








Vancouver is known for natural beauty and clean air, and it will take the collaboration and support of many stakeholders to keep it that way.

## Emissions inventory

For emissions to be reduced, they must first be measured. That's why we conduct air emission inventories at the Port of Vancouver every five years, at the same time as regional

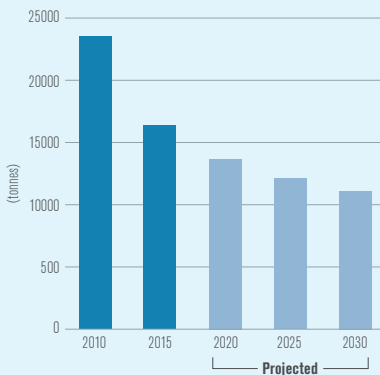
and national inventories. The results identify trends so we can improve our programs and policies, and ultimately reduce emissions.

### Per cent change in total emissions by source from 2010 to 2015

	 Marine	 Rail	 On-road vehicles	 Non-road equipment	 Administrative operations
Air pollutants	↓ 36%	0%	↓ 31%	↓ 26%	↑ 14%
Greenhouse gas emissions	↑ 10%	↑ 17%	↑ 23%	↑ 18%	↑ 7%

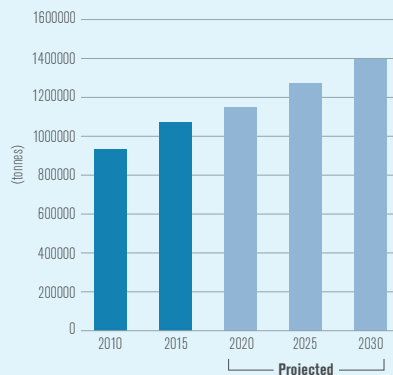
## Key findings

### Air pollutants



Air pollutant emissions have decreased significantly since 2010 despite growth in trade through the port – a result of stronger regulation and investment in technology.

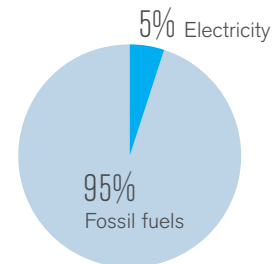
### Greenhouse gas emissions



Greenhouse gas emissions per tonne of cargo have decreased, but total emissions have increased and are forecast to continue increasing with growth in trade through the port.

## Challenge

### Energy use



Fossil fuels make up 95% of port-related energy use. We will need to work with government and industry stakeholders to reduce port energy consumption through conservation and efficiency, and facilitate a transition to low carbon energy alternatives like hydroelectricity.

Our vision is to be the world's most sustainable port. We are working to reduce port-related air emissions that affect air quality and contribute to climate change.

## Our approach

At the Vancouver Fraser Port Authority, we focus on supporting early compliance with pending environmental regulations, improving efficiency and promoting clean technology. We collaborate with government and

industry stakeholders to undertake port emission inventories and enhance air quality monitoring, which enables us to track and report our progress toward achieving our vision.

### Our air and energy initiatives target key port-related emission sources:

#### Emissions inventory

Our activity-based inventory enables us to estimate port-related air emissions from a variety of sources. The inventory informs our policy and programs by helping us identify trends and priority areas for action.

#### Northwest Ports Clean Air Strategy

The strategy was developed in partnership with the ports of Seattle and Tacoma and the Northwest Seaport Alliance to reduce port-related air emissions in the Georgia Basin-Puget Sound air shed.

#### EcoAction Program

Ships can receive harbour dues discounts by meeting voluntary environmental best practices. Participation in the program grew to 612 vessel calls in 2016, representing more than 20 per cent of all vessel calls.

#### Shore power

Since 2009, shore power at the Canada Place cruise terminal has eliminated 474 tonnes of air pollutants and 16,138 tonnes of greenhouse gases. We're installing shore power at two container terminals, to be completed in 2018.

#### LNG bunkering

Along with other global ports, we're preparing the port for liquefied natural gas as a marine fuel, which will reduce ship air emissions.

#### Truck Licensing System

Container trucks that access the port meet minimum environmental requirements for engine age, emission controls and idle reduction.

#### Non-Road Diesel Emissions Program

We work with port tenants to accelerate change-over of older diesel equipment through a combination of fees and rebates.

#### Energy Action initiative

In partnership with BC Hydro, this program helps port tenants advance energy conservation measures and access financial incentives.

#### Climate Smart

We offer training for port tenants to measure and reduce greenhouse gas emissions. 11 tenants participated in 2015, collectively eliminating 2,788 tonnes of CO<sub>2</sub>e.

	Marine	Rail	On-road vehicles	Non-road equipment	Administrative operations
<b>Emissions inventory</b>	✓	✓	✓	✓	✓
<b>Northwest Ports Clean Air Strategy</b>	✓	✓	✓	✓	✓
<b>EcoAction Program</b>	✓				
<b>Shore power</b>	✓				
<b>LNG bunkering</b>	✓				
<b>Truck Licensing System</b>			✓		
<b>Non-Road Diesel Emissions Program</b>		✓		✓	
<b>Energy Action initiative</b>				✓	✓
<b>Climate Smart</b>		✓	✓	✓	✓

 Learn more about our air and energy initiatives at [portvancouver.com/cleanair](http://portvancouver.com/cleanair)