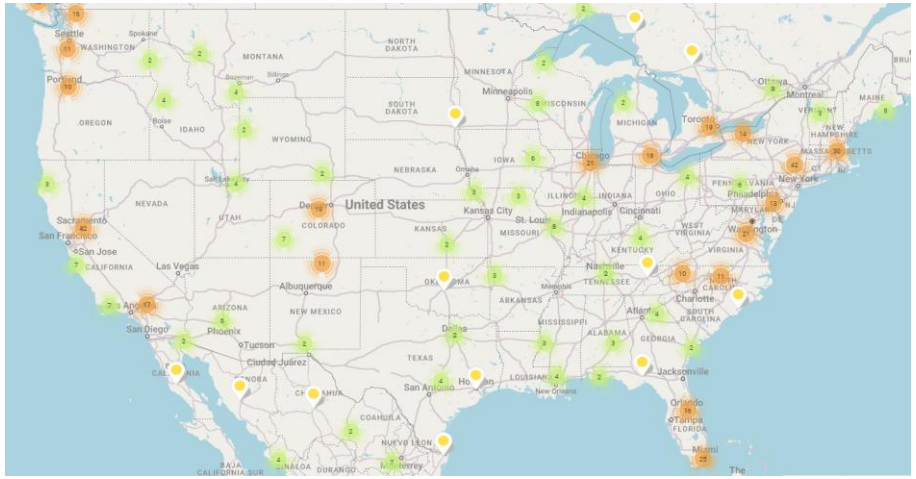
2025 Greenhouse Gas Inventory

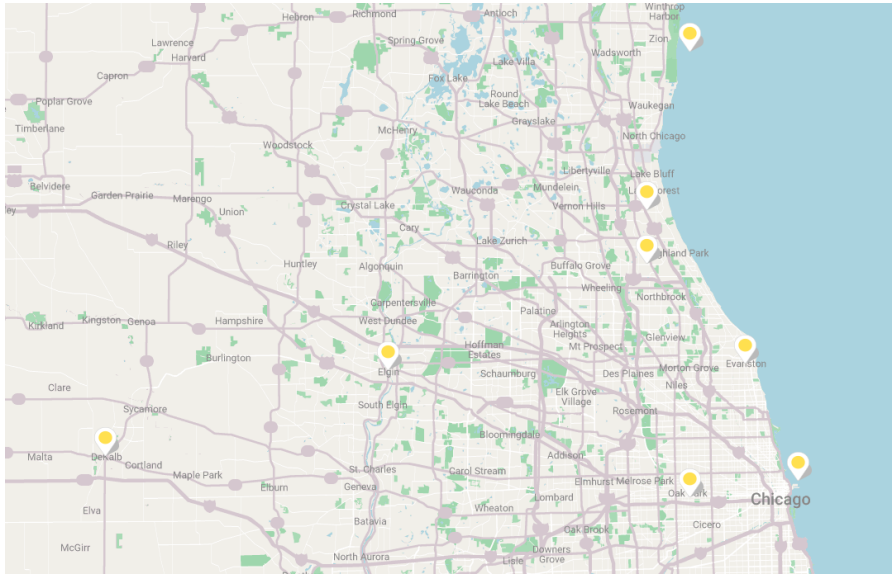
Sustainability Programs Manager

July 8th, 2026

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, 2022, 2023, and 2024.





Policy Goals

- 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

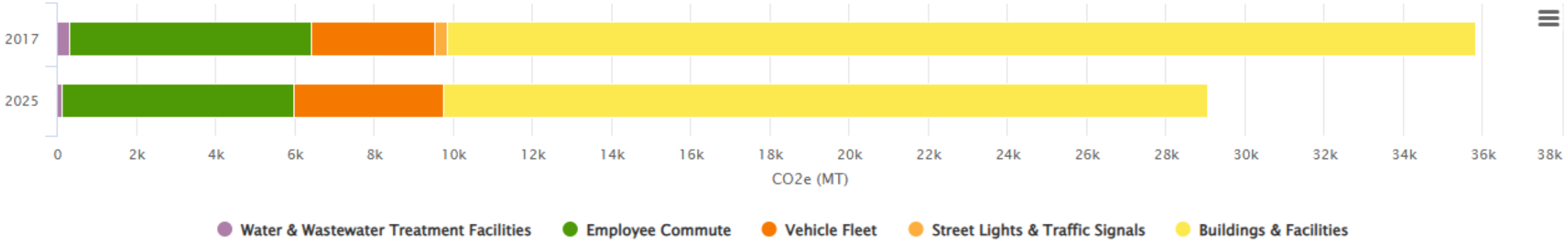
Definitions

- 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).

