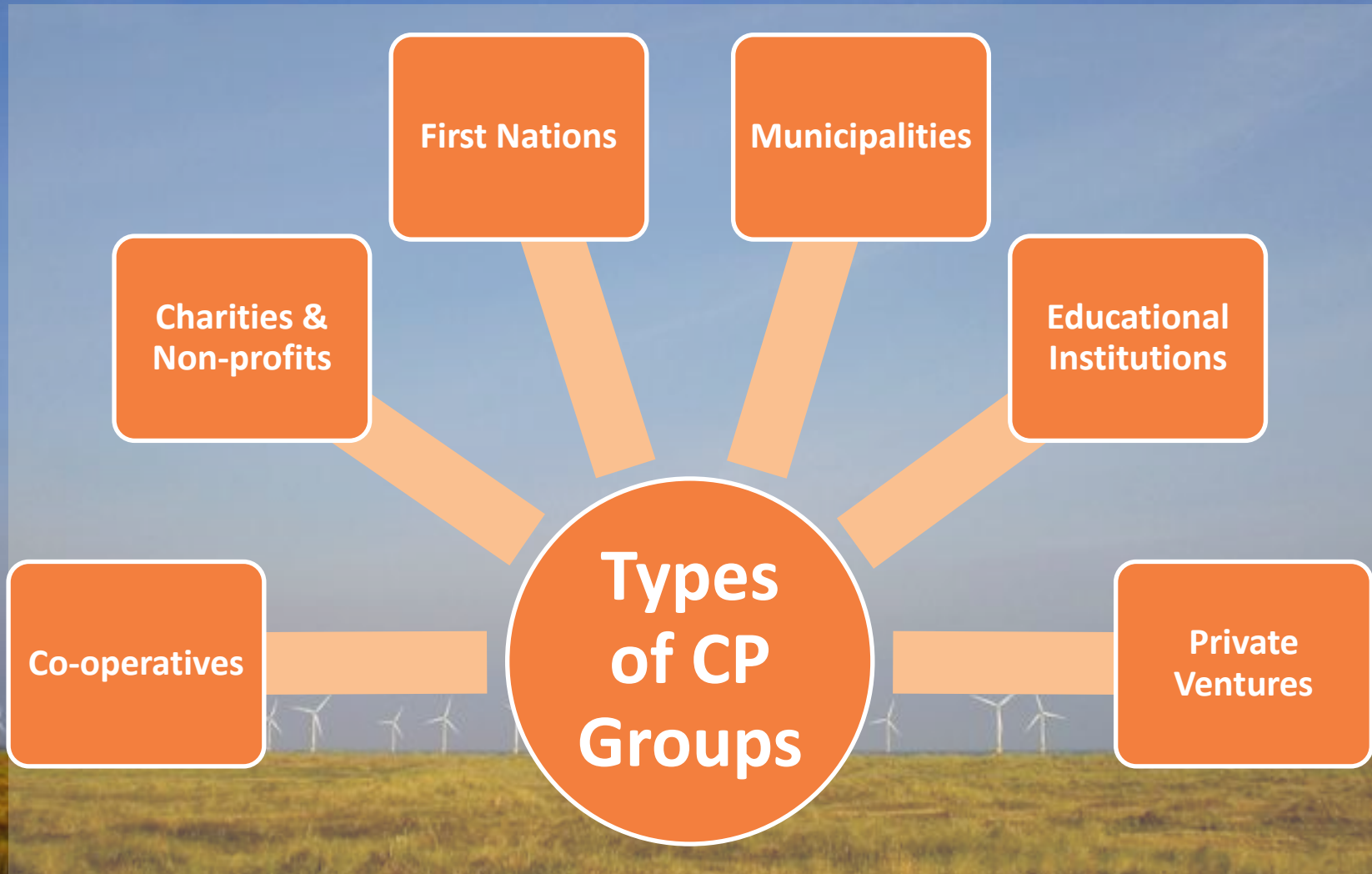


# Ontario Policy

- Community ownership a key element in the Green Energy Act, 2009
  - Feed-In tariffs with price adder for community ownership
  - Community Energy Partnership Program (funding)
  - Changes to Co-op Corporations Act
- This policy introduced a framework to enable & encourage CP development



# Eligible Participation (Ont)



# CP activity in Ontario

- Over 80 community and at least 26 Aboriginal Energy projects under development
- Of the 17,000 MW in RE projects (with FIT & in the pipeline), 1500 fall under broad 'community' definition – 326 MW with FIT
- Less than 50 MW is being developed by co-op, non-profits or charities
- Approximately 20 RE co-ops active, only two have operational facilities, several have started raising community investment, only a few have a FIT contract
- **Despite significant activity & effort, progress is slow**





- Incorporated in 2010 as a non-profit co-op
- 18 sites / 600 kW installed & generating power since 2011
- \$3.7 million total cost; financed through private loans
- Selling community bonds at 5%, 5-year terms
- Plans for expansion – seeking \$3 million in community investment
- [www.solarbonds.ca](http://www.solarbonds.ca)



SolarShare Waterview site, 430 kW rooftop



# Barriers to CP

- **Grid constraints/restrictions in many provinces** (monopoly/centralised electricity systems)
- **Cumbersome and costly development process**
  - Competitive environment
  - Agency delays and uncertainties
  - Changing rules/prices
  - FSCO apprehension (Ont)
- **Steep learning** curve for community groups – not enough shared learning and resources
- **Financing challenges** – development costs, raising sufficient community equity, finding commercial debt, operating costs (scale is important)





# Opportunities and next steps

- **Commercial-community partnerships:** gain local support, great for public profile and raise community equity – need to watch for equitable partnership terms
- **Ease financing process** – gov't loan guarantee or debt money (e.g. Infrastructure Ontario) for CP projects: excellent local impact investment opportunity (e.g. NS CEDIF program)
- **Reduce turn around times on applications and approvals:** need to bring projects to fruition quickly and cost-effectively (more certainty essential for sector expansion)
- **Clarity & assurances on grid access** needed (priority access in for CP projects, NS ComFIT)
- **Develop economies of scale** through shared experiences and administration services (reduce 20 year overheads)





# Contact info

Measuring the Co-operative Difference Research Network

<http://www.cooperativedifference.coop/>

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