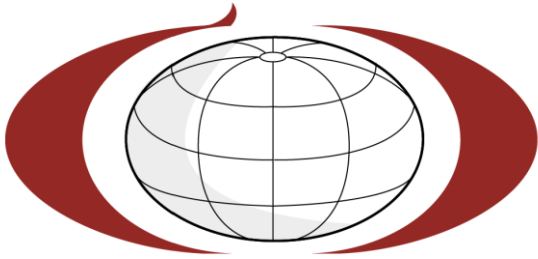


# PRAIRIE RESILIENCE

## MANAGING GHG LIABILITIES UNDER SASKATCHEWAN'S NEW LARGE EMITTERS PROGRAM



**NORTH SHORE**  
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# Outline

- ▣ Regulatory Background
- ▣ Technical Overview
- ▣ Strategy
- ▣ Next Steps
- ▣ Questions

Prairie Resilience:  
A Made-in-Saskatchewan Climate Change Strategy





# Regulatory Background

# Regulatory Background

- The Government of Saskatchewan released its Prairie Resilience climate change strategy in December 2017. Part of the strategy includes:
  - Output-Based Performance Standards Program (OBPS), under the Management and Reduction of Greenhouse Gases Act (MRGHG) – in effect Sept 2018
    - Reduce by 10% by 2030 (large emitters)
  - Methane Action Plan (MAP), under the Oil and Gas Emissions Management Regulations (OGEMR) – in effect Jan 2019
    - Reduce by 40 to 45% of 2015 levels = 4.5 million tonnes CO<sub>2</sub>e

# Federal Regulatory Drivers

- The federal Greenhouse Gas Pollution Pricing Act (GGPPA) went into effect June 2018
- Under the GGPPA, the federal carbon pollution pricing system has two parts:
  - Regulatory charge on fuel (CRA)
  - Output-Based Pricing System (OBPS) for large emitters (ECCC)
- If provincial jurisdictions do not meet equivalency, the federal backstop will apply

# Equivalency

- ❑ Saskatchewan's system is on track to only partially meet the benchmark stringency requirements
- ❑ Federal carbon pollution pricing system will apply to the emission sources not covered
  - Large emitters in electricity and natural gas transmission sectors will be subject to federal performance standards

# Program Comparison – Oil and Gas

	AB CCIR	SK OBPS	Federal OBPS
<b>Threshold</b>	100,000 tonnes CO <sub>2</sub> e	25,000 tonnes CO <sub>2</sub> e	50,000 tonnes CO <sub>2</sub> e
<b>Opt in Threshold</b>	50,000 tonnes CO <sub>2</sub> e	10,000 tonnes CO <sub>2</sub> e	
<b>Fugitive and Venting Emissions</b>	Included	Methane venting and fugitives from oil and gas facilities are not included – covered in other frameworks.	
<b>Indirect Emissions</b>	Included	Not included	Unknown
<b>Benchmark</b>	Sector benchmark set at 80% of production weighted average emissions intensity	Sector benchmark not used, facility specific baseline used instead	Sector benchmark set at 70% of production weighted average emissions intensity.
<b>Compliance Cost</b>	Currently \$30/tonne, may not increase	Currently \$20/tonne, increasing by \$10/tonne each year up to \$50/tonne in 2022	
<b>Compliance Reports due</b>	March 31	June 1	June 1

# Technical Overview

For Upstream Oil and Gas Facilities under the  
Saskatchewan Output Based Performance  
Standards (OBPS) Program



# Direct Emissions Definition

- Direct emissions are the sum of all emissions associated with the production of a product
- Facilities in upstream oil and gas are covered by additional provincial regulations – to avoid double regulating, OBPS covers only stationary fuel combustion emissions

Source Category	Included in direct emissions for regulated sectors (excluding upstream oil & gas)	Included in direct emission for upstream oil & gas
Stationary Fuel Combustion	✓	✓
Industrial process	✓	✗
Industrial product Use	✓	✗
Venting	✓	✗
Flaring	✓	✗
Leakage	✓	✗
On-site transportation	✓	✗
Waste	✓	✗
Wastewater	✓	✗

# Thresholds

- ❑ Facilities must register as a regulated facility if they emit  $\geq 25,000$  tonnes CO<sub>2</sub>e annually in stationary combustion emissions
- ❑ Facilities can opt in if they emit  $\geq 10,000$  tonnes CO<sub>2</sub>e annually in stationary combustion emissions
- ❑ **Existing facilities** – facilities that have been in commercial production for at least 3 calendar years with annual total regulated emissions  $\geq$  tonnes 25,000 CO<sub>2</sub>e
- ❑ **New Facilities** – facilities that have been in commercial production of fewer than 3 calendar years with annual total regulated emissions  $\geq 25,000$  tonnes CO<sub>2</sub>e
- ❑ **Voluntary facilities** – facilities with annual total regulated emissions between 10,000 and 25,000 tonnes CO<sub>2</sub>e. Facilities can be existing or new.

