CleanBC Program for Industry Update

February 2, 2021
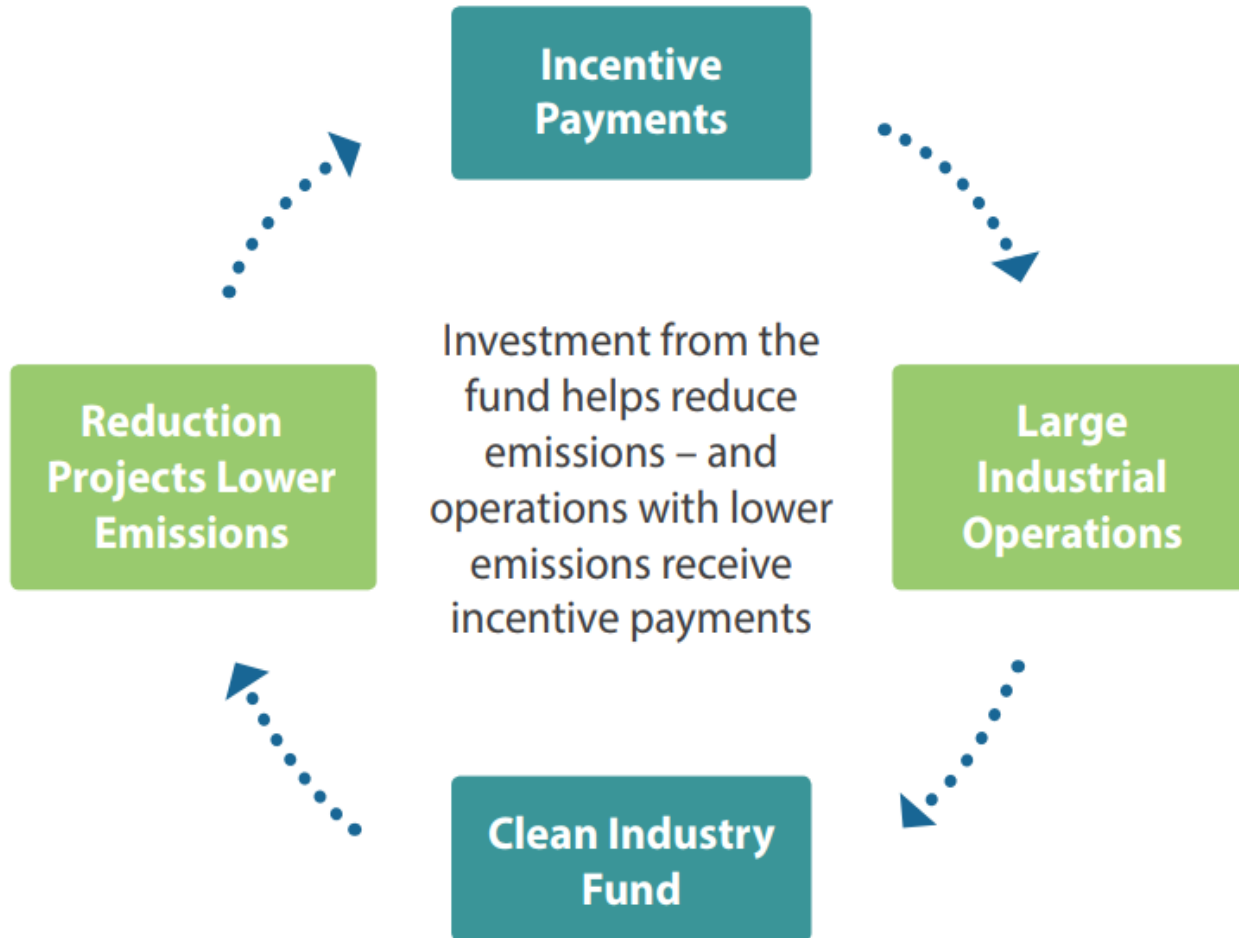
Presentation Overview

Context	• Background about CleanBC program for Industry
CIIP in a nutshell	• Benchmark and Eligibility Thresholds • CIIP Program requirements
Highlights	• Transition + year Highlights
ERP	• Emission Reduction Plan and its future
CIIP Applications Review	• CIIP applications review • Most Common Mistakes
CIIP Application Process	• Process Chart for the next CIIP Cycle • Time line
Looking forward	• CIIP Next Steps
Questions?	

Context

- In Dec 2018, government announced **CleanBC** to reduce climate pollution and build a low-carbon economy
- Includes **CleanBC Program for Industry (CPI)** with the following objective:
  - Enhancing British Columbia's competitive advantages while reducing our own GHG emissions intensity
- Two CPI Initiatives:
  - **CleanBC Industrial Incentive Program (CIIP)**: incentive payments based on operations' emissions intensity compared to a **world-leading performance benchmark**
  - **CleanBC Industry Fund (CIF):** funding for industrial emissions reduction projects
- The program is funded by the carbon tax paid by industry above $30/tonne

Program for Industry

cleanBC

Incentive Payments

Large Industrial Operations

Clean Industry Fund

Reduction Projects Lower Emissions

Investment from the fund helps reduce emissions – and operations with lower emissions receive incentive payments

CIIP Program Requirements

- Eligibility Criteria:
  - Must be a GGIRCA "reporting operation"
    - Emit 10,000+ tC02e, excl. Sched. C Biomass
    - Submit an emissions report for the previous reporting year by deadline of current year
    - Not a waste treatment, power generation or natural gas distribution operation (ineligible sectors)
  - Material non-compliance under GGIRCA could result in ineligibility or impact future payments under CIIP

- Must submit a certified CIIP application with complete additional information (production, energy imports/exports, etc.) together with verification statement and verification Report (+25,000 tCO2)
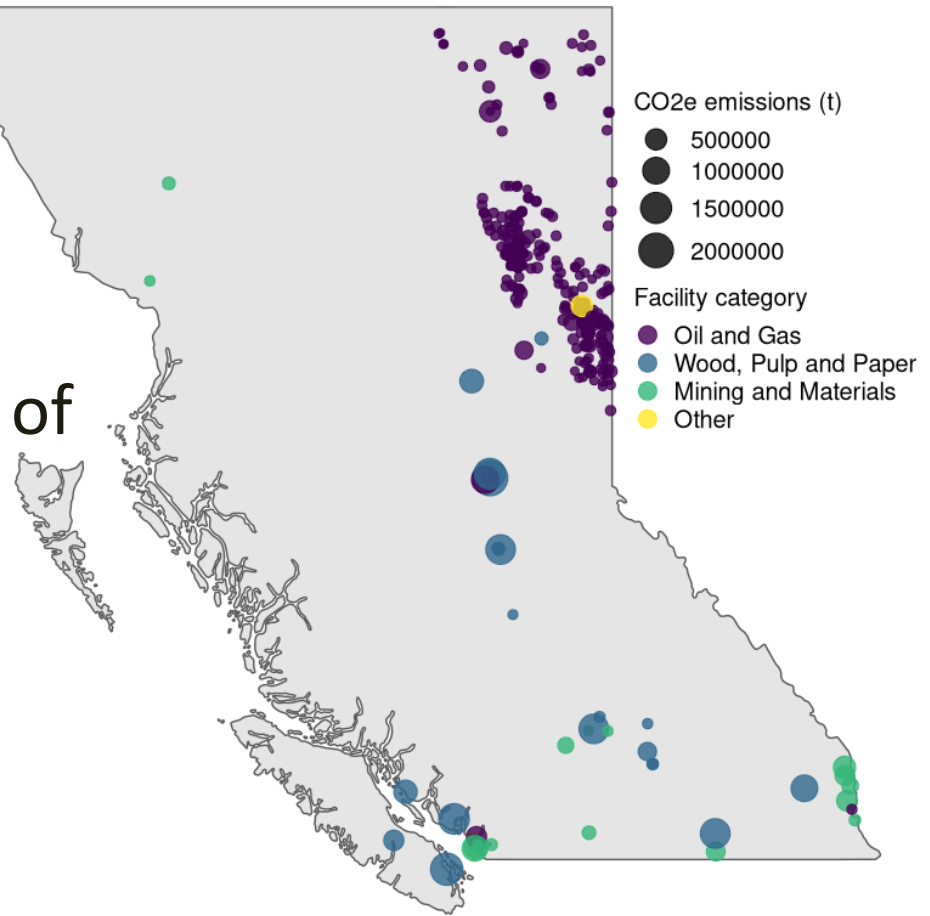
CIIP in a nutshell
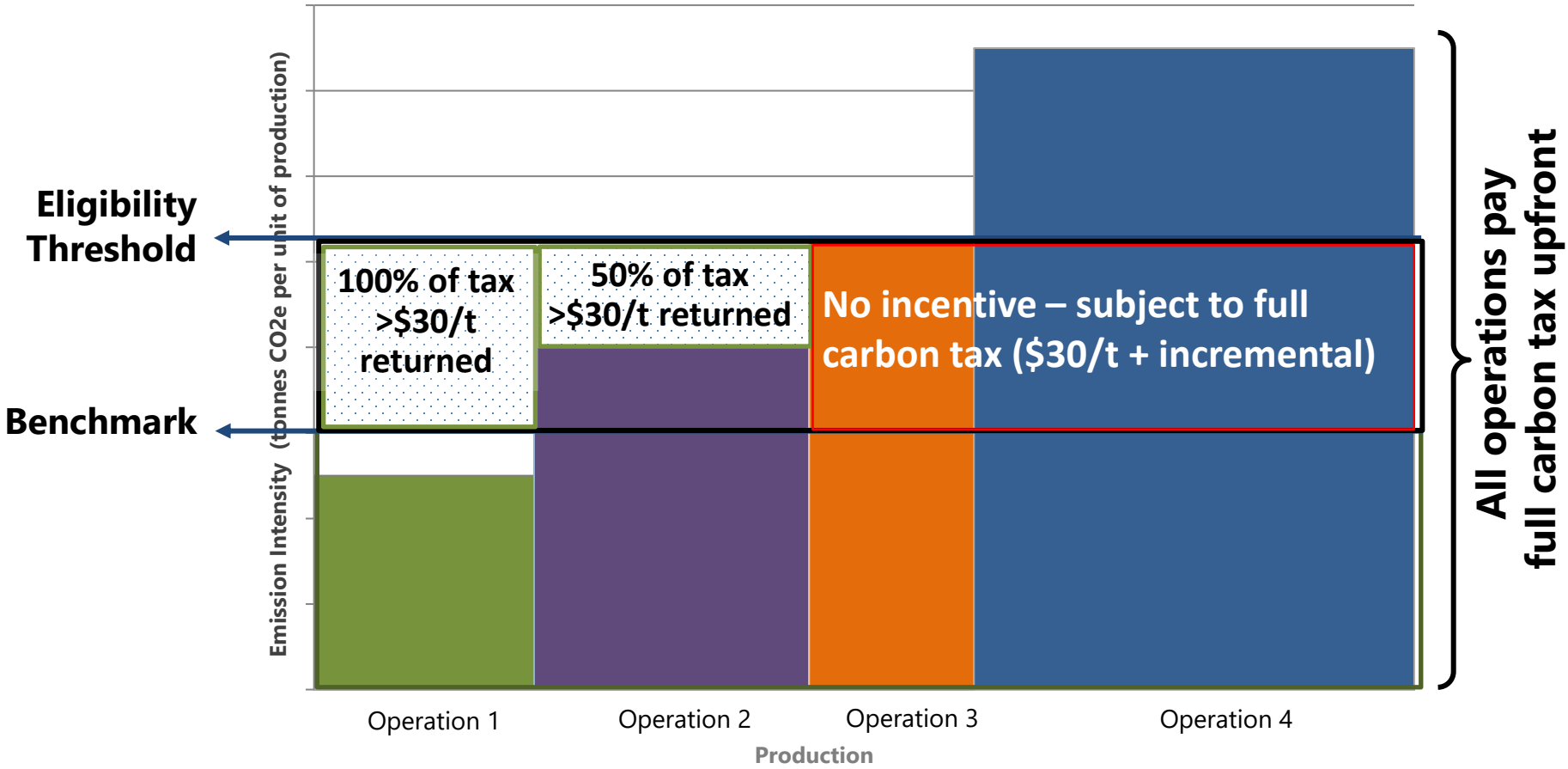
Transition + Year

- Applications for the 2019 reporting year were received and processed

- 34 benchmarks and thresholds are set and applied

- For 2nd year of CIIP:

  - 72% of available funds provided to industry in the form of industrial incentives; and

  - 28% of available funds were allocated to the CleanBC Industry Fund.

  - Weighted average incentive ratio 82%.

Transition + Year Highlights

- 518 eligible applications received and processed. 56% more than 2018.

