



WORLD
RESOURCES
INSTITUTE

Designing Installation-Level Emissions Data Monitoring and Reporting Programs

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Outline

- Introduction
- Program Objectives
- Program Building Blocks
- Program Design and Implementation
- Conclusion
- Questions

Introduction

- GHG reporting programs: involve **accounting and reporting** of GHG emissions at **periodic** intervals at the **level of the emitter/installation**

Name of Program*	Country/ Region
National Greenhouse Gas and Energy Reporting	Australia
GHG Emissions Reporting Program	Canada
European Union Emissions Trading Scheme	EU
Bilan d'Emission de GES	France
Mandatory GHG Accounting and Reporting System	Japan
GHG Reporting Program	United States

**Additionally, examples and lessons from GHG emissions reporting programs in California, Korea and the recently announced but yet to be implemented program in UK, were also used where relevant.*

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Program Objectives

- Objectives \leftrightarrow program design and implementation
- Realistic and achievable within the resources available
- Agreeable to stakeholders
- Not only short-term objectives but also long-term goals
- Evolve with changing context

A range of program objectives

- **GHG reporting, management and mitigation** (e.g., France - “incentive for corporate action towards GHG reduction”)
- **Improving data accuracy, quality and consistency** (e.g. US - “accurate and timely GHG data to inform future policy decisions”)
- **Supporting related policies, programs and strategies** (e.g., regulatory policies, fuel economy standards)
- **Providing information to stakeholders** (e.g., to researchers, investors, etc.)
- **Supporting emissions trading** (e.g., EU ETS, California)

