Guidance for Accessing NEI Transportation Data

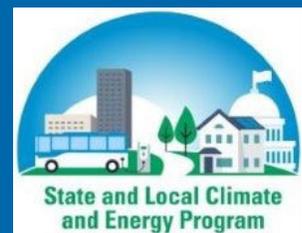Incorporating National Emissions Inventory Data into the Local or Tribal GHG Inventory Tools

September 2023

Prepared for:

State and Local Climate and Energy Program
U.S. Environmental Protection Agency

Prepared by:

ICF
2550 S Clark St.
Arlington, VA 22202
Tel: (571) 842-4500

Contents

Overview

This guide accompanies the Local and Tribal Greenhouse Gas Inventory Tool: Community Modules. It explains how to obtain transportation greenhouse gas (GHG) emissions data at the county- or tribe-level and how users can enter the data into the Community Modules within the Additional Emission Sources sheet. For more information on using the Modules, please refer to the Local or Tribal Greenhouse Gas Inventory Tool User's Guides, which are available to download here: https://www.epa.gov/statelocalenergy/download-local-greenhouse-gas-inventory-tool or https://www.epa.gov/statelocalenergy/download-tribal-greenhouse-gas-inventory-tool.

Additional Emission Sources Data Entry Sheet

The Additional Emission Sources sheet of the Community Modules may be used to account for pre-calculated emissions associated with the transportation sector within your community or tribe. Users are asked to input a description of each source, the sector it falls under (i.e., Residential, Commercial/Institutional, Industrial, or Energy Generation), the scope (i.e., Scope 1, 2, or 3)[1] of the emissions, and the quantity of emissions for each type of GHG in metric tons of carbon dioxide equivalent (MT CO_2e). This sheet is ideal for data sources that do not fall into another category within the Module (e.g., landfill emissions). Prior to entering data into the sheet, convert emissions from tons of each gas to MT CO_2e using the correct Global Warming Potential (GWP) for each GHG. Once you enter emissions data in the entry sheet for each respective source, the information will automatically be pulled into the Summary sheet.

Obtaining Input Data

County- and tribal-level[2] transportation emissions data are available from the U.S. EPA's 2020 National Emissions Inventory (NEI) Data Retrieval Tool.[3] This publicly available database provides emissions data for on-road, non-road, and point, and nonpoint data categories. Criteria and hazardous air pollution emissions are reported for all data categories, and GHG emissions are reported for all on-road, non-road, large point (e.g., electricity generating units (EGUs), and some nonpoint data categories. For more background on the 2020 NEI, including documentation of the methods used to report emissions, please see the Technical Source Document. This guidance document outlines how the 2020 NEI Data Retrieval Tool database may be used to pull in transportation data to the Additional Emission Sources sheet of the Local or Tribal Community Modules. For more information on the NEI Tool, visit https://www.epa.gov/system/files/documents/2023-01/NEI2020_TSD_Section1_Introduction.pdf.

Using the NEI Data Retrieval Tool

Step 1. Access the 2020 NEI Data Retrieval Tool

Navigate to the NEI Data Retrieval Tool website: https://awsedap.epa.gov/public/single/?appid=20230c40-026d-494e-903f-3f112761a208&sheet=5d3fdda7-14bc-4284-a9bb-cfd856b9348d&opt=ctxmenu,currsel (Figure 1).

---

[1] Scope 1, Scope 2, and Scope 3 are categories used to classify greenhouse gas emissions associated with an organization's activities. Scope 1 includes direct emissions, Scope 2 covers indirect emissions from purchased energy, and Scope 3 encompasses various other indirect emissions along the organization's value chain. Addressing all three scopes in a comprehensive approach allows organizations to accurately manage and reduce greenhouse gas emissions in the long-term.

[2] Tribal-level transportation emissions data are only available in the 2020 NEI if that tribe reported emissions to the NEI. If the tribe did not report their emissions, tribal emissions are accounted for within county-level estimates.

