

## **39. Accelerating Domestic Styrofoam Reuse and Remanufacture for Environmental and Economic Gain**

### **Issue**

Regulations across Canada have encouraged the collection and recycling of Expanded Polystyrene (EPS) post-consumer products, commonly referred to as Styrofoam (a trademark name); however, the ability to re-use EPS waste is limited to specific types (clean, un-dyed, uncontaminated). Most EPS still ends up in landfills or shipped overseas regardless of how it was collected. EPS in landfills is comprised of 98% air that “overfills” sites per weight and lasts indefinitely. A common contaminant of EPS products is fire-retardant chemicals, such as hexabromocyclododecane (HBCD) or perfluorooctanoic acid (PFOA) and related products. These compounds can leach into the ecosystem and are an environmental risk.

### What is EPS

For more than 50 years, the effectiveness of Expanded Polystyrene (EPS) has been proven in numerous applications used by a wide variety of industries, consumer product manufacturers, and shipping companies. It is a rigid, closed-cell foam that is non-toxic, inert and made without chlorofluorocarbons (CFCs). EPS expandable polystyrene beads are processed and molded into either low or high-density foam products.

Lightweight EPS is ideal for packaging applications due to its cushioning characteristics, dimensional stability, and thermal and moisture resistance. There is a growing use of EPS in construction as insulating concrete forms and insulated EPS sandwich panels as well as structural blocks in road and highway construction.

### EPS in Canada

According to the 2008 EPS Recycle Rate Report prepared by the Alliance for Foam Packaging Recyclers (AFPR), the total amount of post-consumer and post-commercial EPS sold in the USA was 172 million pounds.

In Canada, the estimated total amount of post-consumer and post-commercial EPS sold is about 18.4 million pounds per year, or the equivalent of 651,287m<sup>3</sup> of EPS sold in Canada for consumer and commercial purposes.

The majority of the post-consumer and post-commercial EPS is impact-absorbent packaging for fragile electronic devices. In 2010 alone, Canada imported 43 billion dollars’ worth of electronics. The estimated cost of packaging for electronics is approximately \$860 million. Depending on provincial regulations, electronic companies may take the responsibility of recycling the end-of-life electronics through different product stewardship programs across Canada; however, electronic companies refused to recycle EPS packaging. This means that each year, hundreds of millions of dollars of packaging materials are sent to landfills, instead of being recycled.

Due to the weight of EPS, diversion will have minimal effect on municipal diversion rates or goals compared to heavier items (e.g., bottles) and is, therefore, low on the priority list.

### Environmental Concerns

Unfortunately, EPS is virtually indestructible and does not biodegrade for hundreds of years and is resistant to photo decomposition.

In 2012, an estimated 14.4 million pounds (80%) of EPS waste in Canada went to landfills, rivers, streams and the ocean. This is the equivalent of 18.4 million cubic feet, or 208 Olympic sized swimming pools of EPS waste in Canada each year. In ten years, it is estimated that over 64,000 trailer loads (40' trailers) of post-consumer and post-commercial EPS waste will be buried in landfills across the nation. Due to the light weight and large volume physical properties, the total cost to haul EPS waste from transfer stations to landfill sites is estimated to be \$20 million, and the landfill cost is estimate to be \$2.4 million.

Clean EPS packaging has less impact on the environment than molded pulp packaging; however, toxic fire retardants such as hexabromocyclododecane (HBCD) is included in the production of EPS for insulation and imported for the construction industry, accounting for 99% of HBCD use in Canada. Approximately 92.4% of products contaminated with HBCD will ultimately be landfilled, with contaminants potentially leaching into the environment. The federal government is currently proposing to prohibit the importation of products containing HBCD and similar fire retardants as safer alternatives exist; however, future disposal of EPS made with fire retardants currently in use is unknown.

### A Commercial Opportunity

EPS is 100% recyclable. Recycled post-consumer and post-commercial EPS can be turned into value-added plastic products, such as crown moldings, picture frames, park benches, movie props, faux marble and stone, etc., reducing the amount of virgin material needed. Comparing the various options for the 14.4 million pounds of EPS waste in landfills every year, and using the virgin material price at \$0.90 per pound, following are the costs and Value Returned/Retained on each option (using 2012 figures):

|  | <b>Market Value<br/>(\$/lb)</b> | <b>Economic Value<br/>(\$)</b> |
|--|---------------------------------|--------------------------------|
| Landfill: Cost of hauling and landfill                                       | 0.13                            | (1,896,480)                    |
| Compacted and exported to China  | 0.16                            | 2,304,000                      |
| Extrude & palletize PS, and sell in open market                              | 0.50                            | 7,200,000                      |
| Basic recycled plastic products  | 1.20                            | 17,280,000                     |
| Innovate and high value recycled plastic products<br>(conservative estimate) | 2.00                            | 28,800,000                     |
| Innovate and high value recycled plastic products<br>(optimistic estimate)   | 3.00                            | 43,200,000                     |

### **Recommendations**

That the federal government:

1. Actively promote the diversion of waste Expanded Polystyrene (EPS) from landfills, to engage with Canadian plastics industry companies and institutions and provide incentives to stimulate research into and the development of high value made-in-Canada products from recycled EPS.
2. Supports the research and development of cost-effective mechanisms to decontaminate EPS for the purpose of recycling and re-use.

**SUBMITTED BY THE SURREY BOARD OF TRADE**

**THE NATURAL RESOURCES AND ENVIRONMENT COMMITTEE SUPPORTS THIS  
RESOLUTION.**

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## 40. Clean Technology and the Renewable Energy Sector in Canada

### Issue

Much of the recent energy dialogue has focused on the price of oil and the impact this is having on federal and provincial budgets. This misses the fact that a more fundamental shift is occurring in the global economy. For the first time in more than a century, multiple signs suggest that the dominance of fossil fuels is beginning to decline. We are seeing the beginning of a new technology revolution that will provide huge economic benefit for those able to place themselves at the forefront of this revolution. One only need to look at countries such as Germany to appreciate how taking a leadership approach to this new green economy can benefit an entire country both economically and environmentally.<sup>1</sup> Unfortunately, while some Canadian provinces have a strong international reputation for innovation on climate change we, as a country, are not leveraging this reputation to be at the forefront of the growing green technology economy.

