Local Greenhouse Gas (GHG) Inventory Tool

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February 15, 2022 | 2 PM Eastern

Three audio options:
1. Listen via computer
2. Use the "Call Me" feature
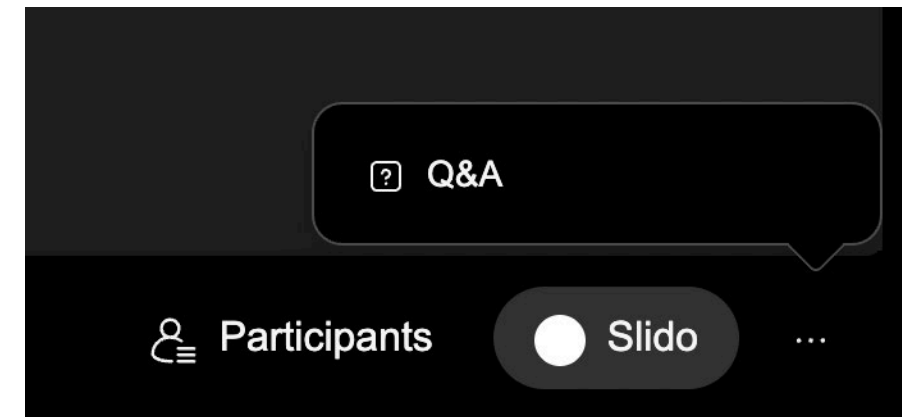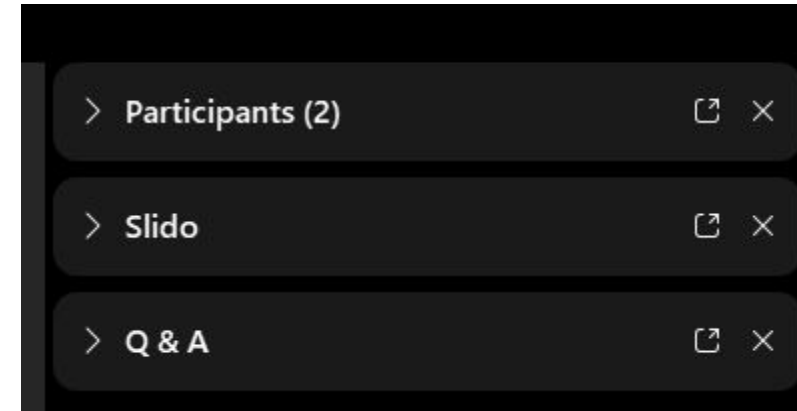3. Dial 1-415-655-0002 or 1-855-797-9485; Event number: 2431 922 2306

Webinar Panels

We'll use three panels

- Participants, Slido, and Question & Answer (Q&A)
- Use the arrow to expand or collapse the panels

