

2019 TOMPKINS COUNTY  
GREENHOUSE GAS EMISSIONS AND  
ENERGY USE INVENTORIES:  
COMMUNITY &  
COUNTY GOVERNMENT

Tompkins County Department of Planning and Sustainability  
February 2021

## Why do we do these inventories?

- To account for greenhouse gases emitted and amount of energy used and track progress from base year 2008
- Use results to help inform actions to reduce emissions
- 2019 Energy Strategy target is net-zero emissions

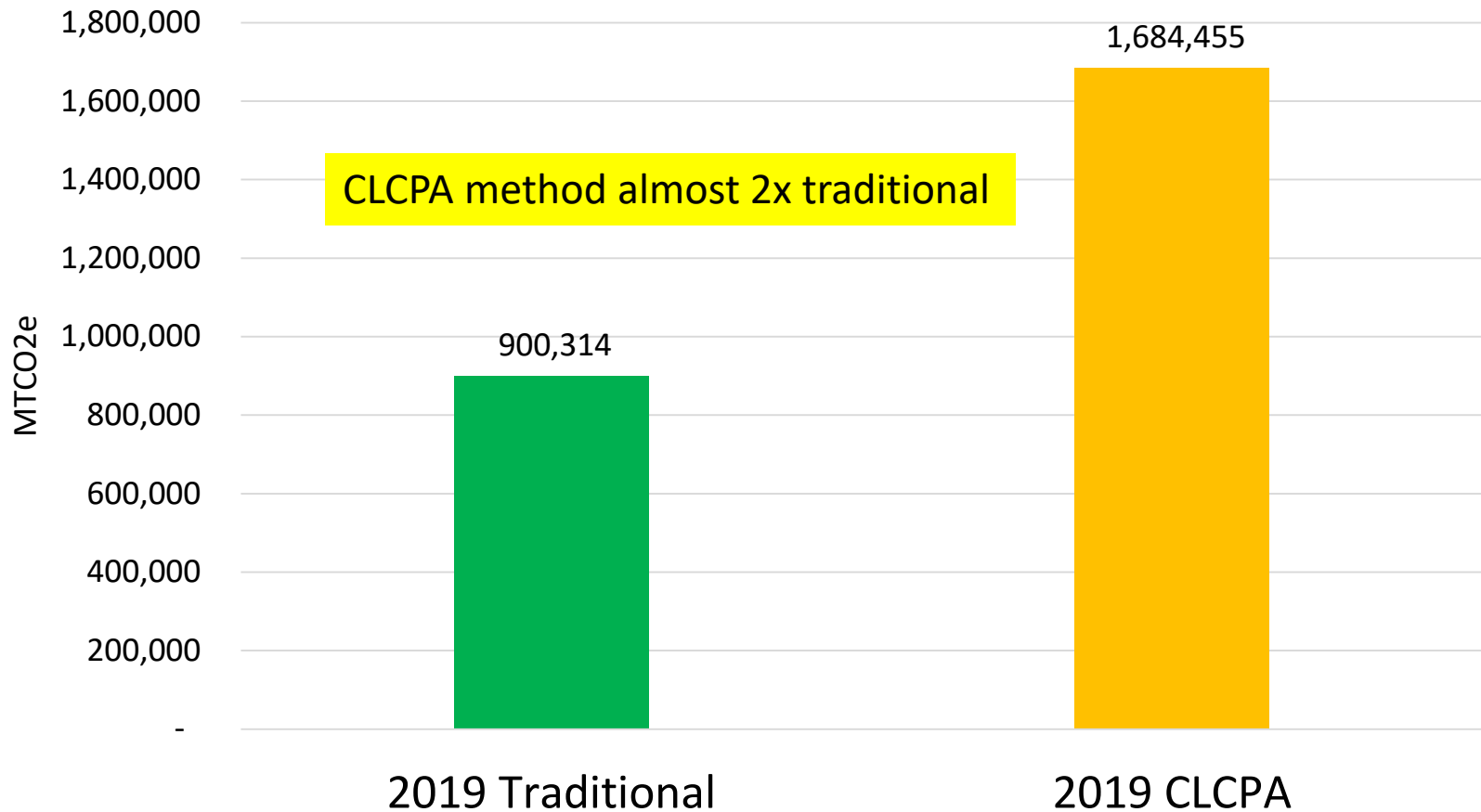
These inventories include two distinct narratives:

- Narrative 1 compares 2019 GHG emissions using two different methods
- Narrative 2 explores the details of the 2019 GHG emissions, calculated with the traditional method, and compares to previous inventories

