



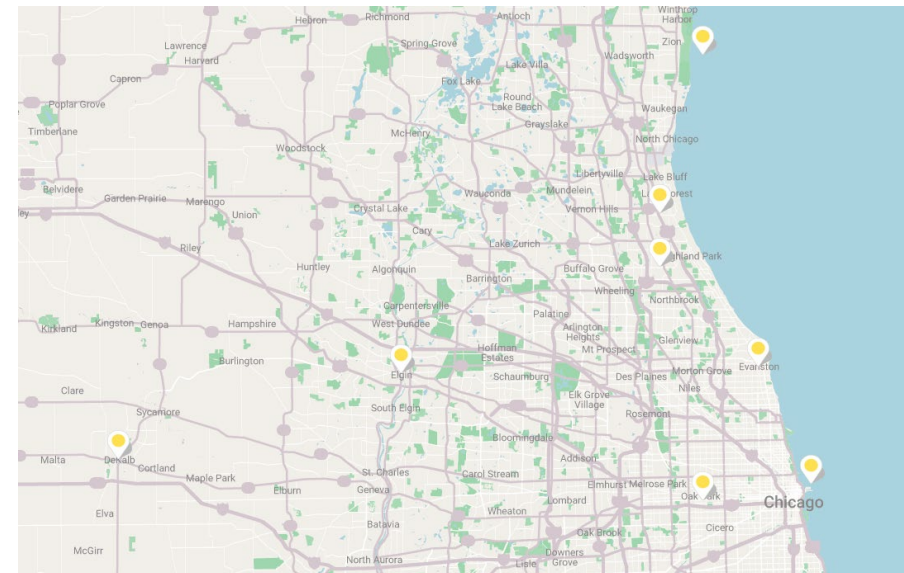
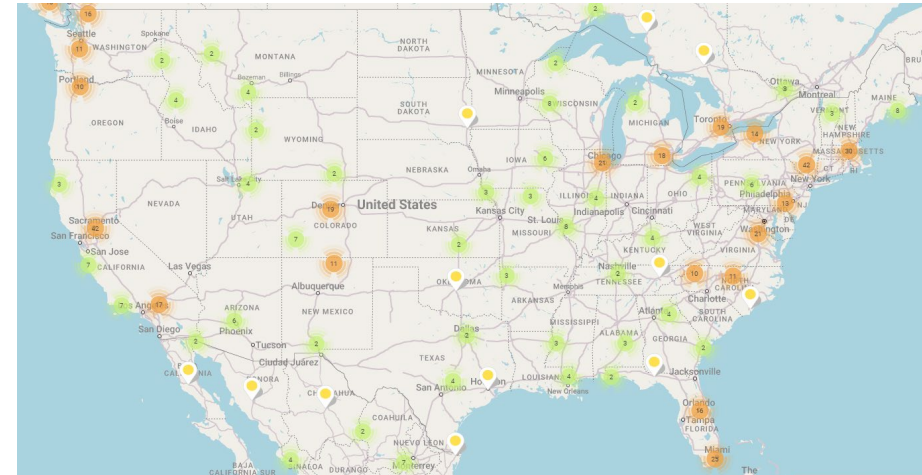
Greenhouse Gas Inventory

Sustainability Programs Manager

May 3rd 2023

What is a Greenhouse Gas Inventory?

- A greenhouse gas inventory quantifies the amount of heat-trapping gases (GHGs) released by human sources within a defined boundary over the course of a year.
- Staff has utilized ClearPath, the emissions management software suite from ICLEI-USA for 2017 and 2022.



Why quantify GHG emissions?



- At its Sept. 8th, 2020, meeting, the Lake County Board approved a resolution committing Lake County government operations to the goal of attaining net zero greenhouse gas emissions from its 2014-2017 baseline.
- The resolution commits Lake County to the following:
 - By the year 2030, reducing greenhouse gas emissions from its operations by 50%, and achieving at least a 60% diversion rate of recyclables and organics from its own waste stream
 - By the year 2040, procuring 100% renewable energy, reducing greenhouse gas emissions by 90% or more, and achieving at least a 90% diversion rate of recyclables and organics
 - Ensuring that all new County facilities constructed after 2020 be evaluated for their potential for net zero certification
 - Publicly reporting progress toward these goals on an annual basis
 - Inviting and encouraging municipalities and townships throughout the county to join in the effort to reduce the environmental impact of the operations required to provide public service to the residents and businesses of Lake County