Adding Panels

- If some panels don't appear, hover over the bottom of the screen and select the desired panels
- Select More Options (…) for additional panels
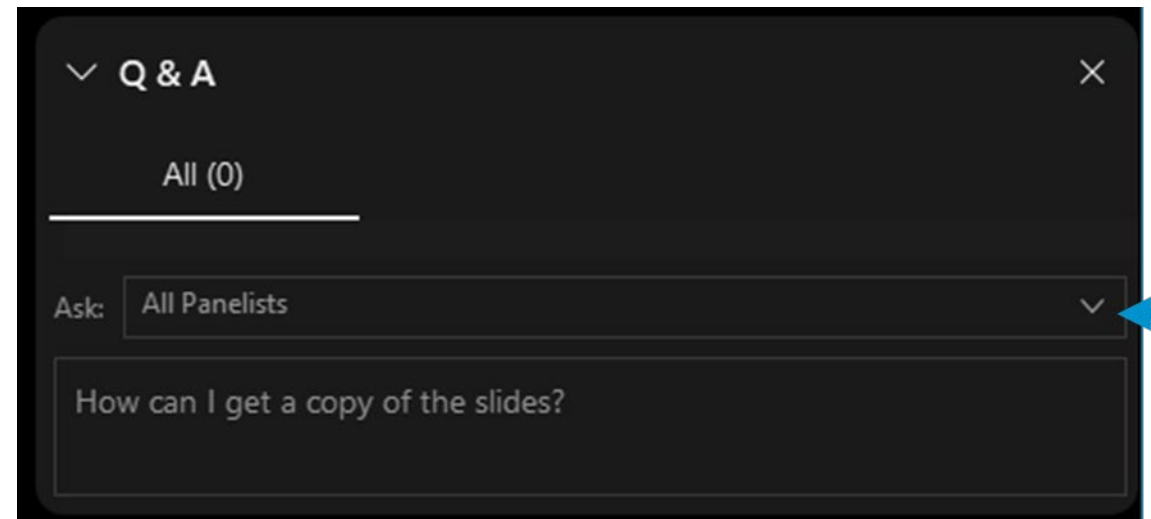- Highlighted backgrounds indicate active panels
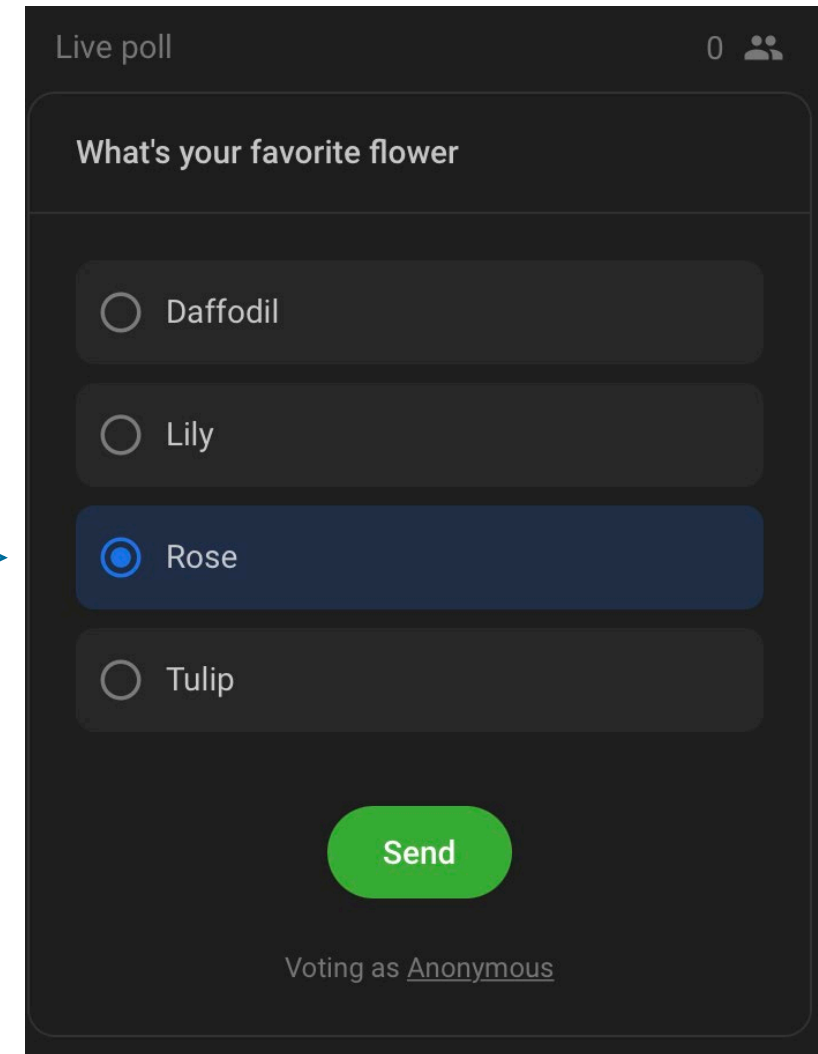
Q&A

- Participants are muted

- Questions will be moderated at the end

- To ask a question:
  1. Select "All Panelists" from the drop-down menu
  2. Enter your question in the Q&A box
  3. Hit "Enter"

Webinar Feedback

- A feedback form will pop-up in the Slido panel near the end of today's webinar with several questions

