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# Local Government Operations (LGO) Protocol Advisory Group 2nd Meeting

Call-in number: 888-577-8995

Access code: 67405#

Webinar:

<https://www1.gotomeeting.com/register/830707819>

Welcome!

May 27, 2008

California Environmental Protection Agency

 **Air Resources Board**

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# Welcome and Introductions



# Goals and Objectives

# Agenda

- Review Draft Local Government Operations Protocol
- Clarifying Guidance
- Feedback in Key Areas
- Advisory Group Questions
- General Comments
- LGO Protocol Development Timeline
- Contacts and Adjourn

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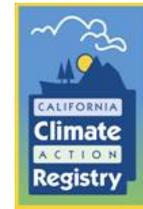
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# Review Draft LGO Protocol



# PART I

## INTRODUCTION

- Background
- Purpose
- Background on the Partners
- Partner Objectives
- Protocol Audience
- Protocol Origin
- Evolution of the Protocol
- Technical Assistance



# PART II

## DETERMINING WHAT TO REPORT

- General Principals
- Reporting Guidelines
- Organizational Boundaries
- Operational Boundaries

# PART III

## QUANTIFYING YOUR EMISSIONS

- Choosing the Appropriate Calculation Methodology
- Facilities
- Vehicle Fleet
- Power Generation Facilities
- Solid Waste Facilities
- Wastewater Facilities

# PART IV

## REPORTING YOUR EMISSIONS

- Local Government Operations Standardized Report
- Efficiency Metrics
- Program-Specific Reporting Requirements
  - CCAR
  - ICLEI



# PART II DETERMINING WHAT TO REPORT

# Reporting Guidelines

- Report emissions of all six internationally-recognized greenhouse gases
- Separately report biogenic CO<sub>2</sub> emissions from combustion
- Annual reporting based on calendar year
- Base Year:
  - Performance datum with which to compare emissions over time
  - Select year for which accurate records of all key emission sources exist in sufficient detail
- No guidance on biological stocks or other “sinks”

# Organizational Boundaries

## Management Control

- Report 100% of the emissions from operations, facilities and sources you control, determined by:
  - Financial control
  - Operational control
- *Operational control strongly recommended*

# Organizational Boundaries

## Operational Control (Recommended)

- Wholly owning an operation, facility or source
- Authority to introduce/implement operating policies
- Operating lease or operating license = operational control
  - Any lease that is not a capital lease is an operating lease

## Financial Control

- Wholly owning an operation, facility or source
- Consistent with financial accounting standards - asset included if part of your financial accounts
- Retain rights to majority of economic benefits/financial risks
  - Finance or capital lease

# Operational Boundaries

Scope	GHG Emission Source	Local Government
1	Direct	Owens and/or operates
2	Indirect	Generated elsewhere for or as a result of local government <i>(only purchased electricity, steam, district heating/cooling)</i>
3	Direct & Indirect	Exerts some control or influence <i>(upstream, downstream, etc.)</i>

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# PART III QUANTIFYING YOUR EMISSIONS



# Recommended and Alternate

Throughout protocol, activity data and emission factors are labeled as *recommended* or *alternate*:

- *Recommended* is the preferred and most accurate
- *Alternate* is less accurate
  - Need to check program specific requirements - not all alternate approaches accepted by CCAR
- Calculation methodology disclosure required in standardized report

# Facilities

## Stationary Combustion Recommended Approach: Direct Emissions - CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
Known fuel use (meter readings/utility bills)	Default emission factor by fuel type

# Facilities

## Stationary Combustion

### Alternate Approach:

Direct Emissions - CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
<ul style="list-style-type: none"><li>Proxy year data</li><li>Fuel estimates based on comparable facilities and square footage</li></ul>	<ul style="list-style-type: none"><li>Default emission factor by fuel type</li></ul>

# Facilities

## Electricity Use

### Recommended Approach:

Indirect Emissions - CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
Known electricity use (meter readings/utility bills)	Verified utility-specific emission factor -or- eGRID subregion default emission factor

# Facilities

## Electricity Use

### Alternate Approaches:

Indirect Emissions - CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O

#### Activity Data

- Estimated electricity uses for leased space
- Proxy year electricity use data
- Estimated electricity use based on comparable facilities and square footage
- Installed wattage (streetlights only)

#### Emission Factor

- Utility-specific emission factor

# Facilities

## Fugitive Emissions from Refrigerants

### Direct Emissions: HFCs, PFCs

Recommended Method	Alternate Method
Mass balance method	<ul style="list-style-type: none"><li>▪ Simplified mass balance method</li><li>▪ Estimations based on equipment inventory and refrigerant use</li></ul>

# Vehicle Fleet

## Recommended Approach: Direct Emissions- CO<sub>2</sub>

Activity Data	Emission Factor
Known fuel use	Published emission factor by fuel type (state- or region-specific)



# Vehicle Fleet

## Alternate Approach: Direct Emissions - CO<sub>2</sub>

Activity Data	Emission Factor
<ul style="list-style-type: none"><li>▪ Fuel estimates based on detailed annual mileage and vehicle fuel economy</li><li>▪ Fuel estimates based on annual mileage and vehicle fuel economy</li><li>▪ Fuel estimates based on dollars spent</li><li>▪ Proxy year fuel use data</li></ul>	Default emission factor by fuel type (National)