- Applicants represent 90% of total reported industrial emissions

- 60% of emissions covered by Carbon Tax

CO2e emissions (t)
- 500000
- 1000000
- 1500000
- 2000000

Facility category
- Oil and Gas
- Wood, Pulp and Paper
- Mining and Materials
- Other

Transition + Year Highlights

- CIIP application web portal was launched

- Because of complications with COVID19:

  - CIIP application deadline moved to September

  - Initial payments of more than $34M provided prior to the CIIP application in summer 2020

  - Incentives paid to operators based on their emissions performance or 75% floor subject to submission of Emission Reduction Plan

- Second payment in December / January

- Total Incentive Payment of more than $81M

Emission Reduction Plan

Emission Reduction Plan

cleanBC
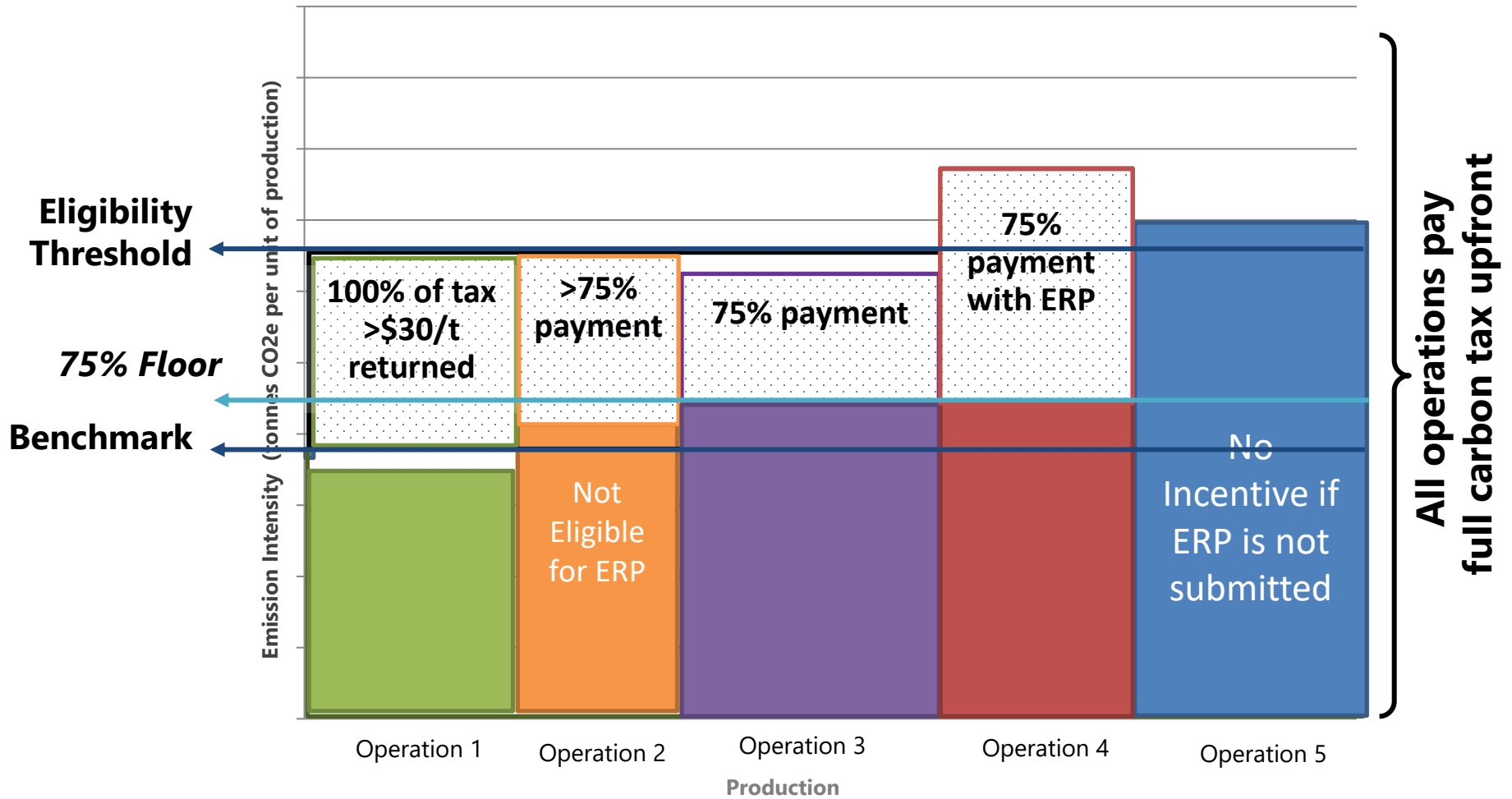
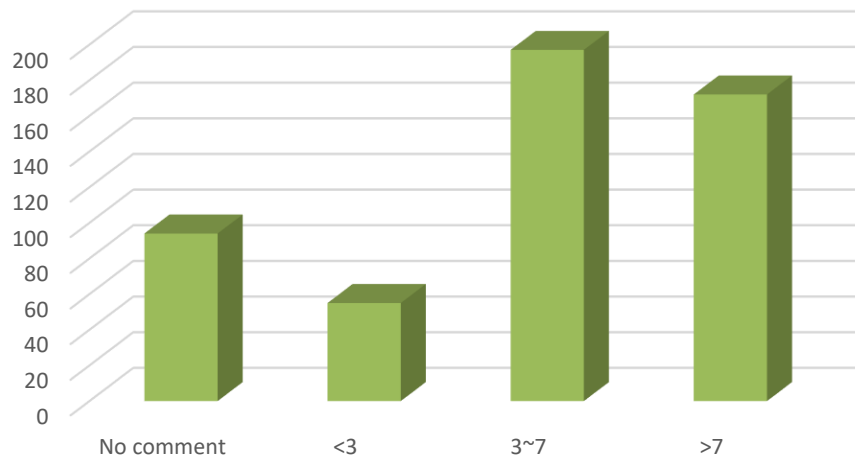No. of application VS. Incentive ratio range
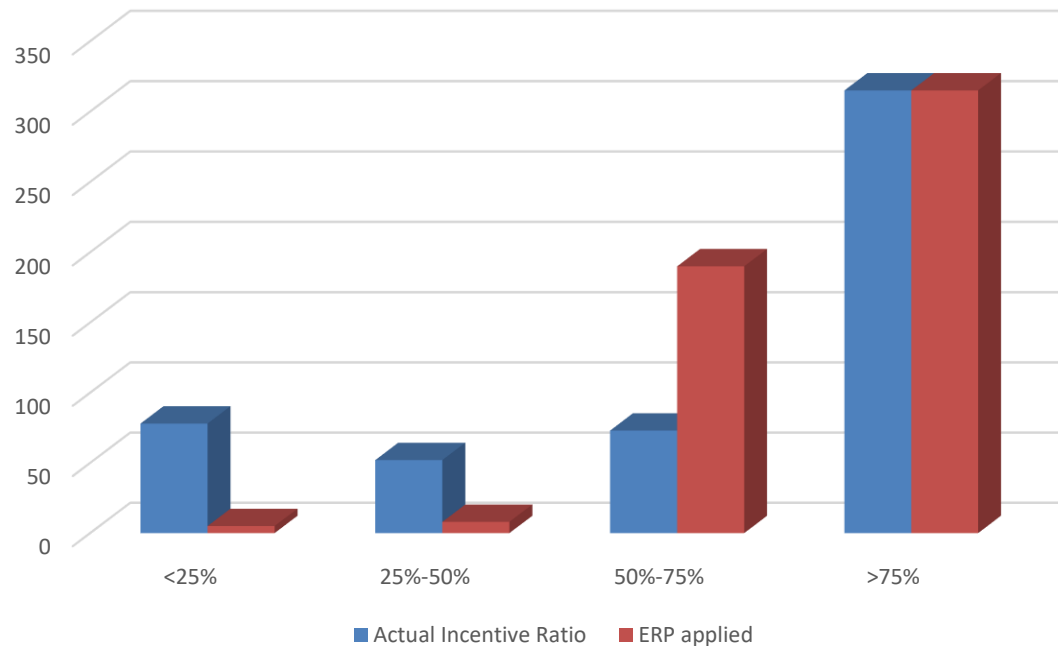
- Number of facilities eligible to submit ERP: **193**
- Number of facilities committed to submit the ERP: **171**

CIIP Application Review

	No of applications	No. of comments
Total	518	
No comments	94 (18%)	
Administration	193 (37%)	206
Emissions	215 (42%)	587
Fuel	341 (66%)	1138
Production	195 (38%)	456

No. of comments per application

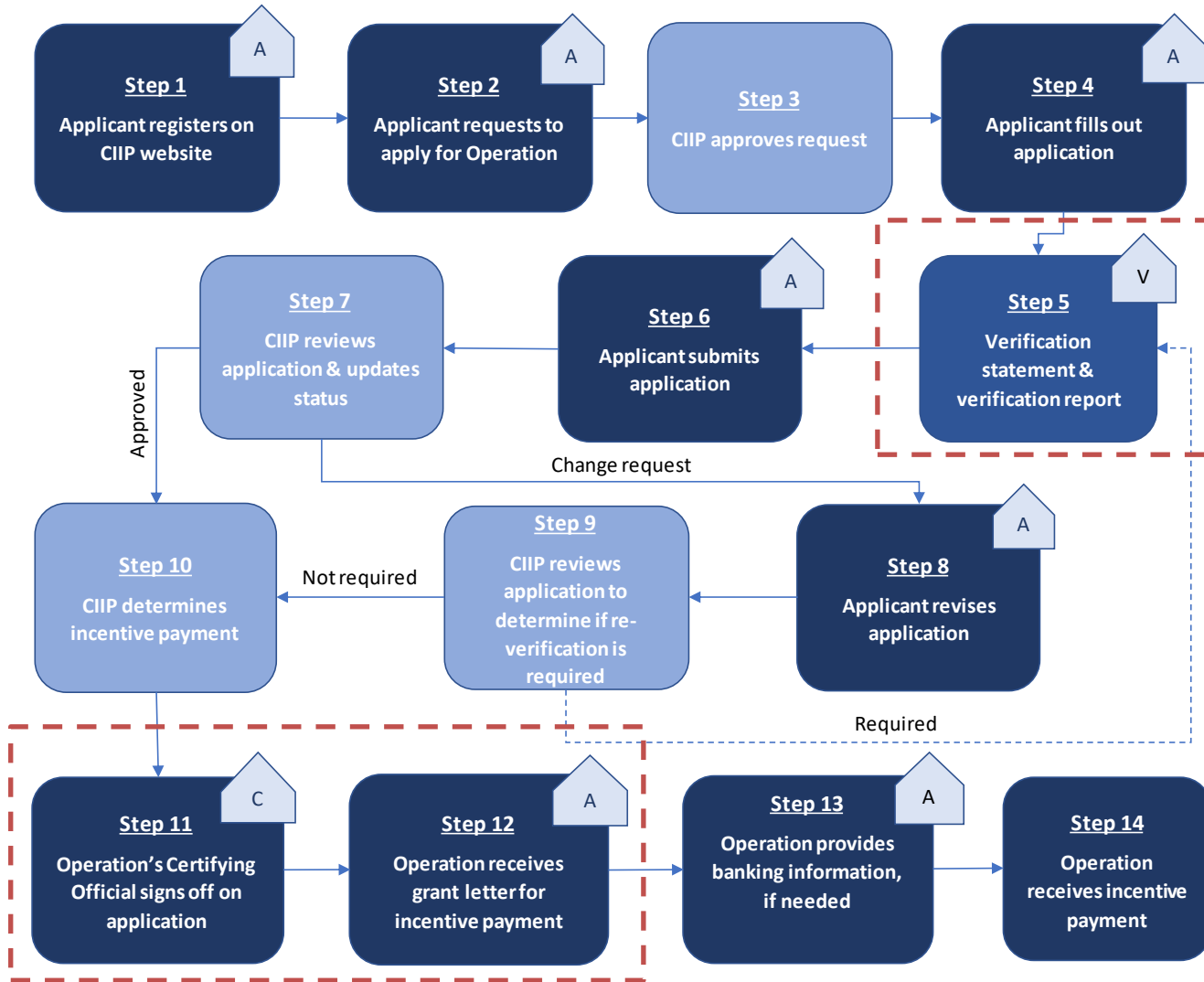2387 comments!