The scope of the clean technology and renewable energy opportunities are poorly understood. While investments in renewable energy are well underway in many jurisdictions, the scope of change required will be well beyond electricity generation. Innovation in terms of new technologies and new practices will be required in a range of other areas.

| Sector                            | Examples of Technology  |
|-----------------------------------|---|
| Electricity Access                | Upgraded Power Grids<br>Off-grid technologies   |
| Water Management                  | Wastewater Treatment  |
| Waste Management                  | Recycling<br>Energy capture from landfills  |
| Climate Change/Reducing Emissions | Mitigation technologies<br>Upgraded power grids<br>Renewable energy, wind, solar, geothermal, geoexchange, tidal, biomass, hydro, etc.<br>Electric and hybrid vehicles<br>Carbon Capture and storage<br>Adaption technologies<br>New cultivation practices<br>Climate resistant infrastructure: sea walls, drainage capacity, water, forest and biodiversity management, etc. |
| Transport                         | Rapid Transit systems<br>Low emission vehicles and fuels, biogas, natural gas and plug in electric  |
| Building Energy Efficiency        | Thermal Insulation<br>Energy efficiency programs  |

<sup>1</sup> <http://theyee.ca/News/2014/10/20/German-Clean-Energy-Revolution/>

It should be recognized that some Canadian and international governments have already begun placing a direct focus on the green economy. “Technology and Green Economy” forms a part of the BC Jobs Plan. In addition the British Columbia Provincial Government has also developed “BC’s Green Economy – Growing Green Jobs”. Nova Scotia has created a rebate programs for a variety of solar and energy efficient green products for consumers through Efficiency Nova Scotia.<sup>2</sup> “Sustainable Development Technology Canada” (SDTC) has established a role that fills the gap in government funding for Canadian renewable energy and cleantech projects. In addition, they provide consultation for small and medium-sized enterprises (SMEs) wishing to engage in clean technology and renewable energy projects.<sup>3</sup> While the creation of SDTC is a welcome initiative, it is insufficient for the scale of the challenge facing Canada. While this program needs to be highlighted, expanded and encouraged, there are other successful programs in other jurisdiction that should be replicated here in Canada; perhaps the best examples can be found in Germany.

In conjunction with their National Action Plan on Energy Efficiency (NAPE), Germany has implemented a number of investment and incentive programs to foster the shift to renewable energy generation and clean technology<sup>4</sup>. Some of these include, but are not limited to, premium funding to strengthen the establishment of the renewable technologies in the heat market, special promotions of offshore wind energy projects, low-interest loans, high volume loans for large-scale investment projects. The [SME Energy Consulting programme](#) in Germany which is run by KfW and the Federal Ministry for Economic Affairs and Energy helps unleash energy saving in SMEs. Consultations may qualify for subsidies of up to 80 per cent of the consultation costs. Around 17,000 companies received consultations under this program from 2008 to 2013. All told, the consultations led to EUR 0.7 to 1.4 billion of investment and 1.5 to 2.7 terawatt-hours of energy savings. Every publicly financed euro generated EUR 16 to 29 in private investment.<sup>5</sup>

Canada needs to move beyond the limited focus on Canada’s traditional industries and make Canada a global leader in all aspects of the new emerging global green economy. As an example, the Canadian government needs to make clean technology, including renewable energy production and the manufacture of renewable energy producing products (like solar panels, wind turbines, etc.), a high priority in Canada in an effort to grow a diversified 21<sup>st</sup> century economy.

This strategy should be broad and to be successful would have to address the following challenges:

- build a stronger industrial structure, i.e. larger SMEs and more large firms entirely dedicated to the environment and green technology;
- develop and accelerate the marketing of homegrown technologies;
- capitalize on local markets to stimulate growth in the environmental and green technology industry;
- increase exports and acquire a strong position in buoyant niches in international markets;
- achieve the convergence of the efforts of all players in the sector

While market forces will be a key determinant of successful new technologies, governments have a critical role to play in setting the scene for this societal shift. We have seen a number of instances where government has been successful in initiating programs that have resulted in positive outcomes. As already referenced the carbon tax has been a resounding success in reducing BC’s greenhouse gas emissions while having no negative impact on the rate of growth in the BC economy. In addition, we have seen the Efficiency Nova Scotia programs result in a significant reduction in electricity consumption through a range of programs, including targeted incentive and rebate programs.

<sup>2</sup> <http://www.energyncns.ca/energy-solutions/solar/>

<sup>3</sup> <https://www.sdtc.ca/en>

<sup>4</sup> <http://www.kpmg.com/global/en/issuesandinsights/articlespublications/taxes-and-incentives-for-renewable-energy/pages/germany.aspx>

<sup>5</sup> <http://www.bmwi.de/EN/Topics/Energy/Energy-Efficiency/energy-consulting-and-funding,did=687122.html>

We have just seen the election of a provincial government in Alberta that is committed to a boost for renewable energy and a green retrofitting loan program.

To ensure that Canada is able to move quickly to establish ourselves as a global leader government, we should look to best practices globally to identify programs that encourage the production, sale and purchase of renewable energy and green products. Canada has a unique opportunity. Canada has an undeniable advantage to be at the vanguard of addressing the challenges raised by today's industrial and environmental issues. This will require consultation and a focused effort by government to play a leadership role in partnership with the private sector.

These technologies are in demand worldwide and will be a catalyst in driving a diverse 21<sup>st</sup> century economy in Canada. Jurisdictions around the world are looking to lead. Without a coordinated plan we will quickly see Canada overtaken and left behind in the new global economy, missing huge economic opportunities.

### **Recommendations**

That the federal government:

1. Develop, expand and implement plans to place Canada as a leader in all aspects of the new global green economy and clean technology sector by replicating industrial and residential "green" programs, based on global best practices, similar to those implemented in Germany, in an effort to support, attract and retain clean technology and renewable, sustainable energy technologies in Canada.
2. Work with all provinces, the U.S. government and international governments to standardize and harmonize the costs of controlling carbon emissions.

