Canada’s Elusive Intersection

Kinder Morgan and the Trans-Mountain crisis
Elizabeth May questions Canada’s ability to meet Paris Accord agreement goals
Nurturing our growing cleantech business
FROM THE EDITOR

This edition of The Review explores important topics that have been dominating the headlines: the business of cleantech in Canada, energy, the environment, and Bill C-69.

More than a year after Budget 2017 announced significant funding to support the growth of the cleantech sector, Before the Bell and Dale Smith take a look at where we are and whether or not we are on track to achieve the objectives in “Nurturing Canada’s cleantech future.”

Shannon Watt, director of energy and health policy with the Chemistry Industry Association of Canada, writes that growing the cleantech sector in Canada must also include the chemistry industry in “Canada’s Clean Tech Future needs chemistry industry solutions.”

Susan Rohac, vice president, BDC Cleantech Practice, helps explain their role in supporting the growth of the sector in “Upping the ante for Canadian cleantech companies.”

Expanding on the theme of growing cleantech we shift to look at energy and the environment.

Green Party Leader Elizabeth May raises concerns over Canada’s ability to meet its commitments to the Paris Accord in “Mind the gap – How far off is Canada from Paris agreement goals?”

Dale Smith for the Sixth Estate takes a closer look at the issues of energy and the environment and questions if Bill C-69 will achieve its goals in “Energy and the Environment: Will Bill C-69 make a difference?”

In a closing feature, Dale Smith circles back to examine the impact Bill C-69 would have on the Trans Mountain pipeline project in “Energy and the Environment: Kinder Morgan in the Crosshairs.”

Table of Contents

Nuturing Canada’s growing cleantech future
BY DALE SMITH 2

Mind the gap – How far off is Canada from Paris agreement goals?
BY ELIZABETH MAY 7

Canada’s Clean Tech Future needs chemistry industry solutions
BY SHANNON WATT 3

Energy and the Environment: Will Bill C-69 make a difference?
BY DALE SMITH 9

Upping the ante for Canadian cleantech companies
BY SUSAN ROHAC 5

Energy and the Environment: Kinder Morgan in the crosshairs
BY DALE SMITH 10
Nuturing Canada’s growing cleantech future

BY DALE SMITH
Sixth Estate

The federal government made cleantech a priority in its 2017 budget and outlined $2.4 billion in investments to help Canadian companies. Before the Bell discussed the pressures that are influencing the growth of the cleantech sector in Canada and spoke with the stakeholders who are betting on it being the industry of the future.

Cleantech includes any technology, process, product, or service that reduces negative environmental impacts through significant energy efficiency improvements, the sustainable use of resources or environmental protection activities. It includes a broad range of technology related to recycling, renewable energy (wind power, solar power, biomass, hydropower, biofuels, etc.), information technology, green transportation, electric motors, green chemistry, lighting and more.

The Paris Climate Accord was seen as one of the biggest drivers of cleantech in Canada because it establishes a global framework that enacts increasingly stringent targets.

“That sends great signals to the marketplace, and it sends great signals to technology developers,” said Velma McColl, managing principal of Earnscleff Strategy Group. “It’s the most important thing for the long-term growth of cleantech in the world.”

Denis Leclerc, president and CEO of Éco-tech Québec, noted that the Accord is a work in progress.

“It’s going to take time, it’s going to take effort,” said Leclerc. “We will need collaboration between the financial sector, business and government.”

Scott Thurlow, lawyer and past president of the Renewable Fuels Association, said that there needs to be a mix of regulation and incentives from government in order to spur investment in the cleantech sector.

“I would warn against regulation unless it is exceptionally well-designed,” said Thurlow, citing the example where the previous government’s rules around renewable diesel actually drove emissions up because product was being shipped from Singapore to fill the mandated targets.

McColl said that the cleantech sector is far more mature and sophisticated than it was 10 or 15 years ago.

“We wasted a lot of political time saying you need to make a choice between incentives and regulations,” said McColl, noting that the issues are not about meeting minimum standards or compliance mandates. “If Canada is going to win at cleantech in the world, we need to be far more sophisticated. The core objective is getting to market and scaling up.”