# Registration

- Facilities that meet the thresholds must register online through the Ministry of Environment Business Portal by June 1, 2019
- Emissions are checked against 2017 emissions reported to the ECCC Greenhouse Gas Reporting Program (GHGRP)
- If you do not have a 2017 GHGRP submission, you must contact the Ministry to find alternative ways to prove your eligibility

# Carbon Tax Exemption

- Once you are registered in the OBPS program, regulated facilities can apply for an exemption from the federal carbon tax
- This will allow facilities to obtain fuel on a federal charge-out basis
- Once approved, facilities will apply to be a registered emitter with the CRA, and receive an exemption certificate to present to the fuel supplier.
- Obligations of a registered emitter under the Greenhouse Gas Pollution Pricing Act:
  - Requirements to report monthly to the CRA
  - Pay fuel charge on any fuel diverted from your facilities

# Compliance Years

- ▣ **Existing facilities** – first compliance year is the 2019 reporting year
- ▣ **New facilities** – first compliance year is the third year after the year in which there are at least 25,000 tonnes CO<sub>2</sub>e of total regulated emissions or the commencement of commercial production.

# Baseline Emissions

- Regulated facilities must establish a baseline emissions intensity for each product
- Baseline should reflect business as usual conditions
- Ministry of Environment can be contacted to discuss establishing alternative baseline years
- Baseline submissions can be adjusted if there are major operational changes

# Baseline Emissions

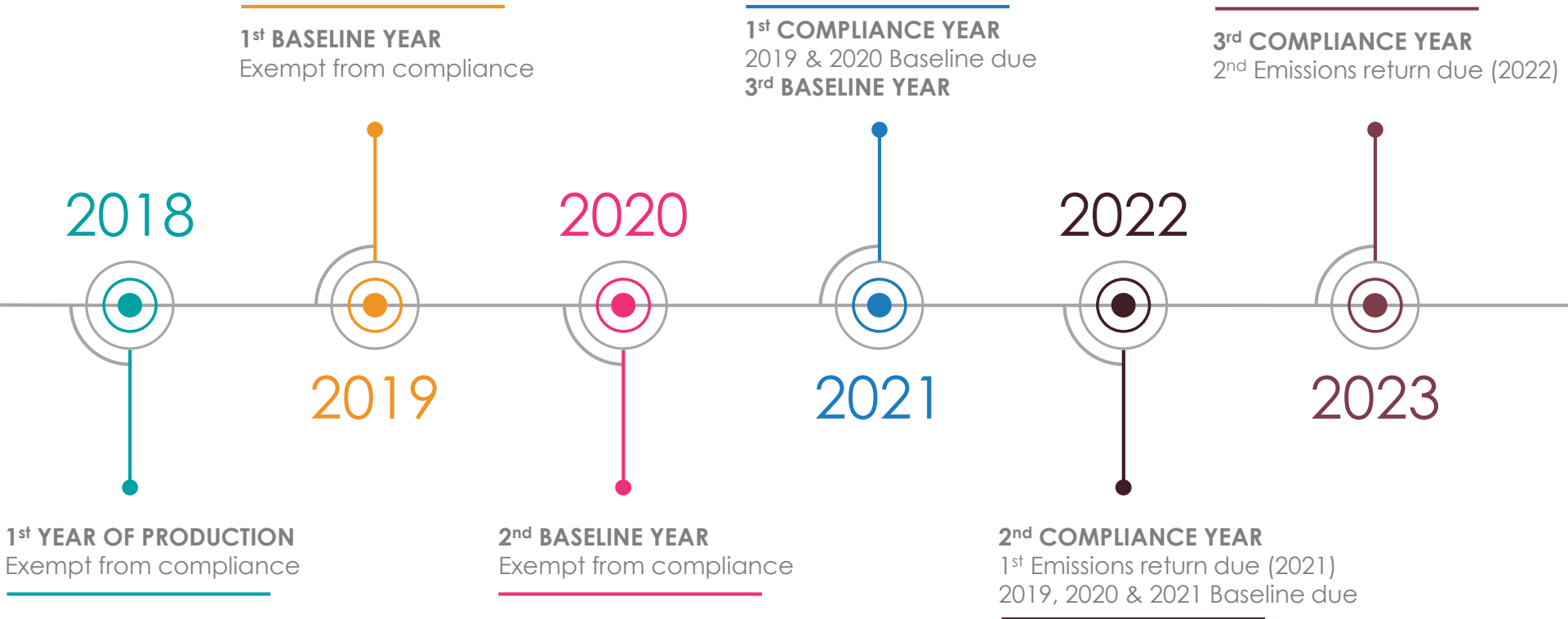
## ❑ Existing facility baseline years

- Three consecutive calendar years, selected from 5 years preceding the first compliance year
- For an existing facility (first compliance year 2019), baseline years can be selected from 2014 to 2018