Common observed errors

- Legal name and BC Corporate Registry number do not align.
- Incorrect or missing NAICS code
- Incorrect or missing BCGHG ID number.
- Difference in emissions reported to CIIP vs. SWRS
- Discrepancy between reported emission and emission allocated to the products
- Using wrong emission factor for purchased electricity and heat
- Not assigning the emissions from purchased electricity to the products
- Incorrect emission allocation between the products in multi-product facilities
- Reporting venting and flaring emissions but not reporting the associate fuel usages
- Reported fuel usages not matching with the associated emissions
- Using wrong fuel names and emission categories for fuels, especially for vented and flared natural gas
- Reporting the total Venting flow rate, while only pneumatic venting should have been reported
- Not reporting any products
- Reporting products that were irrelevant for the sector (E.g. power generation for oil and gas)
- Misreporting production which led to out of range emission intensities
- Multiple reporting of one product
- Not Reporting the products without benchmark
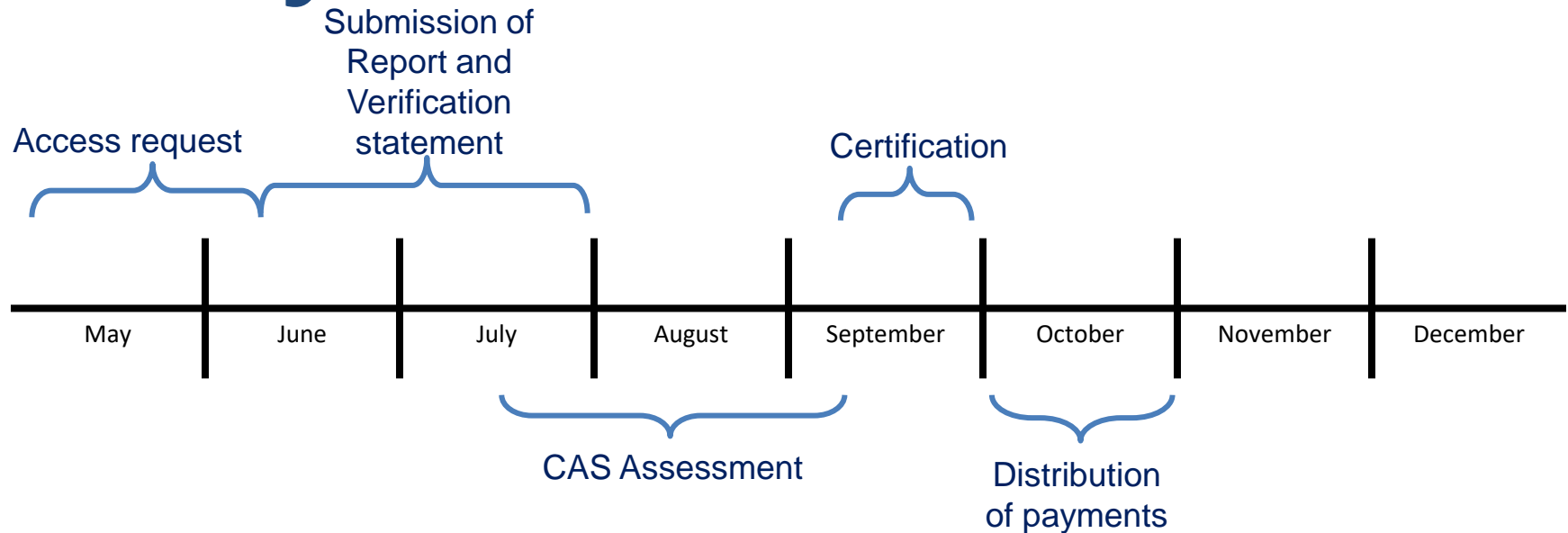
CIIP Application process

CAS is improving the Web portal and guidance material to:

- Address the issues and eliminate the possible sources of mistakes
- Provide clarity on application requirements
- Reduce the review period of the applications and number of communications
- Increase the accuracy of the reports to confirm incentive payments

Proposed application process

2021 Cycle Timeline

Access request

Submission of Report and Verification statement

Certification

| May | June | July | August | September | October | November | December |

CAS Assessment

Distribution of payments

- Application registration open in May
- Application expected to open in June one week after the SWRS report deadline
  - Emissions information will be pre-filled from SWRS information
- Submission of verification statement and verification report with the application
- CAS assessment would include clarifying questions, and assessment of CIIP application to reported GHG data
- Certification of the application would be completed after the CAS assessment

CIIP Next Steps

- Once the revised guidance materials are ready, they will be posted on the CIIP website

- CIIP workshop in April to have a walkthrough on the process and revised application portal

- Q/A Period following the workshop till end of May

- Sector specific workshops in April and May

- Feedback and suggestion for improvement are always welcomed!

- GHGRegulator@gov.bc.ca

CleanBC, Industrial GHG Emissions Reporting and Compliance

February 2, 2021

Presentation Overview

Purpose	• GHG reporting requirements and data quality improvements
Key Metrics	• Annual reported GHG emissions review
Ensuring Data Integrity	• Continuous improvement in GHG reporting: verification, compliance review and inspection
Verification Updates	• Virtual site visit policy review and new verification requirements
Non-Compliance and the CIIP	• How non-compliance impacts CleanBC Industrial Incentive Program (CIIP) eligibility and payment timing
New CIIP Verification Requirements for 2021	• Outlines new verification requirements applicable to CIIP applications made in 2021
Questions?	• We are happy to assist you

Purpose

B.C.'s Industrial GHG Reporting Data

- Data entered in the Single Window Information Manager informs multiple sources.

B.C.'s Annual Industrial GHG Summary Report

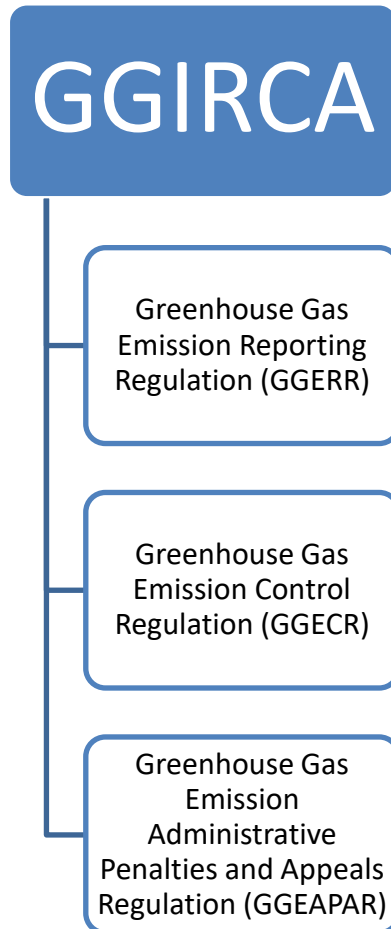Provincial Reports

Policy Decisions

CleanBC Industrial Incentive Program (CIIP)

Emission Reduction Opportunities

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Greenhouse Gas Industrial Reporting and Control Act

GGIRCA

- Greenhouse Gas Emission Reporting Regulation (GGERR)

- Greenhouse Gas Emission Control Regulation (GGECR)

- Greenhouse Gas Emission Administrative Penalties and Appeals Regulation (GGEAPAR)

- The *Greenhouse Gas Industrial Reporting and Control Act* and Regulations came into effect on January 1, 2016

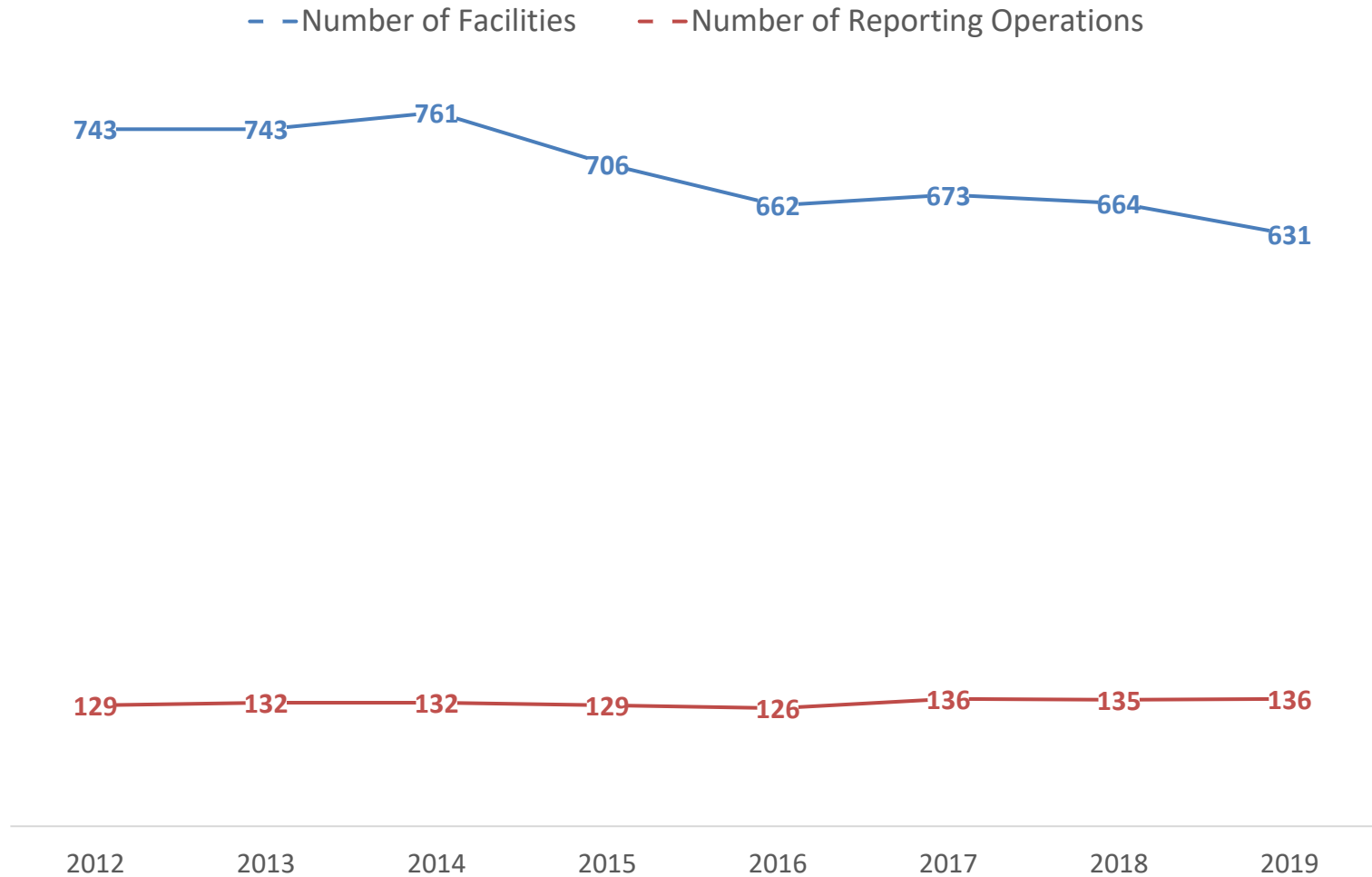- The Act streamlines existing GHG legislation into a single framework. Emissions reporting and offset regulations are now centralized.

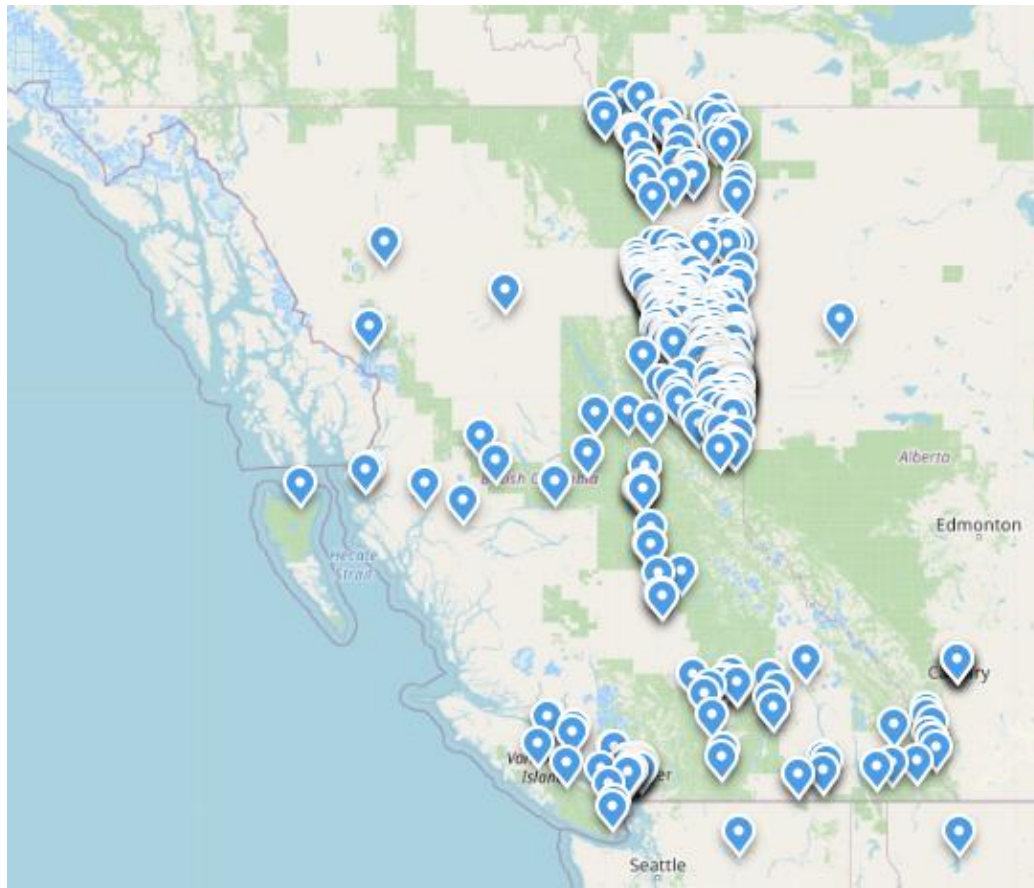- Information and guidance material for the Act is posted to the Climate Action Secretariat website when it becomes available (https://www2.gov.bc.ca/gov/content/environment/climate-change/industry/bulletins-legislation-guidance)