Thurlow added that companies like Walmart have the ability to make decisions at a high level that can influence consumer choice, which is what will help adoption of the sector.

“You can create all of the best cleantech in the world, but if nobody wants to take it upon themselves to adopt it, you’re just going to go out of business,” said Thurlow.

Some of that drive toward adoption is being seen in the chemistry sector, said Shannon Watt, director of environment and health policy with the Chemistry Industry Association.

“We have a company in Sarnia that makes succinic acid – succinic acid is used in pharmaceuticals, cosmetics, plastics, paint coatings, everything. What’s so unique about this company is they’re using plant-based feed stocks, so it’s a bio-succinic acid that’s identical to the original succinic acid,” said Watt. “We have another member who recently opened a plant – if you think of polystyrene foam, we use it once, we can’t recycle that. A new plant opened up with the goal of recycling polystyrene foam. There are real opportunities for innovation in the chemistry industry.”

To help cleantech companies grow, the Business Development Bank of Canada (BDC) hired a dedicated team to disburse the money allocated to cleantech in Budget 2017.

“It takes a different skill set than what the bank already had, and we needed dedicated people who had cleantech experience — experience in doing financial modelling for more complex companies, and we’ve got a really good team in place now,” said Susan Rohac, vice president of growth and transition capital at BDC.

Rohac said that the bank has the infrastructure and systems in place to help cleantech companies ramp up quickly, as well as the partnerships with like-minded organizations that also want to support cleantech companies.

“It takes a lot of different players to raise a cleantech company,” said Rohac. “Government plays a role, and we’ve got to see the private sector, chartered banks and venture capitalists step up as well. We’ve got to see corporations step in and support these companies and we’re starting to see that in the deals we’re doing.”

Once companies are up and running and have sufficient capital to get them past the “valley of death” phase most start-ups hit, Export Development Canada says that they are committed to deploying $2 billion in export credits for cleantech by 2020.

“It’s a sector that’s very internationally focused,” said Carl Burlock, senior vice-president and global head of financing and investments with Export Development Canada. “Since 2012, EDC has supported over $3.5 billion in clean technology exports to over 100 countries. That level of activity reflects what’s happening in the global cleantech sector.”

Burlock noted that by some estimates, cleantech was a $1 trillion sector globally last year, with the potential to grow to $2.5 trillion by 2020. To that end, the federal government is looking to deploy what tools it can to support cleantech through its entire life cycle.

“We’re very cognizant of that scale-up challenge in the innovation sector generally,” said David Lametti, MP for LaSalle-Émard-Verdun, QC, and Parliamentary Secretary to the Minister of Innovation, Science and Economic Development.

“With a variety of different tools, with a variety of different partners, we are trying to see that life cycle through and make sure that Canadian companies can have the initial research, do the initial start-up, get to scale-up, and hopefully be getting to export and being leaders on the world stage,” said Lametti.
Canadians and policy makers are seeking to transition to the low-carbon economy and address the challenges of climate change. Canada’s chemistry sector and its highly skilled workers are uniquely positioned to deliver the solutions.

Canada’s chemistry industry is the fourth-largest manufacturing sector in Canada, directly responsible for 87,000 jobs while supporting another 525,000. From building insulation to solar panels, the products that will help move society to a more sustainable future need chemistry. But the industry is also looking internally to reduce its ecological footprint. By implementing best-available technologies, the sector has been able to reduce its greenhouse gas (GHG) emissions by 67 per cent since 1992.

Chemistry enables green technology

In Canada, the building sector is responsible for 40 per cent of GHG. Chemistry products such as insulation, window coatings, reflective roofing and other innovative chemistry-based materials dramatically lower these emissions by reducing heat loss and the demand for cooling.

Reducing GHG in transportation also provides opportunity for innovation. Lighter vehicles, alternative fuels and moving to electric vehicles will depend on advances in materials, fuel and energy storage developed through chemistry.