- Please make your selections and select "Send"

- EPA will post final materials on the Webinar Series page:

www.epa.gov/statelocalenergy/state-local-and-tribal-webinar-series

Live poll   0 👥

What's your favorite flower

○ Daffodil

○ Lily

⦿ Rose

○ Tulip

Send

Voting as Anonymous

Our Tools and Resources Support State, Local and Tribal Stakeholders on Climate and Energy

State and Local Climate and Energy Program

Develop Inventories and Set Goals

GHG INVENTORY TOOLS
State
Local
Tribal

State Inventory and Projection Tool
Develop and update inventories for 11 sectors. Forecast emissions through 2050

Local Inventory Tool
Develop community-wide inventories or inventories of local government operations only

Tribal Inventory Tool
Develop community-wide inventories or inventories of tribal government operations only

Design, Compare, or Evaluate Policy

AVERT
AVoided Emissions and geneRation Tool
Evaluate changes in power plant emissions from energy policy

HEALTH BENEFITS per kilowatt-hour
Health Benefits per kWh
Estimate the health benefits per kWh of clean energy

COBRA
Co-Benefits Risk Assessment Health Impacts Screening and Mapping Tool
Quantify and monetize health impacts of reducing emissions

ESIST Energy Savings and Impacts Scenario Tool
Energy Savings and Impacts Scenario Tool
Analyze energy savings, costs, and multiple benefits from energy efficiency programs

Communicate and Support Policy Implementation

CO2 Greenhouse Gas Equivalencies CALCULATOR
Greenhouse Gas Equivalencies Calculator
Convert a unit of energy to the equivalent amount of CO_2 emissions from using that amount

HEAT ISLAND REDUCTION PROGRAM
Heat Island Reduction Program
Resources to implement heat island mitigation policies and projects

Technical Support
Provide 1-1 technical support for state, local and tribal stakeholders

Convene Stakeholders
Engage state, local and tribal decision-makers

Local Action Framework:
A Guide to Help Communities Achieve Energy and Environmental Goals

Energy and Environment Guide to Action: State Policies and Best Practices for Advancing Energy Efficiency, Renewable Energy, and Combined Heat and Power

Quantifying the Multiple Benefits of Energy Efficiency and Renewable Energy:
A Guide for State and Local Governments

Local Government Climate and Energy Strategy Series:
A Guide to Developing and Implementing Greenhouse Gas Reduction Programs

Inventory Training Agenda

- Inventory Background

- Tool Overview
  - Background and Goals
  - Tool Basics
  - Tool Contents and Structure

- Tool Demo
  - Government Operations Module
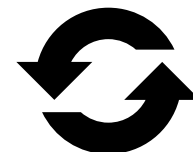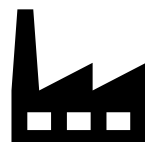 - Community Wide Module

Why prepare an inventory?

- To identify the greatest sources of GHG emissions within your geographic region

- To understand emission trends

- To provide a basis for developing an action plan or develop goals and targets

- To track progress at reducing emissions

Note: completing an inventory should not become an impediment to taking action; state, regional, or other data may be sufficient to get started

What is included in a GHG Inventory?

- Direct Emissions (aka scope 1)
  - Emissions that are released from activities within the inventory boundary
    - Fossil fuel combustion
    - Fertilizer application
    - Landfill operation

- Indirect Emissions (aka scope 2 and 3)
  - Emissions that occur outside the boundary because of activity or demand within the boundary
    - Purchased electricity (scope 2)
    - Everything Else (scope 3)
      - Off-site waste disposal
      - Lifecycle related emissions

Local GHG Inventory Tool Goals

- Respond to requests for assistance with measuring GHG emissions

- Help local governments across the US to evaluate GHGs associated with both government operations and community-wide activity

- Support development of baselines for tracking emission trends, developing mitigation strategies and policies, and assessing progress towards meeting goals

- Provide a **free**, easy-to-use tool consistent with accepted protocols and methodologies

