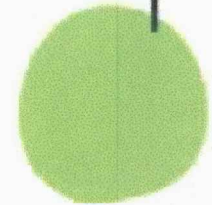
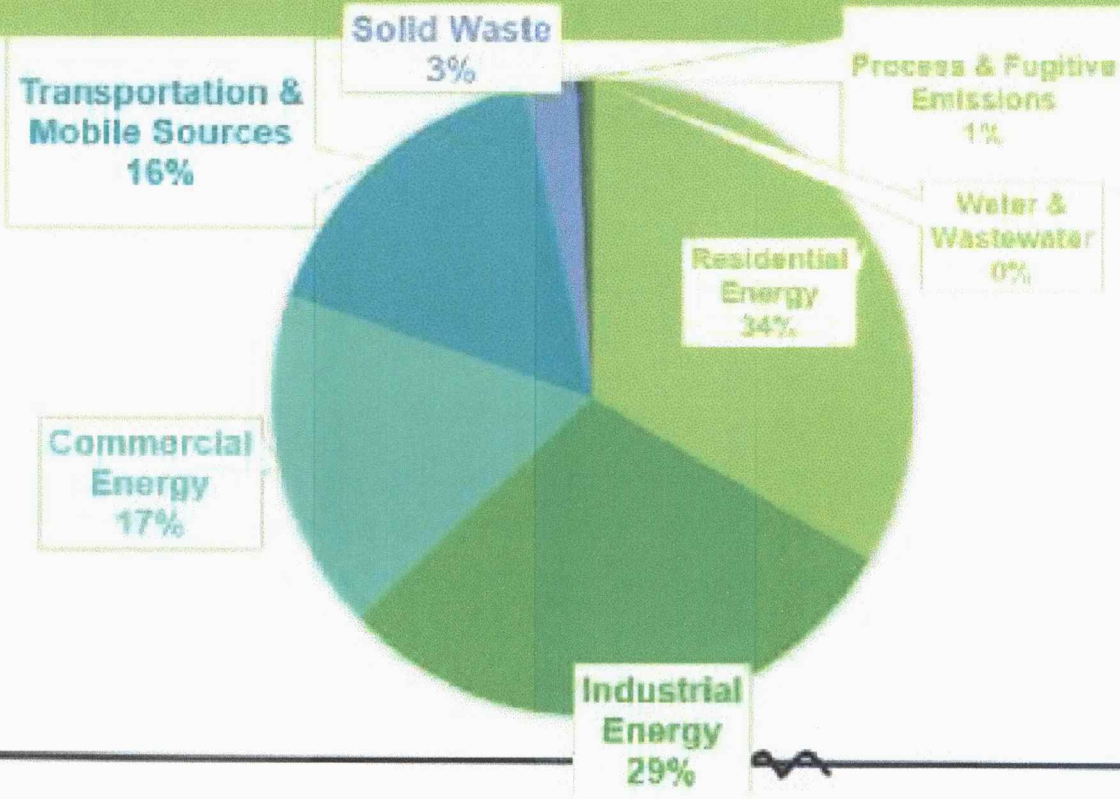


# CO2E IN TERRE HAUTE IN 2019





CHIA STEBK

1984 11 15

6/17/84

FILED

APR 14 2022

CITY CLERK



# Terre Haute Greenhouse Gas Inventory

- A GHG inventory can help governments make informed changes that will reduce their carbon footprint.