Chemistry is also a critical part of nearly every renewable power generation source. From the composite materials in wind turbine blades, to solar panels and batteries, chemistry is essential.

Canada’s chemistry sector is moving us to a low carbon future

Canada’s abundant, low-carbon resources, such as natural gas and natural gas liquids, hydroelectricity and biomass, enable chemistry products that are 80 per cent less GHG-intensive than those from some
The Canadian chemistry sector is doing even more to reduce its ecological footprint by implementing green technology at its facilities. Canada’s modern and highly innovative chemistry facilities include continuously upgraded equipment, re-engineered processes and products, and one of the lowest GHG-intensive national electricity grids.

We can do more

With the right policies and support from government, the chemistry sector could attract $25 billion in new investments by 2025. The positive impact of this new investment will not only spur economic growth and drive innovation — it will leverage the already considerable contribution that the Canadian chemistry sector makes in meeting rapidly growing global market demand for chemicals with the lowest carbon production available.

Read more in our report Chemistry: Essential to Canada’s Transition to a Low-Carbon Energy Future at canadianchemistry.ca

Shannon Watt is the Director of Environment and Health Policy at the Chemistry Industry Association of Canada (CIAC).

Contributed to the Sixth Estate – The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Sixth Estate.
Innovative Canadian clean technology firms have the potential to not only advance Canada’s sustainable economy, but also to drive clean growth across the globe. Despite Canadian cleantech entrepreneurs being best in class, they continue to face difficulties scaling their business. With its mandate to support these companies announced in Budget 2017, BDC is poised to help Canadian cleantech companies overcome this hurdle.

BDC has a long history of investing in cleantech both directly and indirectly, particularly in venture capital. Through our Industrial, Clean and Energy Technology Venture Capital Fund with $287M capital under management, we have been investing in cleantech start-ups with global potential for 16 years. We also invest indirectly through leading cleantech VC funds and provide term debt and other financing to cleantech firms.

Building on this experience, Budget 2017 announced BDC’s $700-million, five-year commitment to the cleantech industry to help Canadian cleantech firms grow. This new capital allows BDC to take on more risk and provide debt and equity financing to help cleantech companies overcome barriers to scale and better compete globally.

Selection criteria include commercially demonstrated or market-ready technology generating positive environmental impact, substantial revenue growth potential, and management ambition and capacity to scale up.

While access to capital is key, we also know that it is not the only piece of the Canadian cleantech puzzle. These firms require more than just money to succeed. Getting the proper advice can be a game changer. Given this, our cleantech practice is also leveraging our network of highly seasoned executive advisors to provide tailored advisory services.

We also know that navigating the vast number of programs and initiatives available can be overwhelming for companies. This is why partnerships and collaboration across the ecosystem are of vital importance for providing coordinated support. We are working closely with Export Development Canada, Sustainable Development Technology Canada, the Clean Growth Hub and others in order to take a team approach to growing Canadian cleantech champions.

Spearheading this entire initiative, we have created a new national multidisciplinary team fully dedicated to cleantech. We were proud to recently announce the team’s first four investments, totalling $40 million. These are investments are in leading scale-ups covering a diverse range of technologies, including biofu-

Our intent is to back the best in Canadian cleantech and our endgame is a commercially self-sustaining cleantech industry that catalyzes ever-greater institutional investment."

— Susan Rohac

BDC

CONTINUES ON PAGE 6
els, plastics recycling, heavy oil upgrading and remote GHG sensing.

These four investments are just the beginning. Our intent is to back the best in Canadian cleantech and our endgame is a commercially self-sustaining cleantech industry that catalyzes ever-greater institutional investment. BDC is proud of the role it can play to help our most promising companies scale into global cleantech champions.

BDC is the only bank devoted exclusively to entrepreneurs. It promotes Canadian entrepreneurship with a focus on small and medium-sized businesses. With its 118 business centres from coast to coast, BDC provides businesses in all industries with financing and advisory services. Its investment arm, BDC Capital, offers equity, venture capital and flexible growth and transition capital solutions. BDC is also the first financial institution in Canada to receive B Corp certification. To find out more, visit bdc.ca.