Key Metrics

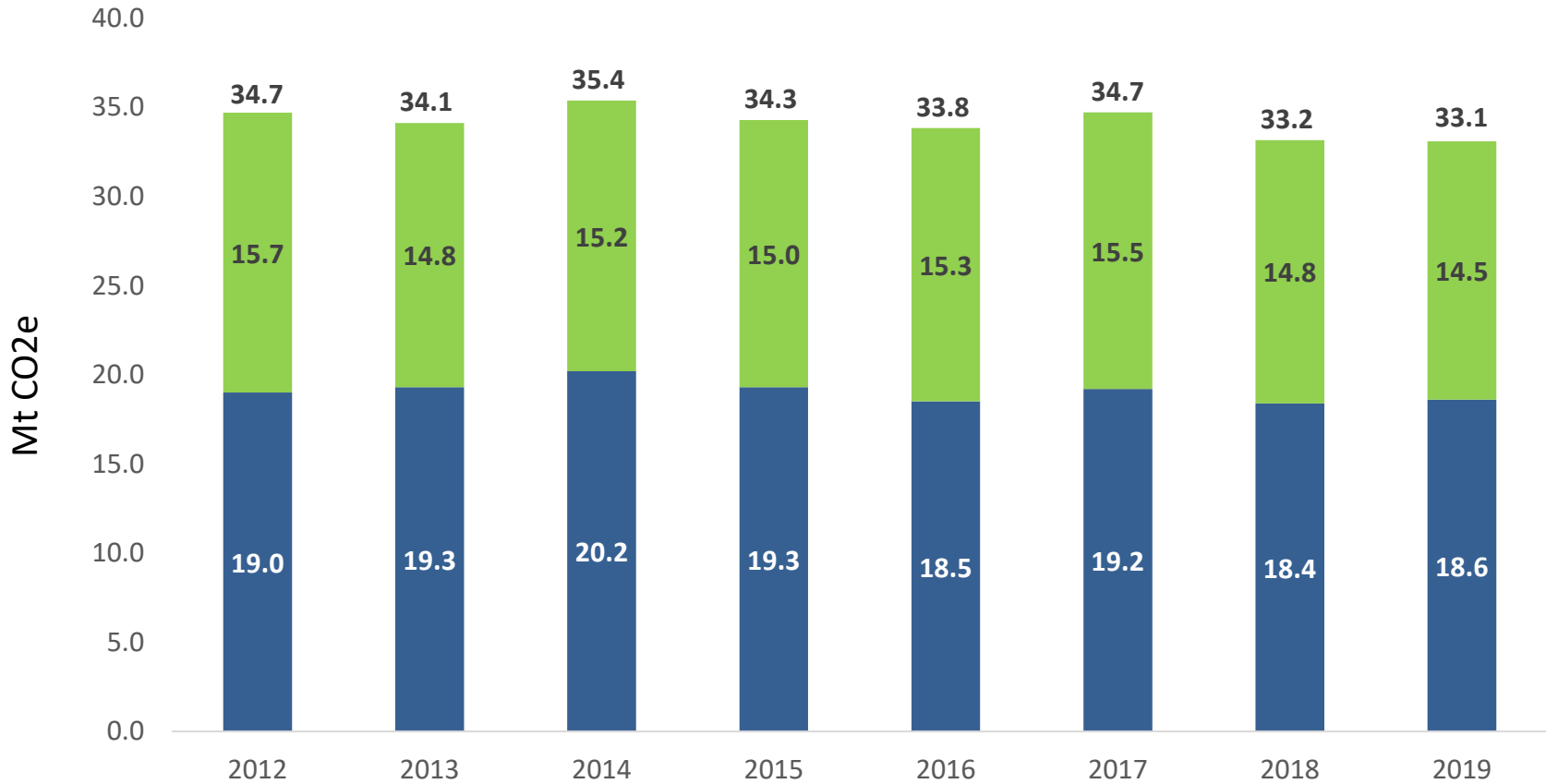# B.C.'s Industrial GHG Reporting Operations and Facilities
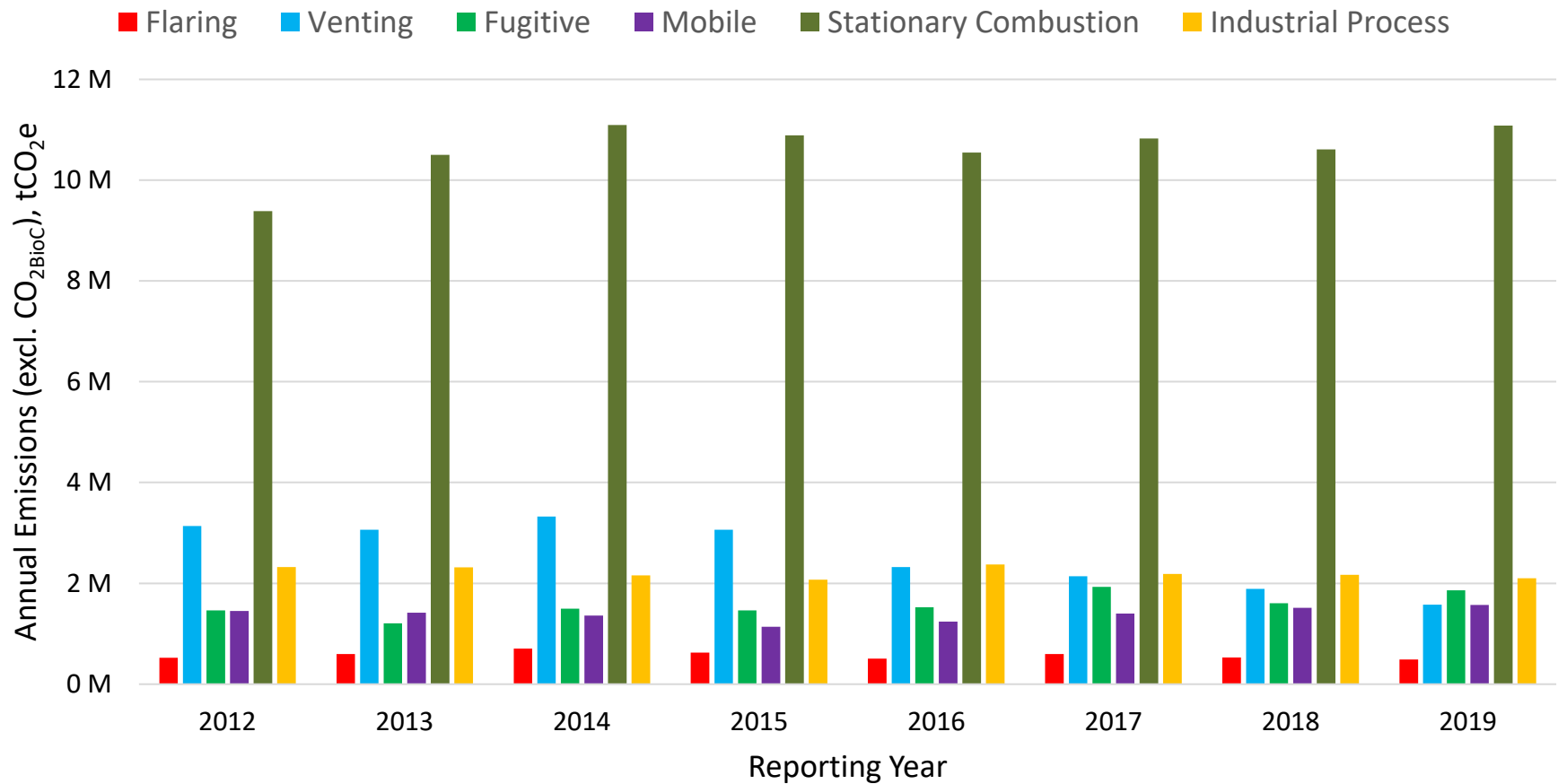
B.C.'s 2019 Industrial GHG Reporting Facilities

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B.C.'s Annual Reported Industrial GHG Emissions

Presentation slide showing a stacked bar chart of CO2Fossil and CO2Biomass emissions (Mt CO2e) from 2012 to 2019.

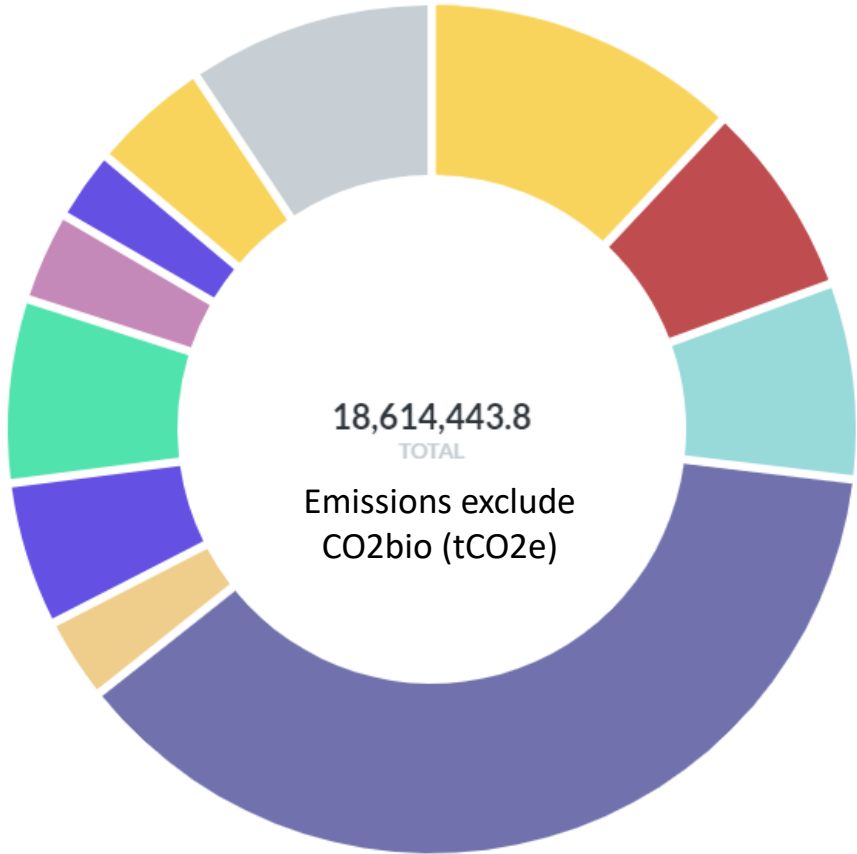| Year	CO2Fossil	CO2Biomass	Total
2012	19.0	15.7	34.7
2013	19.3	14.8	34.1
2014	20.2	15.2	35.4
2015	19.3	15.0	34.3
2016	18.5	15.3	33.8
2017	19.2	15.5	34.7
2018	18.4	14.8	33.2
2019	18.6	14.5	33.1

B.C.'s Industrial GHG Emissions by Type

B.C.'s 2019 Industrial GHG Emissions *excluding* CO_2 biomass grouped by NAICS Code

Emissions exclude CO2bio (tCO2e)

🟡	Bituminous Coal Mining	12.09%
🔴	Cement Manufacturing	7.38%
🟢	Chemical Pulp Mills	7.41%
🟣	Conventional Oil and Gas Extraction	38.33%
🟡	Copper-Zinc Ore Mining	2.97%
🟣	Fossil-Fuel Electric Power Generation	5.38%
🟢	Oil and gas extraction (except oil sands)	6.93%
🟣	Petroleum Refineries	3.25%
🟣	Pipeline Transportation of Natural Gas	2.51%
🟡	Primary Production of Alumina and Aluminum	4.40%
⚪	Other	9.37%

18,614,443.8
TOTAL

Emissions exclude
CO2bio (tCO2e)

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B.C.'s 2019 Industrial GHG Emissions grouped by NAICS Code

B.C.'s Total Emissions Reported incl. C02 Bio (tCO2e)

🟡	Bituminous Coal Mining	6.80%
🔴	Cement Manufacturing	4.36%
🟦	Chemical Pulp Mills	40.91%
🟣	Conventional Oil and Gas Extraction	21.56%
🟪	Fossil-Fuel Electric Power Generation	3.03%
🟢	Oil and gas extraction (except oil sands)	3.90%
⬜	Other	19.44%