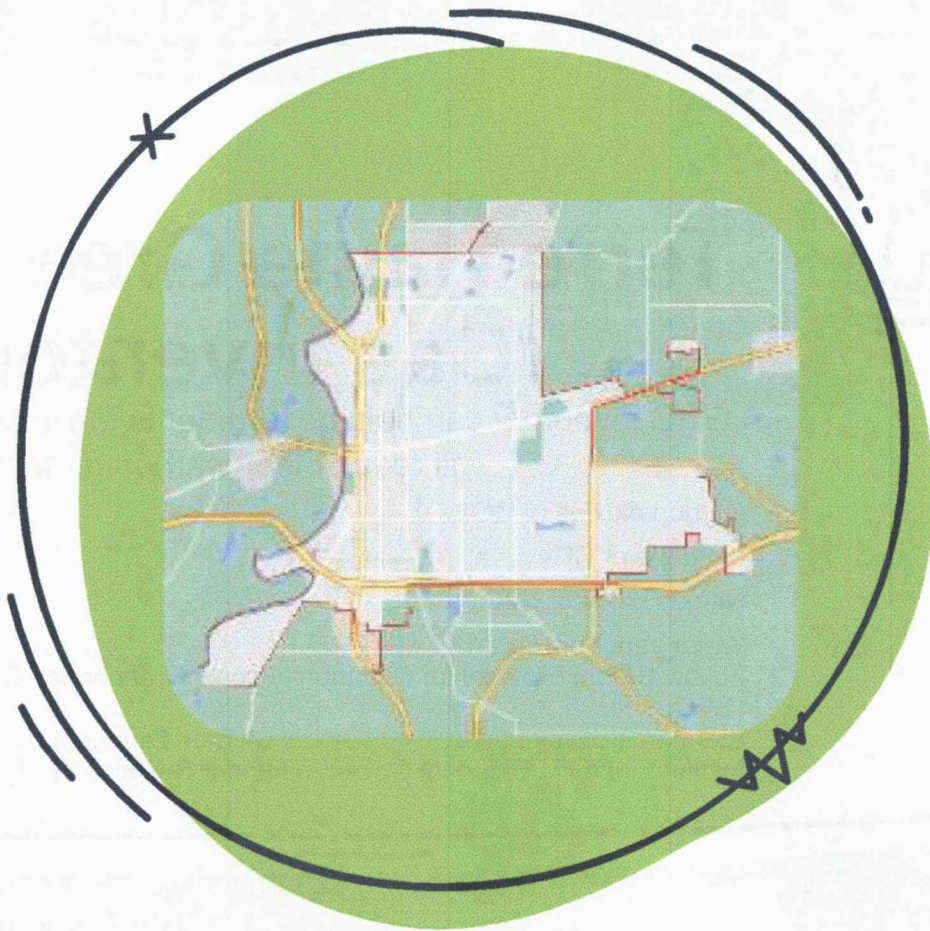
- X Carbon dioxide or CO<sub>2</sub>
- X Methane or CH<sub>4</sub>
- X Nitrous oxide or N<sub>2</sub>O
- X Water vapor or H<sub>2</sub>O
- X Follow Global Protocol for Community-scale Greenhouse Gas Emission Inventories (GPC).
- X Standards developed by C40 (Global Climate Leadership group), the World Resources Institute, and ICLEI (Local Governments for Sustainability).



# 1. Define study area

## Community-wide inventory

For this inventory, we stuck to activities happening within the jurisdiction of Terre Haute in the year 2019. We chose 2019 because it was the last “normal” year.



## 2. Identify Contacts

### Residential Energy

Duke Energy and Centerpoint supply electricity & natural gas to Terre Haute.

### Commercial Energy

Duke Energy and Centerpoint supply electricity & natural gas to Terre Haute.

### Industrial Energy

Duke Energy and Centerpoint supply electricity & natural gas to Terre Haute.

### Transportation

Terre Haute Transportation for Public Transit data. EIE Google estimation for VMT.

### Water & Wastewater

Terre Haute Wastewater Utility and American Water.

### Solid Waste

Special calculator provided by ICLEI due to lack of communication with Republic.

# 4. Enter data into ClearPath

## Inputs

	Value	Units
<b>Calculation Inputs</b>		
Use this section to enter the quantity of energy used and related data.		
Were emissions calculated externally from ClearPath? <a href="#">?</a>	<input type="text"/>	
Electricity Used <a href="#">?</a>	<input type="text"/>	kWh <input type="text"/>
Number of Households (optional) <a href="#">?</a>	<input type="text"/>	Households <input type="text"/>
Population (optional) <a href="#">?</a>	<input type="text"/>	People <input type="text"/>
Building Area (optional) <a href="#">?</a>	<input type="text"/>	Square feet <input type="text"/>



Global Warming Potential - IPCC 5th Assessment

COMMERCIAL ENERGY

Inventory Record	Calculator	Factor Profiles	CO2 (MT)	CH4 (MT)	N2O (MT)	CO2e (MT)
Non residential electricity	Emissions from Grid Electricity	2018 Google EIE	398009.590626049	0	0	398009.590626049
Commercial Energy	Emissions from Grid Electricity	2019 Duke Energy	218433.500807395	24.6221337464053	3.5174476780579	220055.04418698
Non residential natural gas	Emissions from Stationary Fuel Combustion		82785.93169	7.8070475	0.15614095	83045.90637175

Commercial Energy Residential Energy Transportation & Mobile Sources Water & Wastewater Industrial En < >

Add a sheet.

