



# Overview of Selected GHG Emissions Reporting Programs



29 May 2025

# Introduction

## Purpose

- To provide a comprehensive summary of various greenhouse gas (GHG) accounting programs, highlighting their differences and areas of alignment.

## Scope

- Identify regulatory and voluntary programs, including scopes and sectors covered.
- Review the programs identified based on key comparison factors.
- Develop comparison document on programs included and the key factors.

## Project Length

- One year
- Project kicked off on May 31<sup>st</sup>, 2024

## Review Process

- Montrose instituted a stringent internal review process, which included two levels of technical review.
- Deliverables went through multiple levels of review from CARB employees and senior management.



# Original Programs Considered and Selection Process

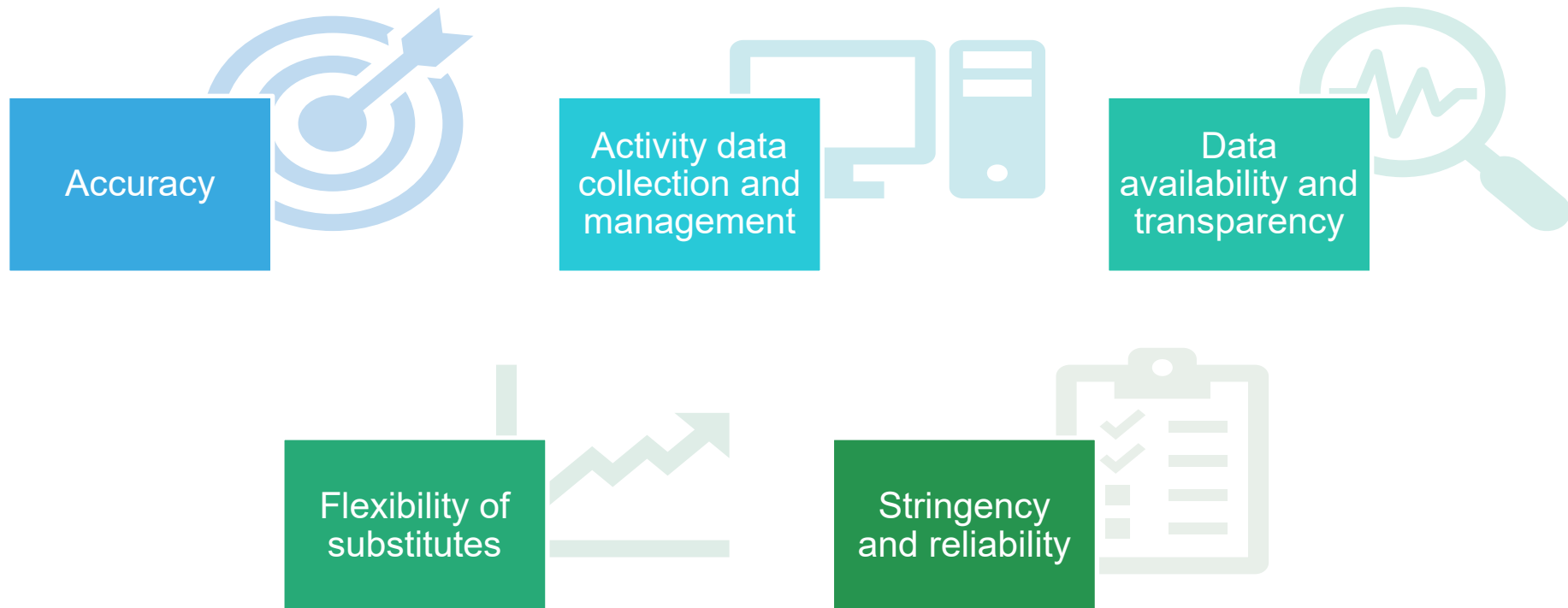
Final Programs Studied	
Regulatory Programs	Non-regulatory Programs
<ul style="list-style-type: none"><li>•U.S. Environmental Protection Agency (U.S. EPA) Greenhouse Gas Reporting Program (GHGRP)</li><li>•The Environment and Climate Change Canada (ECCC) Greenhouse Gas Reporting Program (GHGRP)</li><li>•California Air Resources Board (CARB) Regulation for the Mandatory Reporting of Greenhouse Gas Emissions</li></ul>	<ul style="list-style-type: none"><li>•The Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol)</li><li>•The Climate Registry: General Reporting Protocol</li><li>•U.S. Environmental Protection Agency (U.S. EPA) Scope 1, 2, and 3 Emissions Inventory and Guidance</li><li>•United Kingdom Environmental Reporting Guidelines (UK ERG): including Streamlined Energy and Carbon Reporting Requirements</li></ul>