[3] In addition to transportation data, the NEI Tool can also be used to obtain facility-, county- or tribe-level emissions data on waste disposal, agriculture, industrial processes, solvents, fire, and dust.

Figure 1. 2020 NEI Data Retrieval Tool Starting Page
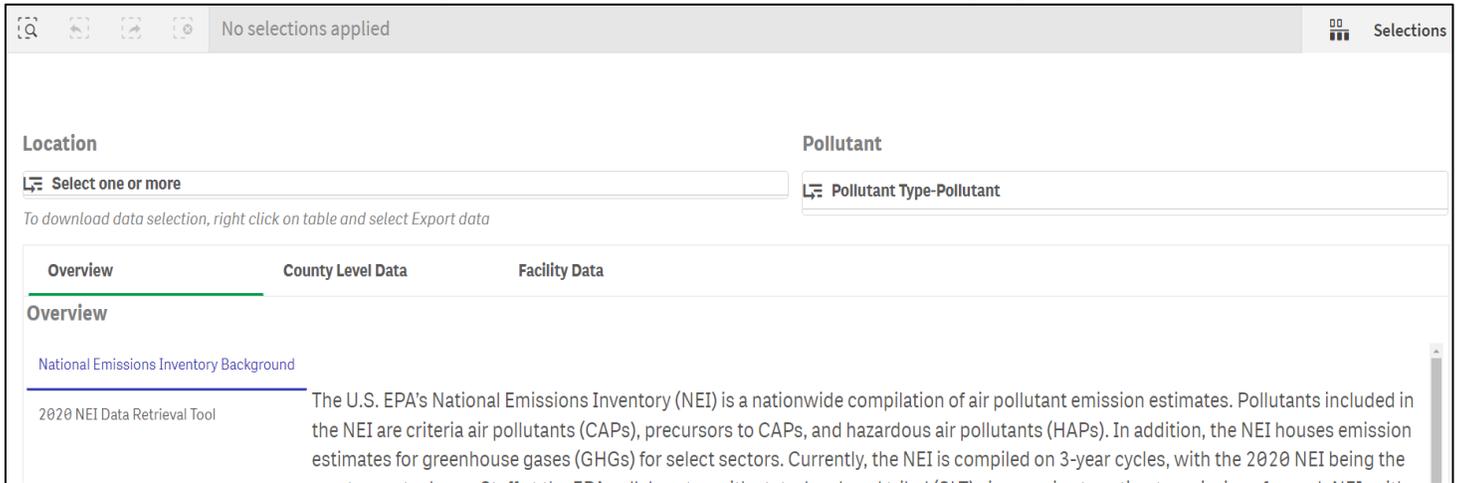
Step 2. Select your County or Tribe

