



2018 CARBON NEUTRAL ACTION REPORT – SMALL EMITTERS FORM

DUE: May 31, 2019

This form is for the use of BC Public Sector Organizations whose GHG emissions were less than 600 tonnes CO₂e during the previous reporting year (2018). Please fill in the required information below

Organization Name:

Innovate BC

Contact name:

Michelle Foster

GHG Emissions and Offsets for 2018 (tCO ₂ e)	
GHG Emissions created in Calendar Year 2018 (from SMARTTool Homepage):	
Total Emissions (tCO ₂ e)	2
Total Offsets (tCO ₂ e)	0
Adjustments to GHG Emissions Reported in Prior Years (from SMARTTool Homepage):	
Total Emissions (tCO ₂ e)	0
Total Offsets (tCO ₂ e)	0
Grand Total Offsets for the 2018 Reporting Year (from SMARTTool Homepage): (This is the total emissions that must be offset for Reporting Year 2018)	
Grand Total Offsets (tCO ₂ e)	2

To enable comparisons with all B.C. public sector organizations, please provide the following data for your organization:

1. How many Full Time Equivalent (FTE) employees were part of your organization as of Dec 31, 2018? 22
2. What was the total amount of floorspace (m²) in your organization (including occupied and unoccupied space, owned or leased) as of Dec 31, 2018: (m²) 7400
3. What was the primary use of that space (office, education, warehousing, health services, lodging, arts and recreation, other)? Office
4. How many motor vehicles did your organization own or lease as of Dec 31, 2018? 0



Briefly describe the top three actions taken by your organization in 2018 to reduce GHG emissions and/or improve sustainability from its operations:

Action
<p>1. Foresight Venture Acceleration Program Update</p> <p>Our Foresight Cleantech Accelerator, a member of our BC Acceleration network, continues to be one of the leading accelerators in the province, supporting the development and advancement of cleantech companies in the province, supporting the development and advancement of cleantech and industrial innovation SMEs in the Province. The organization and all member companies have developed a variety of innovations that significantly reducing green house gas emissions and offer major efficiencies in the way both industry and communities function. Their core sectors have expanded</p> <p>to include mining, oil & gas, water, agriculture, forestry, robotics, manufacturing, materials, transportation, waste management, energy and smart buildings.</p> <p>In 2018, they reported the following:</p> <ul style="list-style-type: none">• Over 240 companies supported through early stage programming and challenge dialogue projects• Over 500 new jobs created• Over \$75 million in company and project investments• Over \$5.5 million government funding to support eco-system development and scale up projects<ul style="list-style-type: none">• Added two new programs throughout the year: Growth & Technology Acceleration <p>Success stories include:</p> <ul style="list-style-type: none">• CLIR secured \$2 million in financing during first 12 months in Launch Program & made 25 hires in first 18 months• PORTABLE ELECTRIC succeeded in increasing revenue over 1000% from 2017 to 2018• ACUVA secured multiple sales and partnership agreements with global partners and tier 1 brands

2. Cleantech Initiatives – Examples of events involving cleantech, which were sponsored or offered by Innovate BC in 2018/2019

2a) BCTECHSummit

Challenges

Two Cleantech Challenges were presented at the 2019 #BCTECHSummit from Shell Hydrogen and the Ministry of Transportation & Infrastructure. Specifically, they are looking for solutions that aim to advance environmental sustainability and reduce greenhouse gas emissions as described below.

- **Shell Hydrogen:** Process improvements for hydrogen production – The challenge was to provide solutions that improve three important areas of hydrogen production:
 - Cost reduction with a focus on (but not limited to): Compression (develop a high capacity high-pressure compression system for heavy-duty applications), electrolyzers, valves and manifolding, and/or industrial control and sensors.
 - Reliability improvement of refuelling systems or components with a focus on (but not limited to): Compressor, refuelling protocol software, nozzles, fittings, chilling systems and hoses.
 - Methods to increase hydrogen by weight and volume for distribution systems such as (but not limited to): Novel designs and configurations for high pressure vessels, liquid organic carriers, low-cost micro liquefaction (Small scale liquefaction is of high interest to enable stranded" low-cost 10-50 MW renewable projects located within 1000 mi. of load centres to be cost-effective) and others.
- **Ministry of Transportation and Infrastructure:** Zero-emission chargers in highway rest areas - The B.C. government has established a goal to increase the use of electric vehicles to reduce greenhouse gas emissions. To support this, the Province is developing a network of DC Fast Charging Stations to allow electric vehicles to operate throughout the province, including charging stations in provincial highway rest areas which are located between communities. The challenge was to identify zero emission technologies and develop the necessary equipment to operate DC Fast Charging Stations in areas of the province not serviced by the electrical grid. This equipment and technology developed will need to work in a variety of locations throughout the province and must take into account the varied weather and geographical conditions.