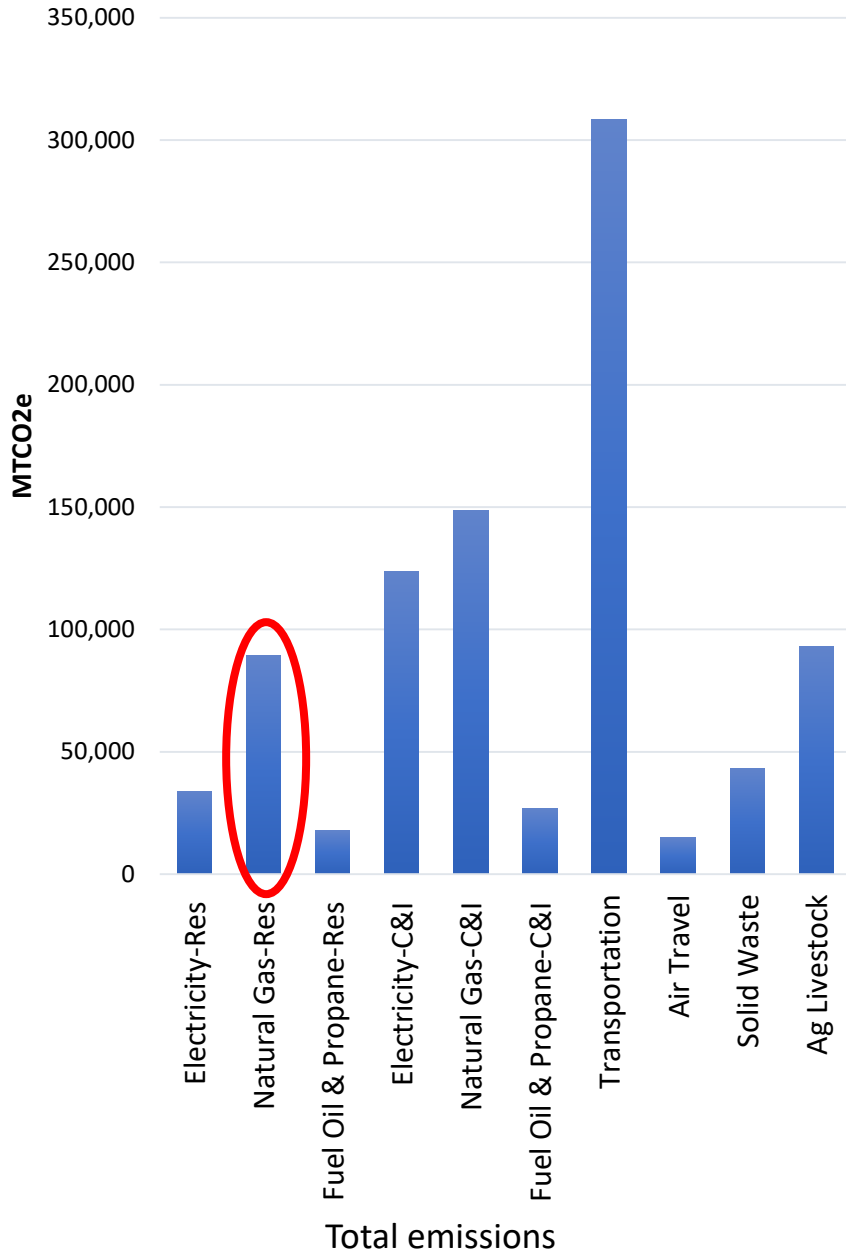
# Tompkins County Community

Narrative 1:  
Comparing two different methods  
to calculate 2019 emissions

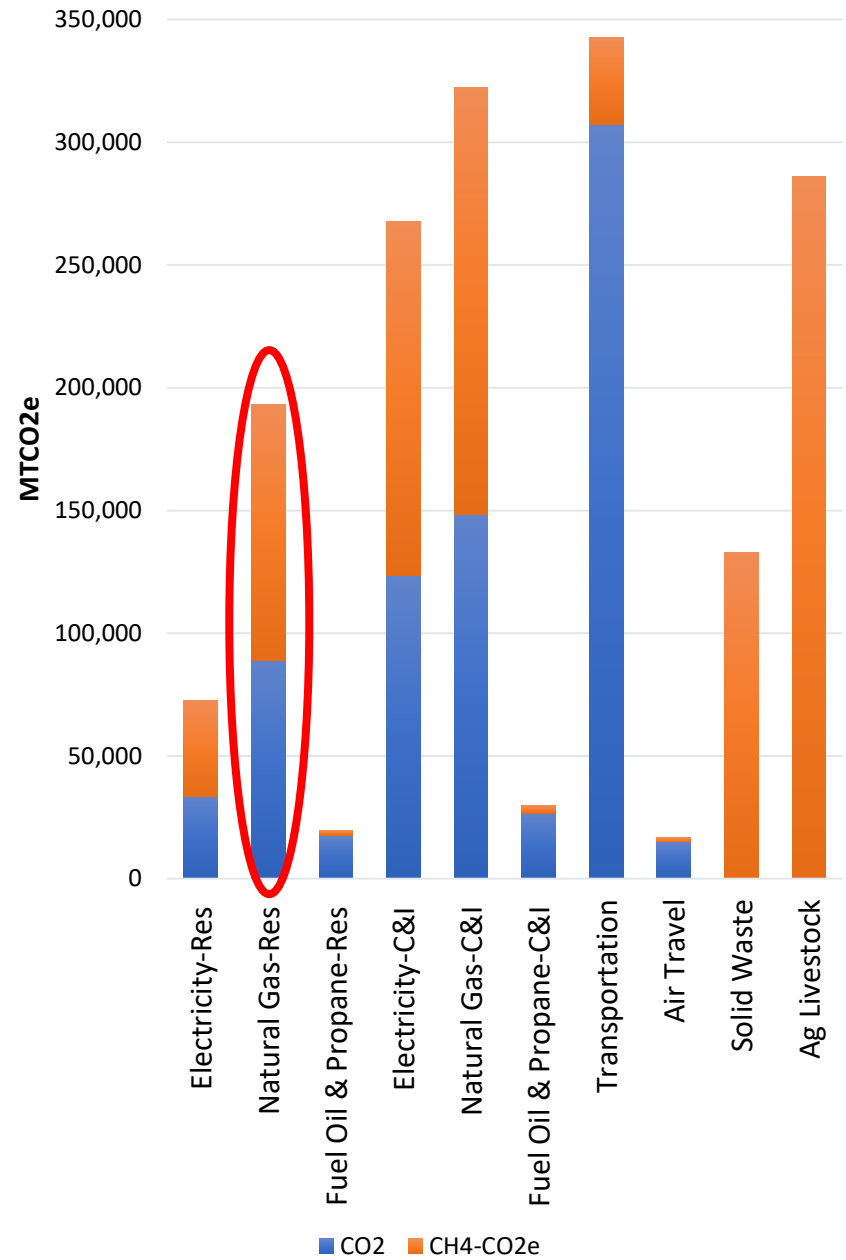
# 2019 Community GHG Emissions Using Traditional and CLCPA Methods



