

July 2015

Ontario Environment and Cleantech Business and Policy Forum

ONEIA examines the challenges & business opportunities of climate change

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Creating export plans

Toronto Region Board of Trade CEO Janet De Silva unveils Trade Accelerator Program.

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Climate change business

Panel looks at business opportunities in climate change mitigation, GHG reduction and infrastructure adaptation.

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Meet the deputies

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Follow the money

How equity capital, green bonds and venture capital markets can help fund cleantech for a future low-carbon economy.

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Roundtable round-up

'Off-the-record' discussions on: municipal & industrial water, brownfields & excess soil, IC&I wastes & organics, environmental approvals, and renewable energy.

ONEIA is the business association representing the interests of the environment industry in Ontario.

Attendees rated the 3rd annual Ontario Environment and Cleantech Business and Policy Forum "our best yet." Held May 4, 2015, at the DoubleTree Hilton Hotel in downtown Toronto, the forum featured an impressive roster of cleantech and policy experts, financial analysts and agency representatives assembled to discuss green business markets.

Participants also had a chance to 'dig down' on the most significant environmental initiatives in Ontario, including the province's recently unveiled cap-and-trade system for addressing climate change, major investments in infrastructure expansion and renewal, and key regulatory developments in waste diversion, excess soil and Great Lakes water quality.

The program "covered a lot of ground," said ONEIA Chair **Derek Webb** (Biorem). The morning sessions followed the money trail, identifying both cleantech investment opportunities and viable funding options, while the afternoon roundtables allowed industry representatives to share concerns about — and suggest ways to improve — Ontario's environmental policies, programs and regulations.

"I was struck by the breadth of opportunities out there in the areas of climate change, brownfields, waste, water and renewable energy," Webb said. "They pretty well reflect the full cross-section of ONEIA's membership." However, to maximize the environmental payoff "sound policy and regulation will be needed, backed by clear vision and bold leadership," he said.

"We must export our products, expertise and innovations to global markets to create a more sustainable world. Finding the sweet spot, the place where business interests and sustainability intersect is critical. Our region's businesses continue to show that what's good for the environment can be good for business."

**– Janet De Silva, CEO,
Toronto Region Board of Trade**

Deputy Ministers Giles Gherson (Economic Development, Employment and Infrastructure) and Paul Evans (Environment and Climate Change)



Keynote Address: Board of Trade launches program to TAP into export opportunities



Janet De Silva, President and CEO of the Toronto Region Board of Trade, believes that the world wants and needs the leading-edge environmental products and services being developed in Ontario.

"Clearly cleantech is a critical area of strength that is driving economic growth in the Toronto region and across the province," she told attendees during her keynote address. "Ontario is an internationally recognized cleantech leader."

Although exports already contribute \$1-billion of the sector's \$8-billion in annual revenues, "there is still tremendous room for growth," said De Silva. "The challenge for us is to help businesses get their products into global markets." That's why the Board has launched its new Trade Accelerator Program (TAP GTA), a "one-stop shop" for small and medium-sized companies that want to develop an export plan.

Following a TAP orientation session, companies assess their international market opportunities, export strengths and any potential barriers. Then the TAP advisory board – representing government trade agencies, business partners, international consul generals and trade commissioners in targeted export markets – crafts solutions to overcome those barriers and helps companies begin (or expand) their export activities.

"The Board's objective is for each company to complete the trade accelerator with a solid business plan and the resources to activate [that plan]," De Silva said.

"We must export our products and services to create a more sustainable future," De Silva said. Sustainability also "solidifies a company's reputation for conducting socially responsible business."

Many Board of Trade members are undertaking massive refurbishments to meet LEED certification, replacing windows, installing green roofs and heat reclamation systems, reducing water use and switching to green power suppliers. She also applauded major federal and provincial investments in public transit and new infrastructure.

For more details on TAP, visit the Board's website at www.bot.com/Advocacy/Programs/TAPGTA.aspx

Panel 1: The Business of Climate Change

Many municipalities, government agencies and corporations are already working hard to reduce their carbon footprint. The morning's first expert panel, the Business of Climate Change, examined the business opportunities, both domestic and global, in reducing greenhouse gas (GHG) emissions and better managing the impacts of climate change.

