

GHG Emission Inventories and Reporting

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Initial Steps in the Inventory Process

- *Gain Management Approval*
- *Define Objectives and Boundaries*
- *Prepare the Inventory Work Plan*
- *Gather the Required Data*
- *Implement Your Work Plan Methodology*



So You Think Your Inventory is Finished?

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- *Enjoy your success, but not for too long*



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Hard Work is Still Ahead

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- *Quality Assure your Results*
- *Verify Compliance with Objectives*
- *Conduct Independent Review of the Inventory*
- *Implement Changes to Address Comments*
- *Document Your Inventory*
- *Commission 3rd Party Verification*



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Key Components of the Work Plan

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<i>Protocol Selection</i>	<i>Standard to be used in inventory development (i.e., ARB, EPA Mandatory Reporting, TCR GRP, etc.)</i>
<i>Boundary Determination</i>	<i>Define geographic/organizational units to include in the inventory</i>
<i>Sources and Pollutants Covered</i>	<i>Define emission sources and GHG pollutants to be inventoried</i>
<i>Materiality Threshold</i>	<i>What is the level of significance below which screening approaches can be used to estimate emissions</i>
<i>Methodology</i>	<i>Define the methodology consistent with objectives and available data</i>
<i>Data Collection</i>	<i>Define plan for gathering the required data</i>

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Principles Governing Third Party Verification

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<i>Relevance</i>	<i>The inventory should reflect the GHG emissions of the facility or entity and was developed in accordance with the applicable protocol</i>
<i>Completeness</i>	<i>All material sources and activities within the inventory boundary are inventoried</i>
<i>Consistency</i>	<i>The inventory development process should allow meaningful comparison of emissions over time and across similar organizations</i>
<i>Accuracy</i>	<i>Identified deficiencies in the inventory total should be less than the defined materiality threshold (typically 5%)</i>
<i>Transparency</i>	<i>The inventory process must be clearly and thoroughly documented to allow for outside review</i>

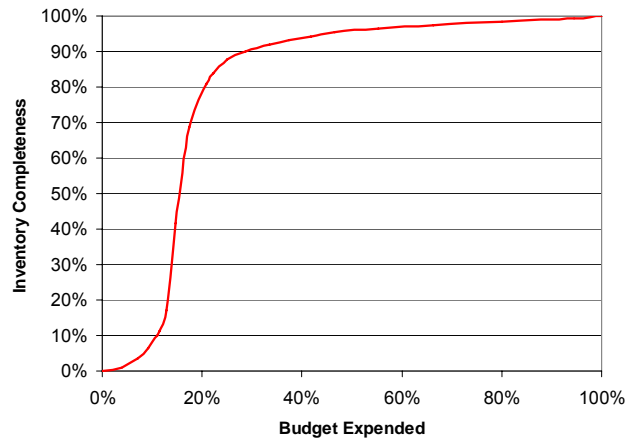
Source: California Climate Action Registry General Verification Protocol

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Emission Inventory 20/80 Rule

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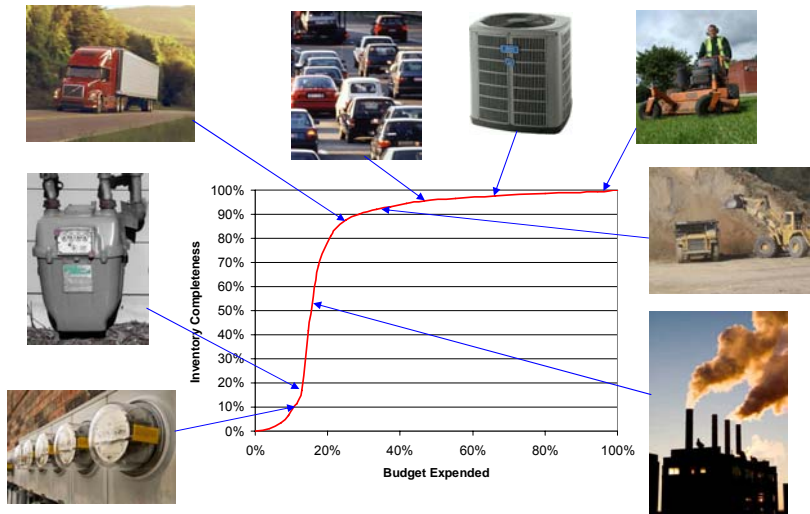
The last 20 % of your inventory takes 80% of your budget