Select your county or tribe by clicking "Select one or more" under the Location heading (Figure 2). Select the state where your county is located from the dropdown list and click the green check mark (Figure 3). Please note, tribes should select "Tribal" from the initial dropdown list. Repeat this step to select your specific county or tribe (Figure *4*).
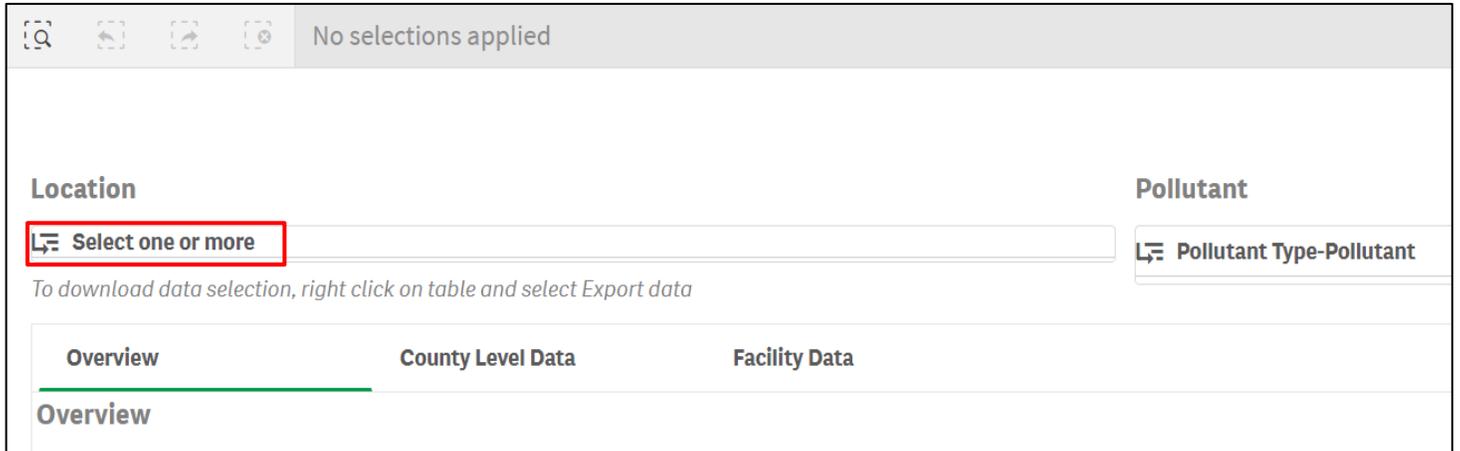
Figure 2. Click "Select one or more"
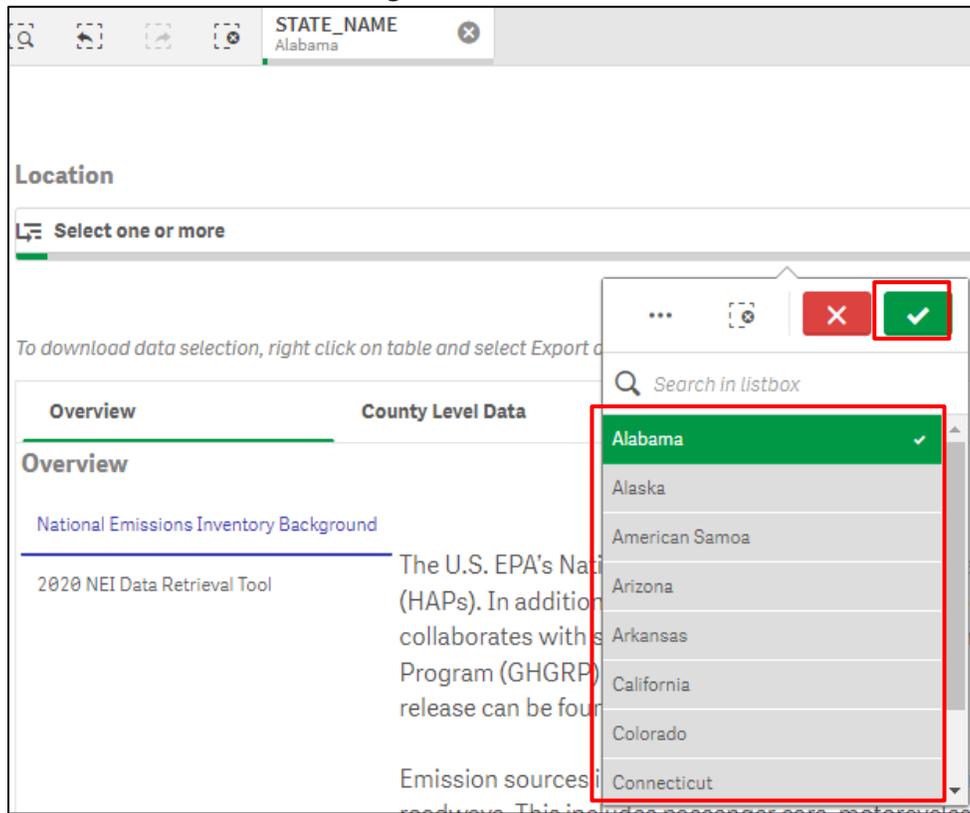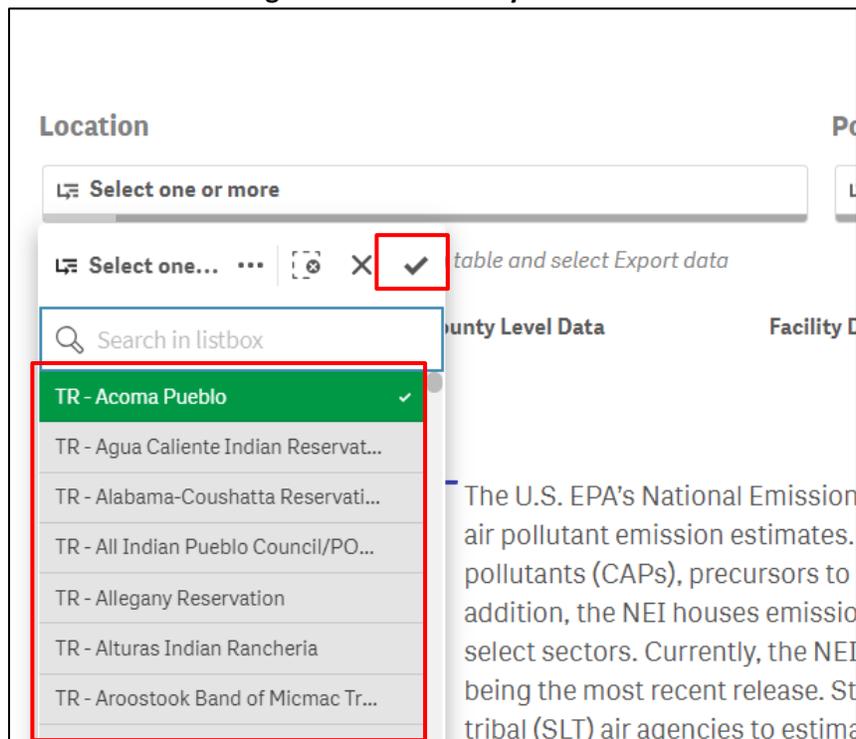
Figure 3. Select State