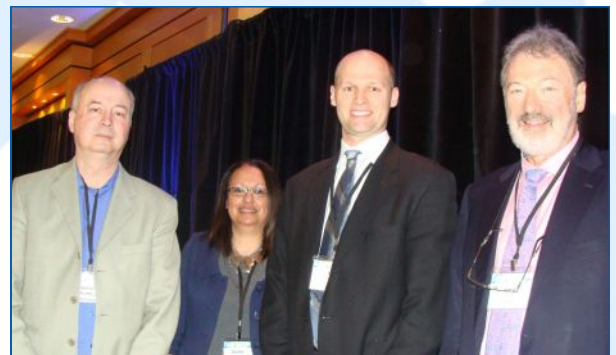


Jon Philipsborn, Climate Adaptation Director for AECOM's North American division, helps clients identify and prepare for extreme events – the storms, flooding, heat waves, drought and, over the long term, rising sea levels and coastal erosion – a changing climate will inevitably bring. "Some compa-

nies are taking a leadership role in preparing for climate change," he said. "They are seeking out best practices that have worked elsewhere so they can make a better pitch to their Boards."

"We look at what climate change means to you, and how it will affect your company's infrastructure, supply chains and even the health and safety of your employees," Philipsborn said. That might mean charting flood vulnerability for a gas plant, preparing a risk assessment for an urban transit system, or preparing sea level rise projections for a port land remediation project

Based on the best available projections, an individualized disaster resistance report card is drafted that identifies a corporation's environmental vulnerabilities and outlines a series of





actions designed to reduce those risks. "You need to plan ahead," Philipsborn said. "You don't want to start this kind of work *after* a Hurricane Sandy has already devastated your business."

The business of resiliency and adaptation



Quentin Chiotti, Senior Advisor on Sustainability for Metrolinx, has been working in the field of environmental resiliency and adaptation planning for the past 20 years. "Lots of people are doing this work these days, at least part-time," Chiotti said. They are looking at the potential impacts of flooding, heat waves and extreme weather, "although most don't call it climate change adaptation," he said.

Metrolinx is the provincial agency that coordinates and integrates transportation in the Greater Toronto and Hamilton Area. "We've made a huge positive impact in reducing Metrolinx' regional carbon footprint," in part by electrifying rail lines, Chiotti said. However, he warns that some of those gains will be lost as Metrolinx triples the capacity of its system. By 2030, Metrolinx will control some \$60 billion in transit assets.

"Despite our best efforts, a certain degree of climate change is inevitable, so adaptation is absolutely necessary," Chiotti said. "Mitigation is still the primary focus, but opportunities in adaptation continue to grow in importance." Metrolinx is currently conducting risk assessments for some of its critical assets and looking at how climate change could impact future projects.

"ONEIA is a very important partner and we have really benefited from the feedback and guidance we've received from the Association and its members on a number of policy initiatives, including the modernization of our environmental approvals."

– Paul Evans, Deputy Minister, MOECC

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Lunch with the Deputies

Over lunch, Deputy Ministers Paul Evans (Ministry of Environment and Climate Change) and Giles Gherson (Economic Development, Employment and Infrastructure) described the economic potential of the government's infrastructure and climate change programs.

"It is very, very exciting to witness the growth of the new economy while we achieve greater sustainability," said Gherson. There will also be strong export opportunities for Ontario's cleantech companies – particularly in India, China and the European Union – as the global market for their products and services is expected to triple over this decade.

The two deputies also discussed a number of regulatory tools currently being fine tuned, including the province's waste recovery framework and its cap-and-trade plans for addressing climate change. Ontario will be taking an "all government approach as we develop the [cap-and-trade] policy, which will be released this fall," Evans said. At least some of the funds generated will be invested back into the community to fund building retrofits, transportation projects and research and development. Infrastructure spending will also be assessed through "a climate change lens," Evans said.