Definitions

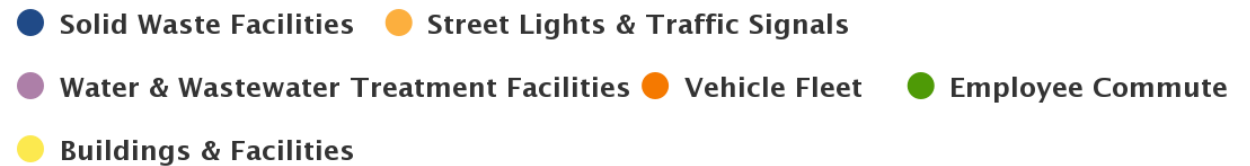
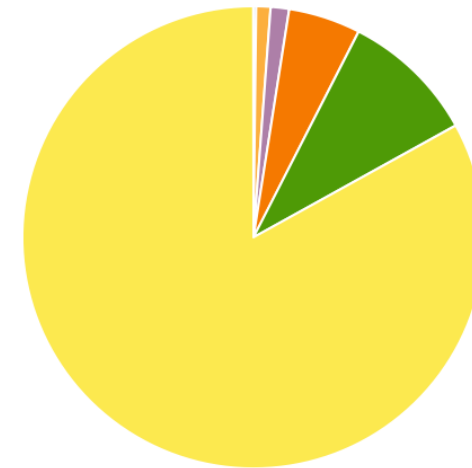
- **CO2e** – The abbreviation for 'carbon dioxide equivalent' which expresses the impact of different greenhouse gases in terms of the amount of CO2 that would create the same amount of warming.
- **Scope 1** - Covers emissions from sources that an organization owns or controls directly (ex. burning fuel in vehicle fleet).
- **Scope 2** - Emissions from sources that an organization causes indirectly through energy use (ex. electricity production).
- **Scope 3** – All indirect emissions that are not included in scope 2 that occur as a result of operations, including both upstream and downstream emissions (ex. employee commute).

