Enerkem

August 5, 2016

Honourable Wayne Easter, Chair
House of Commons Standing Committee on Finance
Sixth Floor, 131 Queen Street
House of Commons
Ottawa ON K1A 0A6

Dear Honourable Wayne Easter,

Enerkem is pleased to contribute to the House of Commons Standing Committee on Finance's pre-budget consultation process. We have identified several federal actions and initiatives through which the Government of Canada could stimulate nation-wide economic growth by unlocking the potential of high-impact cleantech businesses.

We would like to begin by saying we are pleased to work with a government that recognizes the potential and strength of innovation in building homegrown cleantech and export success stories that provide jobs in Canadian communities and a better future for a growing middle-class.

Enerkem's proprietary clean technology was developed in the labs of the Université de Sherbrooke. It has been scaled commercially to convert non-recyclable municipal solid waste into low carbon transportation fuels and green chemicals such as ethanol and methanol, reducing greenhouse gas emissions produced in the transportation and chemical sectors and in landfills.

As a leading Canadian global cleantech company, Enerkem has a proven and practical perspective on how Canada can build the commercial growth in cleantech and other innovative industries through smart policies that place the environmental well-being of our communities at the heart of a progressive economic vision. Our workforce of 200 employees have an industry-leading expertise into the opportunities and obstacles that lay ahead in the cleantech sector, which will be outlined below.

Our successful, modularly constructed biorefining facilities in Alberta and Quebec are the export models on which our team is building a growing portfolio of partners and projects in Europe, North America and China. We are poised to unlock the next stage of our growth trajectory, and we look forward to working with the Government of Canada to remove obstacles to growth and help lead the next generation of Canadian success.

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Enerkem and the Economy

Enerkem contributes significantly to the Canadian economy, designing and delivering advanced biorefineries with a standardized modular build process that is perfectly suited for domestic expansion and export. Enerkem Alberta Biofuels, located at the Edmonton Waste Management Center, is the world's first commercial biorefinery to use municipal solid waste to produce biomethanol and bioethanol. The facility began producing its annual capacity of 38 million liters of biomethanol with a 25–year feedstock agreement with the City of Edmonton. . Product expansion with ethanol is planned for 2017.

An independent study by Doyletech Corporation evaluated the economic impact of the Enerkem Alberta Biofuels facility at 610 direct and indirect jobs during facility construction, 152 direct and indirect permanent jobs, a $199 million Canada-wide economic stimulus and a $64.5 million net annual economic spending increase in the local area.

In addition to its current workforce, Enerkem plans to grow by approximately 50 jobs in the next 12 months across its Montreal headquarters, Sherbrooke engineering and innovation campus as well as its Edmonton operations facility.

Enerkem is moving ahead on its Vanerco facility to be co-located with a conventional biofuels production facility (GreenField) in Varennes on the South Shore of Montreal. The high-impact company is also developing projects with international industrial partners in Europe, North America and China.

To fuel its growth, Enerkem has attracted private capital from investors who are leading Canadian and U.S. industrial, institutional and cleantech investors such as Rho Capital Partners, Waste Management, Braemar Energy Ventures, Investissement Québec, Cycle Capital, Fonds de solidarité FTQ, The Westly Group and Fondaction.

Enerkem and the Environment

With a goal of bringing eight regional facilities on line in four regions by 2030, Enerkem will be successful in creating an estimated CO_2 equivalent reduction of ~880,000 tonnes in Canada alone. GHG emissions reductions mainly come from the displacement of gasoline in automobiles and the avoidance of methane created by landfills.

Enerkem's thermochemical process requires relatively low temperatures and pressures, which reduces energy requirements and costs. Our facilities help diversify the energy mix and make greener everyday products while offering a sustainable and economical alternative to landfilling, incineration and petroleum-based fuels and chemicals.

The Commercialisation Challenge for Canadian Cleantech: The Capital Gap

Innovative clean technologies like Enerkem's face a significant challenge to scale up from demonstration scale to commercial roll-out. While federal government support for innovative clean technology at the R&D and pilot/demo scale is excellent, and measures are also in place to facilitate financing for mature technologies, support is lacking for the roll-out of the first commercial facilities. Private sector financing opportunities are also lacking at this crucial stage in the commercialisation of new clean technology as the financing risks are often considered too important for banks to provide loans and for venture capital firms to invest equity. Addressing this financing gap is essential to stimulate cleantech investments, create significant job opportunities and directly contribute to meeting the government's goal of generating economic growth through expanding green infrastructure and reducing greenhouse gas emissions.