# Vehicle Fleet

## Recommended Approach: Direct Emissions – CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
Annual mileage by vehicle type, model year and fuel type	Default emission factor by vehicle type, model year and fuel type

# Vehicle Fleet

## Alternate Approach: Direct Emissions - CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
<ul style="list-style-type: none"><li>▪ Fuel use by vehicle type, model year and fuel type</li><li>▪ Annual mileage by vehicle type and fuel type</li><li>▪ Proxy year mileage data</li></ul>	Default emission factor by vehicle type, fuel type



# Solid Waste Facilities (*in progress*)

For landfills without Landfill Gas (LFG) collection systems:

- Use First Order Decay model
  - Use site-specific parameters when available ( $k$ , waste characterization)
  - Use WIP records going back to opening year (backcast when not available)

For landfills with LFG collection systems:

- Use standardized collection efficiency with metered volume of LFG
- May allow for site-specific collection efficiency to be reported additionally, where available
- Methodologies will be included in protocol for public comment mid-June
- ARB developing web-based tool

# Wastewater Facilities (*in progress*)

- Working with subgroup and CWCCG on methodologies for:
  - Fugitive CH<sub>4</sub> emissions
  - Process N<sub>2</sub>O emissions
- Reviewing IPCC and EPA methodologies (top-down) to see if they can be improved with available site-specific data
- Reviewing default emission factors (EPA vs. NACWA)
- Methodologies will be included in protocol for public comment mid-June



# Clarifying Guidance

# Clarifying Guidance

## Facilities

- Green Power and Renewable Energy Certificate Purchases
  - Report as supplemental information
  - Do not deduct from Scope 2/Indirect Emissions
  
- Accounting for Transmission and Distribution Losses
  - T&D losses reported by entity that owns or controls the T&D lines
  - No T&D losses from power entity generates itself (already in Scope 1)
  - T&D losses only from power entity purchases or wheels
    - Scope 2

# Clarifying Guidance

## Vehicle Fleets

- Methodology included for calculating fossil and biogenic CO<sub>2</sub> emissions from biofuels
  - Fossil portion = Scope 1
  - Report biogenic CO<sub>2</sub> emissions separately from Scope 1
  
- Alternative Fuel Vehicles/Electric Vehicles
  - Default emission factors provided for alternative fuels
    - Scope 1, unless biogenic
  - Electric vehicles = electricity consumption = Scope 2



# Feedback Requested

# Organizational Boundaries

## Issue: Autonomous Departments and Municipal Utilities

### Question:

- Did we provide enough guidance for local governments to assess operational/ financial control?
  - Operational control  $\Rightarrow$  report as part of local government
  - Financial control  $\Rightarrow$  if department is not consolidated in financial statements, do not report
- Do you agree with this approach?



# Operational Boundaries

Issue: Reporting biogenic CO<sub>2</sub> emissions from combustion

Question: Should biogenic emission reporting be required?

- Sources include combustion of biomass and biomass-derived fuels
- Track and report CO<sub>2</sub> emissions separately from Scope 1 emissions
- CH<sub>4</sub> and N<sub>2</sub>O from biomass combustion still Scope 1



# Facilities: Electricity Use

Issue: Emission factors for electricity use

Questions:

1. Which emission factors should be recommended for use?
  2. Should unverified emission factors be used at all?
- Currently, recommended emission factors:
    - Utility-specific
      - Verified under CCAR PUP Protocol
    - Regional
      - US EPA eGRID
  - Alternate emission factor
    - Unverified utility-specific emission factors



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# Advisory Group Questions

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## Facilities: Electricity Use

- Should ARB provide a California-specific emission factor?

## Reporting

- Comments on calendar year reporting?
- Should ARB require registering emissions?

## General Comments

- Additional recommendations?

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# General Comments



# LGO Protocol Development Timeline

# Tentative Timeline

ARB Public Workshop in Sacramento	March 11, 2008
CCAR Workgroup & Subgroup Meetings	March/April, 2008
ARB Advisory Group Kick-off Meeting	April 22, 2008
1 <sup>st</sup> Draft Protocol to Advisory Group	Mid-May, 2008
ARB Advisory Group Meeting	May 27, 2008
Comments Due	May 30, 2008
2 <sup>nd</sup> Draft Protocol to Advisory Group	Mid-June 2008
ARB Public Workshop	Mid-June, 2008
Public Comment Period	June/July, 2008
LGO Protocol Finalized	August 2008

# Websites

- “Protocol in Progress” information available on CCAR website:  
[www.climateregistry.org/tools/protocols/protocols-in-progress/local-government-operations.html](http://www.climateregistry.org/tools/protocols/protocols-in-progress/local-government-operations.html)
- ARB Local Government website:  
[www.arb.ca.gov/cc/protocols/localgov/localgov.htm](http://www.arb.ca.gov/cc/protocols/localgov/localgov.htm)
- ICLEI website:  
[www.icleiusa.org](http://www.icleiusa.org)



# Contacts

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