The Baseline

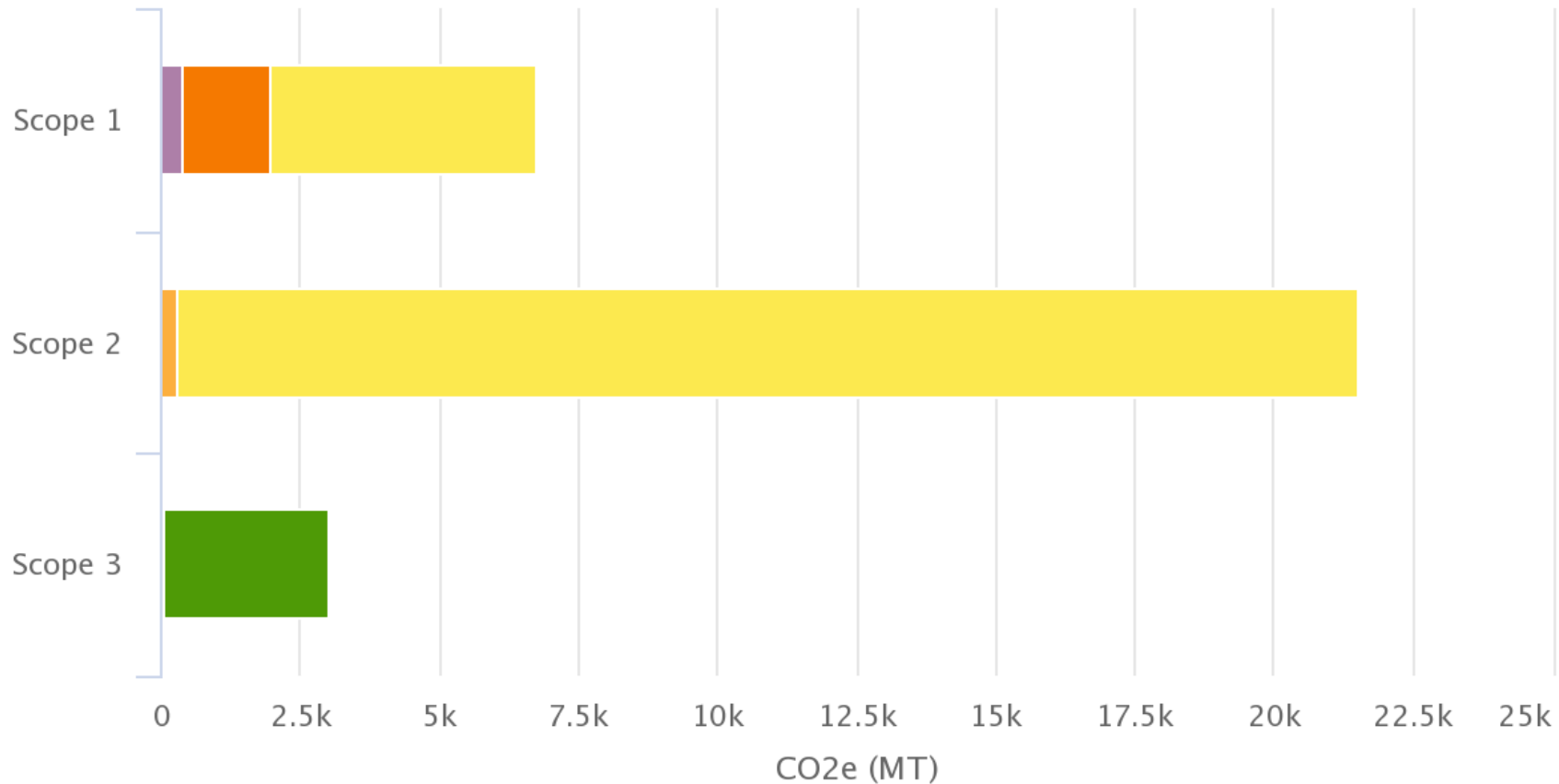
- In 2017, Lake County produced 31,269 MT of CO₂e.

Scope	Sector	CO ₂ e
Scope 1	Buildings & Facilities	4,743
Scope 1	Vehicle Fleet	1,580
Scope 1	Water & Wastewater Treatment Facilities	403
Scope 2	Buildings & Facilities	21,223
Scope 2	Street Lights & Traffic Signals	310
Scope 3	Employee Commute	2,950
Scope 3	Solid Waste Facilities	59

CO₂e By Category



The Baseline



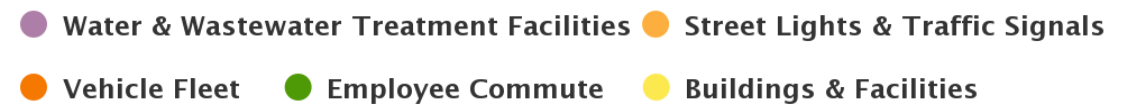
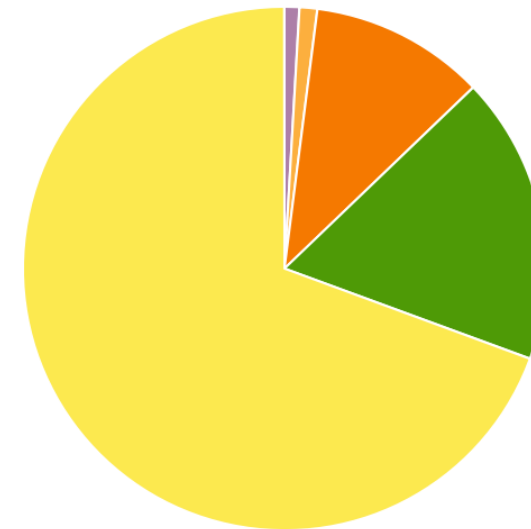
- Solid Waste Facilities
- Employee Commute
- Street Lights & Traffic Signals
- Water & Wastewater Treatment Facilities
- Vehicle Fleet
- Buildings & Facilities