**SUBMITTED BY THE SECHLT AND DISTRICT CHAMBER OF COMMERCE**

**THE NATURAL RESOURCE & ENVIRONMENT COMMITTEE SUPPORTS THIS RESOLUTION.**

## 41. Does Our Water Abundance Mask a Potential Challenge? The Need for a National Water Framework

According to the World Economic Forum's 2014 Global Risks Perception Survey, water security is one of the top three most concerning global risks facing the world today.<sup>1</sup> This resolution seeks to build upon the existing 2013 Canadian Chamber of Commerce resolution *Water for Sustainability – A National Water Strategy* by positing that Canada is not immune to water security risks and that our assumed freshwater endowment and fragmented jurisdictional responsibility mask potential water challenges and the need for a national water framework.

The demand for freshwater continues to rise and global water requirements are projected to be pushed beyond sustainable water supplies by 40% by 2030. Agriculture already accounts for approximately 70% of total water consumption but, according to the World Bank, food production will need to increase by 50% by 2030 as the population grows and dietary habits change. The International Energy Agency further projects water consumption to increase by 85% by 2035 to meet energy production needs. In addition, population pressures and the changing climate are only serving to compound current water demands.

An assumption exists that Canada is blessed with abundant freshwater and need not be concerned with water scarcity. However, while Canada has 20% of the world's total freshwater resources, less than half of this water is deemed "renewable", meaning that it is useful and accessible for humans. The remainder of this freshwater resource is locked away in fossil water caches such as in aquifers or glaciers.<sup>2</sup>

Currently, Canada does not have an adequate national water strategy or governing framework for our water resources. We lack a full and accessible national accounting of our existing water resource, our current water needs, and the projected water demands of the future. In addition, we have little national understanding of the cumulative impacts of our water use, including the timing and volume of water withdrawals, the speed of return flows and the quality of returning water – information necessary for governments to adequately, and fairly, assess applications by industry or agriculture to withdraw water for their operations.

As water is essential not only for human life but for the production of food, energy, and products of all kinds, it is vital that it is managed sustainably to meet future needs. The lack of a national water framework compromises our ability to manage this resource sustainably and makes industry susceptible to future water shortages or unduly aggressive conservation measures. As responsibility for water is fragmented between federal, provincial, and municipal governments and various departments and agencies,<sup>3</sup> only a governance framework of national scope that consolidates and updates existing water management strategies across the country will be sufficient to know how and why we use water in the ways we do and how we manage the resource for the future.

### Recommendations:

That the federal government:

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<sup>1</sup> World Economic Forum, *The Global Risks Report 2015*, <http://reports.weforum.org/global-risks-2015/part-1-global-risks-2015/environment-high-concern-little-progress/>

<sup>2</sup> Environment Canada website. Accessed from: <https://www.ec.gc.ca/eau-water/default.asp?lang=En&n=1C100657-1>

<sup>3</sup> National Roundtable on the Environment and the Economy, "Changing Currents: Water Sustainability and the Future of Canada's Natural Resource Sectors." Accessed from: <http://www.blue-economy.ca/sites/default/files/reports/resource/changing-currents-water-report-eng-1.pdf>

1. Commission new research into the sustainability of Canadian water resources, the potential for national water shortages and the potential impact on Canadian businesses and make this research and any subsequent resources or tools publicly available.
2. Craft a national water framework in partnership with the provinces and territories that consolidates and updates existing legislation and strategies and ensures Canadians across the country and all levels of government understand:
  - the location and abundance of our current water resources;
  - how that water is consumed by industry, agriculture, residential, fisheries and natural users today and projections of future usage;
  - the potential impact of climate change on our water resources;
  - the replenishment rate and returning quality of major water resources; and
  - how to ensure water is properly managed and remains a sustainable resource for Canadians in the future.

**SUBMITTED BY THE BURNABY BOARD OF TRADE**

**THE NATURAL RESOURCES & ENVIRONMENT COMMITTEE SUPPORTS THIS RESOLUTION.**

## 42. Energy Productivity: A Win-win for Canada's Economy and Environment

Growth in productivity is closely related to growth in standards of living, innovation and economic competitiveness. In Canada, much ink has been spilt over labour or multifactor productivity growth rates. Yet another productivity statistic deserves closer attention. Energy productivity, the amount of economic output possible at a given energy supply, can improve Canada's economic competitiveness while effectively addressing greenhouse gas emissions and other environmental impacts of energy production and use. There are several ways investments in energy efficiency that improve energy productivity benefits the Canadian economy:

- *Large international market* – The global market for energy efficient products and services is very large. According to the International Energy Agency, investment in energy efficiency worldwide was between \$310 billion and \$360 billion in 2012. This sum was larger than the money put into renewable, coal, oil or gas electricity generation, and around half the size of upstream oil and gas investment.<sup>i</sup> Due to increased global demand, the market for energy efficiency-related goods, services and technologies could reach \$550 billion per year by 2035.<sup>ii</sup>
- *Source of jobs* – According to a report by Natural Resources Canada, in 2011 there were about 100,000 people working in energy-efficiency related occupations in Canada with total annual wages of \$7.7 billion. Every \$1 million spent on energy efficiency programs within Canada generates between 30-57 job years in firms that sell energy efficient products or services.<sup>iii</sup>
- *Freeing up resources for reinvestment* – Reducing energy use can act like a tax cut, releasing funds for reinvestment into a business or allowing households to spend more in other areas, ultimately resulting in job growth and improved overall economic performance. Between 1990 and 2011, more than \$34 billion in energy savings was reinvested into the Canadian economy. Companies addressing energy efficiencies often end up improving other characteristics and thereby improving overall performance, efficiency, innovation and market share.<sup>iv</sup>
- *Freeing up energy for export* – Aside from its impact on the domestic economy, improved performance on energy productivity can also promote exports. Energy that is produced but not consumed within Canada can be exported, creating broader economic benefits through royalties and taxes collected. Energy savings, if passed to consumers, increases price competitiveness usually resulting in increase market share.

Improving Canada's energy productivity will have significant environmental benefits as well and could play an essential role in an effective climate change strategy for Canada. Reducing waste in energy production and transportation and reducing the need to use energy in the first place will result in lower greenhouse gas emissions and the need for fewer power plants and transmission lines.

