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Sent: Friday, November 16, 2018 4:55 PM

To: Engages-Mobilisation (WD/DEO) <wd.engages-mobilisation.deo@canada.ca>

Subject: Western Canada Growth Strategy

Good afternoon,

On behalf of ABB Canada, we would like to submit a short PDF proposal highlighting some ideas to help grow Western Canada.

We specialize in electrification and digitalization and wanted to share with you how some of our technologies and strategies have helped grow industries and economies around Canada.

Thank you for taking the time to read hopefully we can provide some new information.

Sincerely,

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Electrify Western Canada;
Western Economic Diversification
Strategy Proposal

About ABB

ABB is a pioneering technology leader that works closely with utility, industry, transport and infrastructure customers in roughly 100 countries. ABB offers a full range of technologies across the electrical value chain from substation to the point of consumption, to improve performance while lowering environmental impact. With 19 locations across British Columbia, Alberta, Saskatchewan and Manitoba, ABB is well connected to industry leaders and is consistently involved with the building and electrification/digitalization of Western Canada.

The Conversation: To Build an innovative and inclusive Western Canada **Sustainability and a stronger Western Canadian economy**

Growing the economy in a sustainable way will ensure stability for future generations and support long-term sustainable development. Modernizing and building infrastructure that will last will contribute to lowering emissions and Green House Gases. Utilizing and modernizing the Provinces' main industries such as Agriculture, Shipping and Mining, gives the economy an opportunity to grow from its existing foundations.

Agri-food Efficiency

As the world population increases, technology plays an important role in ensuring food production maintains and increases each year. About half of the Canada's wheat comes from Saskatchewan and the majority of Cattle/meat is produced in Alberta, Saskatchewan and Manitoba. The west is a vital component to ensure food security for future generations in Canada. By increasing production efficiency, the provinces can successfully increase yield to keep up with the growing and inevitable demand. Efficiency and quality on the farm as well as in the processing stages are important to maintain a competitive/sustainable status.

ABB is a member of Protein Industries Canada (PIC)ⁱ. A non-for-profit organization with the main goal of using collaboration research and innovation to establish ways to enhance overall production of plant-based products. PIC currently is geographically centered in the major cities of Alberta, Saskatchewan and Manitoba. The growth of this organization has the potential to provide new information and technology to industry leaders, increasing resources. ABB has developed products with automation and smart technologies that have been designed to boost efficiency. In many provinces and countries, ABB has partnered with agriculture corporations to implement their technology in the hopes of a digital revolution. Digitalization in food production creates new opportunities by combining the tech and agribusiness worlds.

Ships and Ports –British Columbia

ABB delivers automation and electrical systems for container and bulk cargo handling - from ship to gate. A rapidly increasing number of container terminals across the globe rely on our systems and global support network when serving their customers in the world's cargo hubs.



Diesel-electric hybrid ships have been operating on the high seas since the 1990s, and the technology has now become the industry standard for cruise ships, LNG tankers, polar icebreakers, offshore support vessels and more. As of 2017, ABB was awarded a contract by the Vancouver Fraser Port Authority to provide a technology solution that will enable a shore to ship power supply for Canada's largest container port located in Delta, British Columbia. This will allow for ships at the Global Container Terminal (GCT) to connect to the electrical grid of BC Hydro, instead of using diesel generators. The ability to plug into the grid when berthed and shut down engines will curtail polluting, and will also mitigate noise and vibration levels, to support the terminal's sustainability goals.

The electrification of all ports is possible and well on the way. ABB's solution to power ships with electricity supplied from shore includes special substations that can cater to vessels from different parts of the world, together with on-board connections and automation panels. ABB's systems and services make terminal operations safer, greener and more productive.

Mining –Alberta, Saskatchewan, Manitoba

ABB in Mining delivers complete plant electrification, integrated process control and optimization solutions, motors and drives systems as well as instrumentation and analyzer systems. Currently ABB is commissioned to design, deliver, install the friction hoist with all related mechanical and electrical systems for Mosaic's new K3 potash mine by 2021. The K3 mine is located east of the Town of Esterhazy, in Saskatchewan.

The New friction hoist will be an energy efficient, reliable solution with the latest hoist safety features. At 15,800 kW, this will be the largest mine hoist electrical powertrain in North America.

By utilizing current technology, Western Canada is already in the midst of electrification to save energy and increase productivity. These projects provide employment for thousands of people and is a secure way of growth as technology is constantly advancing.

Government Involvement

In Western Canada, there are many funding opportunities available through the Federal, Provincial and Municipal governments for energy efficiency and clean energy projects. For example, the province of British Columbia lists hundreds of funding programs to which apply to many areas and groups including but not limited to first Nations Communities, regional areas and local governmentsⁱⁱ. By making these opportunities more known and taking advantage of them, the provinces and companies can work together to build a greater economy by involving the government as well as providing employment opportunities in numerous fields at all levels.

Increasing Job opportunities

With new technology, comes new opportunity. The transition to a more efficient Western Canada opens up many positions as this new tech needs to be researched, established and maintained. The combination of industries allows for growth beyond standard ways, as digitalization is becoming a forefront to sustainability. An effective way to increase



potential is to utilize networking and operate as a complete country and world. The amalgamation of provincial resources and technologies throughout Western Canada, will help expand the fundamental industries and potentially introduce new ones, meaning more job security. All groups will have more accessibility to different areas of employment, with no biases on gender, culture or levels of education.

Women in Resources Mentorship Program 2018 (IWRMP)

Canada is one of the largest mining nations providing a variety of jobs at all levels, but in an industry dominated by men, mining and mineral processing has the lowest number of women employed worldwide. Women in Mining (WIM) Canada promote women in the industry. This year ABB provided sponsorship in a world-first collaboration between, International Women in Mining (IWIM) and WIM Canada, to launch the first International Women in Resources Mentorship Program 2018 (IWRMP).

The IWRMP's 2018 cohort is composed of 42 females from resources-based companies around the world. Its objective is to empower women working in the mining resources industry and enhance career prospects by developing productive mentoring partnerships worldwide. A structured and solutions-focused mentoring program was developed for the women involved, to which ABB in Canada provided mentorship. ABB's Remy Lanoue, Hub manager North America, was selected as a Mentor for a candidate based in Zimbabwe.

These types of programs which pair leading corporations with keen industry representatives could increase job opportunities for underrepresented groups including women, youth, indigenous populations and new immigrants. Benefiting the economy, companies and individuals.

Many opportunities for economic growth across Western Canada are simple and presently available. The Federal, Provincial and Municipal governments have allocated funds to support green energy infrastructure to help lower emissions and prepare for a more sustainable future. By using these funds and implementing partnerships with industry leaders like ABB and interested groups, Western Canada can grow, develop and increase employment across its provinces. Electrification and modernization are efficient ways to build off of the pre-existing foundations to continue to develop current valuable industries such as agriculture, shipping and mining, resulting in higher employment rates and lower economic costs.

ⁱ <https://www.proteinindustriescanada.ca/uploads/7/1/5/9/71596509/picproposal-mar2018.pdf>

ⁱⁱ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/transportation/funding_opportunities_clean_community_energy_bc.pdf