The Progress

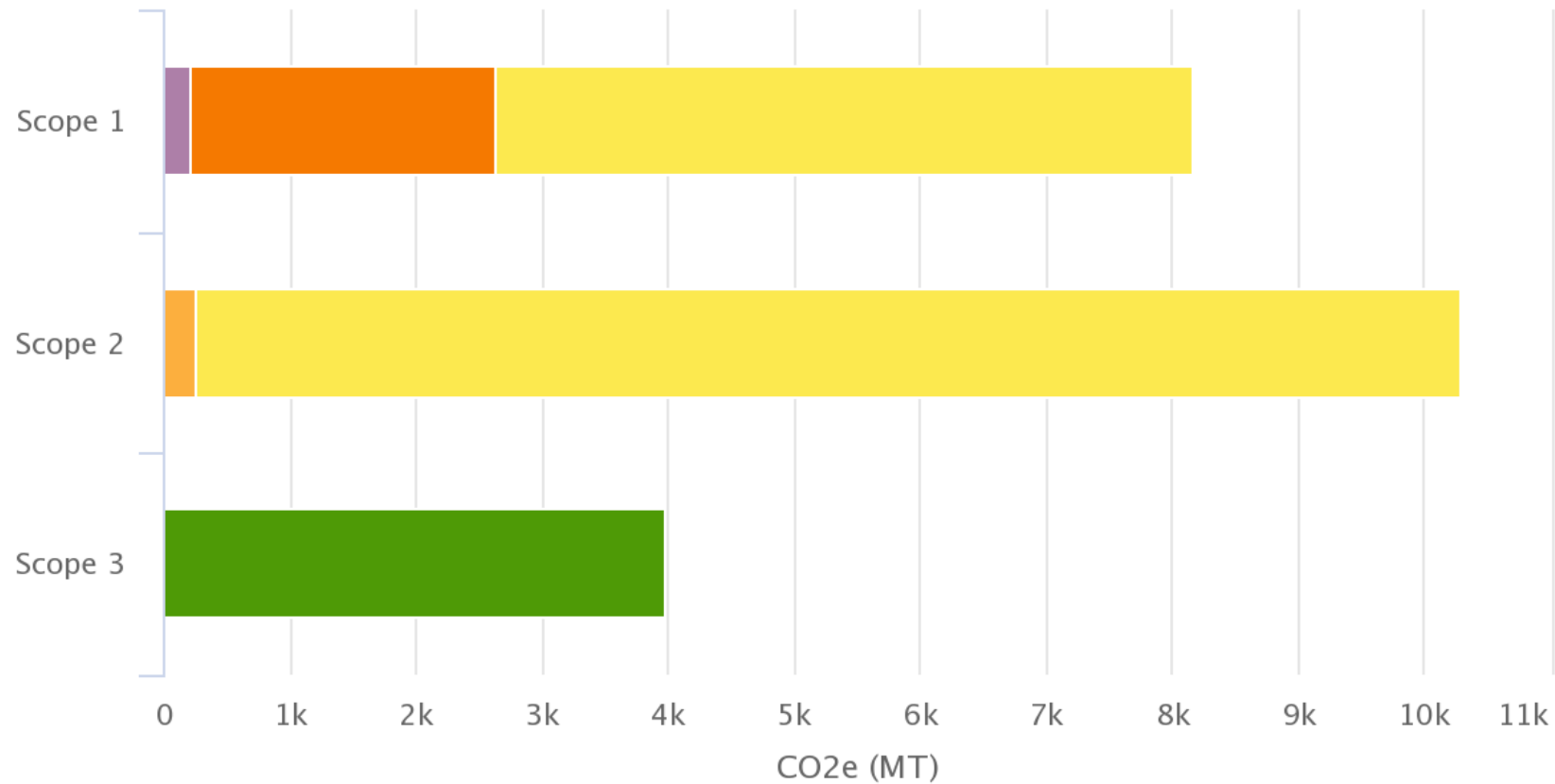
- In 2022, Lake County produced 22,425 MT CO₂e.