## ❑ New facility baseline years

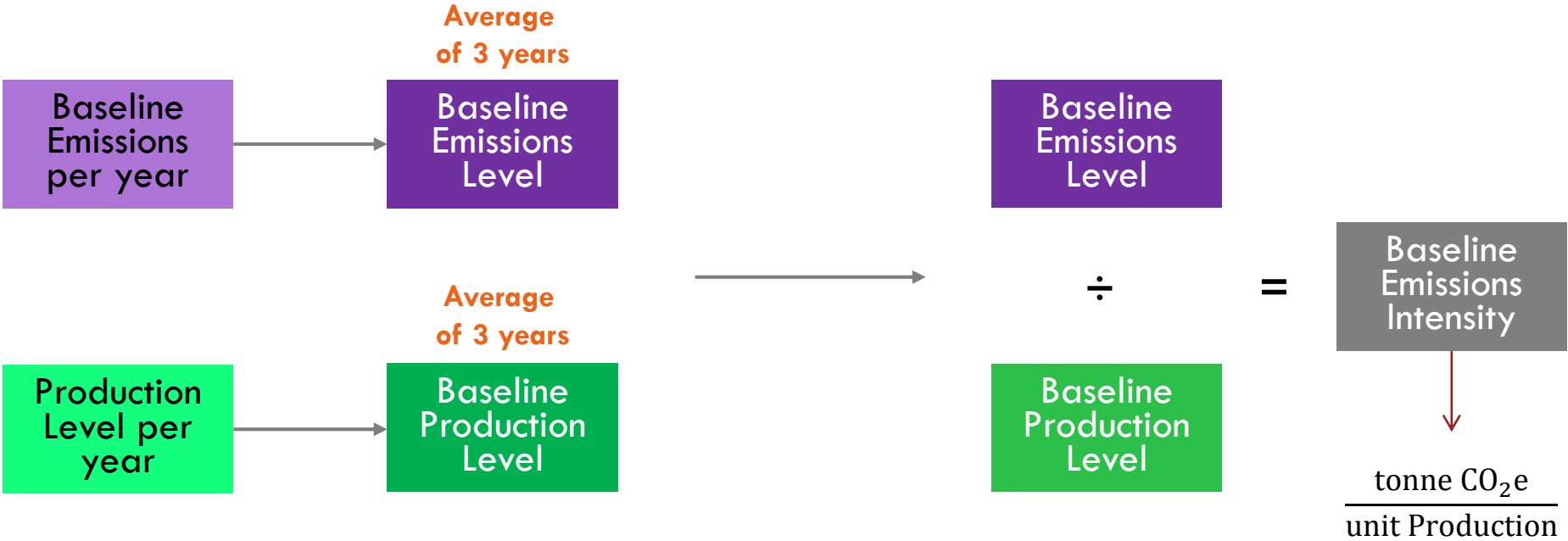
- Facilities are exempt from compliance obligations for 3 years
- First compliance year – baseline years are 2 years preceding the first compliance year
- Subsequent compliance years – baseline years are the 2 years preceding the first compliance year, and the first compliance year

# New Facility Baseline Emissions Example





# Baseline Emissions Calculations



# Baseline Submissions

- ❑ Facilities must be registered before baselines can be submitted
- ❑ **Existing facility** – baseline submission due Sept 1 of the first compliance year
- ❑ **New facility** – first baseline submission due Sept 1 of the first compliance year. Second baseline submission due Sept 1 of the second compliance year.
- ❑ Baseline submissions must include:
  - Chosen baseline years
  - Total regulated emissions for each baseline year
  - Total production for each baseline year
  - Verification by a third party (includes site visit)
  - Quantification methodology

# Quantification of GHG Emissions

- There is no prescribed methodology for quantification of direct emissions:
  - “The most accurate quantification methodology for each emission source should be used”*
- Options include:
  - Emission factors
  - Energy equivalence factors
  - Unit conversions
- Quantification methodology must be consistent with the baseline submission – Cannot change methodology without contacting the Ministry of Environment