Unlike many other productivity measures, Canada has had success in improving its energy productivity performance. Between 1995 and 2010, Canadian GDP grew by 46%, while demand for energy rose by only 12%.<sup>v</sup> Yet Canada has not made continuous improvements in energy productivity an explicit part of its approach to economic competitiveness or action on climate policy. This is in contrast to other peer nations. In 2013, President Obama pledged to double energy productivity from the 2010 level by 2030, while Australia's government recently released an energy white paper proposing an increase of up to 40% in energy productivity by 2030.

There are two significant barriers to further improvements in Canada's energy productivity that the federal government could address. First are measures to reduce the costs of energy efficiency. In the 2014 Canadian Energy Efficiency Alliance conducted a survey of business attitudes toward investments in energy efficiency, with over half of respondents cited costs as the most significant barrier to improved energy efficiency. A fifth suggested and improved incentives would be the most effective approach to removing these barriers.<sup>vi</sup>

A second significant barrier is the need for effective and accurate methods by which to measure and record energy productivity/efficiency. Without proper methods to track and report on energy productivity, making businesses or government accountable for progress will be difficult to achieve.

## **Recommendations**

That the federal government work with provinces and territories to:

1. Advocate for the economic and environmental benefits of increased energy productivity/efficiency to business and promote energy efficiency measures.
2. Research and adopt the best available science to measure and record energy productivity across Canada.

**SUBMITTED BY THE NATURAL RESOURCE AND ENVIRONMENTAL POLICY COMMITTEE**

**Co-sponsored by the Surrey Board of Trade**

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<sup>i</sup> International Energy Agency. 2014. "Executive Summary". *Energy Efficiency Market Report 2014*.

<sup>ii</sup> International Energy Agency. 2014. "Factsheet". *World Energy Investment Outlook 2014*

<sup>iii</sup> Natural Resources Canada. 2014. *Energy Efficiency Update 2014: Economic Benefits of Responsible Energy Use*

<sup>iv</sup> Natural Resources Canada. 2014. *Energy Efficiency Update 2014: Economic Benefits of Responsible Energy Use*

<sup>v</sup> Ralph Torrie and David B. Layzell. "The secret life of Canada's Energy System." Canadian Energy Systems Analysis Research. <http://www.cesarnet.ca/blog/secret-life-canada-s-energy-systems>

<sup>vi</sup> The Canadian Energy Efficiency Alliance. *CEEA 2014 Survey: Canadian Business Attitudes on Energy Efficiency*

### **43. Greenhouse Gas (GHG) Emission Reduction through Economic Instruments**

G7 leaders met on June 8, 2015 notably to discuss climate change and committed themselves to various objectives, including:

- Hold the increase in global average temperature below 2°C;
- Reduce global GHG emissions “in the upper hand” of 40 to 70% reductions by 2050 compared to 2010 through “a global response”;
- [Do their] part to achieve a low-carbon global economy in the long-term;
- Adopt an agreement at the Paris Conference this fall.

In the past, Canada committed itself to various targets, including limiting GHG emissions to 555 megatons in 2012, under the Kyoto Protocol, 610 megatons in 2020 under the Copenhagen Agreement and, on May 15, 2015, to a 515 megaton limit in 2030. The Kyoto target for 2012 has been largely surpassed (715 megatons according to the latest revision, or 160 megatons over target or +29%) whereas the targets of Copenhagen and last May are not likely to be met at the current rate – the latest results for 2013 show another increase in emissions to 726 megatons.

A growing number of Canadians already see products having a carbon component or being transported, being priced. This is the case in British Columbia, with a carbon tax, and in Quebec with a royalty paid to finance a cap and trade system under the Western Climate Initiative (WCI). Ontario announced on April 13, 2015 that it intends to join the WCI along with Quebec and California. Consequently, these provinces have taken the path of innovation and sustainable development.

The Fédération des chambres de commerce du Québec (FCCQ) has supported carbon pricing to the extent that all economic players are subject to a similar carbon tariff, regardless of the economic instrument used, whether it is a carbon tax or a cap and trade system. This is essential for companies to have the same level of competitiveness. For the FCCQ, it is desirable for the other provinces to follow the lead of British Columbia and Quebec in combating climate change.

The Paris Conference will give several states or countries the opportunity to reveal their targets for GHG emission reduction beyond 2020, probably by 2050. Our commitment to promote sustainable development and be on an equal footing with the European Union in the next free trade agreement must be accompanied by actions supporting that commitment.

Canada’s Chambers of Commerce can be leaders and actors of change and promote this commitment throughout the country. Therefore, there are plans for the chamber of commerce movement, everywhere in Canada, to join their sustainable development sector in order to urge the federal government to adopt a Canadian strategy for GHG emission reduction with a target, and measures and mechanisms to reach this target.

#### **Recommendations**

That the federal government:

1. Adopt an approach and mechanisms to combat climate change in order to establish and reach a GHG emission reduction target by 2050.
2. Work with the provinces and territories to adopt economic instruments, including a carbon tax and/or cap and trade system, to achieve this target.

**SUBMITTED BY THE FÉDÉRATION DES CHAMBRES DE COMMERCE DU QUÉBEC**

**Co-sponsored by the Sechelt & District Chamber of Commerce**

**THE NATURAL RESOURCES & ENVIRONMENT COMMITTEE SUPPORTS THIS RESOLUTION.**

#### 44. Preserving Economic Benefits Under the Extractive Sector Transparency Measures Act

While the new Extractive Sector Transparency Measures Act (ESTMA) contains measures to ensure sustainable resource development in foreign countries in which Canadian companies operate, there remain significant concerns that it could complicate development within Canada and potentially harm industry relations with Aboriginal communities.

Having received royal assent in December 2014, the ESTMA was originally developed in response to reports that some foreign governments were improperly spending mining revenues generated by Canadian companies. To address the issue, Canadian extractive industry partners worked with the federal government to develop regulations requiring public disclosure of payments made to governments and government entities, resulting in the ESTMA.

The foreign disclosure measures outlined in the ESTMA will apply to large mining, oil and gas companies making payments over \$100,000, and to junior firms making payments over \$10,000; these will take effect in the summer of 2015, and have been thoroughly supported by industry as a means of increasing transparency and sustainability for regions in which Canadian companies operate.