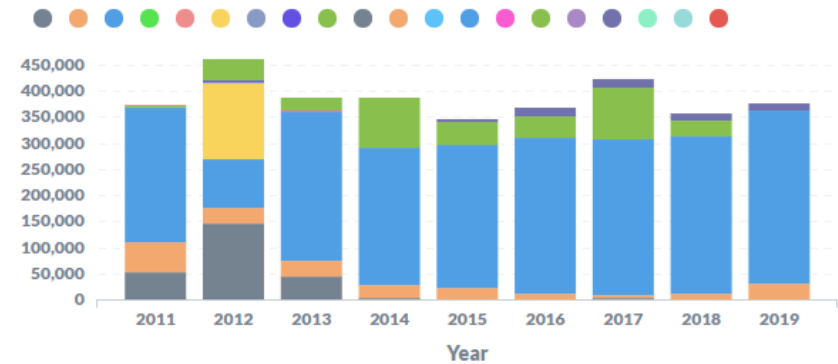33,095,317.99
TOTAL
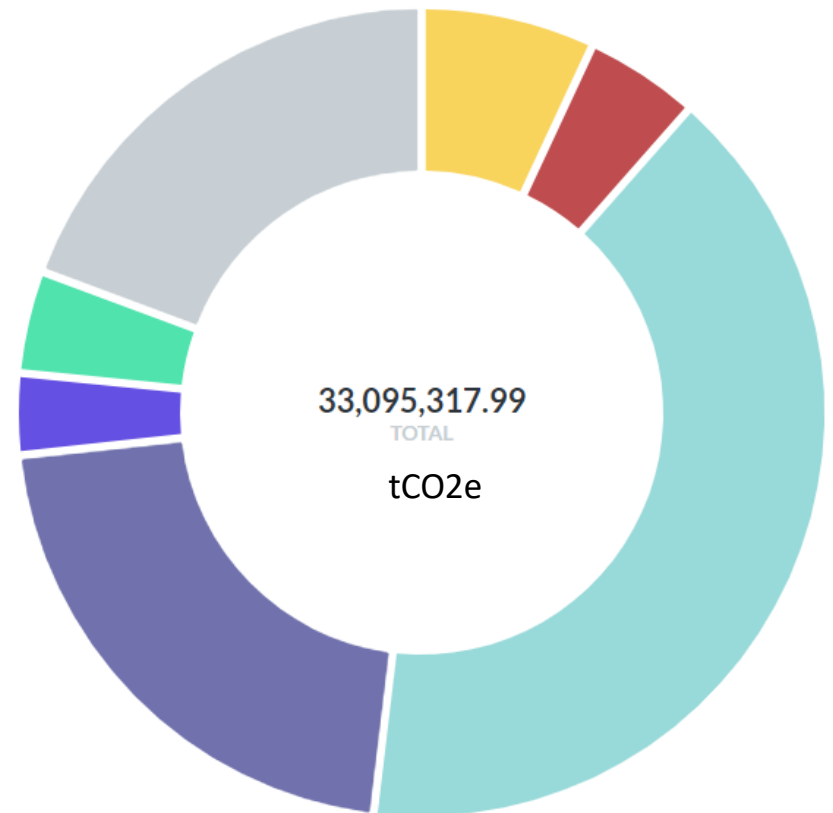
tCO2e

New Emissions Reporting
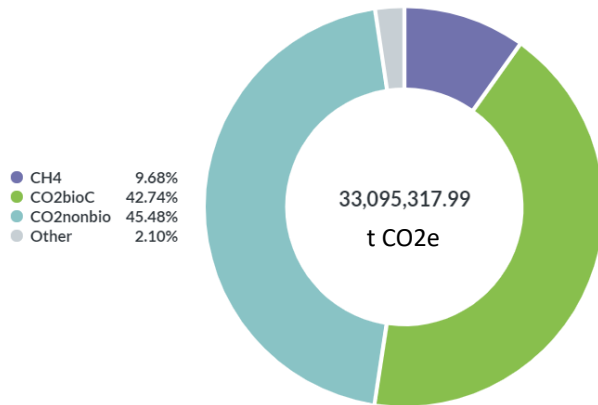
Total Annual Emissions t CO2e
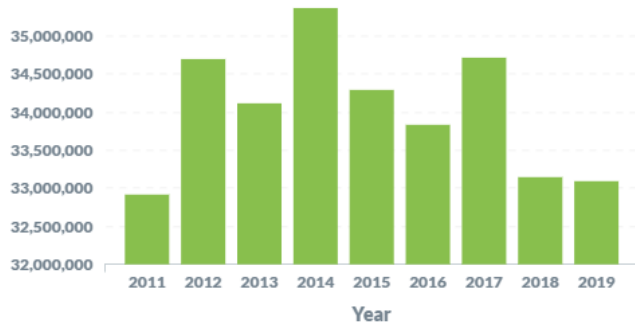
Coal Emissions by Fuel Type

2019 All Emissions by Gas Type

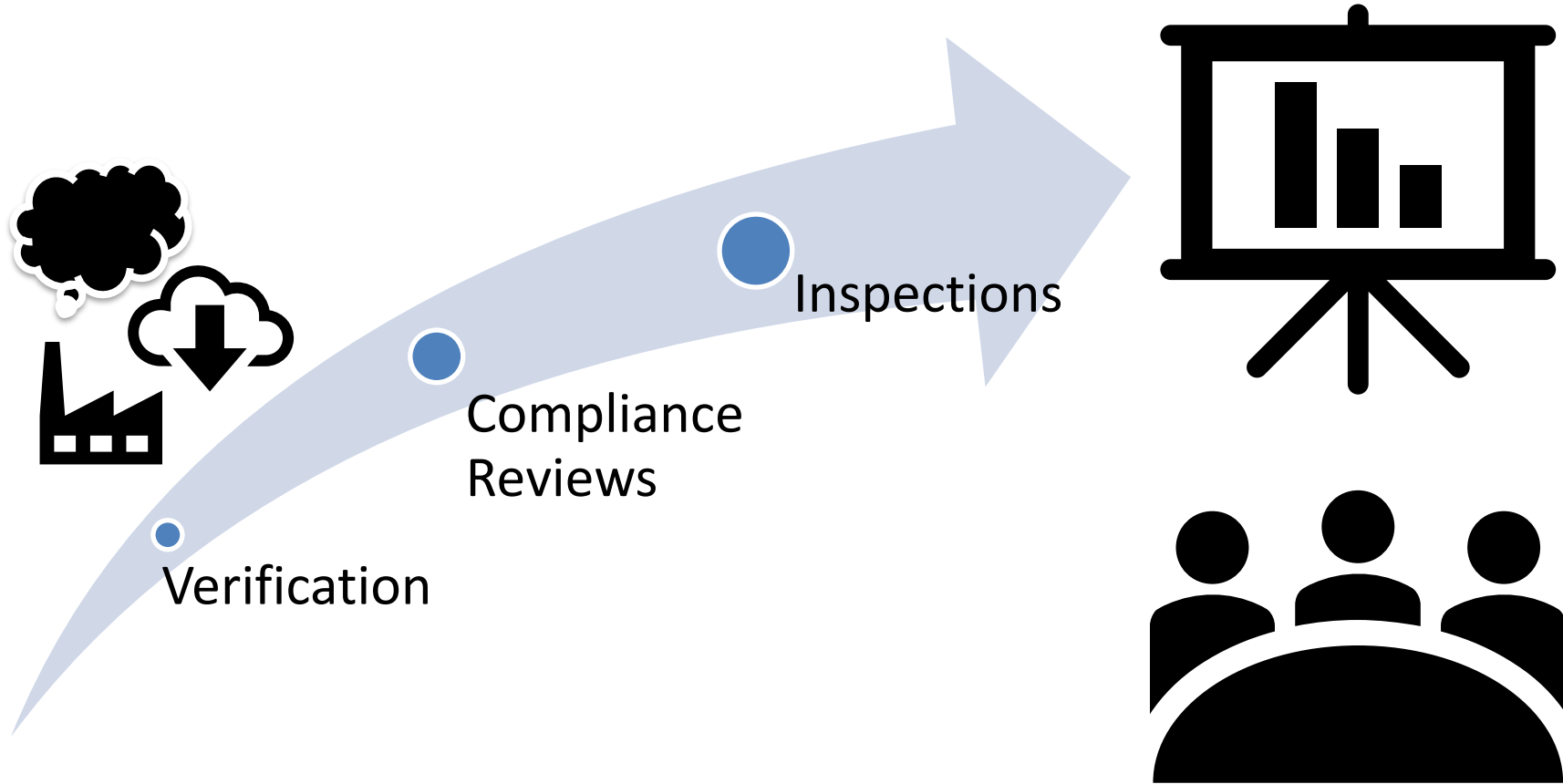|	
CH4	9.68%
CO2bioC	42.74%
CO2nonbio	45.48%
Other	2.10%

33,095,317.99 t CO2e

Total CH4 All Sectors

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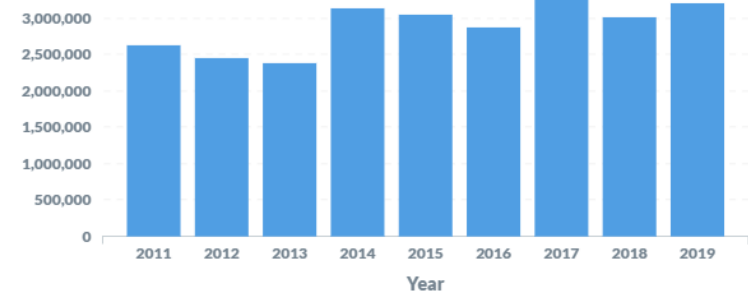
Ensuring Data Integrity

Ensuring GHG Data Integrity

Verification

Compliance Reviews

Inspections

Verification
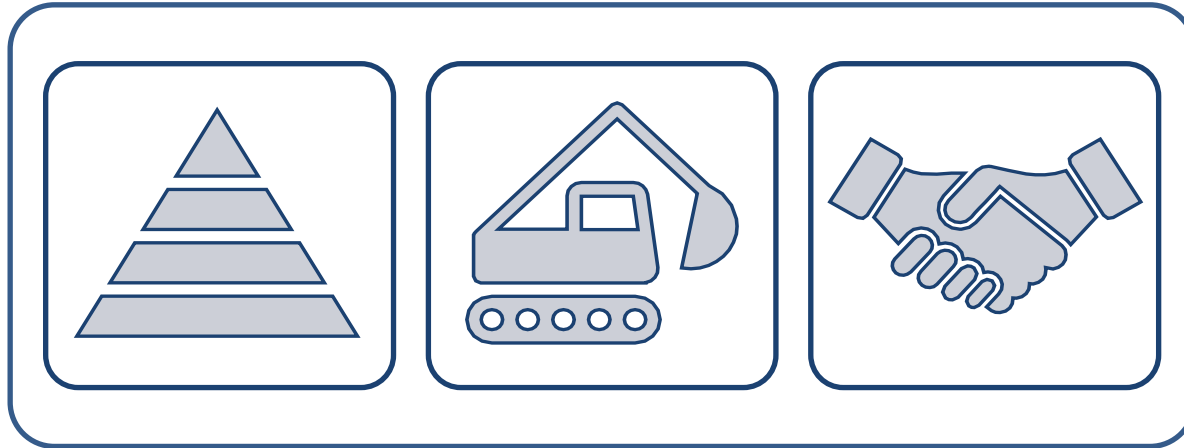
Risk-based approach

Site visits and detailed review

Professional assurance

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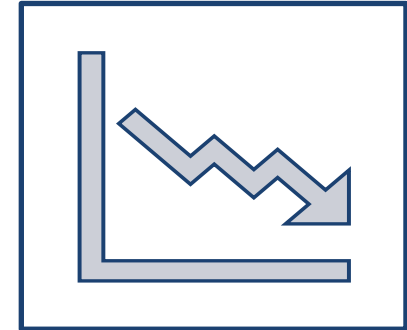
Compliance Review

On time and complete

Data quality checks

Trends and outliers

Administrative / Legal

Technical / Engineering

Consistency

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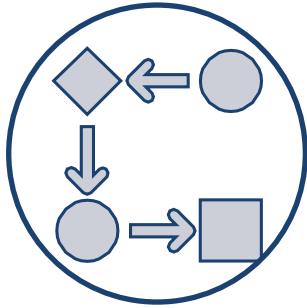
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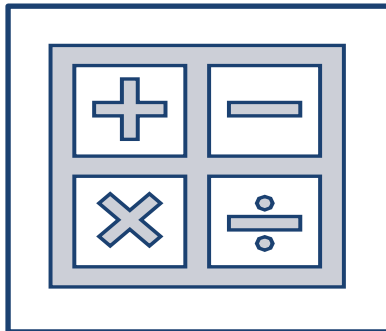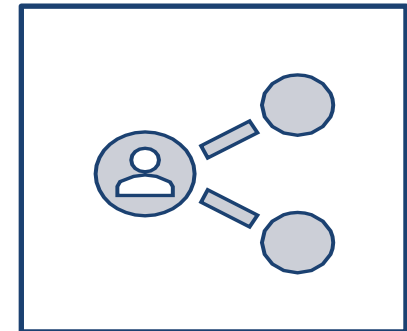
Inspection

Review underlying data

Determine compliance

Ask questions

Finding non-compliance

Communicate and confirm
- Clarify facts and discuss implications
- How can we help?

