

Regulatory Risk and Private Investment in Renewable Energy in Ontario

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Measuring the policy environment for renewable energy in Ontario

- Research objective
 - Assess private sector views on policy and investment environment for renewable energy in Ontario
 - Use data-driven analysis to identify areas of policy strength and issues for reform
- Surveys of renewable energy firms active in Canada, implemented during Fall 2008
 - 63 wind developers, 12 solar developers, 36 manufacturers
 - 1. What criteria make a jurisdiction attractive for renewable energy firms?
 - 2. How does Ontario rate on these criteria?

Motivation

- Ontario government has adopted explicit green energy policy goals since 2003
 - Initial targets of 1350 MW (5%) of new renewable power generation capacity by 2007, 2700 MW (10%) by 2010
 - Current 'green manufacturing' employment objectives
- But private sector investment levels in renewable MW and manufacturing have been relatively low in Ontario
 - 1/3 of annual MW investment rate per capita in U.S. states with Renewable Portfolio Standards
 - Only 60% of 2007 MW target achieved by November 2008
 - Only significant renewable energy manufacturing in Ontario is a wind tower plant in Fort Erie

Survey topics

1. Operational environment
 - E.g. Natural environment conditions, skilled labour cost and availability, size of regional market, proximity to suppliers

2. Regulatory policies
 - E.g. Financial/tax incentives, PPA rates, length of PPAs, availability of transmission capacity

3. Regulatory governance and process
 - E.g. stability of policy, coordination between government bodies, presence of long-term targets, ease of obtaining permits

Criteria affecting attractiveness of a jurisdiction for renewable energy investment

	Wind firms (29)
3 Most Important Criteria	<ol style="list-style-type: none">1. Natural wind conditions2. Stability of the policy environment3. Transmission capacity availability
3 Least Important Criteria	<ol style="list-style-type: none">13. Investment / tax subsidies14. Availability of engineering and construction expertise15. Proximity to equipment manufacturers / suppliers

Criteria affecting attractiveness of a jurisdiction for renewable energy investment

	Wind firms (29)	Solar firms (8)
3 Most Important Criteria	<ol style="list-style-type: none"> 1. Natural wind conditions 2. Stability of the policy environment 3. Transmission capacity availability 	<ol style="list-style-type: none"> 1. PPA rate 2. PPA length 3. Stability of the policy environment
3 Least Important Criteria	<ol style="list-style-type: none"> 13. Investment / tax subsidies 14. Availability of engineering and construction expertise 15. Proximity to equipment manufacturers / suppliers 	<ol style="list-style-type: none"> 15. Availability of engineering and construction expertise 16. Net metering 17. Proximity to equipment manufacturers / suppliers

Criteria affecting attractiveness of a jurisdiction for renewable energy investment

	Wind firms (29)	Solar firms (8)	Technology manufacturers (15)
3 Most Important Criteria	<ol style="list-style-type: none"> 1. Natural wind conditions 2. Stability of the policy environment 3. Transmission capacity availability 	<ol style="list-style-type: none"> 1. PPA rate 2. PPA length 3. Stability of the policy environment 	<ol style="list-style-type: none"> 1. Presence of l-t gov't target for renewable energy 2. Manufacturing gov't incentives 3. Stability of public policy for renewable power generation
3 Least Important Criteria	<ol style="list-style-type: none"> 13. Investment / tax subsidies 14. Availability of engineering and construction expertise 15. Proximity to equipment manufacturers / suppliers 	<ol style="list-style-type: none"> 15. Availability of engineering and construction expertise 16. Net metering 17. Proximity to equipment manufacturers / suppliers 	<ol style="list-style-type: none"> 16. Cost of electricity 17. Proximity to research centres / universities 18. Prior experience in jurisdiction

Ontario ratings

	Wind firms (29)	Solar firms (8)	Technology manufacturers (15)
3 highest rated criteria in Ontario	<ol style="list-style-type: none"> 1. Length of PPA 2. Transparency of PPA process 3. Availability of engineering and construction expertise 	<ol style="list-style-type: none"> 1. Length of PPA 2. Ease of obtaining rights to land 3. Transparency of PPA process 	<ol style="list-style-type: none"> 1. Cost of electricity 2. Proximity to transportation infrastructure 3. Availability of skilled labour
3 lowest rated criteria in Ontario	<ol style="list-style-type: none"> 13. Ease of obtaining municipal approvals 14. Stability of the policy environment 15. Coordination between government-related bodies 	<ol style="list-style-type: none"> 15. Availability of transmission cap 16. Stability of the policy environment 17. Presence of I-t gov't target for renewable energy 	<ol style="list-style-type: none"> 16. Presence of I-t gov't target for renewable energy 17. Stability of public policy for renewable power generation 18. Cost of skilled labour

Key findings from the surveys

1. Renewable energy companies rate regulatory governance aspects as equally important as specific regulatory policies, and more important than operational factors on average, when assessing the attractiveness of jurisdictions for investment
 - i.e. *how* policies are made is critical for investors
2. The long-term stability of policy for renewable energy consistently ranks among the most important factors in private sector investment decisions among competing jurisdictions
3. In Ontario, the stability of renewable energy policy is rated as one of the weakest aspects of the investment environment

Policy instability in Ontario

- Renewable energy MW capacity targets
 - 2003 – initial targets publicly announced
 - 2005 – targets superseded by IPSP planning process
 - 2008 – IPSP process adjourned
 - Future targets will be reviewed at least every 3 years
- Renewable energy policy instruments
 - 2006 RESOP introduced; 2008 RESOP suspended; 2009 biogas RESOP re-instated
 - Sporadic RES RfPs
 - 2004 RES I; 2005 RES II and III; 2006 RES III postponed; 2007 RES III recommenced; 2009 RES process to be replaced with FIT
- Project approvals and permitting processes
 - Delays reported in obtaining all necessary permits

Developer responses to regulatory risk

1. Lower investment levels and jurisdictional priority for Ontario
 - Ontario is a “U.S. Production Tax Credit hedge”
 - U.S. IPP
2. Higher renewable energy project bid prices
 - “For the first time in RES III, we’ve had to price in these risks...It’s very back of the envelope but it’s definitely priced”
 - Canadian IPP
3. Lobbying and government relations
 - “Their [developers] futures will depend increasingly on political influence rather than business acumen”
 - Senior industry official

Regulatory governance in Ontario

- Regulatory governance structure in Ontario creates conditions for chronic instability in renewable energy policy
 - Overarching power of Minister
 - Authority to initiate directives to OPA to procure new MW (RES RfPs)
 - Authority to direct OPA to revise IPSP supply mix recommendations
 - (Re)Appoints OPA board members to 1-3 year terms
 - Revolving ministerial appointments by Premier
 - 4 ministers, 5 deputy ministers in Ministry of E&I since 2003
 - Fragmented agency structure and weak coordination in implementing broad green energy policy objectives

Implications for regulatory reform

- Governance of energy sector in need of reform to insulate policy from short term political pressures, creating longer term stability
- Some suggestions for 'de-politicizing' regulatory policy
 1. Limit degree of ministerial directive authority
 2. Use legislation to enshrine long-term carbon emissions or renewable MW targets
 3. Appoint agency board members to 5 year, staggered terms
- By reducing regulatory risk, governance reform will enable renewable energy policies to achieve their goals at reasonable cost to consumers and taxpayers