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Different Sources Take Different Effort

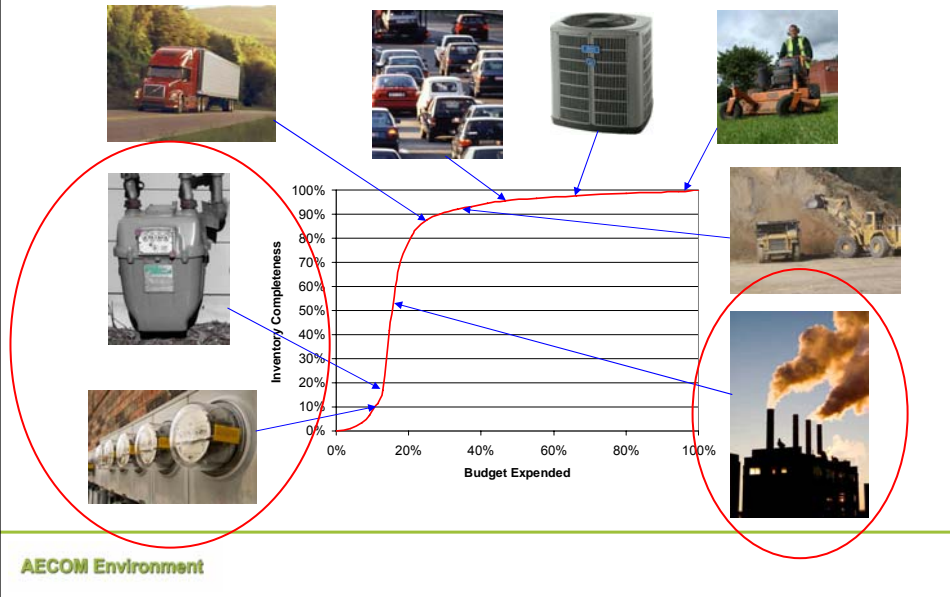
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Different Sources Take Different Effort

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GHG Reporting Programs

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	ARB AB-32	EPA	Climate Registry
Type of Program	Mandatory, facility level reporting	Mandatory, facility level reporting	Voluntary, entity level reporting
Reporting Period	Annual / Triennial, recurring	Annual, recurring	Annual, recurring
Number of Sources	Approximately 1,600	Approximately 13,000	333 members (as of 16 April)
Reporting/ Verification Schedule	Jun 1 / Dec 1 for 7 source categories (annual); Apr 1 / Oct 1 for all other sources (triennial)	Mar 31, 2011 / TBD	Jun 30 / Dec 15
First Inventory Year	2008 First year transitional	2010 First year transitional	NA 2-year transition

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GHG Reporting Programs

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	ARB AB-32	EPA	Climate Registry
Sources Covered	Scope 1 Direct Combustion, Process & Fugitive; On-Road Mobile Optional	Scope 1 Direct Combustion, Process & Fugitive; Engine & Vehicle Manufacturers; Manure Management; Upstream Suppliers	All Scope 1 & 2
GHG Gases Covered	6 Kyoto pollutants	6 Kyoto pollutants plus NF3, HFEs	6 Kyoto pollutants
Reporting Threshold (MT CO2e)	≥ 25,000 MT General Stationary Comb; ≥2,500 MT & ≥ 1 MW (Electric Generation & Cogeneration)	≥ 25,000 MT	All sources with 5% materiality threshold
Inventory Submittal	Electronic - ARB reporting tool	Electronic - TBD	Electronic - CRIS

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Different Handling of Mobile Sources

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- ARB
 - Optional Reporting for On-Road Mobile sources
 - No reporting of Off-Road Mobile sources
- EPA
 - No reporting of Mobile Sources by Facility
 - Engine and Vehicle Manufacturers report Emission Factors
 - Highway vehicles and engines
 - Trucks
 - Off-Road
 - Aircraft
 - Small Engines
 - Modeling and other data can be used to compute emissions
- TCR
 - Mobile sources (on-road and off-road) must be inventoried

Thank You

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For More Information

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