# 2019 Traditional Method



# 2019 CLCPA Method

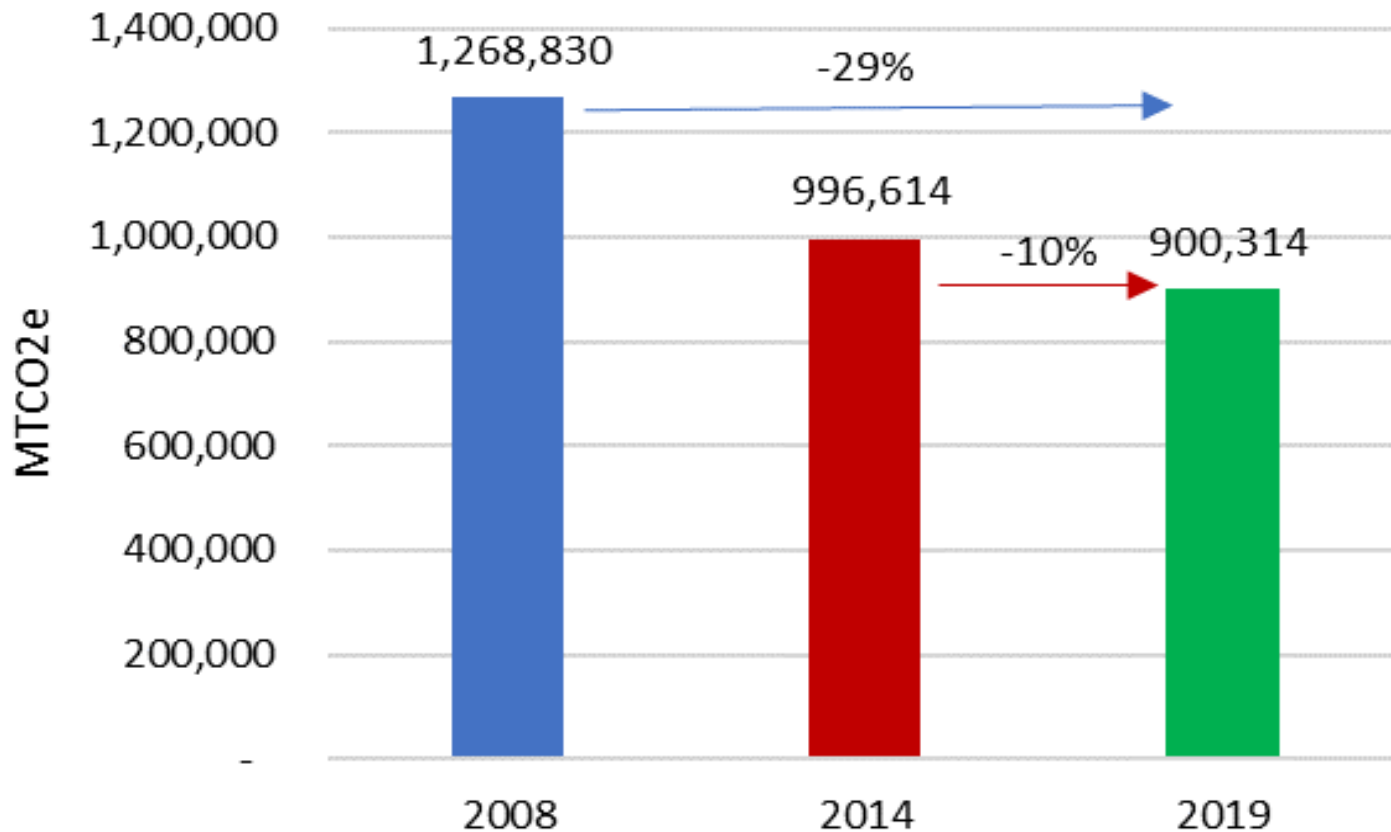


# Tompkins County Community

Narrative 2:  
2019 emissions using the  
traditional method and comparing  
with past inventories

