

How smart policy can drive environmental markets and business innovation

With A Case Study Example
January 2013



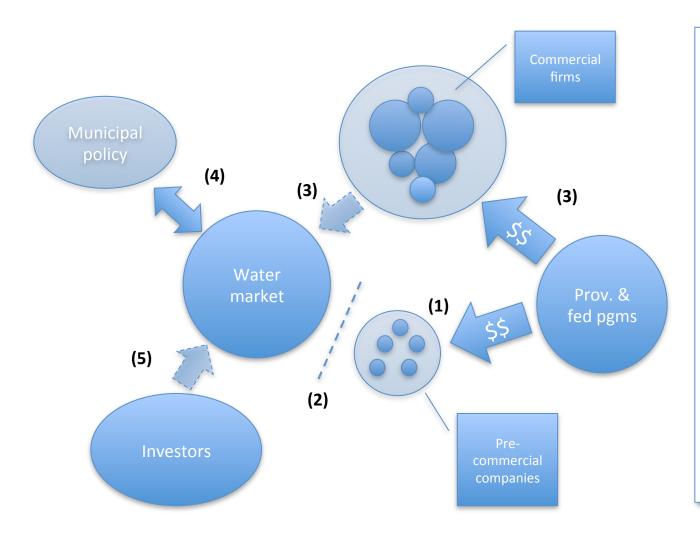
Water, wastewater and stormwater: A developing market

- The world is demanding innovative water solutions – and Ontario has a strong base of companies
- Our challenge is to capitalize on this demand and position Ontario (and its companies) as a world leader
- A strong domestic market puts Ontario companies "en route" to stronger efforts in export markets, helping them build on initial beachheads overseas
- Growth requires an understanding of the role of government policy, investment, and market conditions in giving an industry "critical mass" and making it globally competitive





Past efforts to encourage water innovation in Ontario:



(1) Governments have channeled funds to universities and innovation centres to create companies, most of which have a (2) very low market penetration and high wash-out rate. Existing commercial firms report (3) a mature market that is not demanding innovative solutions because the "harms" that they address have not been priced properly. This inhibits them from developing critical mass to compete internationally. The current market is largely determined by (4) municipal policies that do not properly price the market or incent investment in changes in water use. The investment community (5) is only partially engaged because of small market size and low returns.



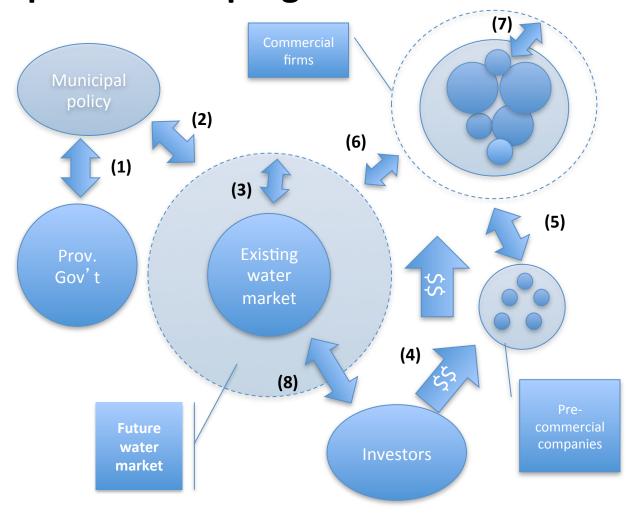
Solution: Expand the market through innovative policies and programs

- Ontario water companies lack a "critical mass" domestic market for their technology and services that limits their growth and ability to engage in global markets – a challenge that their competitors from more developed markets (e.g. Europe) do not have
- Municipalities have the most influence over water and wastewater through delivery, treatment, and pricing of water and should be a key focus to change and grow the market





A solution: Expand the market through innovative policies and programs



(1) The province collaborates with municipalities to create policies that send strong incentive signals (2) to the water market; this expands the size of the market (3) and makes it cost effective for customers to innovate and/or adopt new technologies. This unlocks investment capital for both new "leapfrog" technologies and applications and for established firms to access an expanded market. It also makes it more viable (5) for commercial firms to partner with pre-commercial companies. This leads to increased revenues for Ontario firms, allowing them to (7) grow and compete internationally. It also lets (8) large users become more efficient and partner with investors.