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Program Building Blocks

Legal basis

Stakeholder Support

Harmonization with
other programs

Capacity

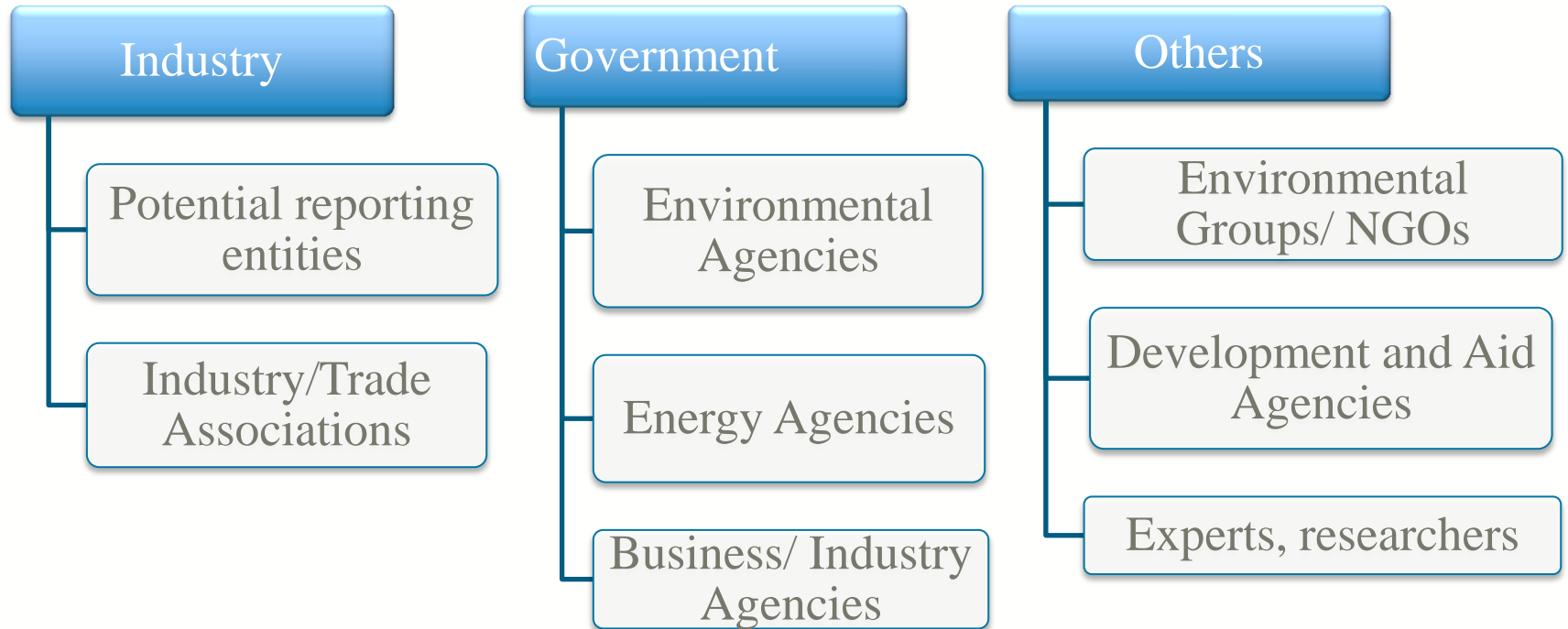
Legal Basis

- Range of regulations
- Having legislation in place enhances program uptake and reduces industry resistance
- Influences time frame and specifics

Country	Legal Basis
Australia	National Greenhouse and Energy Reporting Act, 2007
California	California Global Warming Solutions Act (AB 32), 2006
Canada	Canadian Environmental Protection Act, 1999
France	Grenelle 2 Act, 2010
Japan	Act on Promotion of Global Warming Countermeasures, 1998
Korea	Basic Act on Low Carbon Green Growth, 2010
United Kingdom	Climate Change Act 2008, Companies Act, 2006
United States	Clean Air Act (Consolidated Appropriations Act, 2008)

List of countries with the corresponding legal basis for their mandatory reporting programs

Stakeholder Support



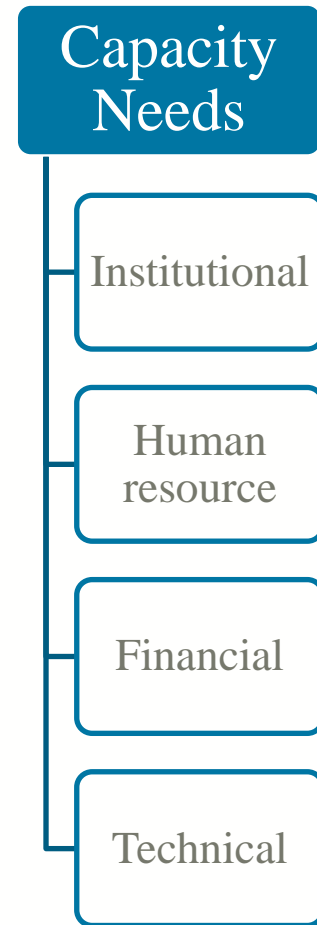
Harmonization

- With other voluntary programs
- Between federal and provincial/state level programs
- Other environmental/energy reporting programs

Program	Examples of Other Mandatory Reporting Programs Within Jurisdiction's Boundary
GHG Emissions Reporting Program, Canada	Various provincial reporting programs such as Alberta's Specified Gas Emissions Report, Ontario's EPA Amendment (GHG ETA)
GHG Reporting Program, U.S. National Greenhouse Gas and Energy Reporting, Australia	Mandatory Greenhouse Gas Emissions Reporting, California Greenhouse Gas Abatement Scheme (GGAS); Clean Energy Legislative Package
Mandatory GHG Accounting and Reporting System, Japan	Japan's Voluntary Emissions Trading Scheme; Experimental Emissions Trading Scheme; Japanese Energy Consumption Reporting Program
Bilan d'Emission de GES, France	Bilan Carbone; European Union Emissions Trading Scheme (EU ETS)
Measuring and Reporting of Greenhouse Gas Emissions, U.K.	Carbon Reduction Commitment Scheme; Climate Change Levy; Department for Environment, Food and Rural Affairs guidance

Capacity

- Identify existing capacities
- Leverage existing programs or systems
- Capacity gaps
- Guides decision choices



Institutional Capacity

- Agency(ies) responsible for managing the program (collecting, verifying, analyzing, synthesizing, presenting data)
- Division of duties across different departments or agencies
- Existing agency or a new agency

Human Resource Capacity

- Number of people with adequate skills (20 vs 4)
- Outsource some functions (help desk, IT support, data system development, etc.)