# Performance Standard Allocations

- Performance Standard Allocations represent the portion of facility baseline emissions that can be emitted without penalty
  - These increase in stringency over time
  - Performance standards for Upstream Oil and Gas only cover stationary fuel combustion
- Permitted emissions are calculated based on the facility specific baseline and the performance standard allocation
  - How many tonnes of CO<sub>2</sub>e can be emitted per unit of product

Reduction Period	Upstream Oil and Gas Stationary Fuel Combustion
1	0.9875
2	0.9750
3	0.9625
4	0.9500
5	0.9375
6	0.9250
7	0.9125
8	0.9000
9	0.8875
10	0.8750
11	0.8625
12	0.8500

**1.25%  
reduction  
each year**

# Permitted Emissions Calculations

A diagram illustrating the calculation of a Performance Standard. It features a red box on the left labeled "Performance Standard Allocation" with a red arrow pointing to the number "0.9875". This is followed by a multiplication symbol "X", a grey box labeled "Baseline Emissions Intensity", an equals sign "=", a dark teal box labeled "Performance Standard", and a red arrow pointing to the fraction  $\frac{\text{tonne CO}_2\text{e}}{\text{unit Production}}$ .

$$\text{Performance Standard Allocation} \times 0.9875 \times \text{Baseline Emissions Intensity} = \text{Performance Standard} \rightarrow \frac{\text{tonne CO}_2\text{e}}{\text{unit Production}}$$

A diagram illustrating the calculation of Permitted Emissions in a year. It features a dark teal box on the left labeled "Performance Standard", followed by a multiplication symbol "X", a black box labeled "Volume of Product in a year", an equals sign "=", a yellow box labeled "Permitted Emissions in a year", and a red arrow pointing to the text "tonne CO<sub>2</sub>e".

$$\text{Performance Standard} \times \text{Volume of Product in a year} = \text{Permitted Emissions in a year} \rightarrow \text{tonne CO}_2\text{e}$$

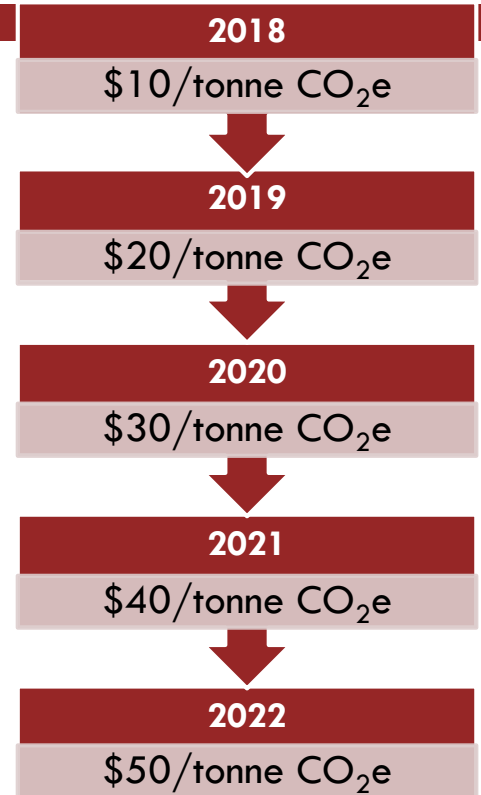
# Compliance Calculations

- Compliance obligations occur if regulated emissions in the compliance year are greater than the permitted emissions

$$\begin{array}{ccc} \text{Total Direct Emissions in a year} & - & \text{Permitted Emissions in a year} = \text{Compliance Obligation} \\ \text{[Dark Red Box]} & & \text{[Yellow Box]} \end{array}$$