Risk-based Assessment
- Level of impact
- Likelihood of getting back in compliance

Follow-up and enforcement
- Ensure corrective actions are taken
- Establish appropriate deterrent

2020 Inspection Flags

Risk category flagged (2019 RP)	Operators	Reporting Operations
Verification (virtual site visits, DV, omitted)	34	39
Inconsistent reporting (LFO internal, CIIP-SWRS)	30	35
Quantification errors - material	7	9

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Key Takeaways
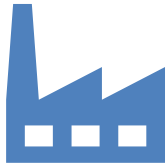
LFO and individual facility reports must match emissions and emission sources

Fuel amounts reported must be correct and in the right units

Correct all errors identified during verification

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Verification Updates

Verification Review

- **Inspections of 31 operators lacking virtual site visit information (Bulletin 005)**
  - Verification report and plan, and/or addendum reviewed
  - 9 interviews - all VBs and representative sample of operators
- **Results**
  - Virtual site visits met or exceeded expectations
  - Process flow diagrams, screen sharing and data transfer more important than visual or live elements
  - Best practices noted in the interviews informed the development of new virtual site visit policy.

Verification Site Visits

Updates to the Greenhouse Gas Emission Reporting Regulation, as of December 2020
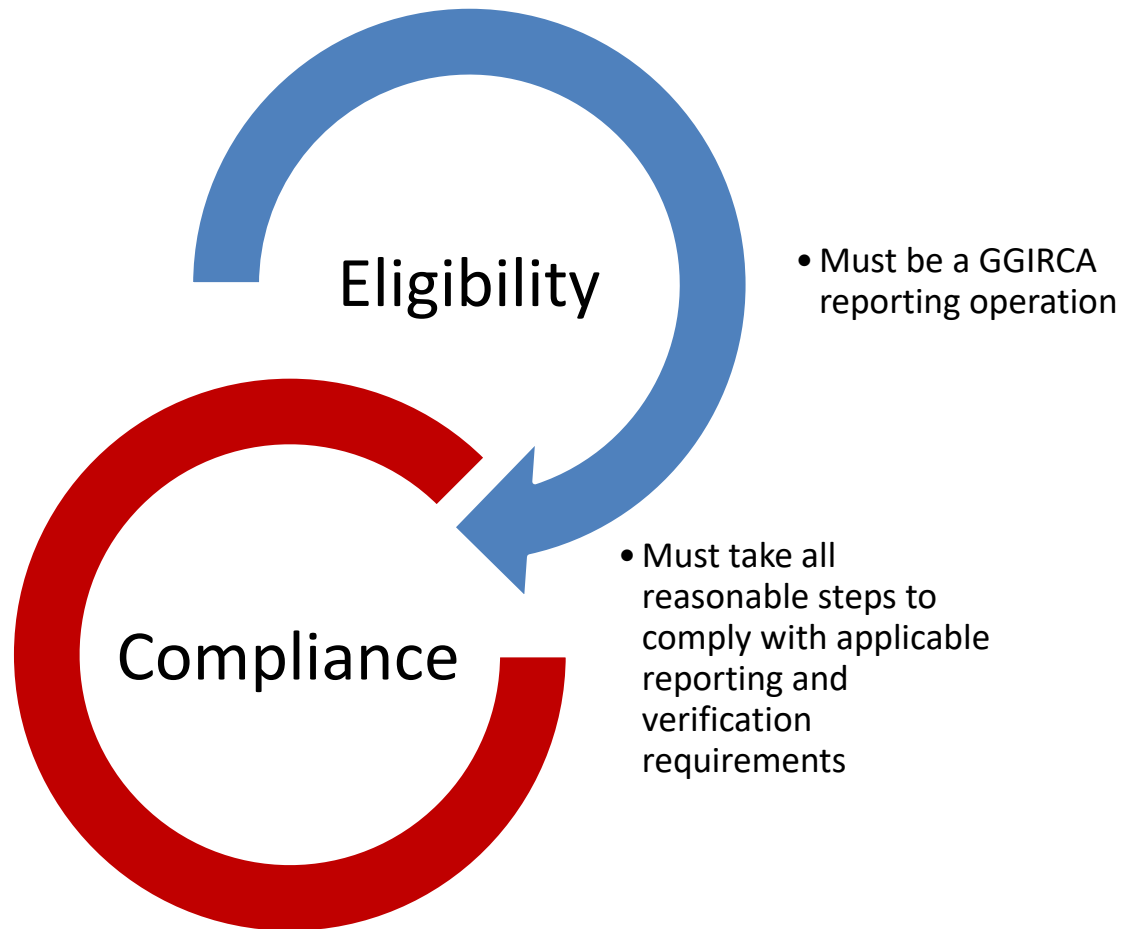*based on best practices noted in the verification review for 2019 RY*

Virtual site visits allowed if

- All required site visits for one of the two preceding reporting periods were conducted in person by the VB
- The VB determines that:
  - no significant changes have been made to the site
  - the process flow diagram is accurate and reliable
  - a virtual site visit can provide reasonable level of assurance
- Technology used and risk assessment, as per IAF MD4, is reported
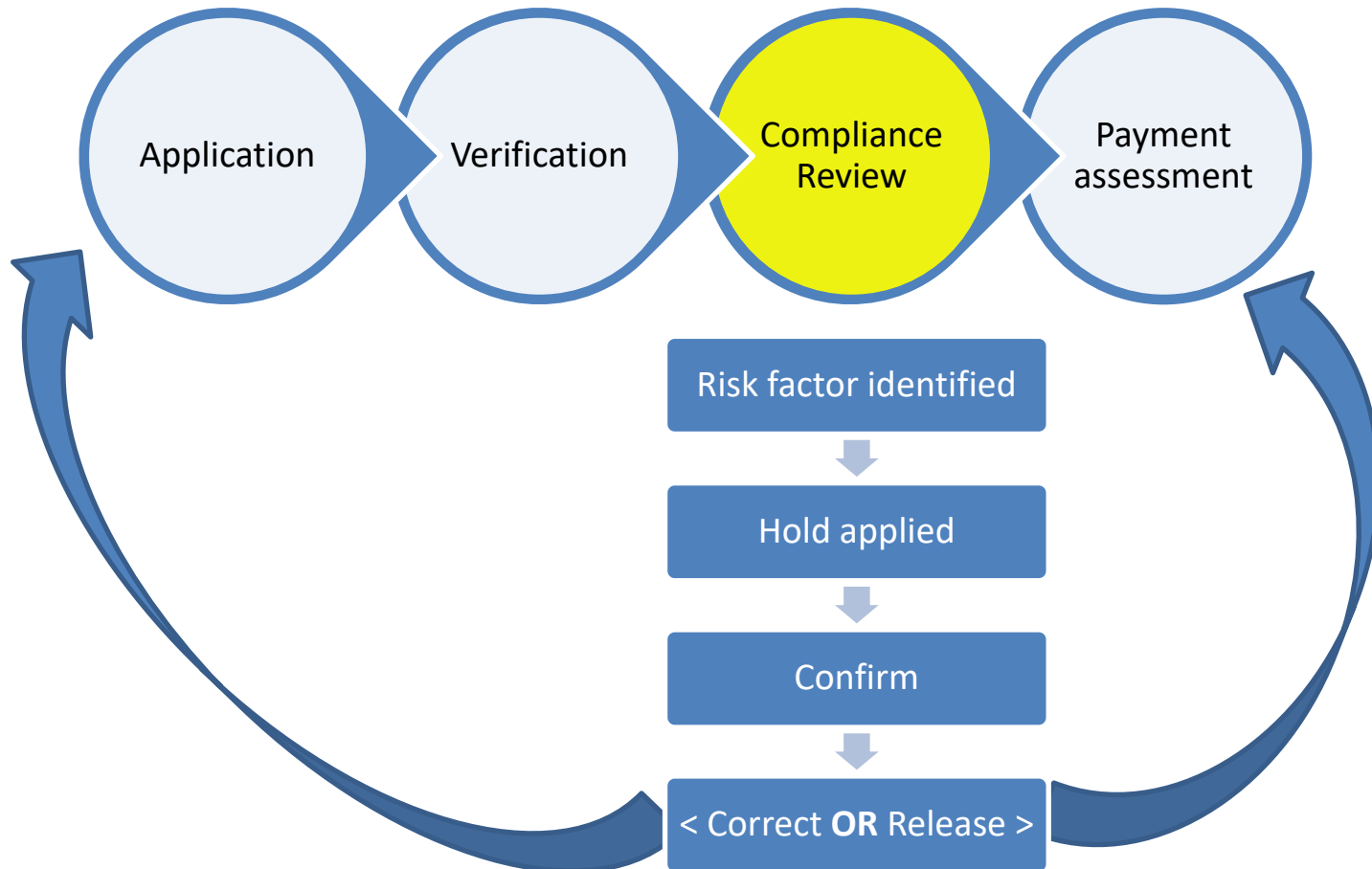- Director has not required an in-person site visit

Changes have been made to the verification statement template, reflecting the changes to the Greenhouse Gas Emission Reporting Regulation.

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Non-Compliance and the CleanBC Industrial Incentive Program (CIIP)

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CIIP Eligibility and Compliance

Eligibility

- Must be a GGIRCA reporting operation

Compliance

- Must take all reasonable steps to comply with applicable reporting and verification requirements

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Payment Risk Assessment Procedure

Payment Risk Assessment Procedure
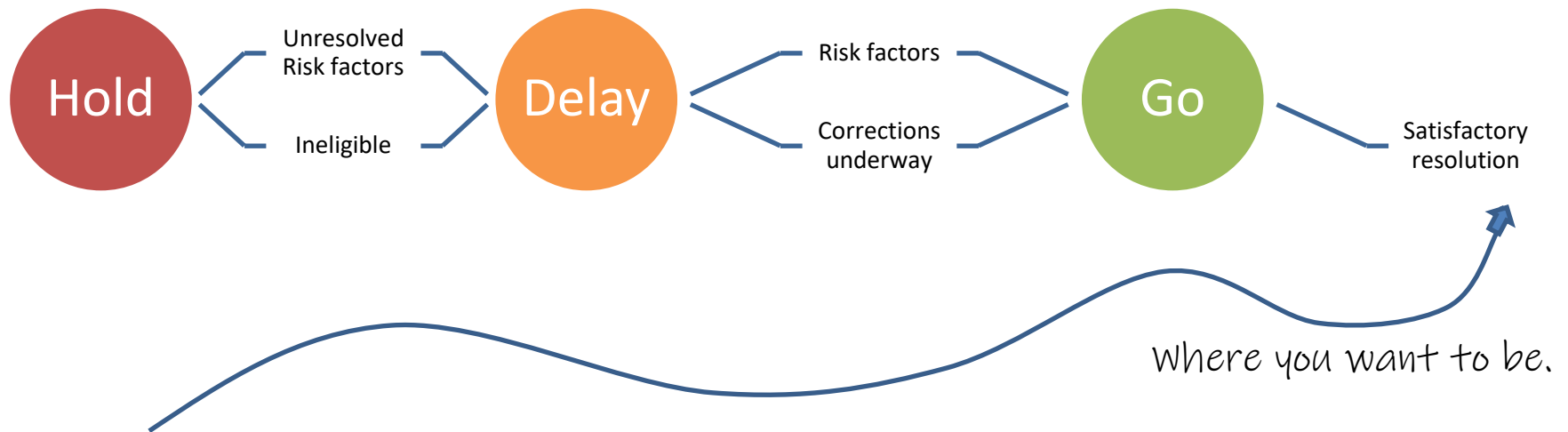
Overpayment Procedure