"ONEIA is a very important partner," said Evans, "and we have really benefited from the feedback and guidance we've received from the Association and its members on a number of policy initiatives, including the modernization of our environmental approvals."



World markets clamoring for cleantech



Anton Davies, Principal and co-founder of RWDI, said there are lots of cost effective and still untapped opportu-

nities to improve energy efficiency. Meeting LEED's silver building standard "is easy," Davies said, "while the platinum standard imposes only a 10 per cent premium. The technology is all there and it doesn't cost all that much. So what's holding us back?"

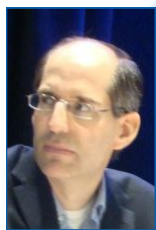
There are hundreds of projects underway in Asia and around the world, Davies said. "Many cities are growing

like crazy, and many of these rely on Western technology," including cleantech systems to reduce energy use and conserve water. "In Panama, the monthly electricity bills for an average apartment can top \$2,000, while in some Arab countries, water is more expensive than gasoline," he said. These markets are clamoring for made-in-Ontario cleantech.

Domestically, Davies suggests "we have to be more demanding" and additional regulation may be needed to push the adoption of cleantech. "It takes five to ten years to make changes to the Building Code," he said. "The houses being built today still look very much like those being built 25 to 30 years ago."

Panel 2: Investing in a Changing Climate

While the first expert panel looked at some of the investment opportunities that will arise during the transition to the low-carbon economy of the future, the second panel discussed where the money to fund all this work might be coming from.



Michael Koussaie, head of the Renewable Energy/Clean Technology Business Development Team at the

Toronto Stock Exchange and TSX Venture Exchange, said the public markets can cover

at least some of this. "On a macro level, the TSX is 'number four' in the world in terms of equity capital raised, trailing only the New York Stock Exchange, the NASDAQ and Hong Kong," he said. "There is a lot of money out there."

According to Koussaie, market capitalization in the cleantech sector has risen from \$6 billion at year-end 2008 to \$29 billion as of March 2015. And while the equity capital raised by cleantech companies on the TSX Venture Exchange has dropped in recent years, from \$183 million in 2010 to a low of \$59 million in 2013, the

"The only constant is change. The cleantech players will change and the technologies will change. We are probably 25 years into a 50-year process. In the future, we won't be using chlorine to treat water or collecting bio-wastes in raccoon-proof green bins. It's analogous to the evolution of the computer business. Today, my phone is more powerful than a computer that cost \$2 million back in 1969."

**– James Sbrolla,
Cleantech Capital Inc.**

amount "bounced up significantly in 2014 to \$129 million," he said, "which is a very good sign of risk appetite."

There are 121 listed cleantech companies on the TSX, more than on any other exchange in the world. These new and growing companies indicate strong support by the financial community, Koursaie said. The listed cleantech companies "trailed only the technology and the life science sectors in raising money," he said, "more than \$1 billion in each of the

last five years."

Cleantech is also going mainstream. "We are starting to see the lines blur between energy and green energy, between mining and clean mining, between tech and green tech," Kousaie said. "The market doesn't care whether Uber is labelled a great cleantech company or just a great tech company."

Green bonds to top \$100 b



Dr. Phillip Ludvigsen, Director of Carbon Advisory Services for KPMG Canada, believes "green bonds can be a

huge source of funding for cleantech." A green bond is a fixed income financial instrument for raising capital for green projects – such as renewable energy, low carbon transport or forestry projects – through the debt capital market.

According to KPMG's research, the labelled green bond market tripled in size between 2013 and 2014, with US\$37 billion issued last year. It is forecast that \$100 billion in green bonds will be issued in

Upcoming Events

September 10, 2015
ONEIA Advocacy meeting

September 23, 2015
**Purchasing Made Practical:
Cracking the sustainable supply chain**

Co-hosted with Mississauga's Research Innovation and Commercialization (RIC) Centre.

October 20, 2015
Environment Industry Day

Join us for an all-day event including MPP meetings (members only) in the Legislative Building at Queen's Park, as well as an afternoon of programming and the customary evening reception co-hosted with the Minister of the Environment and Climate Change. Stay tuned as registration will open later in the summer!



