



August 4, 2016

Parliament of Canada  
House of Commons Standing Committee on Finance  
finapbc-cpb@parl.gc.ca

**Carbon Tax Policies:**

**Carbon Capture Tax Credit (CCTC) Proposal for Federal Budget 2017**

***CCTC Proposal***

This Pre-Submission for the Federal Budget 2017 has been authored to propose the development of an Carbon Capture Tax Credit (CCTC) as a new fiscal incentive to support access to capital for Canadian Carbon Capture (CC) projects. The CCTC, a 20% tax credit, would be available to all Canadian investors who invest in eligible Canadian CC projects.

The 20% CCTC is designed to stimulate demonstration projects in all sectors of the economy and all regions of Canada. In particular, the CCTC is targeted at smaller operations in the areas of Transportation, Manufacturing, Real Estate, Mining, Forestry, Oil and Gas, Technology, Agriculture and Waste Management. Canadians would be encouraged to support and invest in projects that have the potential to initiate a CC pilot plant and possible commercial scale operations.

The term Carbon Capture (CC) compared to Carbon Capture and Storage (CCS) technologies is distinguished to reflect an updated view that Carbon Capture solutions should also focus on converting CO<sub>2</sub> to usable products such as: i) alternative cement, concrete and building materials; ii) chemicals for industrial and consumer products; and iii) low carbon fuels. The CCTC would also apply to long term CO<sub>2</sub> Storage solutions in deep sedimentary deposits or mineral carbonate sinks where the emphasis is not on producing a carbon based commercial product.

Eligible projects would exclude large scale electricity production projects as this area has many existing initiatives that are reducing greenhouse gas emissions and increasing the mix of renewable energy electricity supplies. Generally, these large projects have the infrastructure and expertise to develop specific proposals for governments.

The CCTC is designed to work in conjunction with provincial and federal carbon tax policies that will be generating substantial tax revenue at initial levels in the \$30 per tonne range. Coincident investment funds for these CC projects will be sourced from individuals, corporations, investment funds, RRSPs, Pensions, TSFAs and general capital.

The initial federal 20% CCTC will help to initiate analysis of additional follow on policies such as coincident provincial tax credits and the inclusion of the certain CC expenditures for Flow Through Share eligibility as currently exists in the Mining, Oil and Gas and Renewable Energy sectors.

An important policy goal for the CCTC will be to alert all Canadians to become more aware of carbon issues and seek to actively support promising initiatives in their own region and sector of employment.

### ***Federal Carbon Tax Policy***

The CCTC proposal supports the principle of the Federal Government initiating some type of harmonized federal guidance for minimum Canadian carbon taxes or cap and trade equivalent. Each province can develop its own competitive greenhouse gas (GHG) emission reduction plan but there does need to be national benchmarks.

The BC government \$30 / tonne carbon tax provides a useful initial benchmark. Based on 2014 Canadian greenhouse gas emissions of 732 mega-tonnes, a \$30 / tonne carbon tax would generate approximately \$22 Billion in annual tax revenues. This is a substantial revenue source and should create results if it is deployed effectively on carbon reduction strategies. The CCTC would be part of the allocation plan to effectively redeploy a portion of carbon tax revenues into technologies and projects that directly capture GHG emissions and eventually stabilize atmospheric GHG concentration levels.

Unfortunately, there are many studies that suggest that even with the implementation of various electricity, commercial, transportation and industrial efficiency improvements that atmospheric GHG concentrations will continue to rise at alarming rates. Many regions of the global economy do not have sufficient economic incentive to implement successful carbon plans. Canada has an opportunity to be a leader in developing CC technologies that can work concurrently with many parts of the carbon based global economies and capture all forms of GHGs including atmospheric sources.

### ***The Carbon Capture Technology Roadmap***

There are numerous studies on CCS technologies but it is appropriate to refer to the Natural Resources Canada website section on Carbon Capture and Storage that includes the 2008 report by the CANMET Energy Technology Centre, "Canada's CO<sub>2</sub> Capture and Storage Technology Roadmap. This is an excellent reference document that along with more recent information provides a foundation for new CCS policy and recommendations.