Financial

- Program cost to regulators and reporters
- One time costs (pre-regulation outreach and discussions, initial setting up, etc.)
- Operational costs (reporting, verification, analysis/summarizing data)

Technical

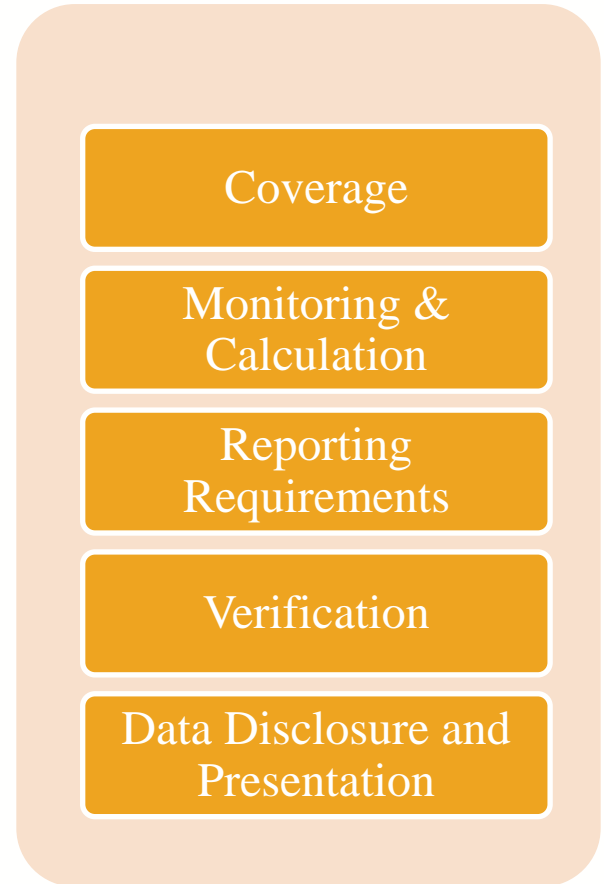
- Calculation methodologies
- Calculating and reporting data (installation)
- Verification and compilation of reported data

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Program Design and Implementation

- Who reports what?
- How is the reported data obtained?
- What is reported?
- Is it verified?
- What happens to the data eventually?



Coverage

- Geographic coverage
 - Regional, national, sub-national or sectoral
- Applicability
 - Installations/Corporate
 - Reporting thresholds
- Emissions coverage
 - All GHGs or CO₂ only
 - Direct/ Indirect