However, throughout the consultation process, industry was clear that their support was never intended to be viewed as an approval for the ESTMA to be applied domestically<sup>12</sup>; nevertheless, the federal government inserted such measures into the final version of the legislation, requiring the mining, oil and gas industries to disclose payments made to Aboriginal groups and communities within Canada as of June 2017.

While industry groups continue to embrace the concept of increased transparency, the mandatory inclusion of Canada's Aboriginal groups within this legislation creates many complex questions which have yet to be fully addressed by the federal government. This includes concerns around the lack of meaningful consultation with Aboriginal groups leading up to the passage of ESTMA, which industry groups have argued to be necessary to ensure that any designated reporting requirements are appropriate, and that Aboriginal interests are adequately considered<sup>3</sup>. Without full and comprehensive consultation, the possibility remains that ongoing disapproval of these measures could place existing and future relationships between extractive companies and Aboriginal communities at risk.

This risk of harm to these relationships is heightened by the lingering fear among industry partners and Aboriginal groups alike that the federal government will reduce funding for Aboriginal communities who have received payments as disclosed under the ESTMA. From the Mining Association of Canada and the Prospectors and Developers Association of Canada to the Assembly of First Nations and the Canadian Aboriginal Minerals Association, many have expressed concern around the lack of any provisions in the Act that would prevent this from occurring.

Any such clawback would effectively harm Aboriginal communities' ability to benefit from resource development. Related agreements also often allow for much-needed enhancements to infrastructure and social programs that are otherwise not covered by federal payments: for example, in 2011 and 2012, oil sands companies provided more than \$20 million to Aboriginal communities in Wood Buffalo and Lac La Biche in northeastern Alberta, which funded school and youth programs, celebrations, cultural events, literacy projects, and more<sup>4</sup>. Similarly, De Beers Canada's Victor Mine project in northeastern Ontario provides roughly \$2 million in annual royalties to the nearby Attawapiskat First Nation, and has funded housing, training options, and other opportunities.

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<sup>1</sup> PDAC-MAC Submission to the Government of Canada Consultation on Mandatory Reporting, 2014

<sup>2</sup> Resource Revenue Transparency Working Group Submission to the Government of Canada - Consultation on Mandatory Reporting, 2014

<sup>3</sup> Mining sector supports new disclosure rules, Vancouver Sun, March 27 2015

<sup>4</sup> Oil Sands Community Alliance, 2013

These improvements also benefit the resource development industry, not only in the form of the community support required to move new projects forward, but also by establishing the training facilities, local capacity, and general infrastructure necessary for the effective operation of their future projects. As such, it is crucial that the federal government protect these investments from being effectively nullified, and provide legislative guarantees against related clawbacks prior to the implementation of the domestic ESTMA provisions in June 2017.

### **Recommendations**

That the federal government:

1. Undertake consultations with Aboriginal groups and communities in order to ensure that Extractive Sector Transparency Measures Act (ESTMA) reporting requirements are appropriate and that Aboriginal interests are properly considered.
2. Undertake consultations with extractive industries to ensure that the process for reporting payments to Aboriginal communities under the ESTMA is not duplicative or unduly cumbersome, and that it does not contravene existing non-disclosure agreements.
3. Guarantee that federal funding for Aboriginal communities will not be reduced in response to financial disclosures made under the ESTMA, ensuring that those communities will be funded appropriately as per their needs and prior federal obligations and commitments, regardless of any investments made by third parties engaged in resource extraction.

**SUBMITTED BY THE TIMMINS CHAMBER OF COMMERCE**

**Co-sponsored by the Edmonton, Thunder Bay, Greater Sudbury, and North Bay & District Chambers of Commerce**

**THE NATURAL RESOURCES & ENVIRONMENT COMMITTEE SUPPORTS THIS RESOLUTION.**

## 45. Proposed Resolution in Support of TransCanada's Energy East Project

The Energy East project is a 4,600 km pipeline that will transport about 1.1 million barrels of oil per day from Alberta and Saskatchewan to the refineries of Eastern Canada. The project implies converting part of an existing natural gas pipeline to an oil transportation pipeline. It also implies constructing new pipelines in Alberta, Saskatchewan, Manitoba, Eastern Ontario, Quebec and New Brunswick. Finally, it includes constructing the associated facilities, pump stations and tank terminals, including marine facilities. The route has not yet been finalized, and will be determined after TransCanada takes into account input from all stakeholders. The project is subject to an analysis and approval process by the National Energy Board (NEB).

- **Whereas** this project will generate \$12 billion in investments;
- **Whereas** this project would make a significant contribution to the country's GDP;
- **Whereas** the completion of this project will improve the competitiveness of our petrochemical industry;
- **Whereas** the project will create many high quality jobs in several provinces;
- **Whereas** the project will make a significant contribution by generating additional tax revenues for federal, provincial and municipal governments;
- **Whereas** the completion of the pipeline will diversify our supply source and allow refineries along its route to rely on this new method of supply for Canadian oil;
- **Whereas** TransCanada has intensified efforts to supply NEB with comprehensive impact studies allowing it to provide clear guidance;
- **Whereas** we are sensitive to concerns raised by the Quebec and Ontario governments;
- **Whereas** the Fédération des Chambres de Commerce du Québec (FCCQ) wants TransCanada to sign an agreement with Gaz Métro and other Ontario gas companies offering maximum guarantees regarding a continuous supply of natural gas at the lowest price;
- **Whereas** TransCanada has multiplied information and consultation meetings with communities adjacent to the pipeline route;
- **Whereas** oil is a resource we will depend on for several decades;
- **Whereas** this forward-looking project will follow the three main conditions of sustainable development, i.e. creating wealth while respecting the environment and communities;
- **Whereas** governments are responsible for determining a clear process to ensure promoter compliance with these requirements;
- **Whereas** this project could fuel economic development in the country:

### Recommendation

That the federal government support the development of TransCanada's Energy East Pipeline project.