ONEIA is celebrating its 25th anniversary in 2016

To help us prepare, we are asking current and past members to comb through their files for any ONEIA-related memorabilia. We are looking for pictures, newspaper clippings, press releases, copies of ONEIA reports, even minutes of those early meetings. We would also love to talk with members from years' past so that we can share some of your stories and reminiscences on our website and upcoming issues of the newsletter. Please help us fill the gaps in our "institutional memory" as we celebrate the campaigns, camaraderie, challenges and successes of ONEIA's first 25 years.

Our 25th Anniversary Subcommittee has just begun planning. If you come across any ONEIA material, or have any ideas for other ways we can commemorate ONEIA's 25th birthday, please give Marjan Lahuis a call at the ONEIA offices at 416-531-7884, or send her an e-mail at mlahuis@oneia.ca.

2015. While banks and governments traditionally have been active in the market, there has been a sharp rise in the number of corporate green bonds issued. Much of this investment has been in clean energy, while "responsible investment is becoming an ever stronger driver," Ludvigsen said.

The cost of clean energy has plummeted in recent years, hitting a "turning point in 2013," Ludvigsen said, "the year capacity from clean energy sources surpassed that of fossil fuels."

"While many investors would still rather do a deal with the devil they know," he said, the long-term risks of high carbon fuels are much greater and the rewards are expanding for cleantech." In addition, companies that have higher ESG (environmental, social and governance) scores have a lower cost of capital.

Lots of great opportunities



James Sbrolla, President and CEO of CleanTech Capital Inc., said there is "some very smart venture capital out there.

There are a broad range of options and a tonne of money available if you have the right business."

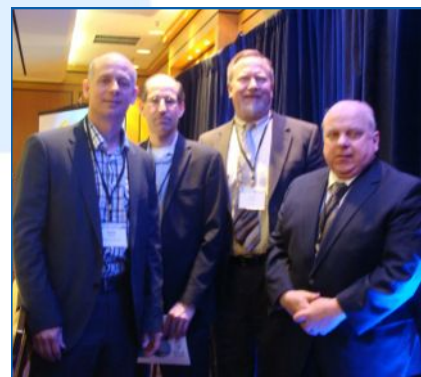
In January 2014, the firm launched a successful IPO raising more than \$1 million and is currently in the process of completing a "qualifying transaction." CleanTech Capital will target companies that are "already successful," with a profitable record and poised for accelerated growth. Sbrolla said there are

lots of good investment opportunities in:

residential, commercial and industrial recycling – "we're looking beyond the blue box"; water treatment and purification – "water's the next great scarcity"; alternative energy generation and recovery – "the lifeblood of future growth"; and environmental contracting and remediation – "dealing with the past, while preparing for the future."

You also have to invest in a professional management team that "knows more than you," Sbrolla said. "It's more important to pick the right team than the magic technology." A number of environmental companies that went public failed because they were guided by people outside the cleantech sector, he said.

However, Sbrolla warns that it is not always easy for start-ups to find the right investors. "You have to spend a long time at it, go to forums like this, meet people, collect cards," he said. "Successful entrepreneurs are successful because they work so hard."



Roundtable Round-up: Setting ONEIA's advocacy agenda



This year's roundtables attracted a roster of top bureaucrats and industry leaders to hash out solu-

tions for some of Ontario's most pressing environmental challenges. To encourage a frank and open exchange of ideas, the roundtable discussions are all "off the record." However, the chairs of each session provided summaries of the major issues raised and listed the priorities for on-going action by ONEIA and its members on some of these.

Brownfields I: Improving approvals system

The focus was on improving the system and guiding brownfields through the Record of Site Condition (RSC) process, resolving inconsistencies, and increasing confidence in the "Qualified Person" regime. The group also praised the MOECC for breaking down the silos between branches and improving internal communication.

1. Work with the MOECC on education and outreach.
2. Create a practitioners' group to engage with the MOECC and others.
3. Provide guidance on key issues.