Coverage: Applicability

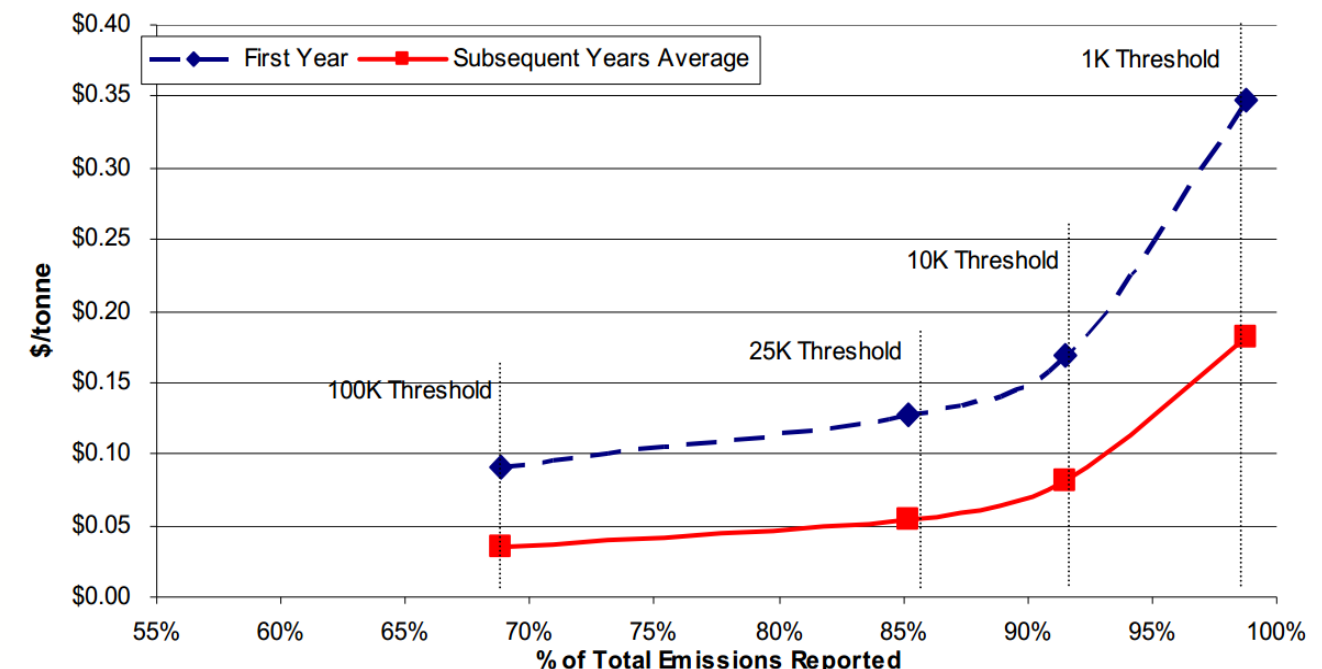
Thresholds

Emissions

Energy
(and/or
emissions)

Source
Categories

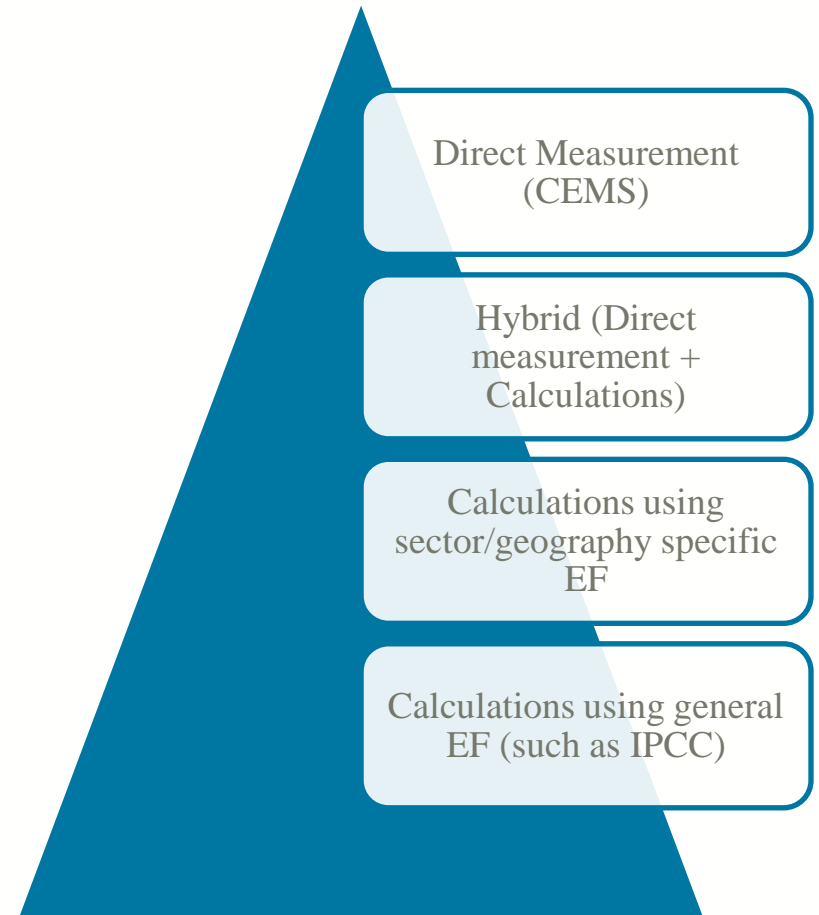
Production
Tonnage



Average Cost and Cost Differential per Metric Ton of Emissions Reported by Threshold (EPA 2010)