CONTINUES FROM PAGE 5

Catherine Clark, David Lametti, MP La Salle-Émard Verdun, QC, Parliamentary Secretary to The Minister of Innovation, Science & Economic Development, Carl Burlock, Senior-Vice President & Global Head, Financing & Investments, EDC, Susan Rohac, Vice President, Cleantech, BDC and Shannon Watt, Director of Environment & Health Policy at Chemistry Industry Association.

THE GREEN ECONOMY.
Brought to you by chemistry.

As we transition the economy towards 100% renewable energy, did you know members of the Chemistry Industry Association of Canada play a critical role? Their plastic innovations contribute to wind turbine blade components that are lighter, stronger, longer and more cost-effective. In fact, over 7 tonnes of plastic resin can be found in a single 17 tonne wind turbine.

That’s good chemistry!
MIND THE GAP – HOW FAR OFF IS CANADA FROM PARIS AGREEMENT GOALS?

On March 27th, Commissioner for Environment and Sustainable Development, Julie Gelfand, issued an historic report. It was the process more than the subject matter that made it historic. For the first time ever, the federal Auditor General working with provincial and territorial auditor generals, turned their attention to a single issue and prepared a coordinated audit.

The issue was climate and the audit was not encouraging. Canada’s governments are not on track to achieve our climate targets. Measured against Canada’s current target – 30% below 2005 levels by 2030 – we are 66 mega tonnes short.

Since the report’s release, our Minister for Environment and Climate Change has been dismissive. She claims the report does not reflect our current reality; that it is backward looking. But the federal auditor is only reporting Environment Canada data when it comes to the gap. We are not on track to hit the 30% below 2005 levels by 2030 target. The audit looks at what is being done in measurable ways. Only five federal departments out of 19 federal departments and agencies have even conducted a review of the risks to government assets posed by the climate crisis.

What makes this even more distressing is that the target (30% below 2005 by 2030) is not consistent with the Paris Agreement. It is far too weak for Canada to do its fair share of reducing Greenhouse Gases (GHG) consistent with the Paris target — much less to claim global leadership.

The huge gap is that the Paris Agreement is more a framework for future action than a blueprint to avoid climate disaster. The Paris Agreement overarching target is to try to hold global average temperature increase to 1.5 degrees C above what it was before the Industrial Revolution, and, if that goal is missed, to as far below 2 degree C as possible. Every nation within Paris (all nations on earth, including the USA) have filed their targets (described as “NDCs” – “nationally determined contributions”) with the UN secretariat on the UN Framework Convention on Climate Change (UNFCCC) The UNFCCC was negotiated and signed back in 1992 at the Rio Earth Summit. Every climate negotiation since then has been conducted within the umbrella of the UNFCCC. Paris differs from Kyoto in that the targets

CONTINUES ON PAGE 8
in Paris are not part of the text of the agreement. Every nation can change the target any time, but only to “ratchet up.”

On the eve of Paris, all the NDCs were reviewed by the international scientific body (the IPCC) and the numbers were crunched to see how far the current targets would get us to our goals. The news was not good. The 2015 goals took us to a range well over 2 degrees and to above 3 degrees. Clearly, current targets are inadequate.

Minister McKenna confirmed that in Paris, describing the 30% below 2005 by 2030 left in place by the Harper administration was weak. She described it as “the floor” and said we would do better. But within a year, the floor was the ceiling, and the entire Pan-Canadian Framework is built around the Harper target.

And now it is confirmed we are not on track to meet that target.

Good intentions are not enough. We need bold climate leadership.

Elizabeth May is the Member of Parliament for Saanich—Gulf Islands, British Columbia, and Leader of the Green Party of Canada.

April 12, 2018 Before the Bell host Catherine Clark in conversation with Julie Gelfand about her recent report.
Energy and the Environment: Will Bill C-69 make a difference?