Scope	Sector	CO ₂ e
Scope 1	Buildings & Facilities	5,547
Scope 1	Vehicle Fleet	2,416
Scope 1	Water & Wastewater Treatment Facilities	205
Scope 2	Buildings & Facilities	10,017
Scope 2	Street Lights & Traffic Signals	245
Scope 2	Vehicle Fleet	13
Scope 3	Employee Commute	3,981

CO₂e By Category



The Progress

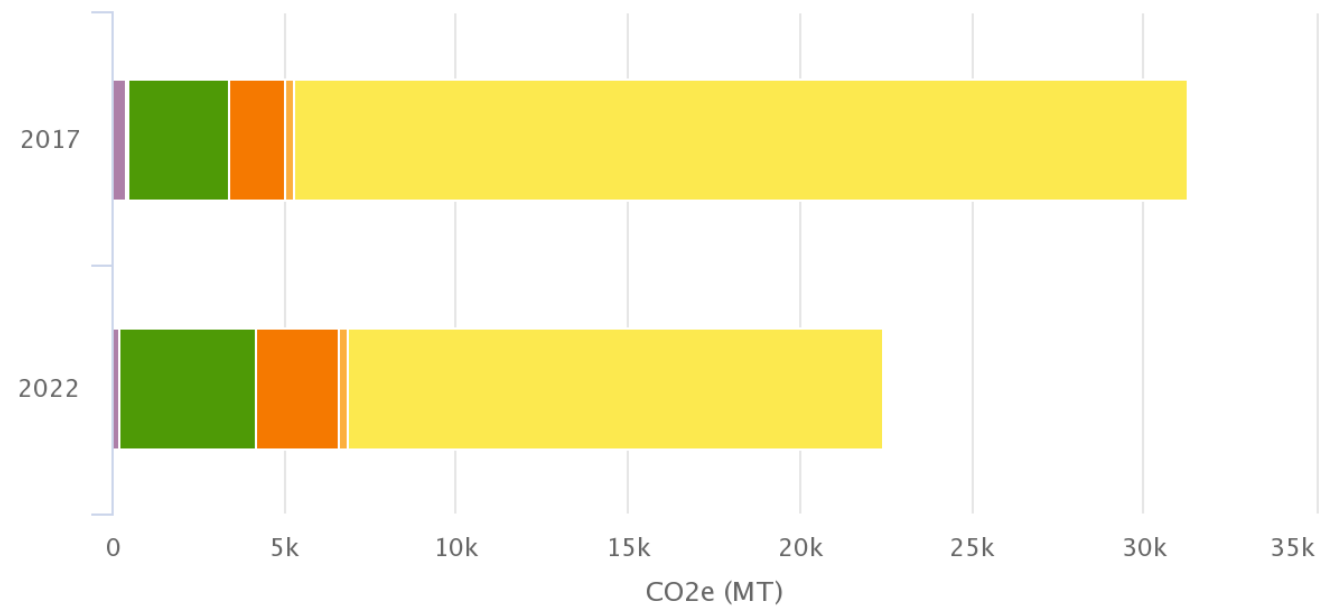


- Employee Commute
- Street Lights & Traffic Signals
- Water & Wastewater Treatment Facilities
- Vehicle Fleet
- Buildings & Facilities

Comparison – 28% Reduction



Year	Buildings & Facilities	Street Lights & Traffic Signals	Vehicle Fleet	Employee Commute	Solid Waste Facilities	Water & Wastewater Treatment Facilities
2017	25,967	310	1,580	2,950	59	403
2022	15,565	245	2,429	3,981		205



- Water & Wastewater Treatment Facilities
- Solid Waste Facilities
- Employee Commute
- Vehicle Fleet
- Buildings & Facilities
- Street Lights & Traffic Signals