2b) 2nd Agritech Innovation Challenge

This challenge dialogue process (a partnership between Innovate BC and the BC Ministry of Agriculture) was offered for the agriculture sector, to communicate their challenges to BC innovators with agritech solutions to support the next generation of tech development to enhance the competitiveness and resiliency of BC's agriculture sector. This challenge was launched in 2016 and we're currently running the second edition.

Although this initiative is specific to the agritech sector it includes a number of cleantech elements within the challenge areas:

- **Food processing technologies:** BC's food and beverage processors produce over \$9.8 billion worth of food each year, representing 70% of total agri-food revenues for the Province. With a shortage of skilled and unskilled laborers in BC and beyond, processors continue to be faced with operational challenges. To address this labor shortage and enhance the efficiency of the processing sector, innovations are sought that will improve processing mechanization and

automation. Innovations for this challenge should consider technologies and solutions that are best suited to micro and small-scale processors in BC.

- **Agriculture, agri-food and seafood traceability technologies:** Traceability systems make it possible to follow the movement of animals, plants and foods from farm to the consumer through all points of a production and distribution system. With increased demand for food and export growth, our food supply chains are becoming more complex, making it difficult to trace food items back to their place of origin. Innovations are sought that will provide user-friendly and economical traceability options to micro and small-scale producers and processors in BC. Innovations for this challenge should consider existing and emerging market and regulatory traceability requirements.
- **Precision agriculture technologies and bioproducts:** Through the adoption of precision agriculture technologies and the manufacturing of bioproducts (from agricultural waste streams), agricultural producers can reduce the negative environmental impacts that result from their operations. With increasing regulatory requirements and interest from producers and consumers to protect our environment, the demand for precision agriculture technology and bioproducts production is increasing. Innovations are sought that allow for improved adaptation and adoption of precision tools, technologies and practices in agricultural operations in BC. Innovations are also sought that allow for the transformation of agriculture waste streams or outputs into renewable products (other than food and feed) in BC.

2c) National Industrial Symbiosis Program (NISP) – Canada Pilot

Launched in 2017 with Innovate BC as an initial funding sponsor along-side the following other pilot funding organizations or government partners: Western Economic Diversification, BC Ministry of Energy and Mines, BC Ministry of Agriculture, BC Ministry of Culture & Community, Metro Vancouver, City of Surrey, City of New West, City of Edmonton. The NISP Canada Pilot offered an award-winning and global methodology to identify and catalyze the implementation of industrial symbiosis, where business to business connections are facilitated to match a need with a have, and to turn waste into potential product resources as part of the circular-economy. The goal is to yield economic returns or cost savings, retention or creation of jobs, innovation out-comes, and the mitigation of environmental impacts (water, waste, ghg emissions).

The 18-month pilot involved six British Columbia workshops and six Alberta workshops which concluded in March 2019. There was a total of 189 participants, 2400 matches and over 1000 resources identified during the pilot year. NISP submitted a final report to funders in March 2019. NISP Canada is now focusing on advancing implementation and seeking additional resources to retain practitioners beyond March 2019 to increase the conversion of potential matches and synergies identified during the pilot. They are also looking to expand to new regions including Victoria, East Kootenays, Squamish and Calgary.

3. Ignite Program

The Innovate BC Ignite Program is designed to provide funding for collaborative, industry-driven academic research leading to commercializable projects in the natural resources, applied sciences, and engineering in BC. The Ignite program launched in 2016, and to date has awarded 4.8M to 22 innovative projects. Of those awards, over **\$3.5M has been contributed to 14 projects that are classified as clean technologies** (defined as technologies will that improve operational performance, productivity, or efficiency while reducing costs, inputs, energy consumption, waste, or environmental pollution). With the support of Innovate BC Ignite, these clean technology projects will commercialize and move their innovations to market within a three-year time-frame or less. We will continue to promote, support and fund initiatives through Ignite, that will help increase sustainability and manage the likely effects of climate change in the coming years and decades.

Briefly describe plans your organization has for continuing to reduce your GHG emissions in future years:

Innovate BC will continue to promote, support and sponsor initiatives that help to increase sustainability awareness and reduce GHG emissions both internally and externally throughout our community.

Describe any actions your organization took during 2018 to strengthen its ability to manage the likely effects of climate change in the coming years and decades (e.g., have assessed whether increased frequency of extreme weather events and/or long term changes in climate will affect your organization's infrastructure, its employees and/or its clients.)

Innovate BC will continue to promote and support cleantech companies and in BC by growing and furthering their work so that they can mitigate environmental impacts from industry.

Retirement of Offsets:

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, *Innovate BC* (the Organization) is responsible for arranging for the retirement of the offsets obligation reported above for the 2018 calendar year, together with any adjustments reported for past calendar years. The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy ensuring that these offsets are retired on the Organization's behalf, the Organization will pay the associated invoice to be issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.



Executive Sign-off

Name: Raghwa Gopal
(print)

Title: CEO

Signature:

Date: May 31st, 2019

Please scan and email the completed form to Carbon.Neutral@gov.bc.ca