



# ENVIRONMENT

## SUSTAINABLE DEVELOPMENT REPORT 2019

Innergex Renewable Energy Inc. ("Innergex" or the "Corporation") is an independent renewable power producer which develops, acquires, owns and operates hydroelectric facilities, wind farms and solar farms. As a global Corporation, Innergex conducts operations in Canada, the United States, France and Chile.



**INNERGEX**

Renewable Energy.  
Sustainable Development.



## INNERGEX TAKES ITS ENVIRONMENTAL RESPONSIBILITIES SERIOUSLY IN ALL ASPECTS OF ITS BUSINESS OPERATIONS. EVERY STAGE IN OUR DEVELOPMENT STRATEGY, FROM CONCEPT THROUGH DEVELOPMENT, CONSTRUCTION AND OPERATION TO DECOMMISSIONING, CONSIDERS OUR ROLE AND RESPONSIBILITY TO ALIGN OUR ACTIONS WITH THE NATURAL SURROUNDINGS.

We remain driven by the belief that the three pillars of sustainability – environmental protection, social development and economic development – are mutually reinforcing, and are proud of our track record of successfully balancing People, our Planet and Prosperity.

Our approach to environmental stewardship is guided by two internal policies. The **Sustainable Development Policy** articulates Innergex's commitment to integrating sustainable development considerations in all aspects of its business, including its strategic planning, decision-making, management, and operations while the **Environment, Health and Safety Policy** addresses Innergex's commitment to identify, mitigate and/or compensate for impacts on the surrounding environment that arise from the construction and operation of our facilities.

### NUMBER OF FACILITIES

As at December 31

	2019	2018
HYDRO	37	37
WIND	26	25
SOLAR	5	4
<b>TOTAL</b>	<b>68</b>	<b>66</b>

### INSTALLED CAPACITY (MW)

As at December 31

	2019		2018	
	Gross <sup>1</sup>	Net <sup>2</sup>	Gross <sup>1</sup>	Net <sup>2</sup>
HYDRO	1,181	797	1,181	797
WIND	1,979	1,489	1,629	1,139
SOLAR	328	302	78	52
<b>TOTAL</b>	<b>3,488</b>	<b>2,588</b>	<b>2,888</b>	<b>1,988</b>

### CONSOLIDATED ENERGY OUTPUT (GWh)

As at December 31

	2019 <sup>3</sup>	2018
HYDRO	3,244	3,365
WIND	4,442	2,929
SOLAR	336	68
<b>TOTAL</b>	<b>8,022</b>	<b>6,362</b>

On May 23, 2019, the Corporation announced completion of the sale of its wholly owned subsidiary Magma Energy Sweden A.B., which owns an equity interest of approximately 53.9% in HS Orka hf, owner of two geothermal facilities in operation, one hydro project in development and prospective projects in Iceland. As a result, they are not included in this document.

All data in this report are for the years ended December 31, 2019 and December 31, 2018.

### GHG INVENTORY

Fighting climate change is one of the key principles at Innergex. Generating renewable energy exclusively means we are a low emitting source of greenhouse gas (GHG) emissions, relative to other energy sources, that promotes cleaner air as our facilities produce no air pollution and no significant GHG emissions. In 2014, we conducted our first GHG accounting of Scope 1 emissions resulting from our operations, which at the time included Canada and the United States. The results illustrated that our facilities produce electricity with no significant amounts of GHG emissions and in fact the amounts of renewable energy generated offset more than our own modest emissions (such as from vehicles or short-term backup generation due to outages). In 2019, we committed to disclosing our GHG emissions on an annual basis going forward. Increasing our output of renewable energy will allow us to make a bigger contribution in the fight against climate change to help build a cleaner future.

### DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS (KG CO<sub>2</sub>E)

EMISSION TYPE	2019
Scope 1 Direct Emissions	2,095,706
Scope 2 Indirect Emissions	1,948,212
Scope 1 + Scope 2 Total	4,043,918
Scope 1 Halocarbon Releases	2,864,990
<b>Total CO<sub>2</sub> Emission including Halocarbon Releases</b>	<b>6,908,908</b>

	(kg CO <sub>2</sub> e/MWh Energy Produced)
<b>Total GHG Intensity</b>	<b>0.504</b>
<b>Total GHG Intensity including Halocarbon Releases</b>	<b>0.861</b>

Note: Halocarbons in this context refers to sulfur hexafluoride (SF<sub>6</sub>) and methane (CH<sub>4</sub>). In 2019 we had three sulfur hexafluoride (SF<sub>6</sub>) releases from high-voltage electrical systems at two of our facilities, resulting in a release of a total of 171.74 lbs. The majority of the loss occurred during construction of a substation at a facility in the United States.

1 Gross installed capacity is the total capacity of all operating facilities of Innergex.

2 Net capacity is the proportional share of the total capacity attributable to Innergex based on its ownership interest in each facility.

3 Production Proportionate as reported in the Corporation's 2019 Management Discussion & Analysis.

Innergex remains committed to producing 100% renewable energy and will not consider adding any technology that emits CO<sub>2</sub> from generating electricity to our portfolio of assets.

## EMISSIONS AVOIDED

Our goal is to produce electricity from renewable sources that have no significant GHG emissions and contribute to reducing CO<sub>2</sub> emissions to fight climate change. We are proud that the energy we generate contributes to offsetting CO<sub>2</sub> emissions from other sources.

