



The Climate
Registry

Local Government Operations (LGO) Protocol Advisory Group Kick-off Meeting

Call-in number: 800-369-1730
Access code: 20733#

Welcome!

April 22, 2008

California Environmental Protection Agency

 **Air Resources Board**

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Welcome and Introductions



Goals and Objectives



Goals of Joint Effort

- Provide “industry-specific” reporting guidance for local government operations
- Help create harmonization between GHG inventories reported to multiple programs
- Promote role of local governments in combating global climate change
- Advance the consistent, comparable and relevant quantification of emissions

Partner Objectives

- ARB – California protocol for AB 32 Program
- CCAR members – “industry-specific” guidance for local government members
- ICLEI members – supplementary to International Local Government Greenhouse Gas Protocol
- TCR will look to these standards in the future
- Applicable across US, potentially Canada and Mexico



GHG Accounting & Reporting

General Principles

- Relevance
- Completeness
- Consistency
- Accuracy
- Transparency

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Local Government Definition

Local Government Definition

Local Government: a general purpose government at the town, city or county level.

- Protocol is developed specifically for city and county needs
- Guidance may be applicable for other entities (e.g. special districts), but will focus on local government needs
- If program requires reporting under sector-specific guidance, applicable to local governments as defined above only

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Local Government Services

Local Government Services

Government Owned/Operated Facilities

- Owned and leased office space
- Police and fire stations
- Recreation centers and facilities, including auditoriums, museums, zoos, other cultural facilities
- Warehouse, fleet and equipment yards, service facilities
- Transportation facilities
- Port and airport facilities and equipment
- Traffic signals, streetlights, utility lighting
- Hospitals and schools
- Courts
- Prisons
- Housing



Local Government Services

Government Owned/Operated Fleet Vehicles

- Passenger fleet vehicles
- Light, medium, and heavy-duty trucks
- Police and fire equipment
- Transit vehicles
- Sanitation and street sweeping equipment
- Port and airport on and off-road vehicles
- Aircraft and maritime equipment
- Grounds keeping equipment



Local Government Services

Government Owned/Operated Industrial Facilities

- Wastewater and potable water conveyance and treatment facilities
- Power generation, transmission and distribution facilities
- Solid waste management facilities, including transfer stations, recycling centers, resource recovery centers, compost facilities and landfills

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Local Government Operations Scopes and Sector Alignment

Scopes

Scope	GHG Emission Source	Local Government
1	Direct	Owns and operates
2	Indirect	Generated elsewhere for or as a result of Government Operations
3	Direct & Indirect	Exerts some control or influence

Sector Alignment

Macro Sector (IPCC)		Local Government Sector
Energy	Stationary Combustion	Buildings and Facilities
		Street Lights and Traffic Signals
		Water/Sewer (energy only)
	Mobile Combustion	Vehicle Fleet
		Employee Commute/ Business Travel
	Fugitive emissions	Other

Sector Alignment

Macro Sector (IPCC)		Local Government Sector
Waste	Solid Waste Disposal	Waste/Wastewater
	Biological Treatment of Solid Waste	
	Incineration and Open Burning of Waste	
	Wastewater Treatment and Discharge	

Sector Alignment

- **Protocol will include guidance for calculating process emissions**

Macro Sector (IPCC)	Local Government Sector
Industrial Processes and Product Use	Other

Sector Alignment

- **Protocol is for Sources ONLY, not sinks**

Macro Sector (IPCC)	Local Government Sector
Agriculture, Forestry and Other Land Use	Agriculture Emissions
	Land Use Sources and Sinks



Sources by Scope

Sources by Scope

Local Government Sector	Scope 1	Scope 2	Scope 3
Buildings and Facilities	Utility-delivered fuel consumption (e.g., natural gas) Decentralized fuel consumption (e.g., propane, fuel oil, stationary diesel)	Electricity / heat / steam consumption	Stationary combustion-based emissions and electricity/heat/steam consumption-based emissions and from facilities operated by contracted businesses performing essential government services
Street lights and traffic signals			
Water / Sewer			
Electricity / Heat / Steam Generation	Utility-consumed fuel for electricity / heat generation		

Sources by Scope

Local Government Sector	Scope 1	Scope 2	Scope 3
Vehicle Fleet	Tailpipe emissions from government owned and operated vehicles	Emissions associated with electric vehicles	Tailpipe emissions from vehicles operated by contracted businesses performing essential services Upstream/downstream emissions
Employee Commute / Business Travel			Tailpipe emissions associated with government employee travel to and from work and business travel Upstream/downstream emissions
Other	Fugitive emissions not already accounted for		Upstream/downstream emissions

Sources by Scope

Local Government Sector	Scope 1	Scope 2	Scope 3
Other	Process and fugitive emissions from industrial processes HV/AC systems and in buildings, fleet, etc. Fire Extinguishers		
Waste	Government owned/operated landfill, incineration, compost and wastewater facilities		Analysis-year emissions from government waste disposed to date Embodied future emissions associated with analysis-year waste generation Upstream/downstream emissions

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Organizational Boundaries

Organizational Boundaries

- Select a consolidation “approach” and apply consistently across entity
 - Equity share
 - Management Control - Financial vs. Operational Control

Equity Share

- Report portion of entity’s emissions commensurate with financial ownership (25% ownership = 25% of emissions)

Management Control

- Report 100% of the emissions from operations, facilities and sources you control, determined by:
 - Financial control
 - Operational control
- No emissions from operations in which you own an interest but have no control (e.g. shareholders)

Management Control

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



“Core Services”



“Core Services”

- Group discussed reporting of emissions from “core services”, regardless of control
 - Fire, life and safety services
 - Water/Wastewater services
 - Waste collection services
- Group discussed requiring what might currently be optional “Scope 3” emissions in current CCAR/TCR guidance
 - Employee commuting/business travel
 - Contractor vehicle fleet
 - Emissions from waste generated by local govt.