Monitoring & Calculation Methodology

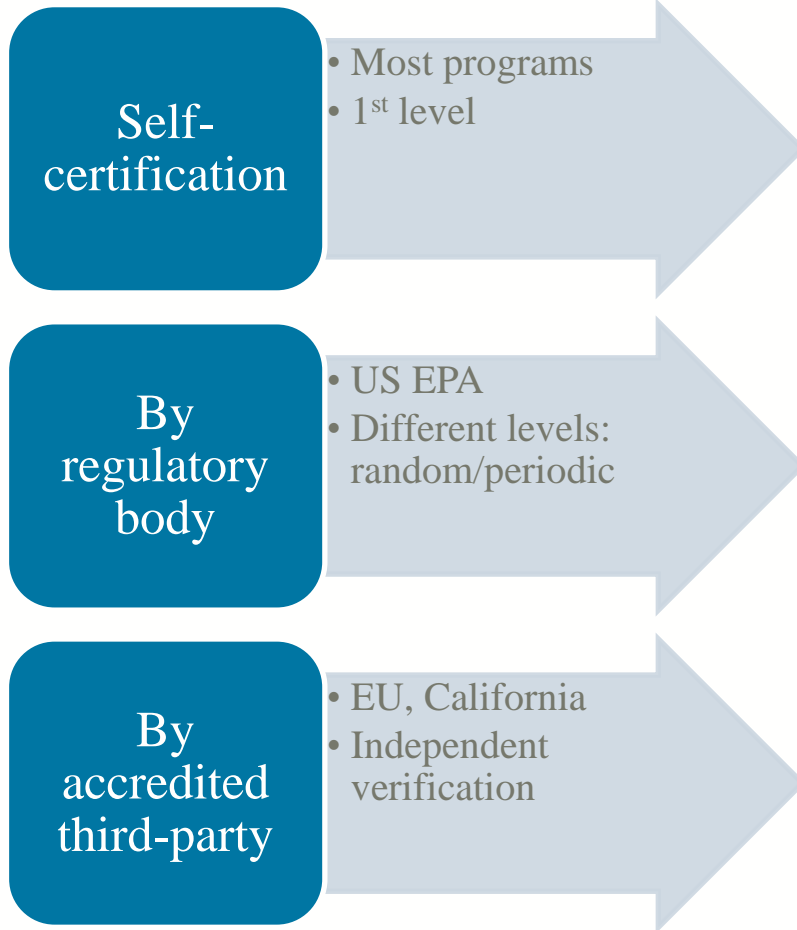
- Essential for standardization and comparability
- Depend on capacity of regulator and reporters
- Small reporters, limited resources, lesser impact



Reporting Requirements

- Level of disaggregation
- Accounting thresholds
 - De minimis
- Confidentiality issues
- Other reporting specifications
 - reporting period, template, documentation, compliance, base year, legality of electronic submission, etc.

Verification



- Choice entails trade-offs – cost involved vs need to establish accuracy & integrity of data
- Existing capacity in the country

Data Disclosure & Presentation

Data Element/Information	Australia	Canada	France	Japan	U.K.*	U.S.	EU
Access to information							
Public access to information	✓	✓	✓	✓	✓	✓	✓
Information available on a centralized online platform	✓	✓	X	✓	X	✓	✓
Data Presentation							
Downloadable format (pdf or excel files)	✓	✓	✓	✓	X	✓	✓
Information online (webpages)	✓	✓	✓	✓	X	✓	✓
Searchable/Interactive database	✓	✓	X	X	X	✓	✓
Level of detail							
GHG-level	✓	✓	✓	✓	✓	✓	✓
Facility-level	X	✓	✓	X	X	✓	✓
Corporate level	X	X	✓	✓	✓	X	X
Sector-level	✓	✓	X	X	X	✓	✓
Geography-based	✓	✓	✓	X	X	✓	✓

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Conclusion

Program Objectives

Range of Objectives

Program Building Blocks

Legal basis

Stakeholder Support

Harmonization with other programs

Capacity

Program Design & Implementation

Coverage

Monitoring & Calculation

Reporting Requirements

Verification

Data Disclosure and Presentation

Thanks!