BY DALE SMITH
Sixth Estate

he Trudeau government’s centrepiece environmental legislation — Bill C-69, the Impact Assessment Act — is currently undergoing debate. But as the government proceeds with its pitch that being strong on the economy and strong on the environment go together, are business and environmental groups actually sold on the policy?

Anna Johnston, lawyer with West Coast Environmental Law, said that C-69 has many promising elements, notably the fact that it brings the public and other constituencies — including Indigenous communities — into the dialogue at earlier stages and includes a sustainability test. But there remains a problem for her.

“Everything is permissive in the Act, so at the end of the day we don’t know if decisions actually make sure that projects are going to help Canada meet its Paris Agreement obligations, whether they’ll contribute to sustainability, or whether the public will be meaningfully engaged as the early stage intents,” said Johnston. “We’re going to have to wait and see.”

Rachel Curran, who was an advisor in Stephen Harper’s PMO and is now a principal with Harper and Associates, noted that the timelines in the bill are potentially indefinite.

“Part of the thinking behind the Harper Government’s changes to the environmental assessment rules was to at least give investors a firm timeline by which they could expect a decision — not necessarily a positive decision, but a decision,” said Curran. “The new legislation extends that timeline potentially indefinitely.”

Jacob Irving, president of the Energy Council of Canada, said that for the pipeline industry in particular, they feel like they are on a “razor’s edge,” and are worried about the future of pipelines in Canada. Other members of the industry are concerned about the timelines and are exploring how to make them more stringent and predictable in order to encourage investment.

“Even in the best construction of a regulatory process, there are all kinds of potential off-ramps and unintended consequences that could arise once you start living it,” said Irving. “That’s the same no matter who you have in government and how they may change a regulatory process.”

Irving added that ministerial discretion can also throw uncertainty into the process, but it can similarly offer salvation to some proponents who feel that they are losing the process otherwise.

That question of discretion is why environmental groups are unhappy with the bill, says Stephen Hazell, director of conservation and general counsel at Nature Canada.

“Having certainty at the political level is super important and we don’t have that with the bill,” says Hazell, adding that it makes it hard to judge intentions, and that while every government likes to have more discretion, the business and environmental communities like rules.

“Impact assessment is about providing information for decision makers so that we can make sound decisions,” said Hazell. “The Impact Assessment Act that has been proposed is a good step.”

Bill C-69 also implements the federal climate price backstop that will be imposed on provinces that don’t have their own carbon pricing mechanisms. For Craig Stewart, vice-president of federal affairs with the Insurance Bureau of Canada, this is essential because his industry believes that in order to affect change, there needs to be a price on carbon.

“We’re experiencing the effects of climate change now,” said Stewart. “Right now, Canadian taxpayers are paying billions in losses from disaster assistance, through upgrading infrastructure because essentially, we’re seeing the effects, and our industry is losing a billion [dollars] a year from events we’re seeing like the floods here in Gatineau, the fire in Fort McMurray in 2016, and the Calgary and Toronto floods in 2013.”

While groups like the Canadian Taxpayers Federation estimate that Canadian households could pay an additional $400 to $900 per year under the proposed carbon taxes, depending on their electricity provider, Stewart says that it’s less than they would be paying in terms of other tax dollars to deal with climate change, whether it’s municipal taxes to upgrade storm water infrastructure to deal with increased flooding or relocating critical infrastructure.

“As insurers, because we are suffering billions in losses right now, we have to look at how that’s going to affect insurance policies,” says Stewart. “The costs are here. The cost of inaction is far more than the cost of action.”

Julie Gelfand, Commissioner of the Environment and Sustainable Development, noted that in her recent report on how governments around the country are working to reduce their greenhouse gas emissions, only Nova Scotia and New Brunswick were on track to meet their 2020 targets, and that most governments are nowhere near ready to adapt to increased flooding and forest fires and rising sea levels.

“Canadians, therefore, are not ready,” said Gelfand.

Gelfand added that governments across the country need to do more risk assessments, noting that the federal government has $66 billion in assets that are not assessed for climate change risks.