Calculation/Estimation Methodologies

GHG Emissions = Activity Data X Emission Factor

Buildings and Facilities

Recommended Method: Direct Emissions - CO₂, CH₄, N₂O

Activity Data	Emission Factor
Fuel purchase records by fuel type*	Default emission factor by fuel type*
	Derived emission factor from on-site source testing, equipment, data, etc.*

* Appropriate for third-party verification

Buildings and Facilities

Alternate Methods:

Direct Emissions - CO₂, CH₄, N₂O

Activity Data	Emission Factor
<ul style="list-style-type: none">▪ Fuel estimates based on square footage▪ Proxy year data	<ul style="list-style-type: none">▪ Default emission factor by fuel type*▪ Derived emission factor from on-site source testing, equipment, data, etc.*

* Appropriate for third-party verification



Buildings and Facilities

Data Sources

- Real Estate Dept.
- Utility provider
- Accounts Payable
- Fuel vendors/suppliers
- Insurance company
- Departmental records
- Facility engineer
- Engineering department

Buildings, Facilities and Streetlights

Recommended Method:

Indirect Emissions - CO₂, CH₄, N₂O

Activity Data	Emission Factor
Metered annual energy consumption*	Utility-specific emission factor*

* Appropriate for third-party verification

Buildings, Facilities, and Streetlights

Alternate Methods: Indirect Emissions - CO₂, CH₄, N₂O

Activity Data	Emission Factor
<ul style="list-style-type: none">▪ Estimated annual energy consumption based on square footage*▪ Estimated annual energy consumption based on proxy year data▪ Installed Wattage (streetlights only)	<ul style="list-style-type: none">▪ Derived emission factor (Local)*▪ Default emission factor (Regional)*

* Appropriate for third-party verification



Buildings, Facilities and Streetlights

Data Sources

- Public Works Dept.
- Energy Office
- Utility
- Accounts Payable
- Real Estate Dept.
- Property Management Office

Fugitive Emissions from Refrigerants

Direct Emissions: HFCs, PFCs

Activity Data	
Recommended Method	Alternate Method
Equipment inventory + HFCs, PFCs used + annual refrigerant charge + annual leak rates*	Equipment inventory + HFCs, PFCs used

Data Sources	Emission Factor
<ul style="list-style-type: none"> ■ HV/AC maintenance ■ Accounts Payable 	N/A

* Appropriate for third-party verification



Vehicle Fleet

Recommended Method: Direct Emissions - CO₂

Activity Data	Emission Factor
Fuel consumption by fuel type*	Default emission factor by fuel type (State-specific)*
	Derived regional emission factor*

* Appropriate for third-party verification

Vehicle Fleet

Alternate Methods: Direct Emissions - CO₂

Activity Data	Emission Factor
Model year, make, model, fuel type, annual mileage + fuel efficiency from EPA*	Default emission factor by fuel type (National)*
Annual mileage per vehicle type, fuel type + fuel efficiency assumption	
Annual mileage + fuel efficiency assumption	
Fuel estimates based on dollars spent	

* Appropriate for third-party verification

Vehicle Fleet

Recommended Method: Direct Emissions – CH₄, N₂O

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

* Appropriate for third-party verification

Vehicle Fleet

Alternate Methods: Direct Emissions - CH₄, N₂O

Activity Data	Emission Factor
Fuel consumption, model year, make, model, fuel type*	Default emission factor by vehicle type, fuel type
Proxy year data	
Fuel consumption + vehicle type, fuel type assumptions	
Annual mileage + vehicle type, fuel type assumptions	
Annual mileage + fuel efficiency assumption	

* Appropriate for third-party verification



Vehicle Fleet

Data Sources

- Mileage reimbursement records
- Maintenance records
- Insurance department
- Fuel tracking system
- Accounts Payable
- Departmental records
- Fuel vendors/suppliers



Sector-Specific Methodologies

- Formed Subgroups
 - Solid Waste
 - Wastewater
 - Reporting/Metrics
- Presented in Second Draft Protocol



Fiscal Year Reporting vs. Calendar Year Reporting



Reporting

- **Fiscal Year**
 - 365-days important
 - No standardization
 - Data availability/accessibility
- **Calendar Year**
 - International reporting standard
 - Achieve consistency
 - 3rd-party verifiable



Advisory Group Questions

Advisory Group Questions

Local Government Definition

- Inclusion of special districts?

Organizational Boundaries

- Agree with recommending operational control?
- Do local governments have operational and/or financial control over all departments?
 - Municipal utilities, ports, airports, redevelopment agencies with separate budgets, Board of Directors

Calculation/Estimation Methodologies

- Require standardized approach?
- Include one recommended method per sector?
- Provide alternate estimation methods?



Advisory Group Questions

Reporting

- Recommend calendar year rather than fiscal year?
- Provide options or require one reporting method?
- Should ARB require registering emissions?

General Comments

- Additional recommendations?



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 st Draft Protocol to Advisory Group	Mid-May, 2008
Comments Due	May 30, 2008
2 nd 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
- ARB Local Government website:
www.arb.ca.gov/cc/protocols/localgov/localgov
- ICLEI website:
www.icleiusa.org



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