**SUBMITTED BY THE FÉDÉRATION DES CHAMBRES DE COMMERCE DU QUÉBEC**

**THE NATURAL RESOURCES AND ENVIRONMENT COMMITTEE SUPPORTS THIS RESOLUTION.**

## **46. Support for TransCanada's Energy East Project: a Nation-Building Opportunity**

All Canadians should benefit from Canadian oil. Energy East is a rare nation-building opportunity that will move oil from the West to refineries and terminals in the East, creating jobs and economic growth from Alberta to Ontario to Quebec and New Brunswick, while reducing our reliance on foreign oil.

TransCanada is proposing to build a critical new piece of energy infrastructure that will directly connect western Canada oil with eastern Canada refineries and ports for the first time. Not only will this project result in the expansion of Canada's oil transportation network but TransCanada feels it could potentially open new channels for international exports.

According to the Conference Board of Canada, Energy East will support almost 8,400 jobs in the provinces it transverses during the seven year planning and construction phases of the project. In addition, Energy East is expected to create an additional 5,300 in indirect full-time employment spread out over each of Canada's provinces and territories. During the first 20 years of operation, the Energy East project is expected to create over 3,200 direct and indirect full-time jobs each year.

The Conference Board of Canada also predicts Energy East will generate an estimated \$11.5 billion in additional GDP for the Canadian economy during the seven-year development and construction phase and \$24.9 billion the first 20 years of operations.

This project also has direct ties to Canada's advanced manufacturing industry. For example, GE Canada's heavy motor plant in Peterborough, Ontario will be building 85 large electric motors for some of the 72 pump stations, creating 250 jobs. Furthermore, Energy East is a project that has the ability to affect positive change with regard to three of the Top 10 Barriers to Competitiveness as identified by the Canadian Chamber of Commerce:

- Lack of clarity regarding duty to consult with Aboriginal peoples
- Innovation rate is not sufficient to help manufacturing rebound
- Canada is missing out on foreign trade opportunities

The Energy East Project is subject to extensive evaluation by the National Energy Board (NEB), a quasi-judicial entity that is committed to examining 16 different areas of interest before approving, amending or not approving the project. Among those 16 considerations are the economic impact of the project, environmental and socio-economic impacts, and safety along the length of the pipeline, along with the impact on supply and natural gas prices in the areas affected by the Eastern Mainline proposal in Ontario and Quebec. The business communities in Ontario and Quebec are concerned with the continuous supply of natural gas and are looking to the NEB to address these concerns about supply and price in a matter that can satisfy the needs of both parties.

Energy East will feed three refineries along the route; Suncor in Montreal, Valero in Levis, Irving Oil Refinery in Saint John. There is a lot of dialogue around this project and it is important for the national voice of business to weigh in on this conversation because of its economic benefits, potential for trade and new jobs across the country.

### **Recommendation**

That the federal government support the Energy East Project as a significant economic opportunity for Canada, recognizing that the National Energy Board has identified 16 issues for consideration prior to ruling on the project.

**SUBMITTED BY THE GREATER PETERBOROUGH CHAMBER OF COMMERCE AND SAINT JOHN REGION CHAMBER OF COMMERCE**

**Co-sponsored by the Belleville, Saint John Region, Sarnia-Lambton, Thunder Bay, Regina & District, and the Fort McMurray Chambers of Commerce**

**THE NATURAL RESOURCES AND ENVIRONMENT COMMITTEE SUPPORTS THIS RESOLUTION.**

## 47. Support Future Mineral Exploration and Mining in Canada

### Issue

The long-term viability of the mining industry is in jeopardy due to a decline in base metal reserves and production volumes. Permanent financial incentives are needed to inspire investment in mining development, especially in remote and northern areas where costs are significantly higher.

### Background

Mineral exploration and mining are mainstays of Canada's economy, particularly in northern and remote regions. In 2013, Canada's mining industry accounted for approximately 20% of Canada's annual goods exports and contributed \$54 Billion to Canada's Gross Domestic Product (GDP). The industry employs over 380,000 Canadians in mineral extraction, processing and manufacturing. Mining is the largest private sector employer of Aboriginal peoples in Canada on a proportional basis, and employment is poised to increase.

There are two indicators of challenges to the long-term viability of the industry: reserves of base metals have experienced significant declines since the 1980's; and, production volumes of key commodities have been declining. These indicators point to a twofold problem: the need to make more discoveries and the need to bring new and existing discoveries into production.

Remote and northern parts of Canada hold the key to resolving both challenges. However, exploring and mining these areas come with a hefty cost premium. Companies operating in remote and northern areas face a unique set of challenges that are linked to the characteristics that define the geographical regions themselves: remoteness, severe weather, undeveloped infrastructure and sparse populations.

The Mining Association of Canada, the Prospectors and Developers Association of Canada, the NWT & Nunavut Chamber of Mines, the Yukon Chamber of Mines and the Association of Consulting Engineering Companies - Canada released a very detailed report, "Levelling the Playing Field" in April 2015 that outlines the cost implications of mining in northern and remote areas of Canada. We have used their data in this resolution.

The primary driver of cost variations is the distance of a project from the transportation infrastructure required to service the needs of the project during exploration, construction and production. As an example, exploration costs at the most remote project (in the Arctic Circle) were six times higher than the costs incurred at the least remote project.

|                          | Non-remote (50km or less from supply route) | Remote (51km to 500km from supply route) | Very remote (>500km from supply route) |
|--------------------------|---|--|--|
| <b>Exploration Costs</b> | Average cost: \$202.69/metre drilled        | 1.7 times higher                         | 2.8 times higher                       |

The higher cost of exploration at a remote site includes the need to fly-in equipment and personnel by fixed wing aircraft and/or helicopter. In addition, personnel are often lodged in a bunkhouse at the exploration site at a cost that is higher than living in a hotel in a small town nearby, which is done where road access is available.

The capital cost of constructing a mine in remote and northern areas often includes construction of assets such as a power plant, accommodations for the workforce, winter and permanent roads of hundreds of kilometres, large storage facilities, aircraft and airstrips, and shipping ports. Capital costs are about

double for gold mines, 2.5 times higher for base metal mines and 15% - 20% higher for diamond mines. In addition, operating costs for these mines are 30% - 60% higher.