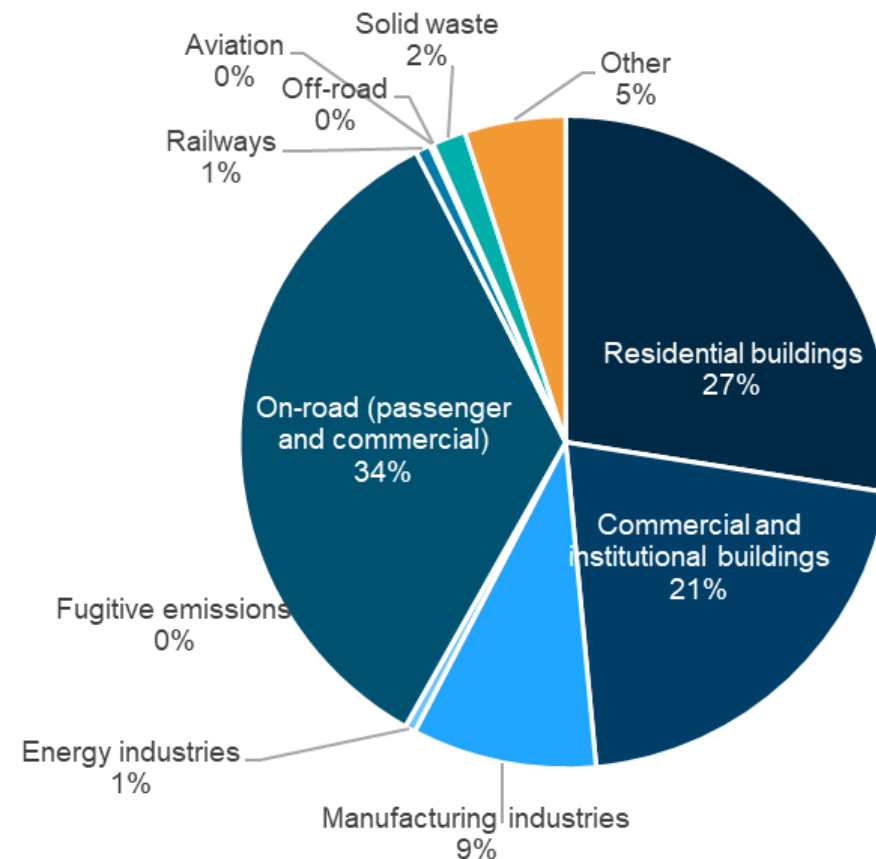
Comparison – 28% Reduction



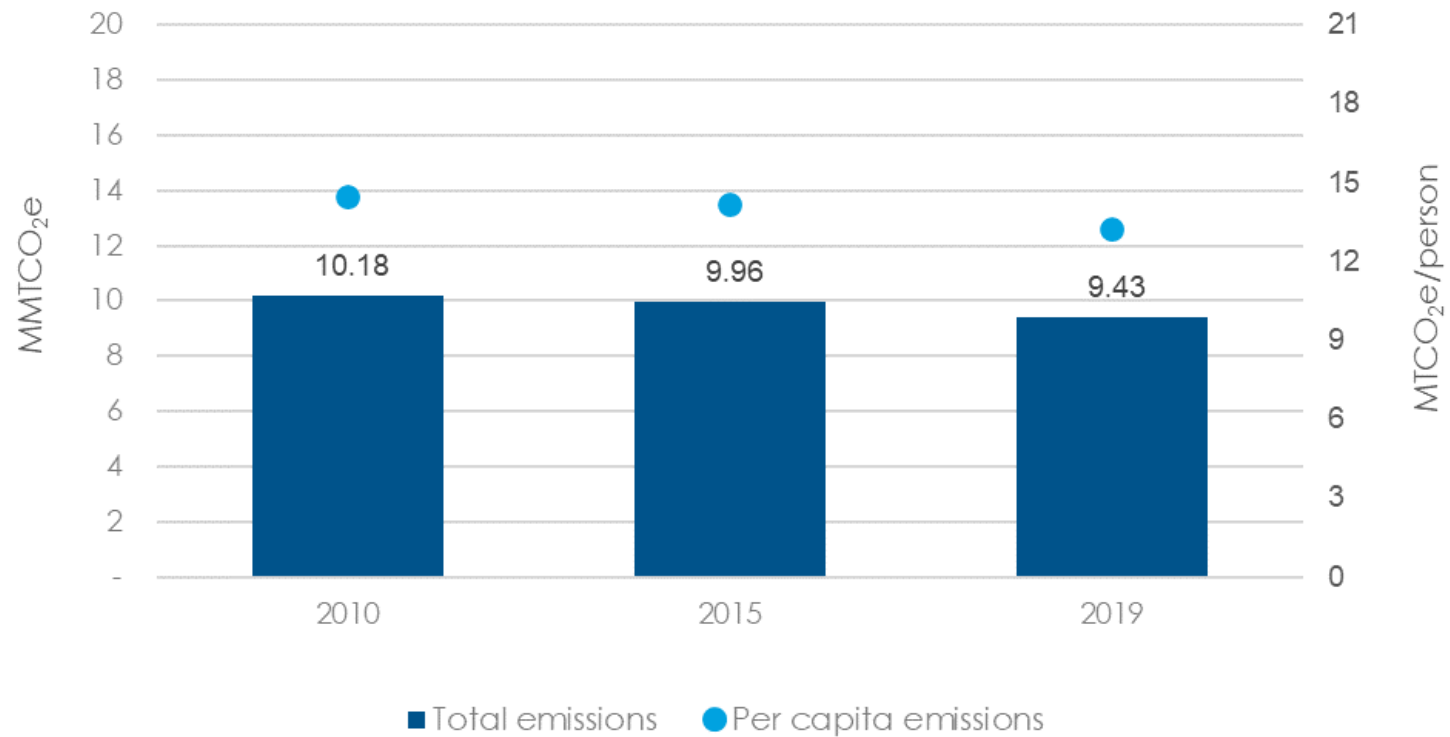
1. RECs
2. Streetlight upgrades
3. More fleet assets
4. More employees driving
5. More electricity and gas used