Programs Excluded from Study	
Regulatory Programs	Non-regulatory Programs
<ul style="list-style-type: none"><li>•European Union (EU) Emissions Monitoring and Reporting Regulation</li></ul>	<ul style="list-style-type: none"><li>•IPCC Guidelines for National Greenhouse Gas Inventories</li><li>•ISCC EU Greenhouse Gas Emissions</li><li>•ISO 14064 Greenhouse Gases</li></ul>



# Original Programs Considered and Selection Process

Final key comparison factors



# Comparison of Selected Programs

## Study of GHG program questions

### Program Scope

- 1.Does the program cover all emission scopes?
- 2.Does the program cover all industry sectors?

### Third Party Verification

- 1.Does the program require third-party verification? To what degree?

### Emissions

- 1.How are emissions measured?
- 2.To what degree of certainty must emissions be measured?
- 3.How is uncertainty accounted for in data collection?
- 4.Does the program provide the reporter with calculation methodologies and examples of calculations?

### Emission Factors

- 1.Does the program publish program-specific emission factors?
- 2.If not, what emission factors does the program reference?
- 3.If so, how often are they updated?
- 4.Does the program publish location-based emission factors?



# Comparison of Selected Programs

## Study of GHG program questions

### Activity Data Collection and Management

1. How is the data collected?
2. Are there specific record-keeping procedures for activity data?
3. Does the program use actual data or estimated data?
4. What are examples of activity data?

### Data Availability and Transparency

1. Is the reporter required to submit their emissions data?
2. Is the reported data publicly available?
3. Does this allow for year-over-year comparisons and cross comparisons with other programs?

### Flexibility of Substitutes

1. Does the program allow for substitutes in quantification methodology or data collection?
2. What is an example of a substitute used in emissions calculations?

### Stringency and Reliability

1. Is the program voluntary or mandatory?
2. Are reporters required to use prescribed methods or guidelines?
3. Are there enforcement or other mechanisms/incentives to ensure consistent and complete reporting?



# Comparison of Selected Programs

## Summary of programs

Program	Mandate	Scope	Third-party Verification	Data Availability	Transparency
U.S. Environmental Protection Agency (U.S. EPA) Greenhouse Gas Reporting Program (GHGRP)	Regulatory	1	Not required	Requires emissions data submittal	Publicly available online
The Environment and Climate Change Canada (ECCC) Greenhouse Gas Reporting Program (GHGRP)	Regulatory	1	Not required	Requires emissions data submittal	Publicly available online
California Air Resources Board (CARB) Regulation for the Mandatory Reporting of Greenhouse Gas Emissions	Regulatory	1	Required for entities over 25,000 MT CO <sub>2</sub> e/year	Requires emissions data submittal	Publicly available online
United Kingdom Environmental Reporting Guidelines (UK ERG): including Streamlined Energy and Carbon Reporting Requirements	Non-regulatory	1, 2, and 3	Not required	Related regulations require data submittals, but program does not	Does not make data publicly available
GHG Protocol Corporate Accounting and Reporting Standard (Corporate Standard)	Non-regulatory	1, 2, and 3	Not required	Does not require emissions data submittal	Does not make data publicly available
The Climate Registry (TCR)	Non-regulatory	1, 2, and 3	Required for enrolled members	Does not require emissions data submittal	Member-reported data publicly available online
U.S. Environmental Protection Agency (U.S. EPA) Center for Corporate Climate Leadership	Non-regulatory	1, 2, and 3	Not required	Does not require emissions data submittal	Does not make data publicly available



# Closing Remarks

## Comparison between key differences of the programs

- Regulatory programs studied have more stringent calculation methodologies, including strict verification and accuracy guidelines.
- Not all require third-party verification.
- Regulatory programs and some voluntary programs publish emission factors,
- Voluntary programs publish more emissions methodologies for Scope 2 and 3 emissions sources and allow flexibility in how they calculate and report the indirect emissions.
- Regulatory frameworks tend to cover Scope 1 emissions and may not provide guidance or methodologies for Scope 2 and 3 emissions.
- Voluntary frameworks may provide less specific guidance for Scope 1 emissions and may include emission methodologies for Scope 2 and 3 emissions.





# Thank you!



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