The higher cost profile of exploration and mining in remote and northern Canada is reducing competitiveness of those regions as a destination for mineral investment. This is particularly challenging during the current downturn, which has seen equity financing levels for mineral exploration drop 80% since 2007. Without creative action to address these challenges, the industry may not be able to sustain the same level of economic benefits for future generations of Canadians.

The mineral exploration tax credit (METC) was introduced in 2000 and provided a 15% tax credit on top of the 100% tax deduction for Canadian Exploration Expense (CEE). The METC was reintroduced in 2006 and subsequently renewed for two years and has since been extended on a yearly basis. In the April 2015 budget, the METC was again extended for an additional year to March 31, 2016. The METC and flow-through share financing continue to serve a critical role as they allow junior companies to raise needed capital, keep investment in Canada and sustain grassroots exploration activity. Since 2006, the METC has allowed mining companies to raise over \$5.5 billion for exploration and development. In 2013, more than 250 companies issued flow-through shares eligible for the METC to over 19,000 investors.

The creation of a new and enhanced METC at 25% for remote and northern projects would reduce the costs of financing one metre of drilling by approximately 12% and would make investments in these projects more attractive to investors and help to attract much needed investment to northern Canada.

## **Recommendations**

That the federal government:

1. Make the 15% Mineral Exploration Tax Credit (METC) permanent: and,
2. Create a new and enhanced 25% Mineral Exploration Tax Credit (METC) for projects in locations more than 50 kilometres from a supply route.

## **SUBMITTED BY THE THUNDER BAY CHAMBER OF COMMERCE**

**Co-sponsored by the Greater Sudbury, the North Bay & District, Sault Ste Marie, and the Timmins Chamber of Commerce**

**THE TERRITORIAL POLICY, NATURAL RESOURCES AND ENVIRONMENT, AND TAXATION POLICY COMMITTEES SUPPORT THIS RESOLUTION.**

*Source data: PDAC (2015) State of Mineral Finance 2015. Accessible at: <http://www.pdac.ca/docs/default-source/securities/levelling-the-playing-field---final.pdf>*

## 48. Supporting Canada to Become a Leader in Global Mining Innovation

Mineral and metal deposits are becoming increasingly more difficult to locate, requiring new tools and techniques. Innovation has allowed Canadian companies to maintain their competitive edge and has helped Canada become a safer, more cost-effective and environmentally-sound mining jurisdiction.

The 2013 Conference Board of Canada's Innovation Index rates Canada as 13<sup>th</sup> out of 15 of its peers. Although Canada is a leader in mining innovation, there currently exists an innovation gap which is preventing Canada from becoming the global leader in innovation. Strengthened coordination, improved funding flows and ratios as well as a broader vision of innovation are all elements that will help propel Canada to the top of the list of global innovators.

Three national mining organizations, the Canadian Mineral Industry Federation (CMIF), the Canadian Mining Innovation Council (CMIC) and the Centre for Excellence in Mining Innovation (CEMI) have identified the lack of national scale coordination of government and industry research, development and innovation (RDI) funding as a barrier to advancing mining innovation. There are over 4,000 different and uncoordinated sources of RDI funding in Canada, carried out and supported by a myriad of academic, government and industry entities. There are also over 40 different mining research organizations that at times operate in silos.<sup>1</sup>

Because the development of new mining technologies and practices is capital intensive, collaboration has become increasingly necessary. Individual firms are hesitant to make standalone investments in innovation because of the risky and uncertain environment and are turning to partnerships with suppliers and academia to advance their initiatives. The Canadian Chamber's 2013 Mining Capital report states that due to the collaborative nature of the natural resource sector, a systematic and coordinated approach that enhances linkages between the various stakeholders is vital to propelling mining innovation.<sup>2</sup> Gains are being made in addressing the coordination gap, such as the establishment of CMIC by government, industry and academic researchers to lobby for mining innovation.

Key to their efforts was the identification for innovation through coordination of industry-led RDI. CEMI, an active participant in the mining innovation space, is closing the co-ordination gap by working collaboratively with the mining industry, academia, mining service & supply sector, SMEs and cross-sector industries (oil & gas, space technology). However, to catapult Canada as a leader in mining innovation, there is an increased need for more co-ordination and co-operation in terms funding (government, industry) and between research and implementing organizations.

Further, for innovation to work, it must be adopted. For this, mining innovations need to be demonstrated and implemented as workable beyond the theoretical, but also show commercial viability. The lack of commercialization is one of the reasons why so little of the funding for mining research has impacted mine operations. The majority of funding in Canada is targeted at research in academia that may not necessarily translate into industry-relevant innovation or commercialization. While university-based research is essential, research in operating mines and with suppliers is equally important. The Research, Demonstration and Implementation (RD +I) approach to focus on practical applications, distinct from academic research was developed by CEMI in 2011 and is aimed at addressing this very important issue. Closing the loop by driving commercialization activities for mining innovations should be strongly supported by government, which will have direct and dramatic economic impact to Canada and in bringing these Canadian mining innovations to the world stage. Mining service and supply firms also make significant contributions to the commercialization process and their efforts should be supported in an integrated manner. Funding and programming in such areas will further help to encourage commercialization and industry adoption of important mining innovations.

Although funding is vital to mining innovation, it is also impacted by: the time it takes for funding to flow; and the government to industry ratio of funding.

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<sup>1</sup> The Canadian Chamber of Commerce, "Mining Capital: How Canada Has Transformed Its Resource Endowment Into a Global Competitive Advantage," 2013.

<sup>2</sup> Ibid.

In some jurisdictions proposals can take over a year to be processed and it can take another year before approved funding begins to flow. The time required impacts the momentum of the project as a whole, available talent and resources, as well as the delay in the potential economic impact and adoption. It also impacts the willingness of management within industry to commit to funds. Most managers and business heads are willing to commit to funds for projects that accrue benefits within their “lifetime” within a particular position, generally between 1-3 years. This incents shorter-term thinking, unless the commitments are approved at the highest levels.