# Continued Progress in Community

Community GHG Emissions 2008-2019:  
Traditional Methods



# Greening Grid

## Growth in renewables

|                         | <b>2008<br/>(MWh)</b> | <b>2014<br/>(MWh)</b> | <b>2019<br/>(MWh)</b> | <b>% Change<br/>(2008-2019)</b> |
|-------------------------|-----------------------|-----------------------|-----------------------|---------------------------------|
| <b>Solar</b>            | 474                   | 4,043                 | 32,013                | 6650%                           |
| <b>Hydro</b>            | 3,100                 | 4,400                 | 7,300                 | 135%                            |
| <b>Total Generation</b> | <b>3,574</b>          | <b>8,443</b>          | <b>39,314</b>         | <b>1000%</b>                    |

Steady decrease in fossil fuel use in powering electric grid

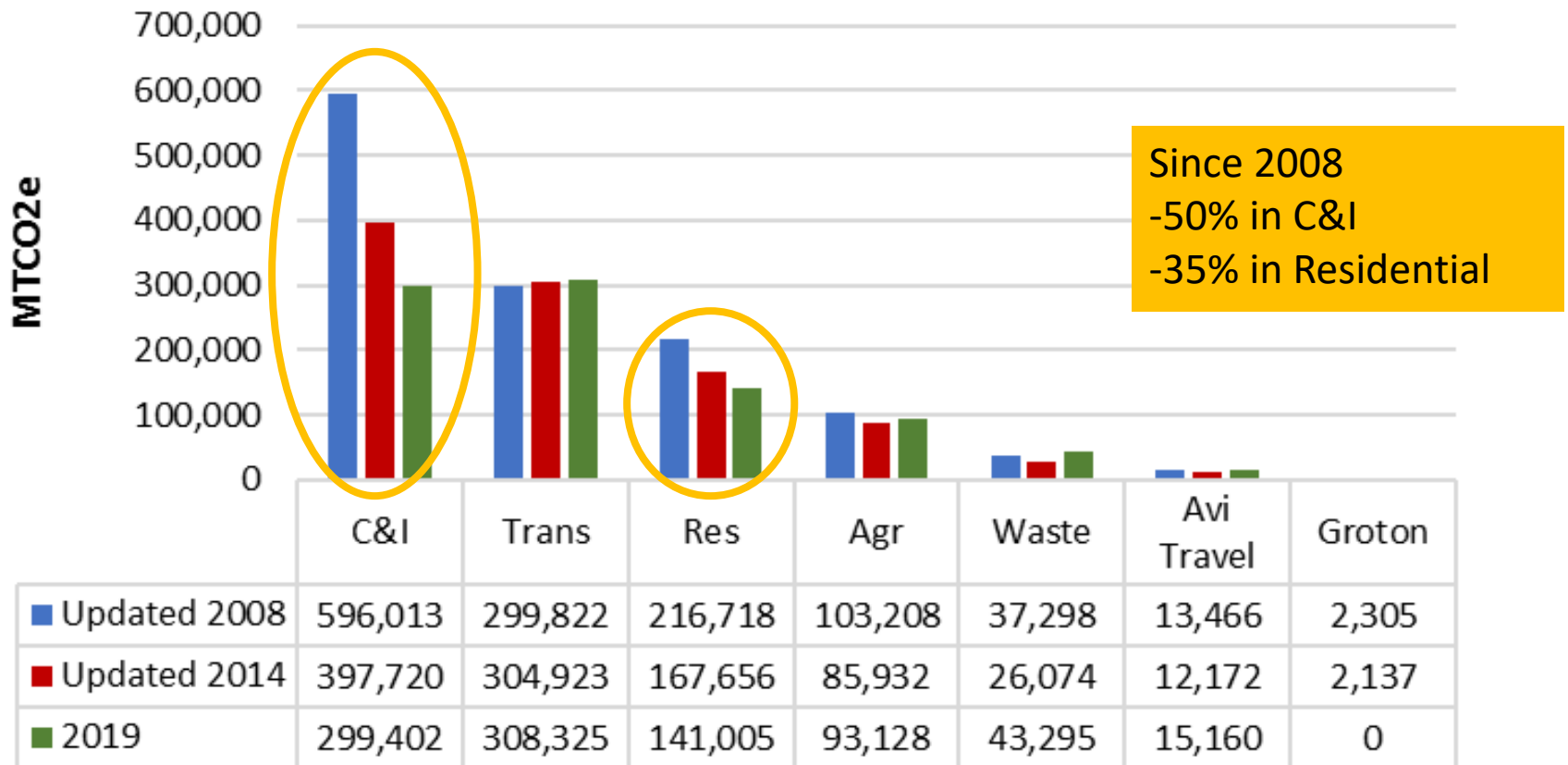
|              | 2008 (%) | 2014 (%) | 2019 (%) |
|--------------|----------|----------|----------|
| Fossil Fuels | 45       | 37       | 27       |
| Non-carbon   | 54       | 62       | 71       |
| Biomass      | 1        | 2        | 2        |



