THE UNIVERSITY OF AUCKLAND
Te Whare Wananga o Tamaki Makaurau
NEW ZEALAND

PUBLIC POLICY INSTITUTE
Te Whare Marea Tātari Kaupapa

Policy Briefing 4/2017

Community Energy and Climate Change: Promising and Cautionary Tales in Canada

Dr Julie MacArthur, University of Auckland

Key Questions:

- What is the status of community energy?
- What policies exist to support its development?
- What role does the political economic context play?

Governments are increasingly looking to non-state and bottom-up community actors to help achieve climate change mitigation targets. Canada has a long history of co-operative and municipal activity in community energy (CE) initiatives, even though it is a resource-rich state with one of the highest per capita greenhouse gas footprints, and where political issues, geographic scale and incumbent industries complicate broader community participation. **This research** examines the emergence of CE in the context of broader moves towards increasingly powerful trade agreements, privatization, and conflicts over Indigenous rights. It argues that significant potential exists to strengthen the role of local actors in energy governance, but that macro-level political and economic developments also create significant challenges.

Community energy systems are nothing new. Electricity networks in the early 20th century developed as local projects; the first windmills provided power to grind flour and distribute it through the nearby countryside. CE encompasses a wide range of organizations and activities, centred on the idea of local resource management of production, distribution and consumption of energy products and services. A CE project is a place-based social enterprise with local participation and collective benefits. These can be based on community leadership in the planning, running and benefit allocation, a community investment project, or partnership with private developers. The actors in the CE sector may take the form of co-operatives, local trusts, non-profit associations, Indigenous benefit companies and municipal or city level agencies.

Community energy activities are similarly broad in scope, enabled by the development of new green energy technologies. Projects have formed to generate renewable electricity from wind, solar, hydro and biomass sources. Others have focused on developing distribution networks, heat distribution systems, or on retail of energy products and services. The potential benefits of CE are widely established: from local economic development, increased empowerment and community cohesion, and reduction in greenhouse gas emissions to instrumental benefits for policymakers and companies interested in reducing local project opposition. Challenges also exist, often related to the skills and resources of the community actors relative to incumbent actors. There are disadvantages to being volunteer-based, inexperienced in the energy sector, and disconnected from policy networks. Their development also rests significantly on what happens beyond the local level, with actors in positions of power both "up" at national and international levels and "out" in terms of sectoral competitors or those in related industries.

'Local actors do not operate on a level playing field with large private energy companies or with centralised state-owned ones, so the uptake of community renewables differs greatly among jurisdictions and is dependent on targeted policy interventions, human and financial resources, and political culture.'

Inequalities in financial and political resources affect policy outputs, from agenda-setting through to implementation and evaluation. To tackle the climate challenge, energy researchers have urged governments to take action by phasing out support for fossil fuels, thinking beyond the power sector to renewable transport

and heating, and planning for complex, decentralized energy futures. These changes are significant, necessary, but also contested by actors who benefit from business-as-usual arrangements.

'Democratizing the actors involved in energy service delivery and policy planning also creates new constituencies, interests and capacities.'

International climate agreements continue to produce promises that fall short of the large scale infrastructural shifts that we need. Scientific evidence for anthropogenic climate change continues to mount, predicting increased intensity and frequency of storms, droughts, species extinctions, sea rises and heat waves. . Despite this, we are faced with either inward-looking or outwardly hostile leadership in the UK and the US. We require cleaner and more efficient energy practices in wealthy and poor countries alike, but skepticism about the motives of governments, together with the longstanding obfuscation of incumbent fossil-fuel and power industries, suggests that centrally led transformations will be challenging to both initiate and sustain. It is in this gap that local, bottom-up energy initiatives in the CE sector are taking place. CE initiatives have emerged in many countries in the past three decades, including the UK, the US, Australia, Denmark and Germany, in response to the climate crises and in recognition of the need for institutional change and innovation. Recognizing the importance of CE initiatives, recent global renewable energy reports by the Renewable Energy Policy Network for the 21st Century, the British Academy and OECD are now explicitly including community-scale projects in their recommendations. CE actors, once established, can be involved in co-constructing public policy alongside more traditional private sector actors, broadening the values and interests represented in policy discussions.

Canadian Energy in Context: Emissions, Ownership and Trade

Canada sits in a unique position to understand the varied development of CE initiatives. It is a wealthy, arctic nation with significant fossil fuel extraction, processing and consumption activities, and greenhouse gas emissions significantly higher (20%) than 1990. Fossil fuel deposits and vast water resources have historically shaped regional differences in industrial development and emissions profiles. Provinces have constitutional jurisdiction over their respective electricity sectors, resulting in a mix of sources, ownership structures and governing bodies: sub-state policies at the provincial and territorial levels are crucially important. First Nations and Aboriginal communities are also increasingly active in the energy space – Supreme Court rulings starting with the Calder case (1973) have continually strengthened the legal power of these groups. More than 200 co-operative electricity generation projects have emerged across Canada since 1990, following the restructuring of power systems. 20 co-operatives are generating wind, solar and hydro-power on more than 100 projects.

Supportive policies are key to the scale-up potential of CE systems. For example, through specific policy initiatives, Ontario phased out its coal-fired generation capacity a year ahead of schedule in 2013 and has the highest investment in new renewables generation in Canada. In this space CE initiatives have drawn enthusiastic support from policymakers, climate activists and local economic development advocates alike. Enthusiasm for the development of a form of energy democracy certainly exists. Canada's strongest policy support for CE, Ontario's Green Energy and Economy Act 2009, was however subject to two trade challenges that were decided in 2016 under NAFTA and the WTO respectively. The rulings suggest chilling effects on future policies and a subsequent narrowing of policy tools, particularly those that are aimed at localizing the economic benefits of renewable energy transitions.

Local empowerment, environmental justice and liberalized markets are not easy bedfellows; the tensions that are emerging internationally in the practice of CE project development and CE policy implementation raise important questions for actors in the sector and policy makers. CE may bridge some traditional political fissures through mixed governance modes—use of both public and private funds, and distribution of benefits to wider group of society—but they do not escape them. Future policies need be recognize these tensions, in order to prioritize goals and respond to challenges more effectively.

Policy Tools:

- **Grid set-asides**
  A portion of new electricity generation capacity is allocated specifically for community actors
- **Community feed-in tariffs**
  Statutory arrangments guaranteeing a premium price for locally owned power
- **Siting privilige**
  First right of refusal on project development for local developers
- **Financial support** through grants and project development assistance

To find out more about this research, visit:
http://www.mdpi.com/2071-1050/9/3/464 and https://pacificoutlier.org/2015/11/24/climate-power-to-renewables/

Contact Dr Julie MacArthur:
j.macarthur@auckland.ac.nz

Adapted with assistance from Suzanne Woodward, Public Policy Institute