Generally, Canadian mining companies and government contribute research and innovation funds on a 1:1 ratio. In a national perspective, this makes sense as both are vested in developing and building the infrastructure, knowledge base and economy within Canada. However, the global consolidation of the mining industry has impacted the financial commitment for mining innovation in Canada. The Canadian portion of these mining conglomerates accounts for a small percentage of the whole and the evaluation for investment in Canada is measured against the consolidated global view. The interests of these mining conglomerates for their Canada-based companies can diverge significantly from that of Canadian government’s economic interest and development. For near-term (1-2 years) smaller projects, the 1:1 ratio is still valid. In order to attract funds and partnership with these global mining companies, the Canadian government needs to consider adjusting its funding ratios and consider options such as increasing ratios to 4:1 or 5:1 to provide incentives to support larger-scale, longer-term, visionary Canadian mining innovation projects to stay the course.

The Federal Government has recognized the issue of funding flows, but support is required. In 2014 the Federal Government, Business-led Networked Centres of Excellence (BL-NCE), in recognition of its RD +I&C (commercialization) approach, awarded CEMI \$15M over five years to CEMI’s Ultra-Deep Mining Network (UDMN). The total program is \$46M, funded roughly equally by government, mining companies and service and supply companies in the resources industries (mining and oil and gas). It focuses on reducing geotechnical risk, improving productivity, reducing energy consumption and improving human performance – all critical issues for mines at 2.5 km below surface and deeper – becoming common in many mining jurisdictions around the world. The UDMN is an example of co-operation, collaboration and that takes into account the time flow of funding and exemplifies how best to move forward.

In face of growing competition from nations with lower wages and less stringent environmental regulations, Canada has little choice but to innovate. Governments at all levels in Canada have to recognize that Canada is just one player in the globalized mining business. Given the relative strength and coherence of mining industry, research and innovation organizations and our mining service and supply sector, we have a tremendous opportunity to become a global powerhouse in this field – so long as all the factors for success are in place in which mining innovators can thrive. Conventional approaches are failing to deliver new mines at greater depths and in more remote locations; innovation is essential if we are to sustain our strength in the mining industry.

## **Recommendations**

That the federal government:

1. Provide funding for mining innovation projects that go beyond academic research exclusively and include those aspects that incorporate mining industry, supply & service companies and cross-sector industries to support implementation and commercialization requirements.
2. Increase funding ratios and manage funding flows as appropriate based on the size and timeframe of innovation projects.
3. Facilitate and support co-ordination and collaboration between research and innovation organizations, funding bodies and business organizations to meet Canadian and global mining innovation needs.

**SUBMITTED BY THE GREATER SUDBURY CHAMBER OF COMMERCE**

**Co-sponsored by the Sault Ste. Marie Chamber of Commerce**

**THE NATURAL RESOURCE & ENVIRONMENT AND INNOVATION COMMITTEES SUPPORT THIS RESOLUTION.**

## 49. Understanding and Preparing for Global Sustainability Risks and Trends That Will Affect Productivity and Competitiveness of Canadian Small Businesses, Their Suppliers and Customers.

Every year the World Economic Forum (WEF) asks nearly 900 international experts from business, academia and the public sector to assess the major threats to economic growth and stability. In their report, *Global Risks 2015, 10<sup>th</sup> Edition*, water crises, energy price shock, failure of climate change adaptation and biodiversity loss and ecosystem collapse are rated among the top ten most impactful and devastating risks. These risks could lead to price hikes, increased regulation, and shortages affecting Canadian businesses directly or indirectly through their supply chains.

A recent example of such a sustainability threat impacting the broader economy is the mountain pine beetle epidemic which has killed about 50% of the total volume of commercial lodgepole pine in British Columbia since the early 1990s, and continues to migrate eastward into Alberta and beyond. This crisis was caused in part due to the trend in recent decades of milder winters and warmer summers<sup>1</sup> and the economic impacts of this crisis extend far beyond the forestry industry. The repercussions of this crisis have been felt not only by direct suppliers to the forest industry but eventually by the broader business community--from restaurants to accommodations to professional services--which rely on the spin-off economic activity of the forest sector and its workforce.

Many of these trends will create challenges – and opportunities – for Canadian small businesses:

- As small enterprises, Canadian small businesses do not have the resources or long-term perspective to understand the science behind these trends, and if, how and when these trends might impact their suppliers, their operations or their customers.
- Lacking this foresight, they may be unable to prepare their businesses for the most relevant, significant and likely risks such as price increases and volatility, new regulations, physical and weather changes, changes in consumer preferences, and resource constraints on production.
- They may also miss out on opportunities such as the ability to build reputation and brand, enhance innovation, develop new products, services and markets, reduce costs, get ahead of and forestall regulation, and improve access to capital.

If Canadian small businesses can understand and prepare for these trends, they will be more innovative, productive, competitive – and viable.

However, a key challenge to addressing these emerging business issues and capitalizing on potential opportunities is a lack of available research on the implications of these global sustainability trends for Canadian small business in both the near and long term. To address this, the federal government can conduct research and identify the top threats to the viability of Canadian small business and the top opportunities that businesses can pursue to address the trends in a measured, cost effective way. The research could include the business case and benefits, and resources, science and tools to help businesses become more innovative and productive in addressing these trends. As the largest business association in Canada, the Canadian Chamber of Commerce is uniquely positioned to help disseminate the results of this research directly to Canadian businesses and support them in their efforts to understand, prepare for, and capitalize on these trends.

### Recommendations:

That the federal government:

1. Commission new research into the top sustainability trends to determine which will impact Canadian small business, including their suppliers and customers, from 2020 – 2025 so that businesses can begin preparing for the likeliest and most impactful risks and opportunities.

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<sup>1</sup> Natural Resources Canada, 2015, <https://www.nrcan.gc.ca/forests/insects-diseases/13381>

2. Leverage the network of not-for-profit organizations both domestically and internationally to promote and build upon existing resources to create a “sustainability toolbox” for businesses. The purpose of this “toolbox” would be to so that businesses can educate themselves on the identified sustainability risks and have access to the business case and benefits, resources, science and tools to help them become more innovative, productive and successful in addressing these trends.

**SUBMITTED BY THE BURNABY BOARD OF TRADE**

**THE SME AND NATURAL RESOURCES & ENVIRONMENT COMMITTEES SUPPORT THIS RESOLUTION.**