Brownfields II: Dealing with excess soils

Topics discussed included: best management practices and the review of the excess soil policy; development of model bylaws

for municipalities; pilot programs for soil storage; a better definition of excess soil (i.e., whether it is "clean" or a "waste"); and matching supply and demand for excess soil that is categorized properly.

1. Support development of plain language documents for municipalities.
2. Clarify the role of Ministry of the Municipal Affairs and Housing in policy implementation.
3. Determine who is responsible for tracking soil movement and MOECC's role.
4. Set process for determining whether there is an invasive species in the soil (and what to do if there is).

Water I: Municipal markets

Topics discussed included: whether water was "getting lost" in the discussion on climate change; the different drivers for the potable and wastewater markets; and the need for a broader, more holistic approach to infrastructure investment.

1. Strengthen ties between water treatment and the government's carbon reduction mandate.
2. Clearly signal municipalities that they should adopt cleantech in water field.
3. Increase the number of municipal attendees at future events.
4. Celebrate progress (perhaps through an awards program that recognizes member innovation).

ONEIA welcomes the following new members

Covanta

A leader in sustainable waste and energy solutions, Covanta operates 45 energy-from-waste facilities worldwide, while offering a variety of industrial and municipal waste recycling and disposal services.

EnGlobe Corp.

EnGlobe provides contaminated site rehabilitation, organic waste and soil treatment, tank leak testing, and environmental engineering services through its subsidiaries — Biogénie, Tanknology, LVM, and Solution Soil Treatment Facility.

EnviroBlu Solutions Inc.

Manufacturers of EnviroBlu Multipurpose Cleaner Degreaser, a water-based, nontoxic and biodegradable industrial cleaner and degreaser.

Infrastructure Ontario

IO, an Ontario Crown corporation, provides a wide range of services, using alternative financing and procurement (AFP) and other delivery models, to repair, renew and rebuild public infrastructure and manage the province's realty assets.

PGL Environmental Consultants

Provides consulting services to industry, First Nations, the real estate sector and governments, including planning & sustainability, contaminated site management, environmental impact assessment, air quality and hazardous material management.

Jonathan Charron



Water II: Industrial water management

Topics discussed included: the extent to which municipalities need help managing industrial wastewater; the fact that data drives the market; and the role of government. Some participants noted this is the best opportunity for massive change in the past 30 years.

1. Propose an education plan for industry that quantifies costs, identifies risk and establishes that waste means money.
2. Be more aggressive with a government that is open to change and needs help to set priorities.
3. Develop a wastewater subcommittee to discuss regulations.

Waste I: Waste diversion

The discussion covered the pending waste legislation (which is expected this fall, with a strategy document to follow in 6-12 months). The focus will likely be on producer responsibility (which will be broadly defined) and waste diversion through the use of bans and levies.

Waste II: Organics

Areas of focus included: cheap cross-border disposal that serves as a disincentive for innovative organics management and diversion; extensive discussion on how to develop a collection and supply chain; and extended producer and generator responsibility.

1. Stay engaged with development of organics working paper.
2. Provide feedback following release of first draft of legislation.

Energy: Closing the gap

Our supply mix is fairly clean and there are only limited further reductions available in electricity production. However, past success could serve as a catalyst for other sectors (water, transportation, agriculture, certain industry sectors) where we could achieve significant greenhouse gas reductions.

1. Determine ONEIA's strategic position regarding energy.
2. Encourage cross-ministry relationships and integration of

clean energy and climate change concerns.

3. Provide analysis and tie government policy to business outcomes.

Approvals: Approvals reform

Topics discussed included: the use of the New Environmental Technology Evaluation (NETE) program to remove roadblocks and support new technology; improving timelines for approvals and reducing the current backlog; and ways to improve the approval of waste diversion, resource/energy recovery, and climate change-related technology.

1. Better promotion of new technologies through NETE and cross-ministry collaboration.
2. Identify additional options for stakeholder engagement and knowledge sharing.
3. Look for new ways ONEIA can offer engagement and consultation opportunities.

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