Application → Verification → Compliance Review → **Payment assessment**

Risk factor identified
↓
Confirm and correct
↓
Deduction or Repayment
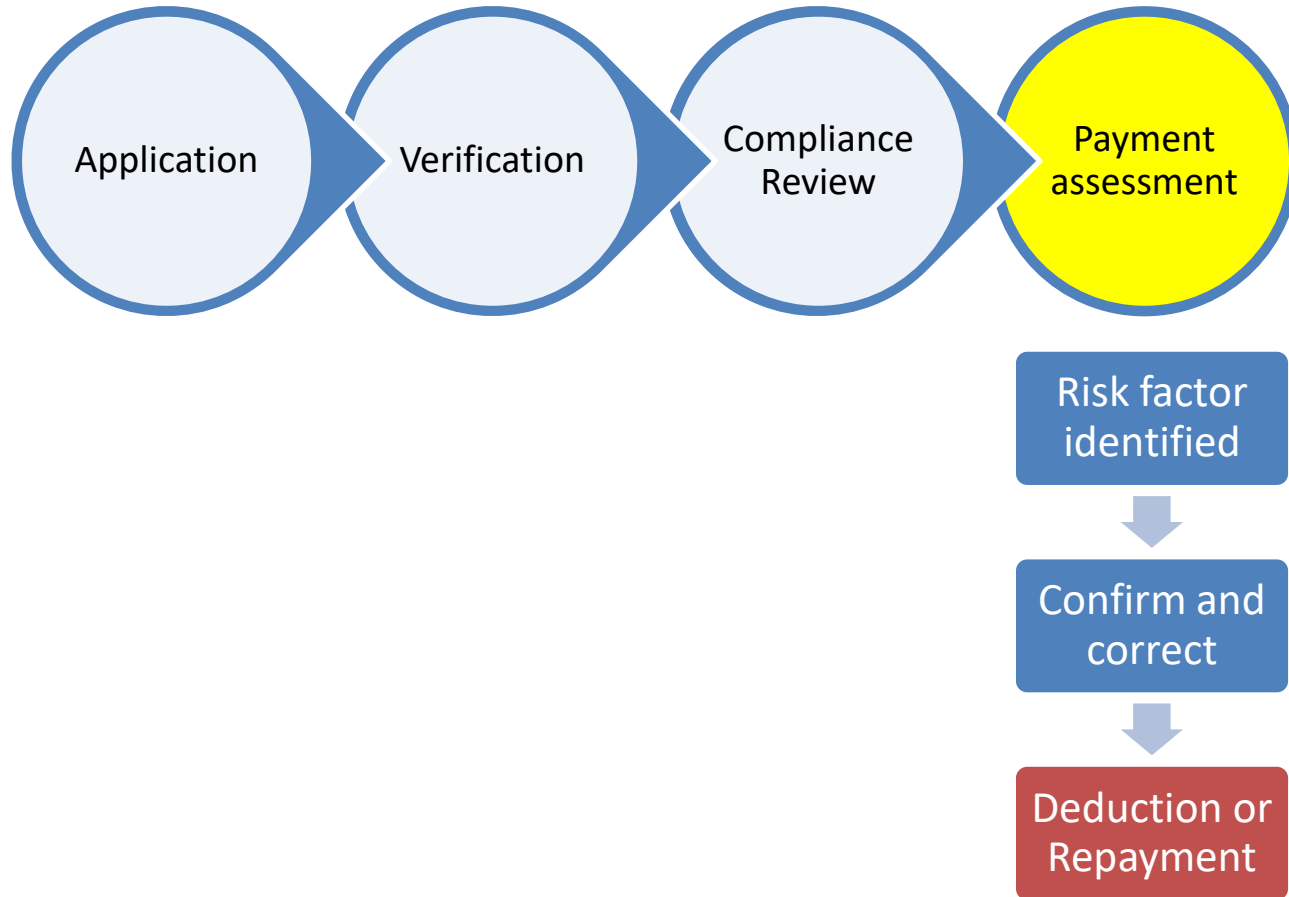
New CIIP Verification Requirements for 2021

What happens during verification?

Verification planning and risk assessment

Data collection process

Data review and recalculation

Site visit and interviews with key operations personnel

Presentation of findings and verification report

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CIIP Verification Policy

New verification requirements for 2021 CIIP Applications

- All applications with emissions ≥ 25,000 t CO2e required to work with an accredited VB to complete new requirements
- Two verification statements required, one for the emissions report and one for additional information on the CIIP application
  - *fuel, electricity, production values and emissions intensity*
- Site visit requirements
- Applicants may apply to CIIP with qualified or adverse verification - must work with VBs to reduce errors as much as possible.

CIIP Verification Requirements

If required, two-step verification process for CIIP applicants

Emission Report Verification

- Complete as required by regulation
- Covers all information in emission report
- Use emission report verification template
- Submit to SWIM by May 31st

CIIP Application

- If required by CIIP
- Covers additional information in CIIP application
- Use additional CIIP verification template
- Guidance available soon

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Contact

Please direct all enquiries to
GHGRegulator@gov.bc.ca

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Questions?

British Columbia's Offset Program

Annual Update

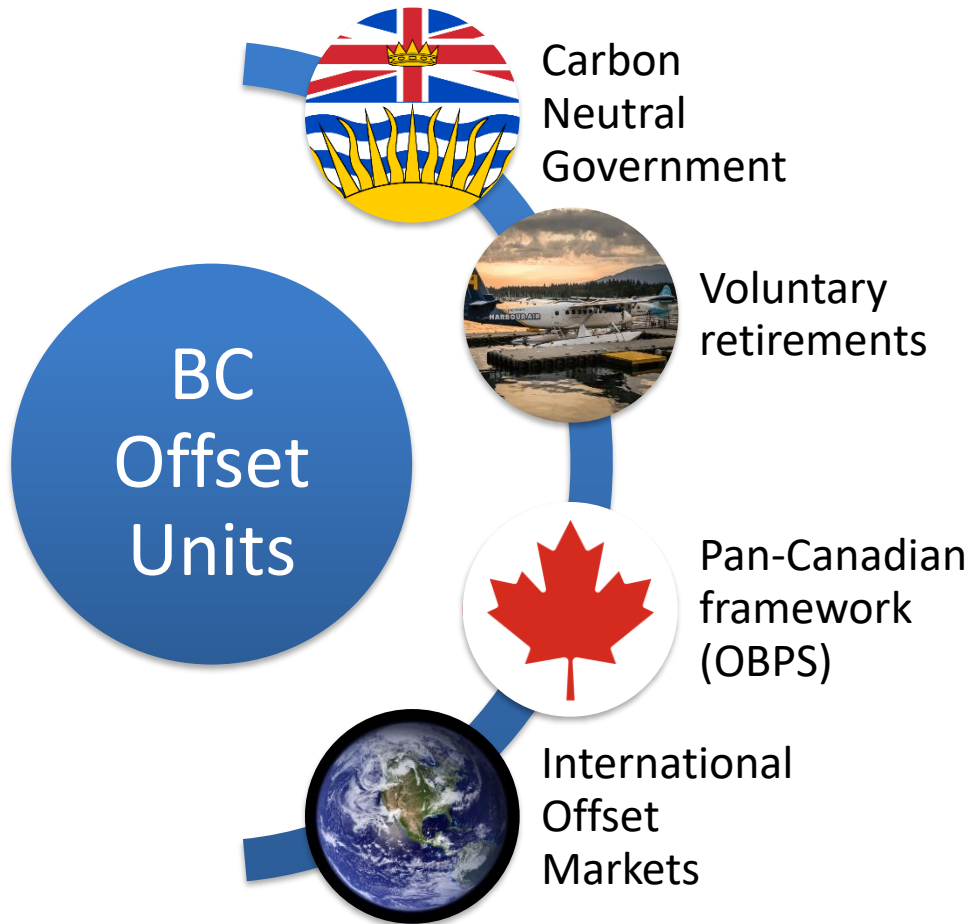CleanBC Industry Workshop

February 2, 2021

Purpose

- Provide background on policy framework supporting emission offsets in B.C.
- Inform offset stakeholders of regulatory processes and existing protocols
- Provide an overview of B.C.'s offset market
- Show next steps in policy and program development
  - Guidance and system updates
  - Protocol Development

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What is a Carbon Offset?

An organization has a **compliance requirement** or **voluntarily** chooses to purchase offsets

Funding contributes to additional reductions in projects outside of organization

The organization claims the reductions towards specified goals

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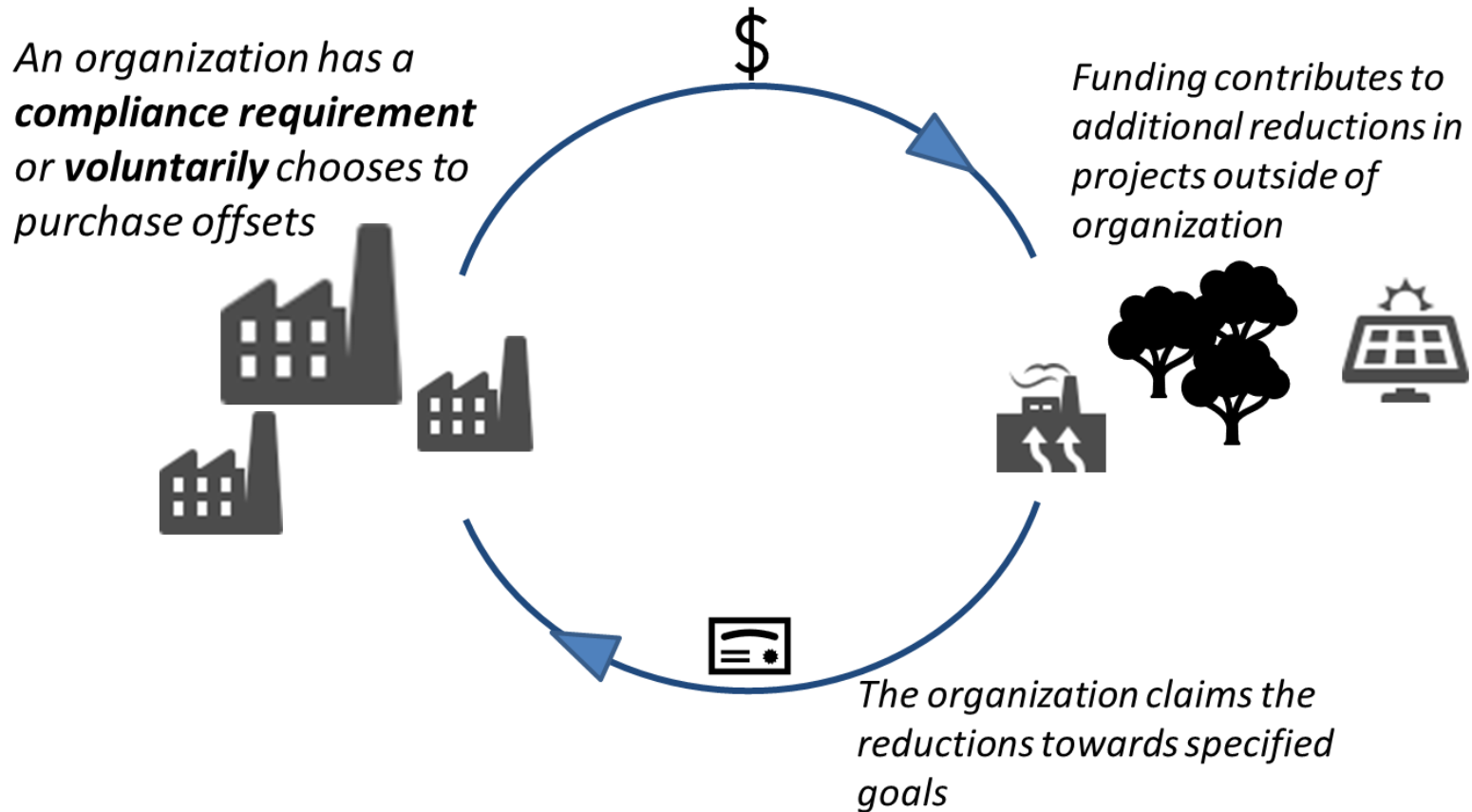
B.C. Offset Program Overview

BC Offset Units

- Carbon Neutral Government
- Voluntary retirements
- Pan-Canadian framework (OBPS)
- International Offset Markets

BC's Carbon Offset Program supports:

1) Additional GHG emission reductions and removals; and

2) Transition to a resilient, innovative, low-carbon economy that works for everyone

B.C. Offsets under legislation

Under GGIRCA (2016), Offset projects **must
meet approved protocol
requirements** and **criteria
established** in the **Greenhouse Gas
Emission Control Regulation.**

```
         GGIRCA
           |
  +--------+--------+
GGERR    GGECR    GGEAPAR
```
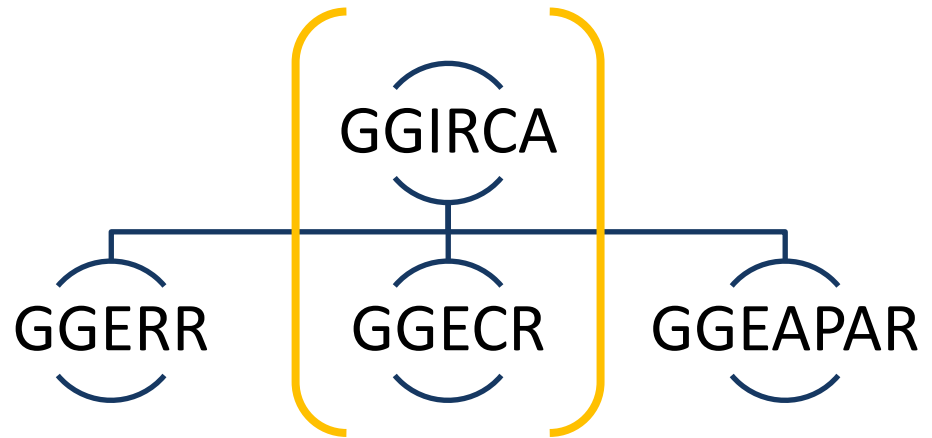
Offset units may be credited for **verified** project activities **located in B.C.** involving the:

1. **Reduction** of greenhouse gas (GHG) emissions into the atmosphere*; and/or

2. **Removal** of GHG emissions from the atmosphere*

*Conservatively estimated

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B.C. Offsets under legislation

- B.C. offsets awarded for conservatively estimated and third-party verified carbon reductions and removals

- Project start date must be 2014 or after

- Project plans must be developed using Director-approved offset protocols and third-party validated

- Crediting periods:
  - Up to 10 years for emission reduction projects
  - Up to 25 years for sequestration projects.