“They should be assessing the risk and then developing adaptation plans so that they are ready when these changes are going to occur. They are occurring right now,” said Gelfand.
Energy and the Environment: Kinder Morgan in the crosshairs

BY DALE SMITH
Sixth Estate

With the drama ramping up between British Columbia and First Nations on one side and Alberta and Ottawa on the other over Kinder Morgan’s proposed Trans Mountain pipeline expansion, a Before the Bell panel looked into what’s at stake, both in the immediate impasse and in the longer term.

Rick Anderson, principal with Earnscliffe Strategy Group, surmised that the current pipeline debate is chiefly a disaster for business and investment in Canada.

“We talk about investor confidence but we also talk about political risk,” said Anderson. “Major corporations from around the world look at countries as places to invest, and Canada has traditionally been a pretty stable place on that score. We’re now getting into a zone where decisions we make in the legal process, or the political process, or the regulatory process, can no longer be relied upon by investors.”

Anderson said that — especially when it comes to energy projects — Canada now demonstrates a high level of political risk.

CONTINUES ON PAGE 11

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— Rick Anderson
Earnscliffe Strategy Group
“I don’t think there’s much risk for political actors,” said Rachel Curran, principal with Harper and Associates, noting that she doubts either of the two premiers or even the prime minister will necessarily pay a heavy political price for the brouhaha. The Canadian economy, however, will pay the price as we are still dependent on resource development for export, Curran asserted.

“We are one of the best countries in the world for developing resources safely and responsibly and getting them to global markets in a safe way,” said Curran.

Curran said that Canada removing itself from the resource development game is a shame, as it represents more than 50 percent of our export market. She believes that this is leading to a flight in foreign capital, with investors unwilling to take on the risk of resource development projects.

“One of the major reasons is we can’t get these projects done,” said Curran. “That’s bad for business, it’s very bad for our economy, and ultimately it will be bad for future generations.”

That prediction of capital flight was disputed by Craig Stewart, vice-president of federal affairs with the Insurance Bureau of Canada. Stewart said that foreign capital may be balking at energy projects not because of what is happening in Canada around pipelines like Trans Mountain, but rather because they are diversifying and moving away from riskier, environmentally unsound investments.

“There is a shift in capital moving away from these twentieth-century projects to new twenty-first century projects,” said Stewart. “It’s happening globally, and our members are diversifying around the world.”

Anna Johnston, a lawyer with West Coast Environmental Law, conveyed her sense is that if built, the Trans Mountain expansion would be a disaster for future generations.

“It was a preventable issue,” said Johnston. “With greater engagement with Indigenous peoples and the public in advance of the project in the very early stages, before any major design decisions were made, before any environmental approval decisions were made and even before leaders and government started to champion the project, had there really been a genuine dialogue, then we might have been able to prevent this issue from the very beginning.”

Johnston said that alternatives could have been found if they were at the table earlier, but even if the pipeline ultimately doesn’t get built, it won’t affect the country’s GDP in a significant way.

Johnston says that any investor uncertainty happening right now is because of the country’s broken environmental assessment system, which is why the proposed new system under Bill C-69 shows promise.

But would the Trans Mountain expansion be approved if it had been assessed under Bill C-69? Johnston is unsure.

“That’s one of the fundamental problems with the Act,” she said. “We don’t have that policy direction from the outset. We don’t know whether projects that are clearly contradictory to our climate obligations and are opposed by Indigenous peoples and the public, whether they would go through.”

Curran is also unsure, and doubts that a proposal would have even been made.

“I don’t think a company would frankly enter in the process at all,” Curran said.

Curran noted that the pipeline is supported by 50-plus First Nations who have signed benefit agreements with the company, and that it has the support of the majority of British Columbians.

“With this legislation, it will make it even harder to get these projects done,” said Curran.

Anderson pointed out that the pipeline industry association has also stated that there wouldn’t have been an application under the new system.

“There might be a permit if it went through the application process, but would they find themselves in the same situation with a permit that they feel they can’t proceed with?” Anderson asked.