U.S. Environmental Protection Agency

Tool Basics

- Excel based

- Divided into 2 modules, can be used independently
  - Government Operations Module
  - Community-Wide Module

- Designed to be flexible to the needs and constraints of different tribal governments
  - data can be entered at any scale, ranging from community-wide activity data to data by facility or meter
  - default emissions factors are provided, but can be over-written with location-specific factors
  - customize year of inventory, number of departments, etc

Government Operations: Overview

- Based on the Climate Registry's *Local Government Operations Protocol*, version 1.1.
- Covers ten emissions sectors:
  - Stationary Fossil Fuel Combustion
  - Mobile Fossil Fuel Combustion
  - Solid Waste Management
  - Wastewater Treatment

Scope 1

  - Electricity Consumption

Scope 2

  - Employee Commute
  - Agriculture & Land Management
  - Urban Forestry
  - Waste Generation (offsite disposal)
  - Water Use (offsite supply/treatment)
  - Additional Sources

Scope 3

Community Module

- Based on ICLEI's *Global Protocol for Community-Scale GHG Emissions,* version 0.9

- Covers nine sectors of community-scale emissions:
  - Stationary Fossil Fuel Combustion
  - Mobile Fossil Fuel Combustion   Scope 1
  - Solid Waste Management
  - Wastewater Treatment
  - Electricity Consumption   Scope 2
  - Agriculture & Land Management
  - Forestry
  - Waste Generation (offsite disposal)   Scope 3
  - Water Use (offsite supply/treatment)
  - Additional Sources

Tool Structure

- Table of Contents page
  - Main navigational portal
  - Track completion of each data source
- Inventory Control Sheet
  - Enter name of community and year of inventory
  - Set up electricity provider information
- Entry Sheet/Data Sheet
  - Enter/review descriptions and consumption activity by unit
  - Some sectors allow batch import of data

- Summary/Calculation Sheets
  - Show calculations/equations and summary data
  - No data entry required, informational only
- Inventory Summary Page
  - Compiles all entered data
  - Tables and charts of emissions data

Government Operations: Table of Contents Page

Table of Contents

Clicking on each box will take you to its respective worksheet in the tool. Use this table of contents to keep track of your progress as you move through the tool.

Completed sheets are filled in. Incomplete sheets have a white background, while sheets that require no action by the user are in grey.