- 100-year monitoring requirements for sequestration projects

- All transactions publicly available in the BC Carbon Registry

B.C. Offset Project Workflow
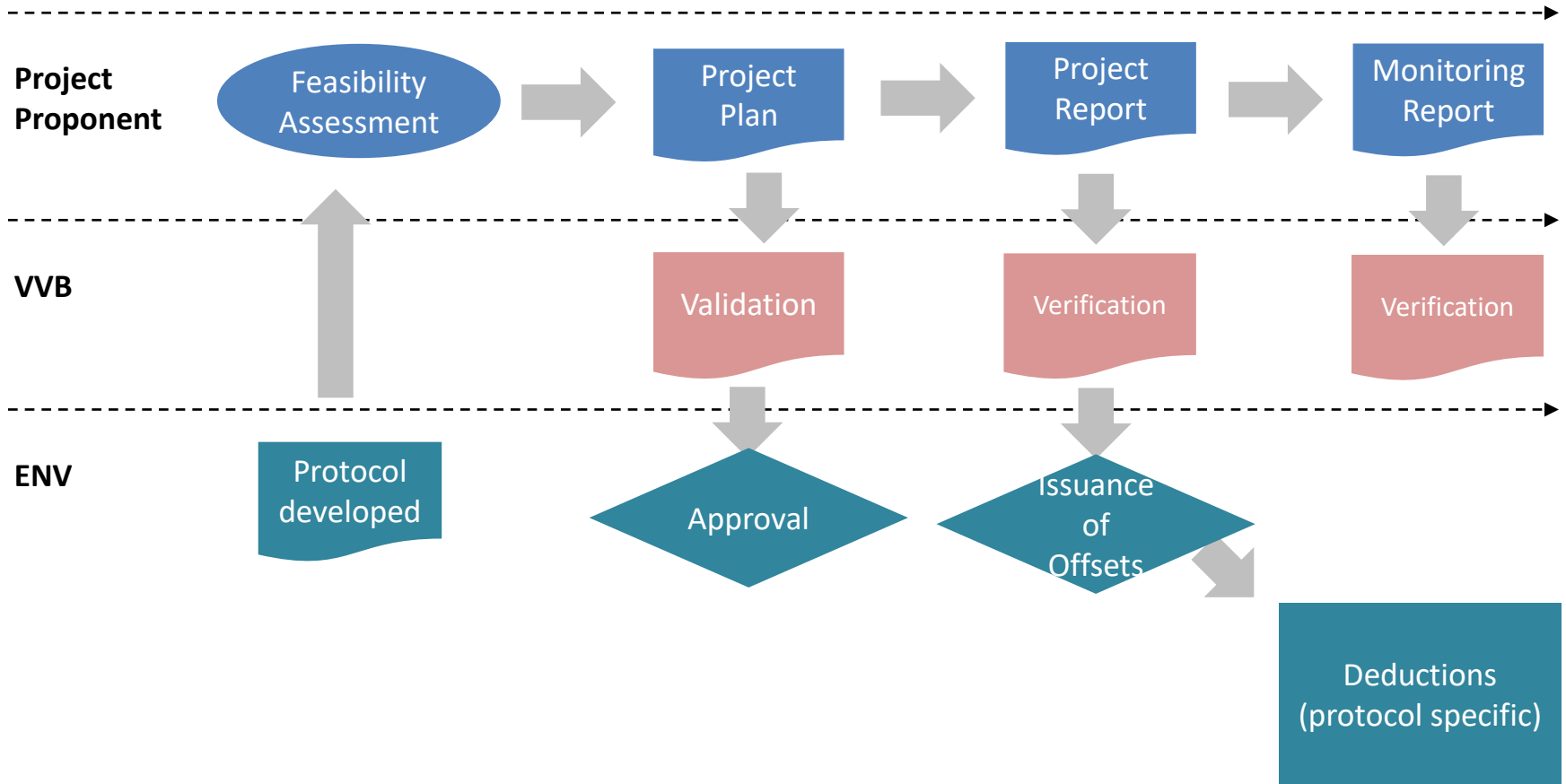
Validation and Verification

- Third-party validation required for project plans (project acceptance) and third-party verification required for project administration (project report and monitoring report)
- Validation and Verification Bodies (VVB) must:
  - Conduct assurance following ISO 14064 and assert that project follows regulatory requirements and estimates are <u>conservative</u>, fair and accurate
  - Be accredited by a member of the International Accreditation Forum, in accordance with ISO 14065
    - ANSI National Accreditation Board (ANAB) Directory
    - Standards Council of Canada (SCC) Directory
- Project proponent must confirm that VVB has the right scope of accreditation (sector-specific)

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BC Carbon Registry

BC Carbon Registry

- BC Carbon Registry acts a listing service where interested parties can find information on existing projects

- Enables the issuance, transfer and retirement of compliance units under GGIRCA, including offset units

- Displays all existing offset projects documentation, assigns unique serial numbers to offset units, tracks issuances, retirements and ownership of units

- All Project Proponents and VVBs must submit project documentation through the BC Carbon Registry (an account is required)

- Trades occur privately, the Registry is not the place to find out about prices (determined by the market)

- Registry operations are contracted to a third-party (IHS Markit)

- For Registry assistance: environmental@markit.com

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2020 BC Carbon Registry Metrics

Registry activity	Number of Transactions	BC Offset Units (equivalent to 1tCO$_2$e)
Issuances	18	1,356,296
Retirement: Carbon Neutral Government*	20	640,305
Retirement: Voluntary	27	33,436

Retired to offset 2019 calendar year corporate emissions

B.C. Annual Offset Supply (Pre-GGIRCA legacy projects)
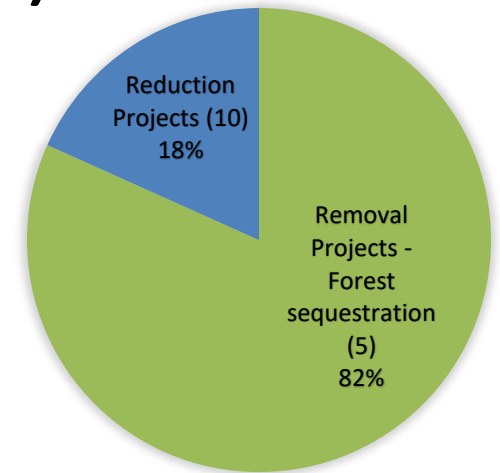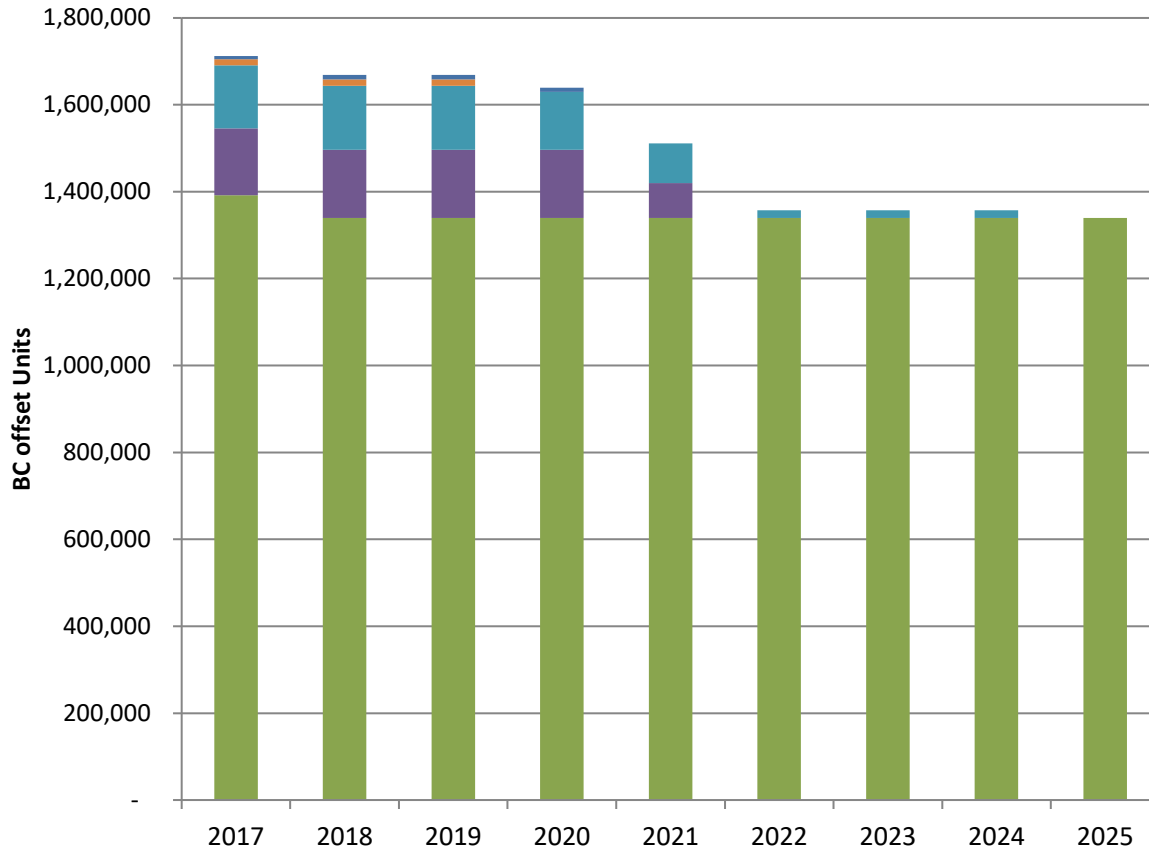
B.C.'s Offset Market

- Carbon Neutral Government (since 2010) – steady
- Output based pricing system (OBPS) –projects under new Protocols accepted by Federal government
- Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) – exploring 2021 pilot phase application
- Voluntary Purchasers – growing
  - Submitted program to the International Carbon Reduction and Offset Alliance (ICROA) Code of Best Practice for acceptance
  - Voluntary retirements have doubled in 2020 (compared to 2018)

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Program Updates

- Guidance documents to support stakeholders in interpreting regulatory requirements and navigating processes:
  - B.C. Offset Guidance
  - Validation and Verification Guidance

- BC Carbon Registry Improvements
  - Streamlined voluntary retirement process
  - Process for OBPS facilities using B.C. offsets for compliance

- Protocol Development

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B.C. Offset Protocol Development

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Fuel Switch Offset Protocol (Director-approved)

- First approved GGIRCA Offset Protocol (released in 2018)
- Establishes mandatory requirements to carry out emission reduction projects resulting from **fuel switching to less GHG-intensive or renewable energy sources in B.C.**
- Supports electrification of existing industrial, buildings and transportation infrastructure
- Projects receiving Royalty Credits, Clean Investment Fund support or Low-Carbon Fuel Credits are not eligible

Forest Carbon Offset Protocol (upcoming consultation)

DRAFT

- Incorporates best practices in carbon offsetting and updated forest carbon quantification methods
- Eligible Project types:
  - Afforestation and Reforestation
  - Conservation / Improved Forest Management
  - Avoided conversion
- Projects on Crown and private land are eligible.
  - Projects on Crown land must have authority to access and use Crown land and entitlement to the Atmospheric Benefits Rights.
  - Projects on private land must have fee-simple ownership
- Project Plan must demonstrate that the project is additional and net reductions and removal enhancements are conservatively estimated
- Risk of reversal requirements include contributions to a Regulator-managed Contingency Account
- 100-year monitoring requirements apply (after completion of crediting period)

Organic Waste Methane Management (upcoming consultation)

DRAFT

- Provides opportunity to monetize the carbon impact of the capture and destruction of biogas
- Captured biogas can be used directly or upgraded to biomethane (RNG) for use in gas grid
- Eligible Project Types:
  - Landfill gas collection
  - Organics diversion
  - Wastewater treatment
  - Manure management
- Supports CleanBC goal of expanding production of Renewable Natural Gas (increased feedstock)
- Project Plan must demonstrate that the project is additional and net reductions are conservatively estimated

Next Steps

- Public engagement on draft protocols
  - Timing TBD – upcoming months

- 60-day engagement period
  - IRC is available to meet with interested parties upon request
  - Public submissions are received

- Release of final protocols
  - 2021 following Director review of feedback

Resources

- Greenhouse Gas Emission Offset Projects Website:

  https://www2.gov.bc.ca/gov/content/environment/climate-change/industry/offset-projects

- BC Carbon Registry

  https://carbonregistry.gov.bc.ca/br-reg/public/bc/index.jsp

Contact

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Questions?