# 2008-2019 Community Emissions

Traditional Accounting Methods

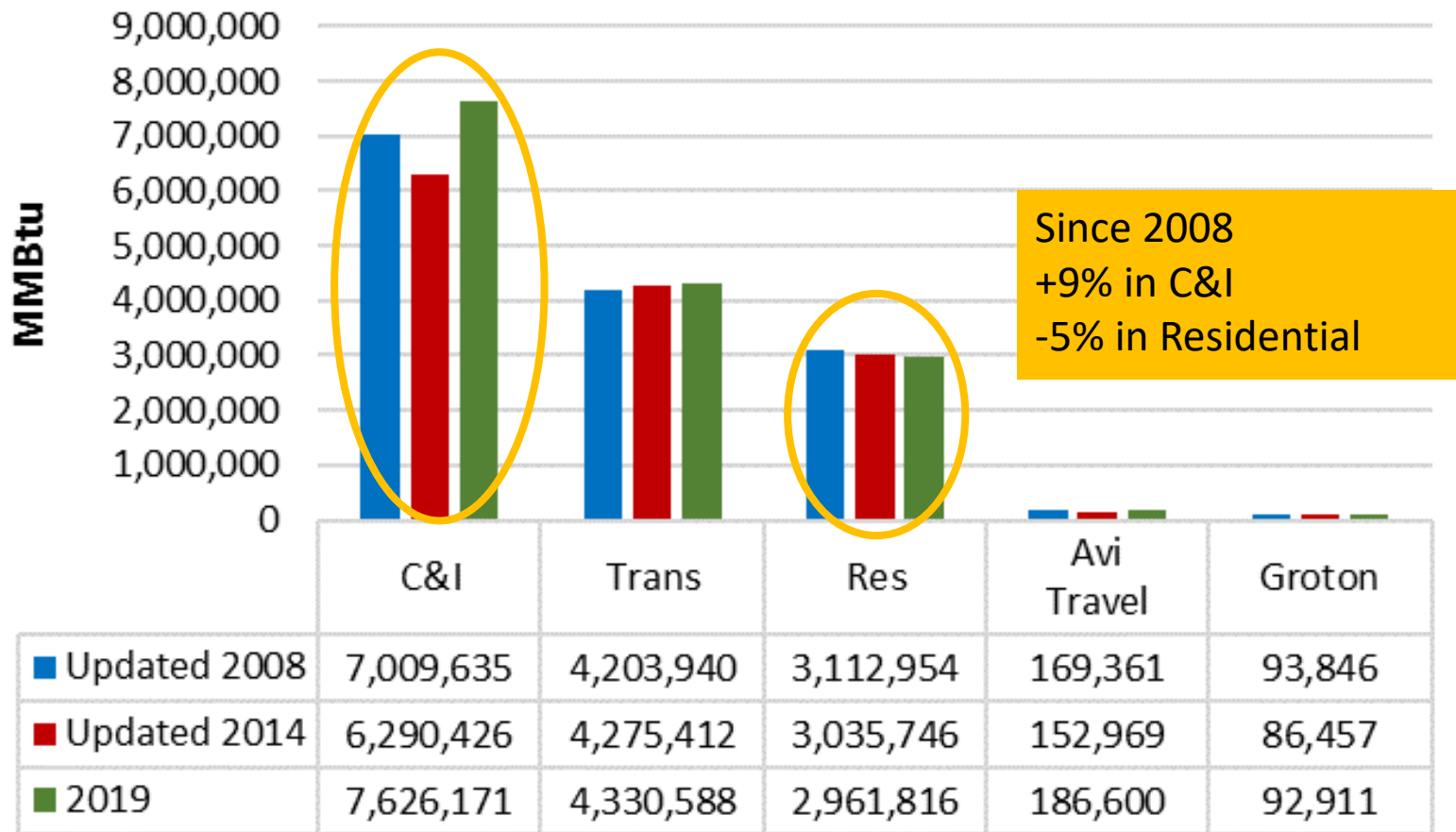
## Comparison of GHG Emissions



# 2008-2019 Community Energy Use

Traditional Accounting Methods

## Comparison of Energy Use



# Implications for Future Actions

## Climate crisis: CO2 hits new record despite Covid-19 lockdowns

Drop in emissions this year is a 'tiny blip' in buildup of greenhouse gases, UN agency says



▲ Smoke from a coal-fueled power station in China. Photograph: Greg Baker/AFP/Getty Images

Climate-heating gases have reached record levels in the atmosphere despite the global lockdowns caused by the coronavirus pandemic, the UN's [World Meteorological Organization](#) has said.

There is estimated to have been a cut in emissions of between 4.2% and 7.5% in 2020 [due to the shutdown](#) of travel and other activities. But the WMO said this was a "tiny blip" in the continuous buildup of greenhouse gases in the air caused by human activities, and less than the natural variation seen year to year.

