March 9, 2017

Parliamentary Committee on Natural Resources

Room 415, 180 Wellington, Ottawa, ON

The RNNR committee is conducting an assessment of policy instruments designed to de-risk the adoption of clean technology in Canada’s natural resources sectors.

Speaking Notes

##### Celine Bak, President of Analytica Advisors

Bonjour mesdames et remediating or preventing environmental damage et merci. Il me fait plaisir de comparaitre devant le comité permanent des ressources naturelles.

I will start with a brief introduction on the Paris Agreement and on the nature of clean technology firms, will address three barriers to adoption of clean technology and will make three specific recommendations to de-risk its adoption.

Despite the collective ambitions that yielded the landmark Paris Agreement, and despite the enhanced commitments to climate action by countries embodied in their nationally determined contributions (NDCs) including Canada’s, the world is still far away from a collective plan to keep global temperature increase to well under 2°C. I would like the committee to know that after Russia and China, Canada’s is the world’s third most GHG intensive economy on a GDP basis, the most GHG intensive economy in the world on a per capita basis and the ninth largest emitter in the world, in absolute terms. Therefore, your work on de-risking clean technology adoption is vitally important.

In regards to clean technology innovation, Canada invests a great deal in de-risking technology whose primary purpose is remediating or preventing environmental damage. According to firm-level research, in 2015, 28 percent of R&D for Canada’s over 800 clean technology companies was **publically funded.** And two thirds of Canadian clean technology firms are engaged in commercializing their products, that is to say they have **proven that the technology works at scale** and are looking for the markets where they both can improve environmental performance and ALSO either:

1. Increase revenues, or
2. Reduce costs

(This is because there is rarely today in Canada a price on pollution, or said another way, remediating or preventing environmental damage is not enough).

The committee’s work on methods for de-risking technology is vital and I would like to focus my remarks on recommendations to de-risk **the markets** for these solutions. This is because clean innovation solutions, are ready now *before* markets for these solutions have formed, and this due to Canadian investment programs during the past 15 years.

Clean technology firms operate capital-intensive business models because they invest in all three of R&D, manufacturing and distribution. [[1]](#footnote-1)

I will speak about three risks to the adoption of their solutions:

**First, there are no net prices on carbon pollution, because of fossil fuel subsidies in place today**

Clean technology firms operate where prices for the commodities they replace (including energy derived from Oil & Gas) are volatile and where prices for the externalities they reduce such as carbon, are in fact still negative. Yes, we will have negative carbon prices in Canada for some time. This is due to Canadian tax expenditures in the form of subsidies to the fossil fuel industry. In Canada these tax expenditures, under the most conservative method are $3.3 B in direct fiscal subsidies and $3 B in publically funded loans.

**Second risk to adoption of clean technology solutions: Regulators assume no innovation in setting environmental performance standards**

Canada does not have accountability mechanisms requiring that environmental regulation, whether federal or provincial, stipulates that best available technology is used as the benchmark to establish environmental performance standards. This means that when methane regulations are established, today, there is no requirement to consult with either academic researchers or clean technology firms, to ensure that regulatory standards reflects what is made possible by innovation. In the US, civil society ensures this happens. In Canada, it is not yet the case.

Also, where permits and approvals are required to implement new technologies, delays are lengthy because authorities grapple with assessing new innovations based on precautionary principles and legacy technologies.

If we were to imagine clean technology firms in a sports league, we should picture, on the one hand, a newly established and very talented team of millennials playing on a field not yet served by lighting, a stadium or a transportation system for spectators. Their older baby boom opponents, on the other hand, are playing on a covered and level field, well-lit and well served by public transportation and other regulatory infrastructure.

**As a third barrier, infrastructure investments predetermine how electricity, mobility, water and wastewater services should be delivered and therefore tilt the playing field away from innovation towards legacy solutions**

Meeting environmental protection goals such as Canada’s commitment to the Paris Climate Agreement will require investment in infrastructure, and innovation can play a role in this to both improve performance and reduce costs. But today, Canada has no mechanisms to stimulate the adoption of best available technology as part of project assessments for infrastructure.

**I’d like to make three proposals for Canada**

Increasingly stringent standards for energy infrastructure

In November 2016, Environment and Climate Change (ECCC) Minister Catherine McKenna set an aspirational (i.e. non-binding) goal for Canada’s electricity sector to be 90% non-emitting by 2030.  Already at 83%, getting to 90% will be achieved largely through the government’s proposed coal phase-out, which currently accounts for roughly half of Canada’s electricity sector emissions.  If natural gas is the primary replacement fuel for coal, getting beyond this target will be difficult to achieve.  Decisions made in the next decade will determine whether fossil fuels “lock-in” will create a stranded assets barrier to achieving decarbonization. Increasingly stringent performance standards will derisk markets for technological innovation in the natural gas industry.

**Second, a principles based approach to Capital Cost Allowances**

Today, fiscal advantages are in place for the fossil fuel industry and for the sectors that can lobby to their advantage. If our tax code was subjected to a principles-based assessment of its alignment with our Paris Treaty obligations, these tax expenditures would be identified and could be redeployed better to serve the public. Through transparent outcome- and performance-based principles, the market for innovation would be de-risked.

**Thirdly, Full Cost Accounting for Infrastructure including a price on carbon for the length of its useful life**

In establishing criteria for long lived infrastructure, full life cycle cost accounting for these projects, including a shadow price on carbon for the life of the project, will stimulate innovation. This combined with the principle of “best available technology” will ensure value for money while de-risking markets for innovation.

**I applaud the committee’s work on de-risking clean technology adoption and look forward to your questions.**

##### Referred to during questions:

Eliminating fossil fuel subsidies has been undertaken by Indonesia.

Carbon pricing schemes are now in place in 40 countries.

When it makes sense, public procurement through carve-outs for SMES can be used to derisk markets for innovation and is a core practice of US government operation.

For example :

US regulations promulgated under the authority of section 15 of the Small Business Act (1958) authorize agencies to set aside contracts for small businesses generally. With respect to subcontracting requirements, Public Law 95-507 changed the emphasis from voluntary to mandatory and from “best efforts” to “maximum practicable opportunity” for prime contractors with regard to their subcontracting obligations from SMEs. The US is a signatory to the plurilateral Government Procurement Agreement at the WTO.

1. Think of how Henry Ford, and Massy Fergusson established the concept of dealerships for their products. Their dealers put forward their homes as security for loans to put the automobiles and tractors on display and available for test drives. [↑](#footnote-ref-1)