Proposed solutions – Tax innovation and capital programs to address financing gap and drive investment for the scale up of green private infrastructure

The Government of Canada has an opportunity to support the growth and scale-up of Canada's clean technology sector through a number of fiscal measures and capital programs that can stimulate private investment in the sector. These measures would help address the negative impacts of the current financing gap and help launch the construction of break through commercial cleantech plants and establish Canada as a home to progressive global leadership on the economy and the environment.

Enerkem's experience raising capital and scaling technology to commercial applications has revealed a number of areas where the Government of Canada can provide leadership to unleash large-scale economic benefits. The following practical solutions can help Canada harness the potential of a growing cleantech sector:

1) **Provide organisations such as Export Development Canada (EDC), Business Development Bank of Canada (BDC) and the regional economic development agencies such as WED, DEC, FedDev and ACOA, clear**

direction to more effectively engage with the cleantech industry in order to help the sector raise the capital needed in the commercial deployment. By offering greater flexibility in the financial instruments available to cleantech companies, these federal organisations would help grow innovative cleantech companies at this critical stage where they are ready to build their first wave of large-scale projects but are still too early in their commercial deployment to access debt and finance their growth via traditional project financing. These agencies should also leverage the technical and commercial expertise of Sustainable Development Technology Canada (SDTC).

2) **Create a cleantech capital program for the commercial scale-up of innovative clean technologies.** The federal government has currently no cleantech funding programs after the R&D, pilot and demonstration phases. For these pre-commercial phases, Sustainable Development Technology Canada (SDTC) plays an important role and we strongly support the continued capitalization of SDTC. In order to address the current gap for the first wave of commercial facilities, we believe that capital programs—which can be in the form of grants, loans with no or low interest rates or loan guarantees—would directly stimulate private investment and share with private investors some of the risks associated with innovative technologies before they reach a certain level of commercial maturity. These programs should be managed by SDTC (or by Innovation, Science and Economic Development (ISED) and Natural Resources Canada (NRCan)). These types of programs have been effective in other countries such as the United States.

3) **Leverage existing financial infrastructure to create a unique, Canadian-made flowthrough share system (FTS) that would invest in cleantech industrial projects** and could require a greenhouse gas emissions reduction threshold in order for projects to be eligible. Canada would innovate with such an enhancement or redirection of its FTS system, which is today benefiting the oil, gas and mining industry. The risks associated with scaling up transformative cleantech innovation are comparable to exploration risks. The government should consider facilitating access to the capital coming from our high net worth Canadians and currently going to our mature resource–based sector instead of our growing clean innovation commercial-ready sector. This would send a clear signal to investors and enable the transition from a resource-based economy to a more innovation-based economy.

4) **Exempt advanced (second generation) ethanol from the federal fuel excise tax.** Conventional biofuels benefited from this incentive prior to 2008 and natural gas and propane, when used as a transportation fuel, are currently exempted from this tax. This cost-effective measure can not only help attract private investment but will also increase the competiveness of the Canadian advanced biofuels industry (incl. cellulosic ethanol) with those of the U.S. and Europe (E.U.) and directly contribute to greening our transportation sector.

5) **Expand the Renewable Energy Capital Cost Allowance to include advanced biofuels equipment** and other equipment for carbon reduced energy sources as well as equipment for biorefineries producing bioproducts. It is currently limited to stationary renewable energy.

In conclusion, Canada is facing a time-limited opportunity to establish a commercial cleantech sector that moves the needle as an economic force to change the future and well-being of communities from coast-to-coast-to-coast. Canada's applied science researchers, regional startup ecosystems, and investment sectors are among the best in the world, however there are still too many obstacles slowing the growth trajectories of companies hoping to follow Enerkem's path of significant job creation and positive environmental impact.

Enerkem's real-world growth which has been fuelled by $324 million in private investments, and our domestic and export growth profiles are demonstrating how a Canadian global cleantech company can change the marketplace. The Government of Canada has the opportunity to act now to help coordinate and enhance the many strengths and assets in this country's cleantech sector. As Canadians, we could be on the verge of creating the next wave of success stories like Enerkem, and we look forward to working with partners in the federal government to help foster these next stages of success.

Thank you for considering Enerkem's contribution to the House of Commons Standing Committee on Finance's pre-budget consultation process. If you have any questions or would like to discuss further please do not hesitate to contact me at (514) 875-0284, ext. 230.

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