↑  
tonne CO<sub>2</sub>e

- Compliance cost is based on the current price of carbon



# Emissions Returns

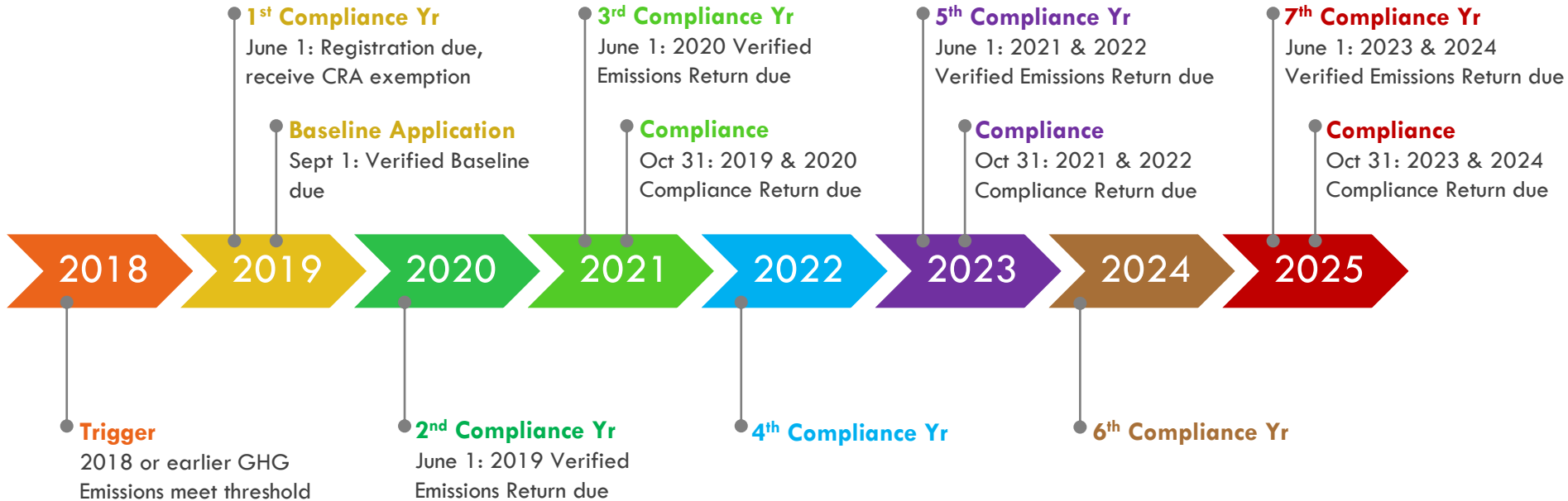
- ❑ Regulated facilities must submit an emissions return for each compliance year
- ❑ Emissions returns must include:
  - Total regulated emissions
  - Total production
  - Quantification methodology
  - Compliance calculations – comparison of total regulated emissions and total permitted emissions
  - Verification by a third party
- ❑ Emissions returns for the 2019 compliance year (1<sup>st</sup> year) are due June 1, 2020
- ❑ Emissions returns for the 2020 compliance year (2<sup>nd</sup> year) are due June 1, 2021
- ❑ Subsequent emission returns are due every other year.

# Compliance Options

- Facilities can meet the performance standard by:
  - Meeting the performance standard
  - Using a performance credit
  - Purchasing an offset credit
  - Contributing to the technology fund
- Compliance returns are required only if compliance obligation is owed
  - Due every two years



# Timeline for an Existing Facility





# Strategy

# Quantification Flexibility

- Freedom to determine what type of methodology works for your facility – room for improvement
- Allows you to choose a methodology that is convenient and beneficial – Note that you must follow the same methodology from baseline to compliance.
- Should calculate emissions using multiple methodologies

# Choosing Baseline Years

- ▣ Choose baseline years to maximize the facility baseline emission intensity
- ▣ If available baseline years are not representative of current operations, engage Ministry of Environment – alternative baseline

# Strategic Reductions

- Kill two birds with one stone
  - Capital investments that will comply with multiple regulations
  - Ex. Retrofit for fuel reductions – will reduce NOx emissions for MSAPR and reduce GHG for the OBPS program

# Integrated Facilities

- Multiple facilities can be combined into a single integrated facility to meet the threshold – receive carbon levy exemption
  - Ex. Multiple wells flowing into a battery with a single owner/operator
- This is a proposed idea from the Ministry of Environment and is not currently available now
  - Encourage industry to reach out to the Ministry of Environment to discuss this proposed idea. Ministry is open to working with industry.

# Next Steps

# Next Steps

- ❑ Determine if you are in the program or eligible to opt into the program
  - Check 2017 GHG emissions for stationary combustion to see if facilities meets thresholds
  - Engage Ministry of Environment if 2017 GHG emissions do not meet the threshold, but 2018 GHG emissions do.
- ❑ Registration by June 1, 2019
- ❑ Apply to the CRA for fuel exemption certificate
- ❑ Determine baseline years and quantification methodology for submission due Sept 1, 2019
- ❑ Engage third party verifiers for baseline submission

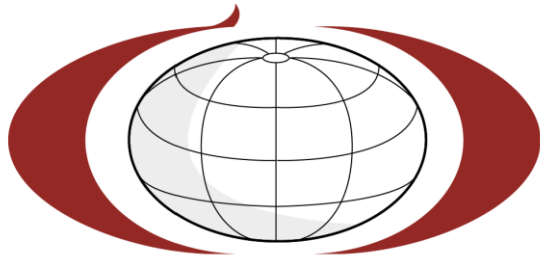


# Questions?

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