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

Contents	i
Overview	2
Additional Emission Sources Data Entry Sheet	2
, Obtaining Input Data	2
Using the NEI Data Retrieval Tool	2

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 precalculated 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-level² 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 <u>Technical</u> <u>Source Document</u>. 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: <u>https://awsedap.epa.gov/public/single/?appid=20230c40-026d-494e-903f-3f112761a208&sheet=5d3fdda7-14bc-4284-a9bb-cfd856b9348d&opt=ctxmenu,currsel</u> (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

Q 8 2 0	No selections applied					Selections
Location			Pollutant			
La Select one or more			L☴ Pollutant Type-Po	ollutant		
To download data selection	n, right click on table and select Export date	1				
Overview	County Level Data	Facility Data				
Overview						
National Emissions Invento	ory Background					A
2020 NEI Data Retrieval To	The U.S. EPA's Nation the NEI are criteria ain estimates for greenho	al Emissions Inventory (NEI) pollutants (CAPs), precurso use gases (GHGs) for select	s a nationwide compilation s to CAPs, and hazardous ai sectors. Currently, the NEI is	of air pollutant emission estimates. Polluta r pollutants (HAPs). In addition, the NEI ho compiled on 3-year cycles, with the 2020	nts inclu uses emi NEI bein	ded in ission g the

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"

[Q				No selections applied		
Loc	ation					Pollutant
L,=	Select o	ne or m	ore			La Pollutant Type-Pollutant
lo di	ownload	d data se	election,	right click on table and select Export d	ata	
C	Overvie	v		County Level Data	Facility Data	
Ον	erview	1				

a 51 12 13	STATE_NAME Alabama	8					
Location							
L= Select one or more							
To download data selecti	on, riaht click on tab	e and select Expo	ort a		[]0	Î ×	
Overview	Count	y Level Data	Q	Searc	ch in listl	хох	
Overview			Alab	ama			~
N			Alas	ka			
National Emissions Inver	TI	DellS EDA's N	Ame	rican S	Samoa		
2020 NEI Data Retrieval	Tool	10 0.3. LFAST	Val.				
	()	IAPs). In addit	tion	ona			
	(F CC	IAPs). In addit Maborates wit	tion Arka	insas			
	(F cc Pi	IAPs). In addit ollaborates wit ogram (GHGF	tion ^{Anz} this Arka RP) _{Calif}	insas iornia			
	(F cc Pi re	IAPs). In addit ollaborates wit rogram (GHGF lease can be fo	tion Anz this Arka RP) _{Calif} our _{Colo}	insas iornia irado			

Figure 3. Select State

Figure 4. Select County or Tribe

Location	P
L≔ Select one or more	
L∓ Select one ··· [S ×	table and select Export data
Q Search in listbox	unty Level Data Facility
TR - Acoma Pueblo 🗸	
TR - Agua Caliente Indian Reservat	1
TR - Alabama-Coushatta Reservati	The U.S. EPA's National Emissior
TR - All Indian Pueblo Council/PO	air pollutant emission estimates.
TR - Allegany Reservation	 pollutants (CAPs), precursors to addition, the NEI houses emission
TR - Alturas Indian Rancheria	select sectors. Currently, the NE
TR - Aroostook Band of Micmac Tr	being the most recent release. S tribal (SLT) air agencies to estim

٦

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"
-----------	-------	------------	-----------------

[Q	83		0	STATE_NAME Alabama	⊗	STATE_COUNTY AL - Autauga	8			
Loc	ation								Pollutant	
L⊒≡	Select o	ne or m	ore						L∓ Pollutant Type-Pollutant	
To d	ownload	l data se	election	, right click on table	and se	lect Export data				
(Overviev	v		County	Level D	ata	Facility	Data		
Ον	erview									

Figure 6. Select GHG

Pollutant				
L, = Pollutant Type-Pollutant				
		[]	×	 Image: A start of the start of
	Q Searc	ch in list	box	
	CAP			-
	CAP/HAP			
	GHG			~
rently, the NEI is compiled on 3-year cycles, v	HAP			ec
l data coming from other programs, such as				ar
uently selected using a hierarchical approac				r. J