### Atmospheric CO2 continues to rise rapidly in 2020

CO2 levels (ppm)

470

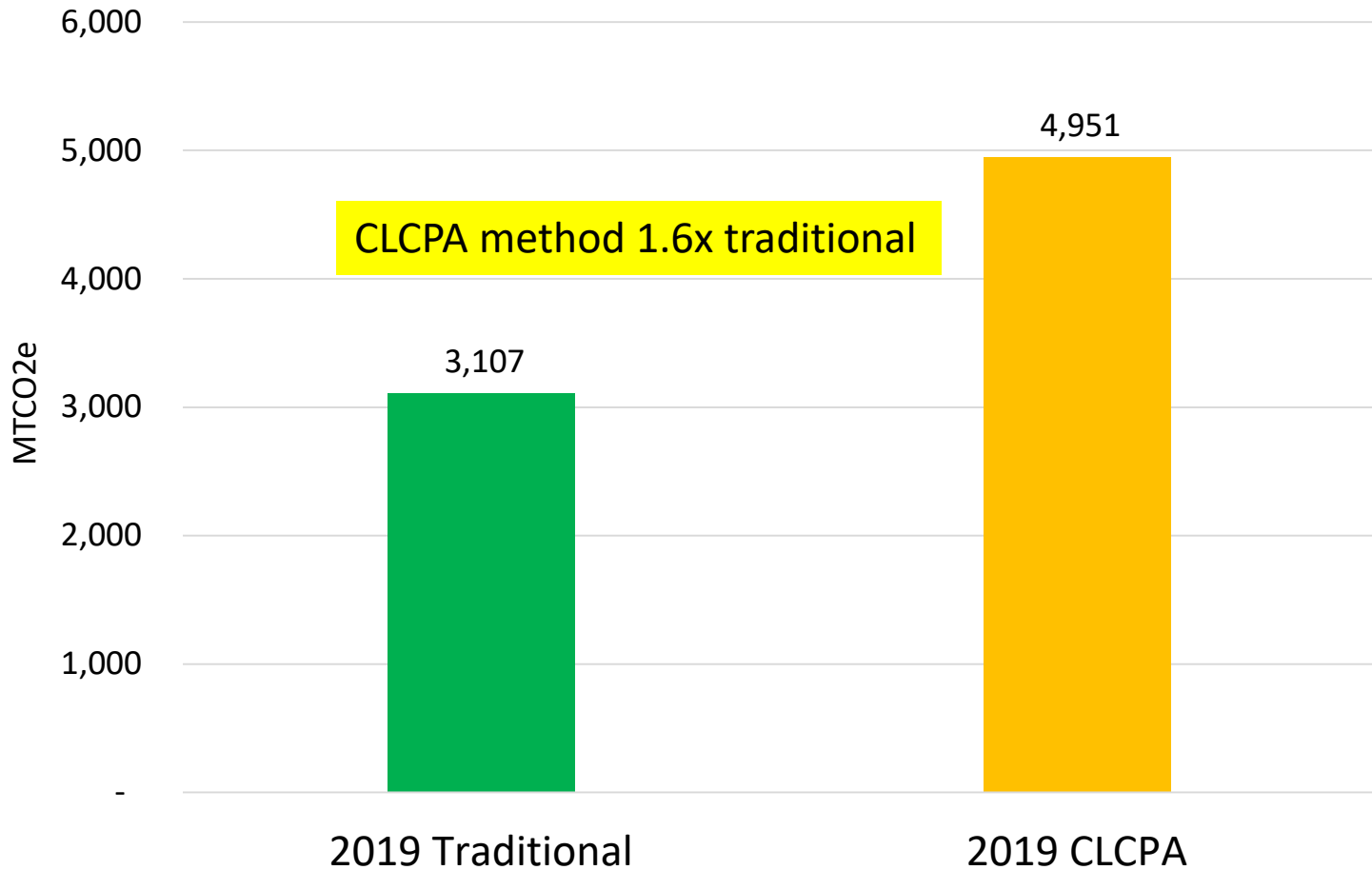
## Three Critical Areas

1. Natural Gas – energy efficiency, electrification
2. Transportation – reduce miles driven and use vehicles with lower emissions
3. Renewables – keep growing