Figure 4. Select County or Tribe

Step 3. Select GHG as Pollutant

To view GHG emissions estimates for your county or tribe, select "Pollutant Type-Pollutant" under the Pollutant heading (Figure 5). From the dropdown list, select "GHG" and click the green check mark (Figure 6). GHGs included in the NEI Tool are Carbon Dioxide (CO_2), Methane (CH_4), and Nitrous Oxide (N_2O).

Figure 5. Click "Pollutant Type-Pollutant"
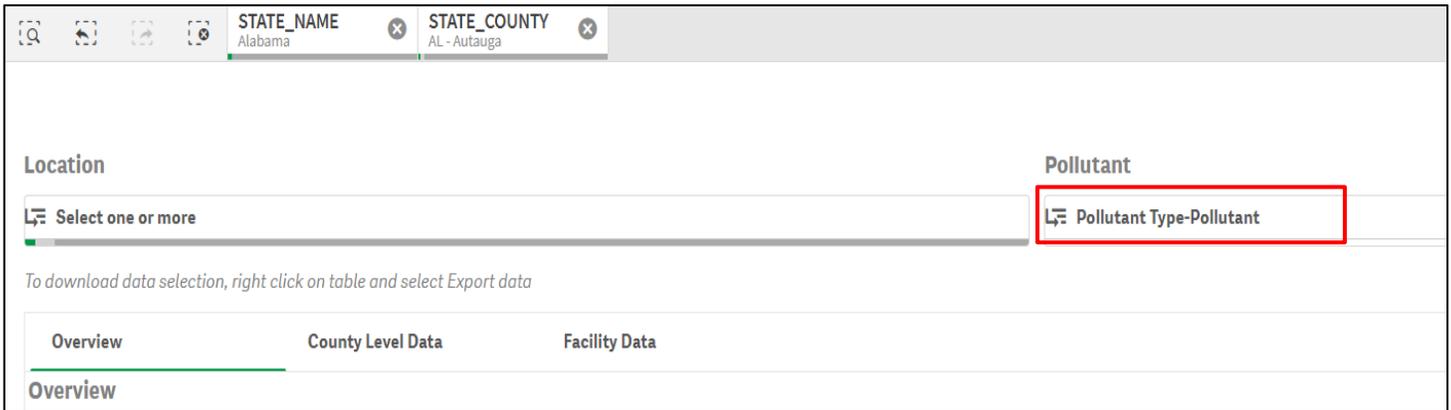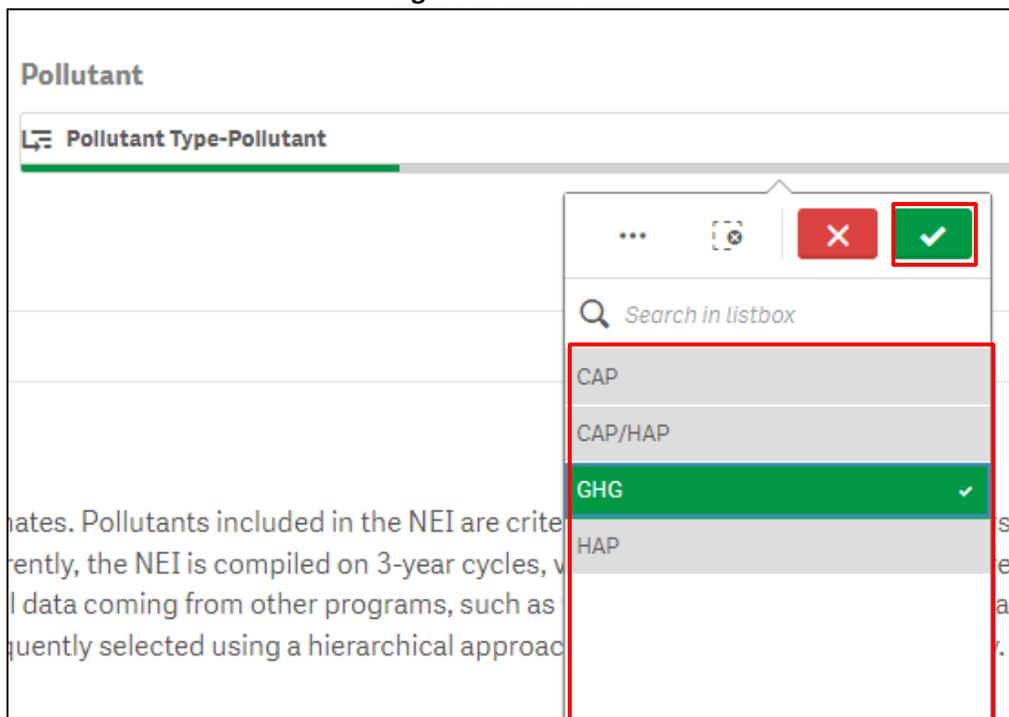

Figure 6. Select GHG

Step 4. View your County Level Data
   Select the "County Level Data" tab to see a table of 2020 County-Level Process Data for Mobile and Nonpoint Emissions (

Figure 7). [4]

To focus the data on transportation emissions, click the magnifying glass icon at the top of the EIS Sector column. Select the following sectors from the dropdown list:
- Mobile – On-Road Diesel Heavy Duty Vehicles
- Mobile – On-Road non-Diesel Heavy Duty Vehicles
- Mobile – On-Road Diesel Light Duty Vehicles
- Mobile – On-Road non-Diesel Light Duty Vehicles
- Mobile – Non-Road Equipment – Gasoline
- Mobile – Non-Road Equipment – Diesel
- Mobile – Non-Road Equipment – Other
- Mobile – Commercial Marine Vessels
- Mobile – Locomotives
- Mobile – Aircraft

If the 2020 NEI does not report emissions from a particular source in a county, that sector cannot be selected from the dropdown list.