The annual GHG emissions offset by Innergex's production of clean, renewable energy in 2019 was approximately

# 5,671,704

metric tonnes of CO<sub>2</sub> avoided, or the equivalent of removing

## 1,225,335 GASOLINE PASSENGER VEHICLES DRIVEN FOR ONE YEAR<sup>1</sup>

<sup>1</sup> Based on Innergex's 2019 Production Proportionate of 8,021,758 MWh, and calculated through <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

## MANAGING WASTE

As part of our disclosures, in 2019, we recorded 20 significant (those greater than 1 L in volume) spills at operational facilities. These spills were immediately and properly cleaned up and any affected soils were disposed of properly in accordance with regulations. Four of the spills were reported to regulatory bodies as required under the conditions of permits. The Corporation received zero fines or other sanctions in 2019 for non-compliance in environmental matters.

Our Spill Management Procedure in British Columbia is designed to improve our response and align with provincial regulations. We are presently formalizing similar procedures in our other areas of operation in line with provincial, state and federal requirements.

Innergex promotes recycling and reuse throughout the organization. We have different systems in place to address the specifics at each of our operating sites as they vary from urban office environments to the remote backcountry.

During construction, our Engineering, Procurement, and Construction contractors are required to provide waste management plans that include proper recycling or disposal of waste that follow local, regional and federal regulations as well as our procedures laid out in our internal waste management guidelines.

Though our facilities do not generate waste associated with their operation, we nonetheless have protocols in place to deal with typical waste generation. Operators at our facilities, mostly in remote locations, sort waste from our facilities to be sent to recycling facilities or disposal depending on the geographic location and availability of services in that jurisdiction.

Joining the September 27 Climate March in Montreal and Vancouver



Our office staff also plays a role in reducing our footprint. All of our offices have recycling available and some have broader options than others. Internal programs help communicate recycling and waste reduction initiatives such as our central recycling station that was implemented in 2019 in our Vancouver office. In an effort to help cut down on disposables in 2019, Innergex provided every office employee with a reusable glass lunch container to transport food items.

In 2019, we successfully phased out plastic water bottles provided to employees at all our offices and **REPLACED THEM WITH BOTTLE LESS COOLERS** that provide filtered carbonated and non-carbonated water directly from tap

## PROTECTING BIODIVERSITY

Capturing the natural movement of nature's resources (water, wind, sunlight) to generate energy demands a commitment to ensure that the construction and operation of facilities harnessing those resources is conducted in harmony with the host environments.

Our approach, laid out in our Sustainable Development Policy, describes the strategies to prevent, mitigate or minimize the effect our facilities could have on local biodiversity. We also consider remediation and restoration as a part of this strategy for not only the land we build on, but adjacent and protected areas.

Our pre-construction, construction and operation phase monitoring programs ensure we can reduce the risks of impacts on the environment including identifying potential species at risk, invasive species, potentially-affected species or the extent and duration of potential impact, to name just a few.

As our projects are located in remote areas, consideration of wildlife plays an important role in the planning, construction and operation phases of our projects. We have a successful record of partnering with government, Non-Governmental Organizations ("NGOs"), conservation groups, academia and local organizations to design and conduct solutions to mitigate human-wildlife interaction and disturbance to important wildlife ecosystems.

## CONSERVING WATER RESOURCES

Maintaining the integrity of water resources is a priority in the environments in which we conduct generation activities. In 2019, as in all other years, our hydroelectric facilities consumed no water while generating electricity since they only use the natural flow of a river and the temporarily diverted water is returned to its original river source free of contaminants. Our solar and wind facilities do not consume water in their operation. Domestic water consumption is minor and limited to usage at our four offices and at facilities that have bathrooms.

## FISH AND WILDLIFE MONITORING PROGRAMS

Innergex takes great care in ensuring our impact on terrestrial and aquatic life is mitigated, minimized or avoided at all times. We invest in considerable short and long-term monitoring programs that run during the early development stage (with pre-project baseline surveys) right through the operational phase. Before and after data are compared to confirm predictions made during project permitting.

Much of the monitoring is carried out by independent third-party specialist environmental consultants with involvement by our Indigenous partners. For some projects, we have partnered with NGOs or academia by providing the necessary capital and support to conduct multi-year, academic-level monitoring programs. Monitoring results contribute new data and knowledge and have provided valuable research insight in some instances that has greatly added to the industry's understanding of environmental issues and renewable energy development.

Our environment team manages the ecological health of **329,366 M<sup>2</sup>, OR 61 FOOTBALL FIELDS, OF FISH HABITAT CREATED TO OFFSET TEMPORARY IMPACTS FROM CONSTRUCTION ACTIVITIES** and any longer-term impacts that could arise during operation

## ENVIRONMENTAL RISK MANAGEMENT

Innergex maintains an environmental management system that applies to each of its operating renewable energy facilities. This system consists of a combination of standard procedures (management and prevention of environmental spills, waste management, etc.) as well as procedures that are unique to each facility and jurisdiction in which we operate. Innergex's approach is to view each facility as a stand-alone with specific environmental requirements that derive from permits and approvals pertinent to each facility. This may include, for example, procedures for water use and compliance, fish protection, or road usage at each hydro facility, and procedures for protection of birds, bats and other wildlife, as well as vegetation at our wind facilities. These procedures are overseen by an in-house environmental team, supported by independent specialist contractors and site operations staff that are trained to adhere and perform their tasks within these site-specific requirements.

Our **Corporate Emergency Response Plan** identifies potential environmental, health and safety emergencies and includes appropriate actions to respond to such situations. This plan, as well as the Site-Specific Safety Plan, are available at each facility and in each Innergex office as well as on the Corporation's intranet network. Our Operations, Health and Safety team works diligently to ensure the health and safety of all our employees through education, training, monitoring and one-on-site visits.

For more information on Environment please visit our Sustainability Reporting Initiative at [sustainability.innergex.com](https://sustainability.innergex.com)

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[innergex.com](https://www.innergex.com)  
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