A	B	C	D	E	F	G
Inventory Record	Calculator	Factor Profiles	CO2 (MT)	CH4 (MT)	N2O (MT)	CO2e (MT)
Residential electricity	Emissions from Grid Electricity	2018 Google EIE	206155.649544139	0	0	206155.649544139
Residential Electricity	Emissions from Grid Electricity	2019 Duke Energy	417638.211332112	47.0767710036197	6.7252530005171	420738.55296535
Residential natural gas	Emissions from Stationary Fuel Combustion		163309.637832	15.400758	0.30801516	163822.4830734

Commercial Energy Residential Energy Transportation & Mobile Sources Water & Wastewater Industrial En <

Add a sheet.

Inventory Record	Calculator	Factor Profiles	CO2 (MT)	CH4 (MT)	N2O (MT)	CO2e (MT)
Buses - Gasoline	Emissions from F 2019 Duke Energy		86.28984	0.0011574017	0.0008875412	86.5574456656
Buses - Diesel	Emissions from F 2019 Duke Energy		548.7875	0.000420068	0.000630102	548.966238934
Shuttles - Gasoline	Emissions from F 2019 Duke Energy		0.62338	0.000028548	0.000012948	0.627610564
Other Transportation - Gasoline	Emissions from F 2019 Duke Energy		2.05452	0.000085644	0.000038844	2.067211692
Paratransit buses - Gasoline	Emissions from F 2019 Duke Energy		471.925	0.0025068963	0.0019223868	472.5046255984
VMT - Gasoline	On Road Transportation 2019 Duke Energy		203842.341695876	9.59190095877867	5.21739763085552	205493.525294898
VMT - Diesel	On Road Transportation 2019 Duke Energy		77537.2506519079	0.242464725775092	0.231506295583838	77605.3888325593







Inventory Record	Calculator	Factor Profiles	CO2 (MT)	CH4 (MT)	N2O (MT)	CO2e (MT)
Wastewater Treatment - Emissions from Wa	2019 Duke Energy		14.9732428717874	0.00168780515462982	0.000241115022089975	15.0843968969709
Wastewater Treatment - Emissions from Wa	2019 Duke Energy		3701.93455148	0.34910737	0.0069821474	3713.559826901
Potable Water - Natural Emissions from the	2019 Duke Energy		58.968859906	0.0055610015	0.00011122003	59.15404125595
Potable Water - Electricity Emissions from the	2019 Duke Energy		3979.53504821693	0.448578829911731	0.0640826899873901	4009.07716830111

Inventory Record	Calculator	CO2 (MT)	CH4 (MT)	N2O (MT)	CO2e (MT)
Industrial Energy	Emissions from Grid Electricity	509865.931602725	57.472810325589	8.21040147508414	513650.926682739

Inventory Record	Calculator	Factor Profiles	CO2 (MT)	CH4 (MT)	N2O (MT)	CO2e (MT)
Solid Waste - Residential Waste Generation	2019 Vigo County			1153.94239361987		32310.3870213565
Solid Waste - Non-Residential Waste Generation	2019 Vigo County Sol			469.367764752645		13142.2974130741

Notes  
 calculator used to acquire the residential data: Residential Calculation Population x lbs. waste/person/day (2019) 4.90 Tons waste/person/d  
 This calculator was used to acquire the residential solid waste data: Non-Residential Calculation Jobs x lbs. waste/person/day (2019) 4.9

Inventory Record	Calculator	CO2 (MT)	CH4 (MT)	N2O (MT)	CO2e (MT)
Fugitive Emissions for Natural Gas	Fugitive Emissions from Natural Gas	3.07808273892498	287.492927815593		8052.88006157553