Figure 7. Select the "County Level Data" Tab

---

[4] Facility-level emissions data can be accessed by selecting the "Facility Data" tab next to the "County Level Data" tab pictured in Figure 7.

Once selected, click the green check mark (Figure 8).

Figure 8. Filter Data
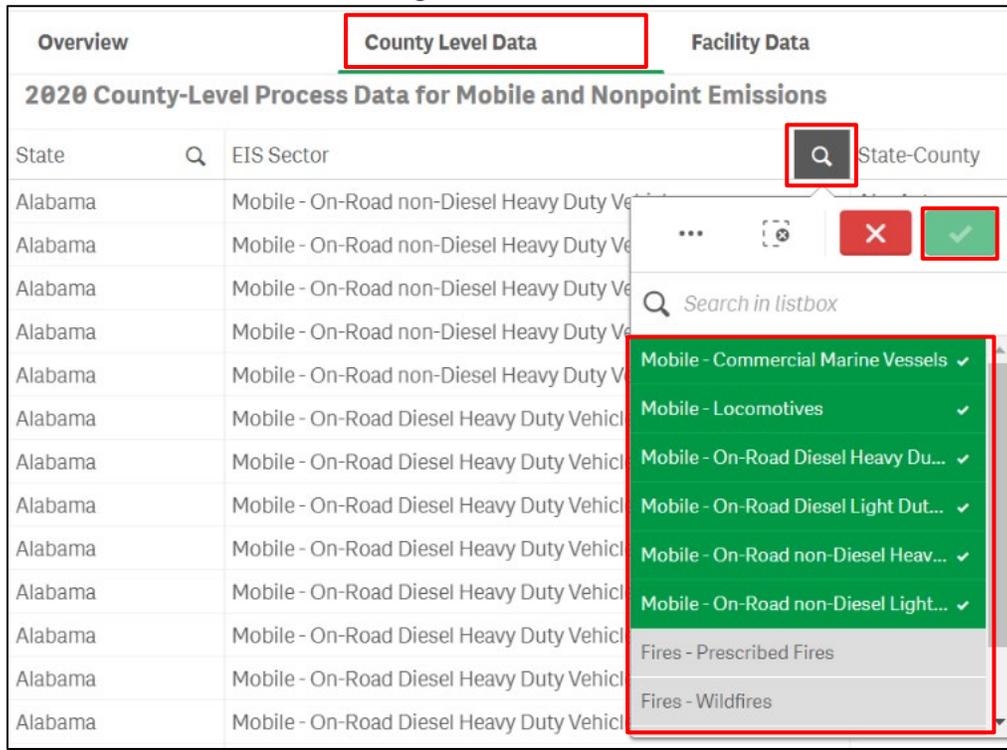
Step 5. Export your Data, Sum Totals, and Convert Units
Right click anywhere on the table and select "Export data" from the list (Figure 9). Once the export is complete, select "Click here to download your data file" in the popup window (Figure 10). The data will be downloaded to your computer as a Microsoft Excel (.xlsx) file.
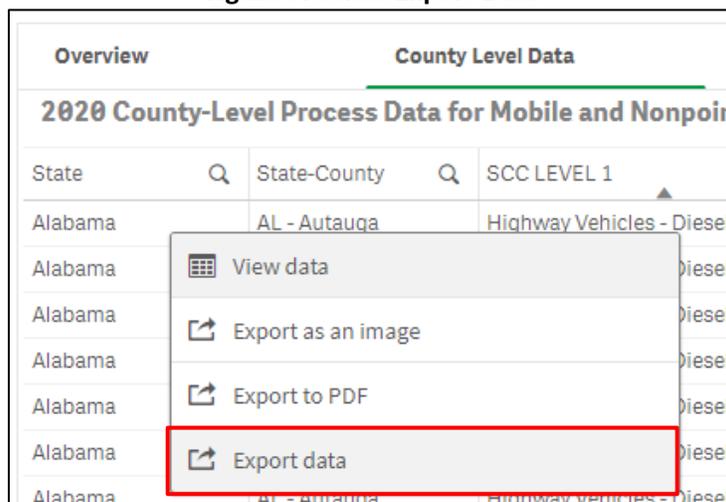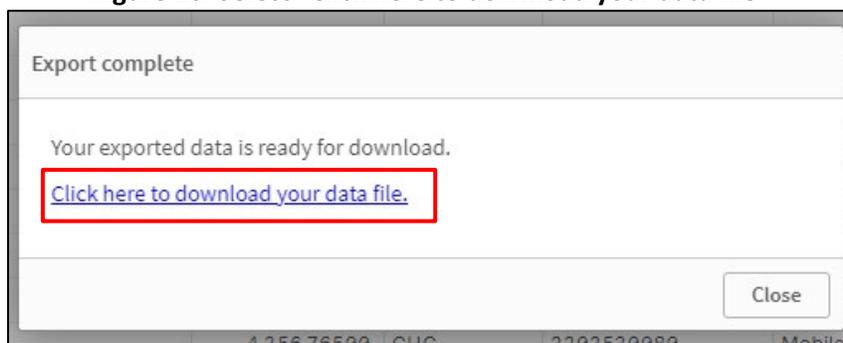
Figure 9. Select Export Data