# Tompkins County Government

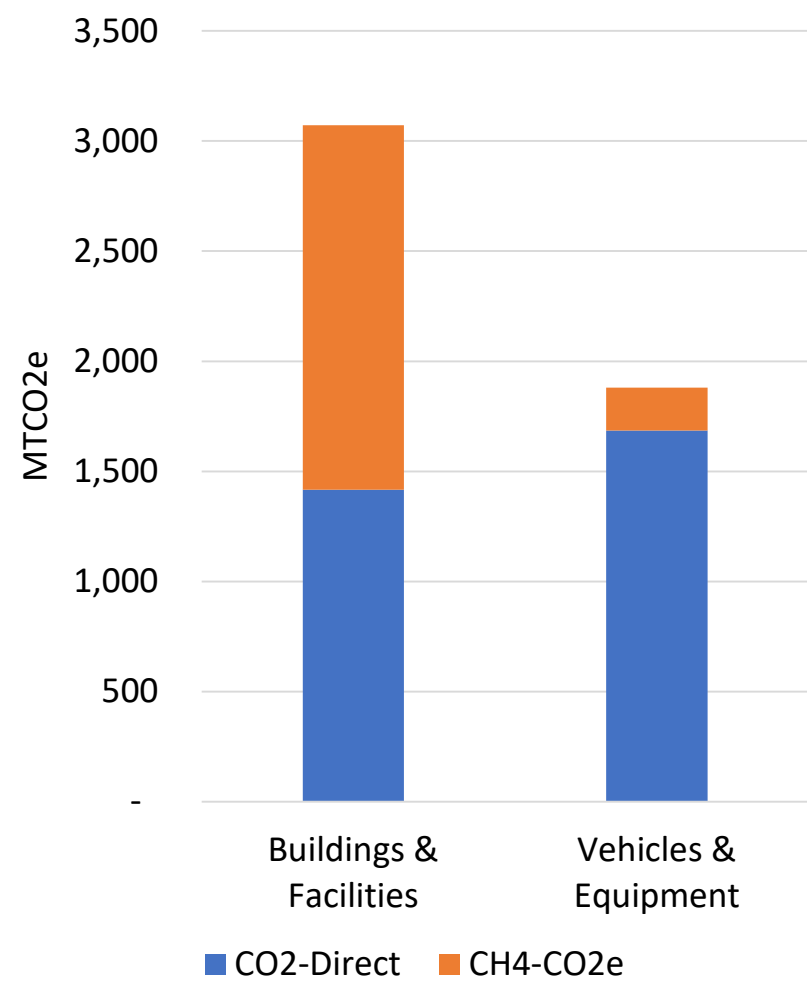
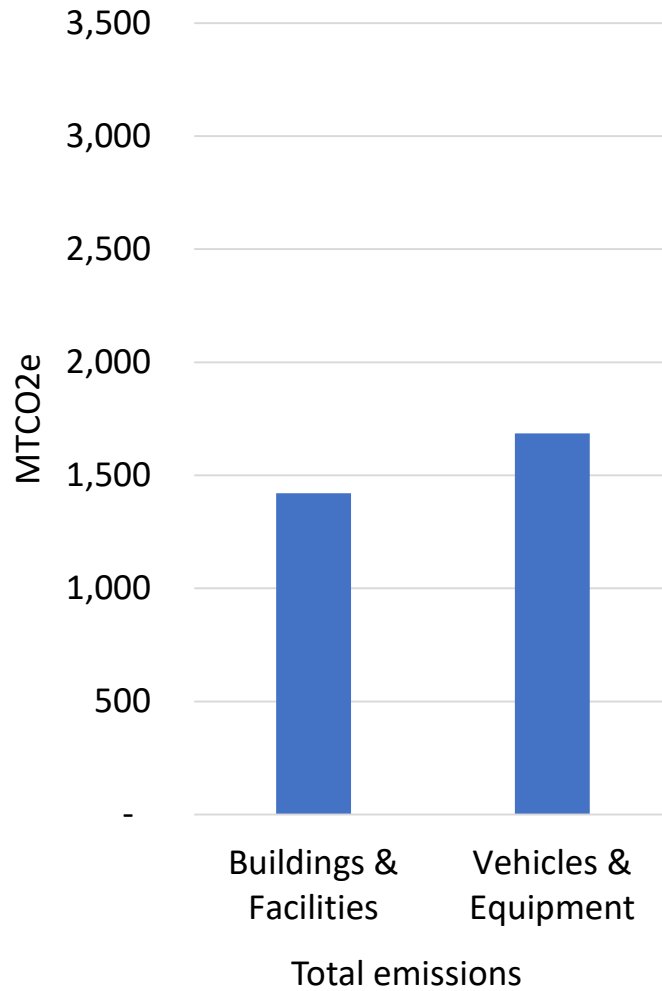
Narrative 1:  
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# 2019 Government GHG Emissions Using Traditional and CLCPA Methods