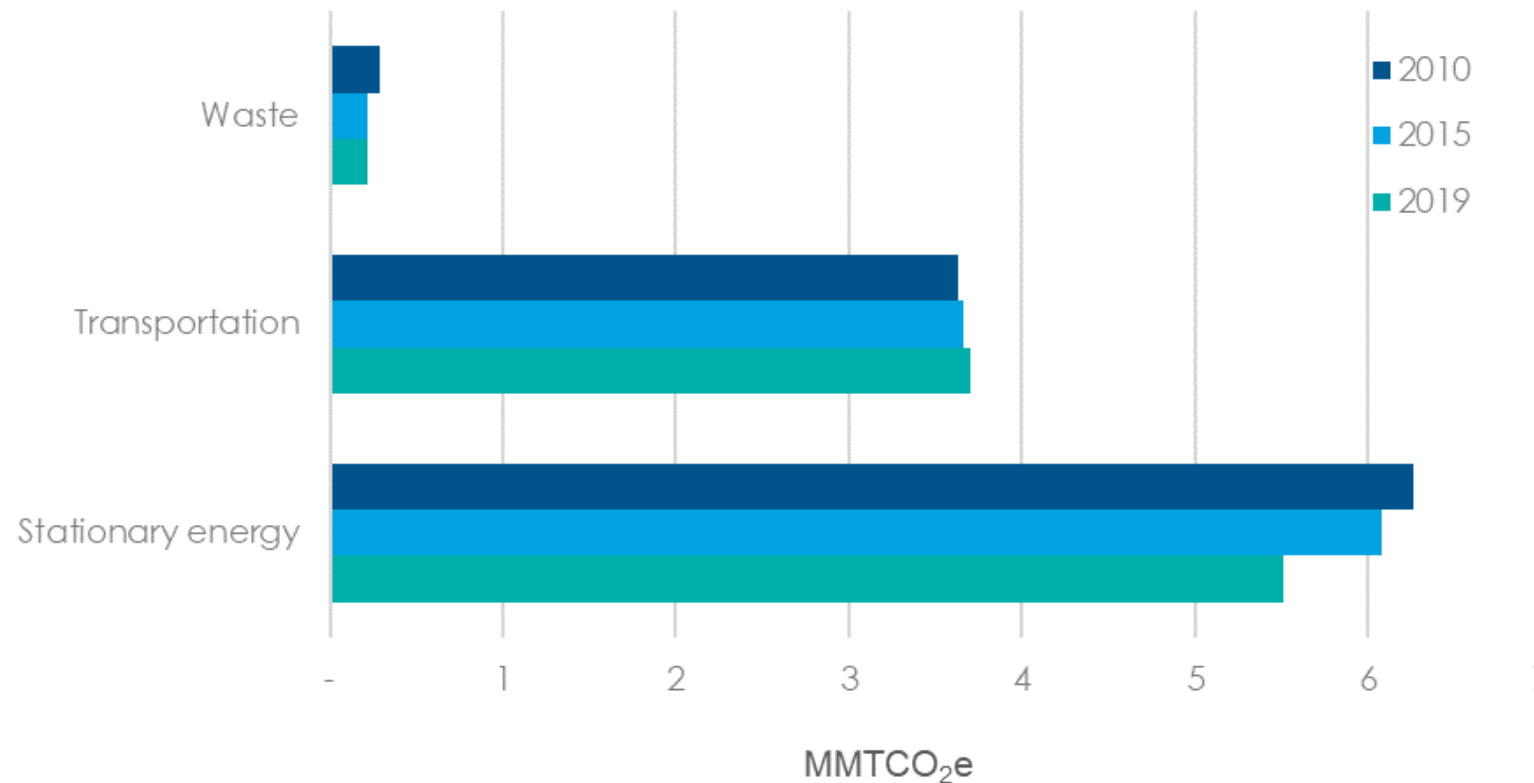
2019 Lake County Emissions by Subsector



Lake County Emissions by Year

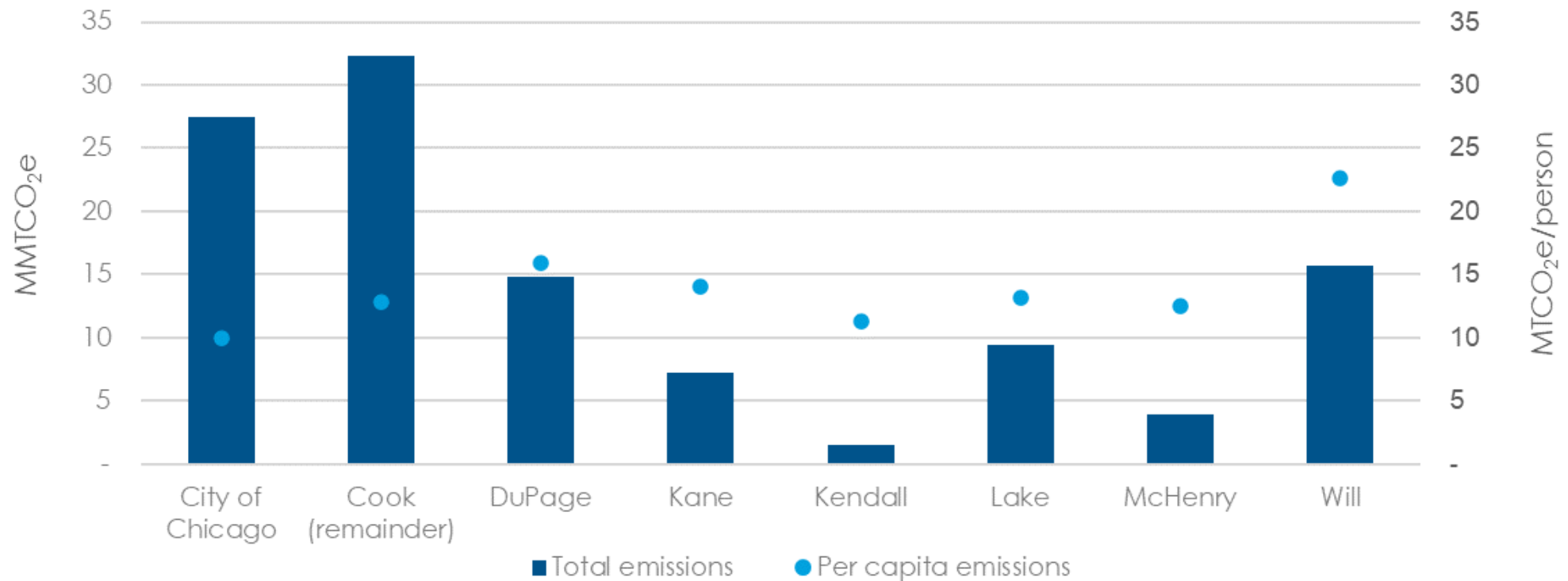


Lake County Emissions by Year and Sector



Local Context

2019 Emissions by County: Total and Per Capita



Where to next?

- **Strategic Plan Development to meet the policy goals**
 - **RECs and solar installations**
 - **Renewable Natural Gas certificates**
 - **New buildings**
 - **Electrification of current buildings**
 - **EV transition**
 - **Waste diversion**
 - **Public transportation advocacy**
 - **Community-scale planning**