Other Canadian CC initiatives include the government funded, Climate Change and Emissions Management Corporation (CCEMC) fund which has \$40 million available in 2016 for GHG emissions projects that are initiated by Alberta based small and medium enterprises (SMEs). The 2016 Carbon X Prize (energy industry sponsored) has a \$20 Million prize for global teams to develop innovative approaches to convert CO<sub>2</sub> emissions from fossil fuels into valuable products.

These noted CC programs are leading studies, funds and prizes that provide useful templates for potential projects. It is also useful to incent national participation in CC projects of a scale something similar to the Scientific Research and Experimental Development Investment Tax Credit (SRED) program. SRED deploys approximately \$3 Billion in annual tax credits to a wide diversity of industries to fund industrial innovation. The CCTC will help to leverage private sector investors and distribution channels to source, analyze and

fund a variety of CC projects as a complementary alternative and possible partner to government managed programs.

### ***CCTC Eligibility and Costs***

At this time there are a limited number of benchmarks for what type of projects and amount of capital may have incentive to utilize the CCTC. The CCEMC to date has provided \$359.7 million towards 109 projects valued at \$2.3 Billion. (A 5.5 to 1 investment leverage.) These projects are estimated to reduce GHG emissions by 12.7 mega-tonnes by 2020 and will create 12,000 Person Year of full time equivalent work.

Based on forecasts in the CANMET 2008 CCS Report on costs of CC technologies; implementation of \$30 per tonne carbon tax, possible GHG emission capture credits, inclusion of possible flow through tax deductions and the CCTC incentives; it is estimated that initial annual tax expenditures for a CCTC would be in the \$200 million range. With a 20% CCTC, total investment capital of \$1 Billion might be implemented in CC projects annually. This early stage estimate is based on the level of tax expenditures related to tax credits in other parts of the economy.

Forecasted annual carbon tax revenues at \$30 per tonne are \$22 Billion. Initially allocating \$200 million in tax expenditures or less than 1% of the carbon tax revenue stream to CC technologies through the CCTC is a modest initiative relative to the scale and importance of the issue. Once the program has been initiated, the response can be measured and adaptations implemented.

CCTC eligibility is focused on CC technologies compared to more general clean tech or renewable energy initiatives. This specific focus will ensure that Carbon Capture is advanced in Canada as one of multiple solutions to solve the global GHG emissions challenge.

### ***Conclusion***

The 20% CCTC will be an efficient, effective and fair funding policy that will benefit the broadest cross-section of Canadian investors and Canadian companies by recycling a portion of the substantial carbon tax revenues into CC initiatives. It will create jobs, economic growth and stimulate CC innovation in every part of Canada. It will be an integral part of Canada's contribution to reducing and capturing global GHG emissions.

### ***Author***

James S. Hershaw CFA, MBA, BSc (Eng)  
Managing Director, WATT Capital  
[jshershaw@wattcapital.com](mailto:jshershaw@wattcapital.com)  
416-420-9122

WATT Capital  
1421 Yonge Street  
PO Box 60077  
Toronto ON M4T 3A1

Mr. Hershaw is the founder of WATT Capital, a consulting firm that has completed a large number of projects related to the capital markets, investors and issuers. These strategic studies blend perspectives from buy side, sell side, corporate and consulting experience. Mr. Hershaw has recently been a member of the OSC SME Committee that helped to develop the new prospectus exemptions to facilitate access to capital for SME companies, including the Equity Crowdfunding Exemption (MI 45-108).

Mr. Hershaw has had senior roles with Imperial Oil, Bank of Nova Scotia, Nesbitt Burns and Dundee Bancorp. He has direct management experience with start-ups and associated regulatory requirements includes managing technology and natural resources funds, founding and managing three energy flow through limited partnerships, creating an EMD, and managing a public TSXV mineral company. Recent consulting assignments have included developing a corporate strategy for a private competency assessment and e-learning software company; a RTO to convert a TSXV mineral company into “*Internet of Things*” beacon technology company; and developing a comprehensive preliminary feasibility study and business plan for a MI 45-108 Restricted Dealer equity crowdfunding platform.

Mr. Hershaw believes that Canada has the engineering and innovation expertise to become a world leader in Carbon Capture and Storage Technologies.