Figure 10. Select "Click here to download your data file"

Open the file and sum up the emissions within each EIS sector for each pollutant. The Additional Emission Sources sheet requires emissions to be in units of metric ton (MT) CO_2e, so NEI emissions values need to be converted from short tons to MT (see Table **1**), and then multiplied by the GWP of each GHG (see Table **2**).

Table 1. Unit Conversion Factor

Conversion	Conversion Factor
Short tons to MT	0.907185 MT/1 ton

Table 2. GWP Conversion Factors

GHG Conversion	GWP Conversion Factor[5]
CO_2 to CO_2e	1
CH_4 to CO_2e	28
N_2O to CO_2e	265

Step 6. Input your Data into the Local or Tribal Community Module

Navigate to the Additional Emission Sources sheet at the end of the Local or Tribal GHG Inventory Tool: Community Module. For the first question, "Would you like to select add any additional emission sources?" select "Yes." Then, enter your NEI transportation data (converted to MT CO_2e) directly into the Additional Emission Sources sheet (Figure 11). Input the emission totals for each EIS Sector in the columns for each pollutant as separate rows and use the Description column to label the rows accordingly. In the Sector column, select the applicable EIS Sector, and for each row, select Scope 1. The total will be summed automatically.

Once you've input your data, you can view your totals in the Summary-Emissions sheet of the Community Module.

Please note, if you enter transportation data into the Additional Emission Sources sheet, **do not** *input any transportation data into the Mobile-Entry sheet of the Community Module.*

---

[5] Following revised reporting requirements under the UNFCCC, CO_2 equivalent values are based on the IPCC Fifth Assessment Report (AR5) GWP values.

Figure 11. Additional Emission Sources sheet of the Community Module

Additional Emission Sources

Return to Table of Contents

☐ Check if you have completed this sheet.

Please use this sheet to enter any additional emission sources you would like to include in the inventory. One example is GHG emissions resulting from non-energy related industrial activities and product uses. The manufacture of concrete, steel, aluminum, ammonia, and other minerals and chemicals result in greenhouse gases as a byproduct. This is separate from energy consumption in industrial facilities, which should be reported under Stationary Units.

1) Would you like to add any additional emission sources?   Yes

2) Add up to a maximum of 10 emission sources below.

Description	Sector	Scope	CO_2	CH_4	N_2O	HFCs	PFCs	SF_6	Total
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0

MT CO_2e

Local GHG Inventory Tool: Community Module

Agriculture & Land Management | Urban Forestry | Waste Production | **Additional Emission Sources** | Summary-Emissi ...