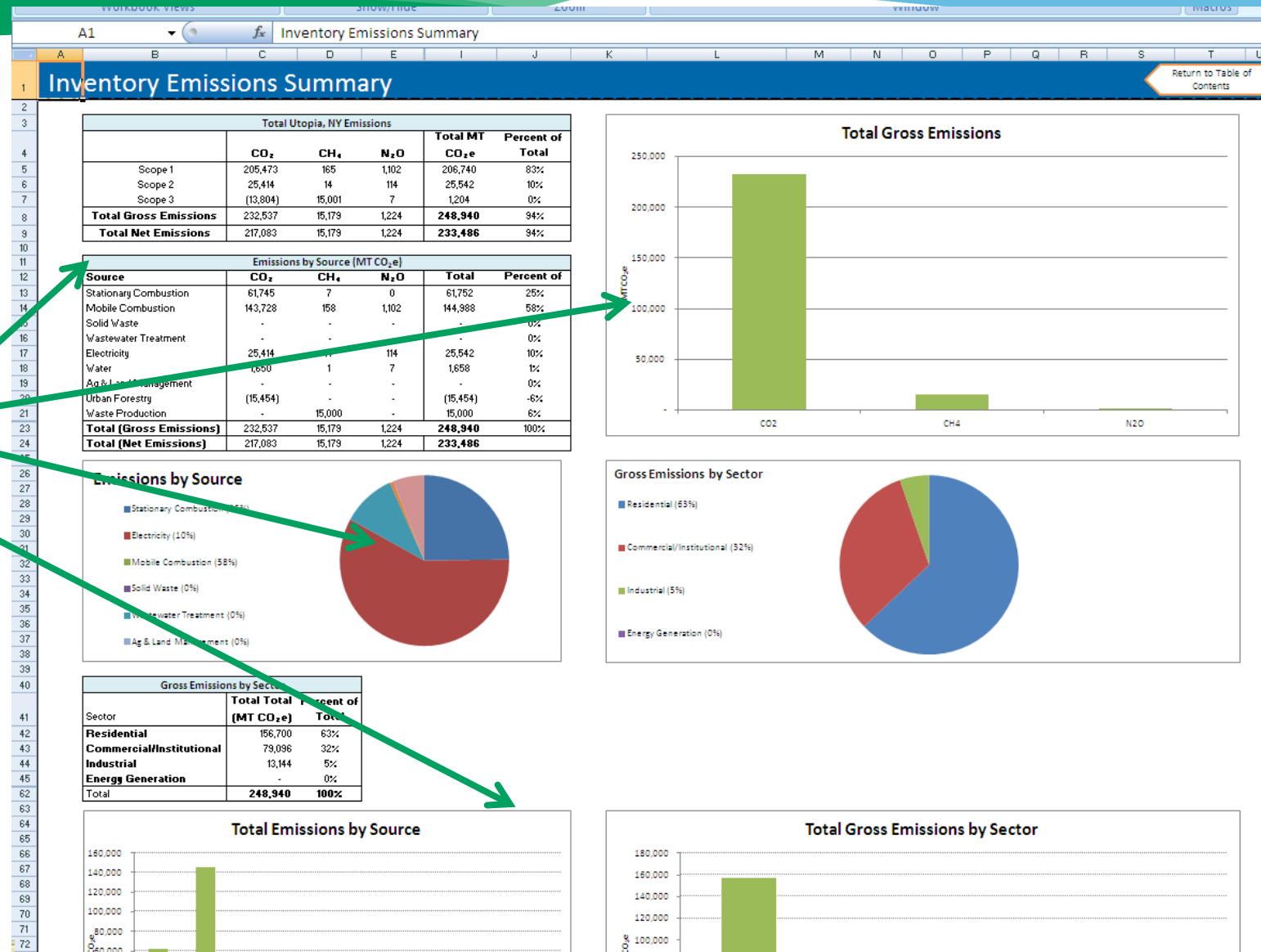Introduction | Read Me | Definitions

Inventory Control Sheet

Click anywhere in the Table of Contents to jump to a section of the tool

Scope 1 | **Scope 2** | **Scope 3**

| Stationary Combustion - Entry Sheet | Mobile Combustion - Entry Sheet | Solid Waste - Control Sheet | Wastewater - Control Sheet | Electricity Use - Entry Sheet | Employee Commute Sheet | Agriculture & Land Management Sheet |

| Stationary Combustion - Data Sheet | Mobile Combustion - Data Sheet | Solid Waste - Entry, Calculation & Summary | Wastewater - Entry Sheet | Electricity Use - Data Sheet | Water Use Sheet | Urban Forestry Sheet |

| Stationary Combustion: - Calculation & Summary | Mobile Combustion - Summary Sheet | | Wastewater - Calculation & Summary | Electricity Use - Calculation & Summary | Waste Production Sheet | |

| | Mobile Combustion - Calculation Sheet | | | | Additional Emission Sources Sheet | |

Inventory Emissions Summary

Community Module: Control Sheet

Enter Tribe Name and Inventory Year

Select eGRID subregion or enter utility factors

"Set Up" Inventory

Community Module: Data Entry Page

Community Module: Navigation Page Revisited

Table of Contents boxes change color as you mark sheets complete

Community Module: Summary Page

Charts and Tables of:

Total Emissions

Emissions by Source & Sector

U.S. Environmental Protection Agency

Tool Demo

- Government Operations Module
- Community Wide Module

Training and Technical Assistance

Download Tool

www.epa.gov/statelocalenergy/tribal-greenhouse-gas-inventory-tool

Local and Tribal GHG Inventory Tool Office Hours

February 22, 2022; 2-3pm EST (11am-12pm PST)

www.eventbrite.com/e/us-epa-local-and-tribal-greenhouse-gas-inventory-tool-office-hours-tickets-247279388307

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