## 2019 Traditional Method

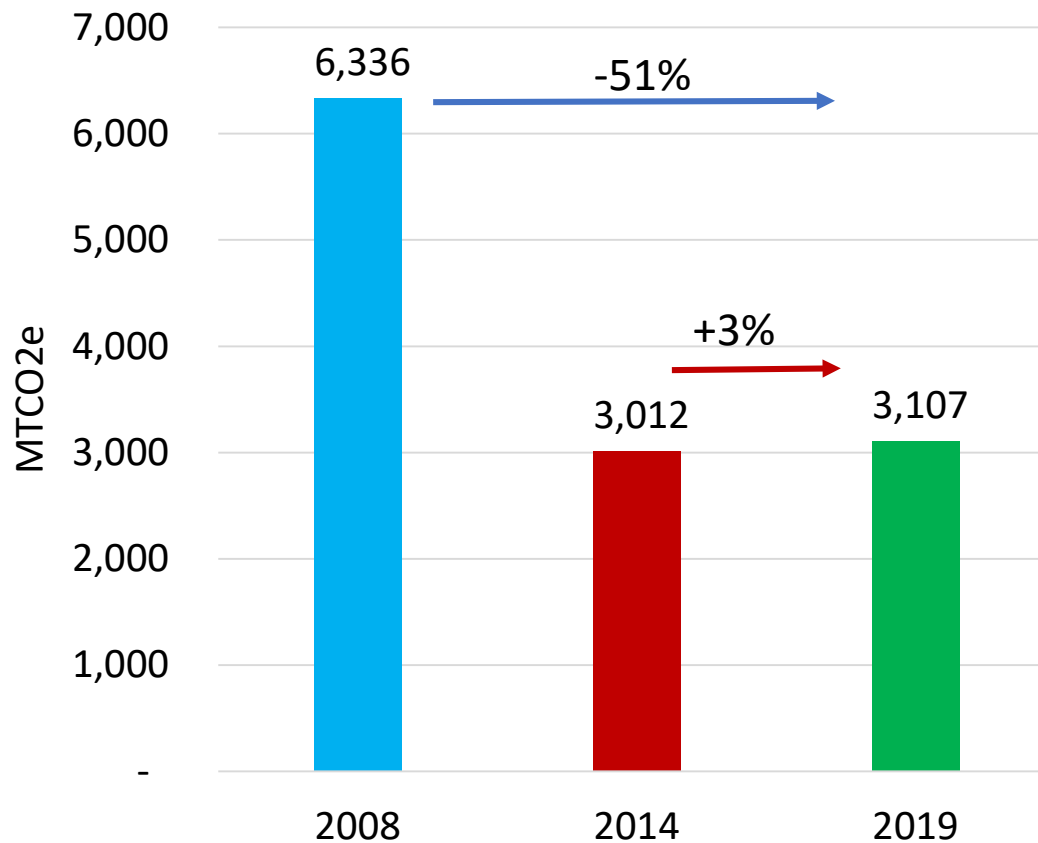
## 2019 CLCPA Method



# Tompkins County Government

Narrative 2:  
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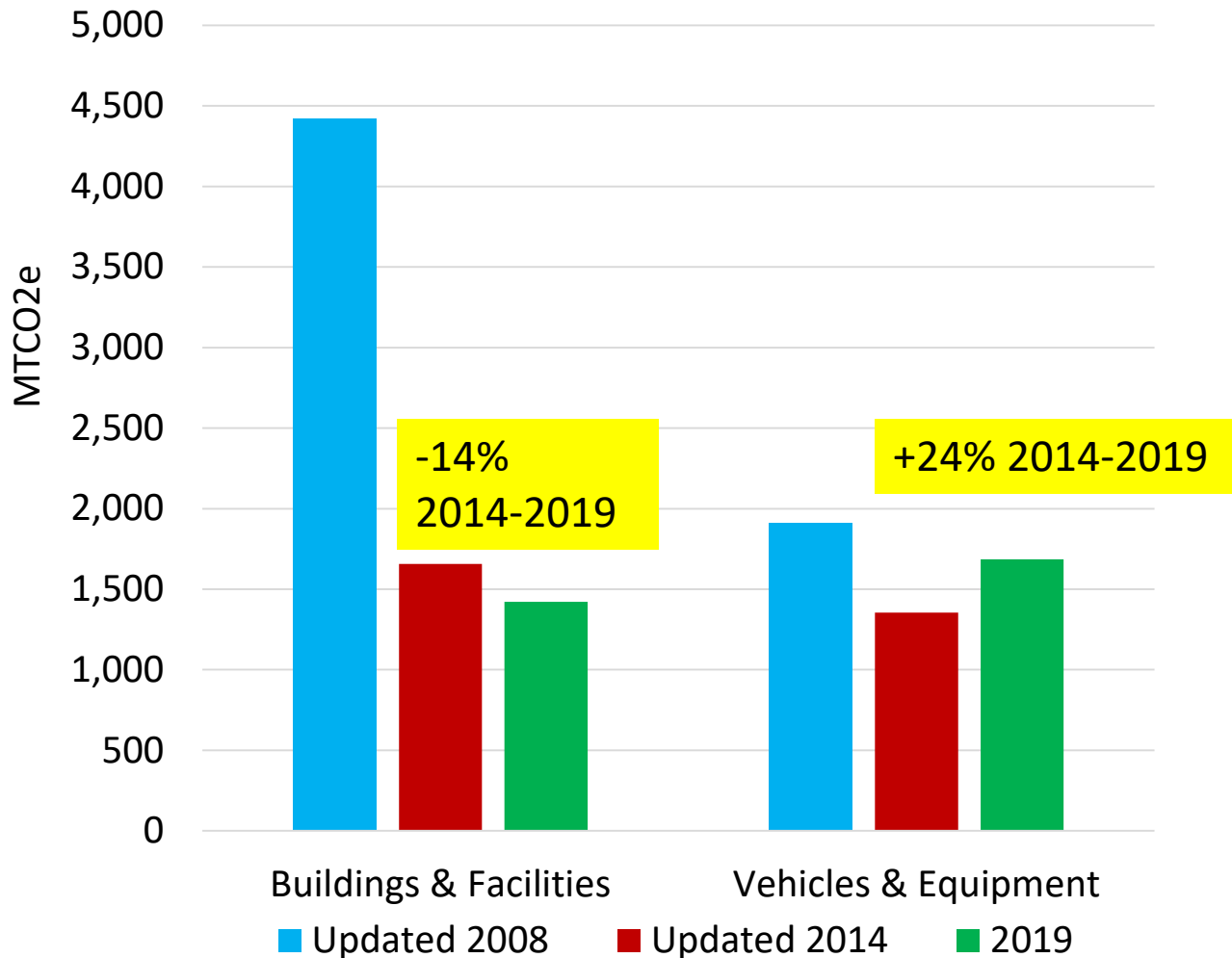
# 2019 Government GHG Emissions Using Traditional Method





# 2008-2019 Government Emissions

## Traditional Accounting Methods



# Opportunities for Future Actions

Green fleet framework with six recommendations

Green facilities

- FlexTech Studies, Real-Time Energy Management, On-site Energy Manager

Full Inventory Reports available on DPS website  
[www2.tompkinscountyny.gov/planning/energy-greenhouse-gas](http://www2.tompkinscountyny.gov/planning/energy-greenhouse-gas)

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