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

[Q	£3	\mathbb{R}	E	3	STATE_NAME Alabama	⊗	STATE_COUNTY AL - Autauga	8	POLLUTAN GHG	IT_TYPE 🛞					
Loc	ation												P	ollutant	
L⊒ :	Select o	one or m	ore										Ľ	🛱 Pollutant	Type-Pollutant
To do	wnload	data se	elect	ion, r	ight click on ta	ble and se	elect Export data?								
C	verviev	N			Cour	ity Level D)ata	Facili	ty Data						
26)20 Ca	ounty-	Lev	el Pr	rocess Data	for Mol	vile and Nonpoi	nt Em	issions						
Sta	te	(Q,	State	e-County (م POLI	.UTANT		Q	Emissions (To	ons) P	OLL O	SCC Code	Q	EIS Sector
Ala	bama			AL-A	Autauga	Carb	on Dioxide			2.819	927 G	GHG	22036100	80	Mobile - On-Road non-Diesel H

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 Dat	а
Overview		County Level Data	Facility Data
2020 County-Le	vel Process	Data for Mobile and No	onpoint Emissions
State Q	EIS Sector		Q State-County
Alabama	Mobile - On-	Road non-Diesel Heavy Duty V	/4
Alabama	Mobile - On-	Road non-Diesel Heavy Duty V	/e ··· [3 ×
Alabama	Mobile - On-	Road non-Diesel Heavy Duty V	C Search in listbox
Alabama	Mobile - On-	Road non-Diesel Heavy Duty V	
Alabama	Mobile - On-	Road non-Diesel Heavy Duty V	Mobile - Commercial Marine Vessels 🖌 🗌
Alabama	Mobile - On-	Road Diesel Heavy Duty Vehic	Mobile - Locomotives 🗸 🗸
Alabama	Mobile - On-	Road Diesel Heavy Duty Vehic	Mobile - On-Road Diesel Heavy Du 🗸
Alabama	Mobile - On-	Road Diesel Heavy Duty Vehic	Mobile - On-Road Diesel Light Dut 🗸
Alabama	Mobile - On-	Road Diesel Heavy Duty Vehic	Mobile - On-Road non-Diesel Heav 🗸
Alabama	Mobile - On-	Road Diesel Heavy Duty Vehic	Mobile - On-Road non-Diesel Light 🗸
Alabama	Mobile - On-	Road Diesel Heavy Duty Vehic	Fires - Prescribed Fires
Alabama	Mobile - On-	Road Diesel Heavy Duty Vehic	Fires Wildfires
Alabama	Mobile - On-	Road Diesel Heavy Duty Vehic	rites - wildnies

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.

			•				
Overview		с	ounty	Level Data			
2020 Cou	nty-Le	vel Process Da	ata fo	r Mobile and I	Vonpoin		
State	Q	State-County	Q	SCC LEVEL 1			
Alabama		AL - Autauga		Highway Vehicle	es - Diesel		
Alabama	💷 V	/iew data			Diesel		
Alabama	E T	xport as an imag	ρ		Diesel		
Alabama		spore do dri indg	-		Diesel		
Alabama	E E	Export to PDF					
Alabama	C E	xport data			Diesel		
Alahama		AL - AU3103		HILLIWAY VEHICL	es - Diesel		

Figure 9. Select Export Data

	,,	
Export complete		
Your exported data is ready for download.		
Click here to download your data file.		
		Close
4 256 76500 000	2202520080	Mobilo

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) CO₂e, 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 Factor⁵
CO ₂ to CO ₂ e	1
CH₄ to CO₂e	28
N ₂ O to CO ₂ e	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 CO₂e) 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, CO₂ equivalent values are based on the IPCC Fifth Assessment Report (AR5) GWP values.

Figure 11. Additional Emission Sources sheet of the Community Module

Ado	ditional Emis	ssion Sourc	es						Return to Table of Contents	Chee	ck 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 factilities, which should be reported under Stationary Units.									energy related industrial roduct. This is separate from	
_	1) Would you like to add any additional emission sources? 2) Add up to a maximum of 10 emission sources below.										
				MT CO ₂ e							
	Description	Sector	Scope	CO2	CH₄	N ₂ O	HFCs	PFCs	SF ₆ Tot	al	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
L										. 3	1
	Local GHG Inventory Tool: Community Module										
•	Agriculture & Land Managem	ent Urban Forestry V	Vaste Product	ion Additio	onal Emissi	on Source	Summa	ary-Emissi	(+) : 🚺		