A role for government and its agencies – lead an expansion of the Ontario water market

- Provincial and municipal cooperation and coordinated policies on water pricing, infrastructure investment and other related efforts can substantially increase the domestic market
- Such a role can send a strong signal to companies, unlock significant investment capital and lead to growth and jobs in the Ontario water sector
- Ontario already has a working example of how policies have stimulated companies and encouraged growth



Who wins from good water policy measures?

Stakeholder	Benefit
Municipalities	Reduced load on their infrastructure, increased investment in new technologies, economic growth and development
The Province	Realizing policy goals around water development, economic growth, partial solution to infrastructure deficit (through reduced loads)
Companies	Increased market for their products, more revenues, critical mass upon which to build overseas expansion
Investors	New revenue equations open up possibilities for P3 and direct investments in companies and municipal infrastructure
Educational institutions	Better linkages to established companies and market demands for new technologies



Toronto Case Study: How a smart municipal policy delivers many benefits ...

- Canadian municipalities face increasing demand on aging systems and need to control their biggest outlay of energy – pumping and treating water and wastewater
- Toronto has a set of policies unique in North America that drive critical mass in water companies and more efficient use of water/wastewater systems by industrial users
- Toronto's first step was to increase the Industrial Water Rate to General Water Rate (making it 30% higher)
- Reductions in this rate were then possible if companies adopted new technologies and approaches





Toronto Case Study: How a smart municipal policy delivers many benefits ...

- Toronto offers companies an Industrial Water Rate Reduction (by 30%) if they file a Water Conservation Plan
- They have five years to implement their Conservation Plan, which may require investing in new water technologies and processes
- The main condition is that these firms must be in compliance with the Sewer Use Bylaw
- Companies can enter a Compliance Program Agreement to provide time to study and implement solution
- Having an agreement in place represents compliance; the Company then receives a 30% reduction in their water rate
- These agreements then drive investments in technology, equipment, and services and open up the possibility of innovative partnerships with investors



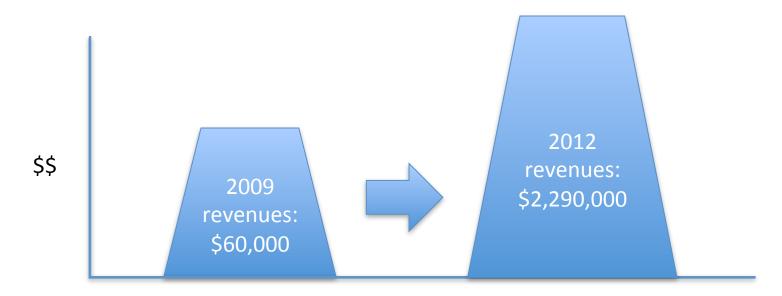
Toronto Case Study: The outcomes

- Large firms become more efficient and generally save more money than they thought
- The culture of the large company embraces sustainability with water
- The load on municipal infrastructure is lowered, reducing the need for costly expansion or maintenance
- Environment and cleantech firms that provide solutions gain customers and an increased market, allowing them to attain critical mass
- This critical mass and sophistication then allows them to access new domestic and international markets



Toronto case study: A practical example

Based on these programs, one water technology and consulting firm enjoyed 97% growth in its Toronto revenues in 18 months up to 2012, allowing it to enter new markets in Canada and the US. Estimates do not include the additional investment in equipment and spin-offs within its supply chain. This total economic impact is estimated at more than \$3.5M



Recommended next steps ...

- ONEIA proposes a dialogue with Water TAP and Ontario water companies, specifically:
 - 1. to explore the role that the province can take with respect to policy and program leadership in this area
 - Find better ways to measure and track activity in Ontario's growing water sector
 - 3. Convene an exploratory meeting of water stakeholders to discuss "growing" the water market in Ontario



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