Baseline Comparison – 18.8% Reduction

- In 2017, Lake County produced 35,823 MT of CO2e.
- In 2024, Lake County produced 29,073 MT of CO2e.

Emissions Sources for 2017 and 2025					
Year	Buildings & Facilities	Streetlights & Traffic Signals	Vehicle Fleet	Employee Commute	Water & Wastewater Treatment Facilities
2017	25,967	310	3,122	6,100	324
2025	19,000	308	3,797	5,854	114

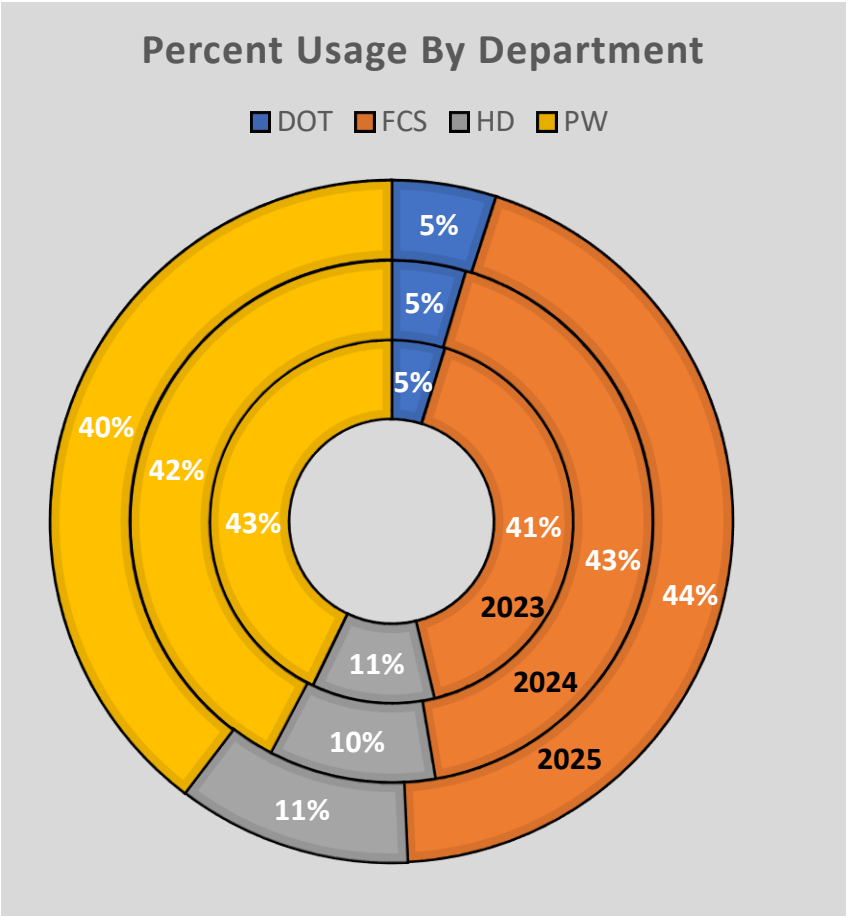


Comparison – 2024 to 2025

1. Buildings & Facilities ↑
    1. Purchased electricity emissions factor up
    2. Higher natural gas usage explained by additional cold days (2024 unusually warm)
    3. The ROC came online, adding a new electrical load.
    4. The CPF installed a solar array, reducing purchased electricity from the grid
    5. Depke Construction necessitated additional electricity use
2. Streetlights & Traffic Signals →
    1. Incorporated into B&F numbers
3. Vehicle Fleet ↑
    1. Fleet miles have increased by 82,000 but EV miles had decreased by 6,000 (15%)
    2. Higher than usual snowplow callout requests
    3. No change in driver efficiency score
4. Employee Commute →
    1. Shorter average commute
    2. Fewer people driving alone (94% -> 93%)
    3. More EV drivers (5% -> 6%)
    4. More accurate work from home average (2 days per week -> 2.36 days/week)
5. Wastewater Treatment Facilities →
    1. No change in populations served

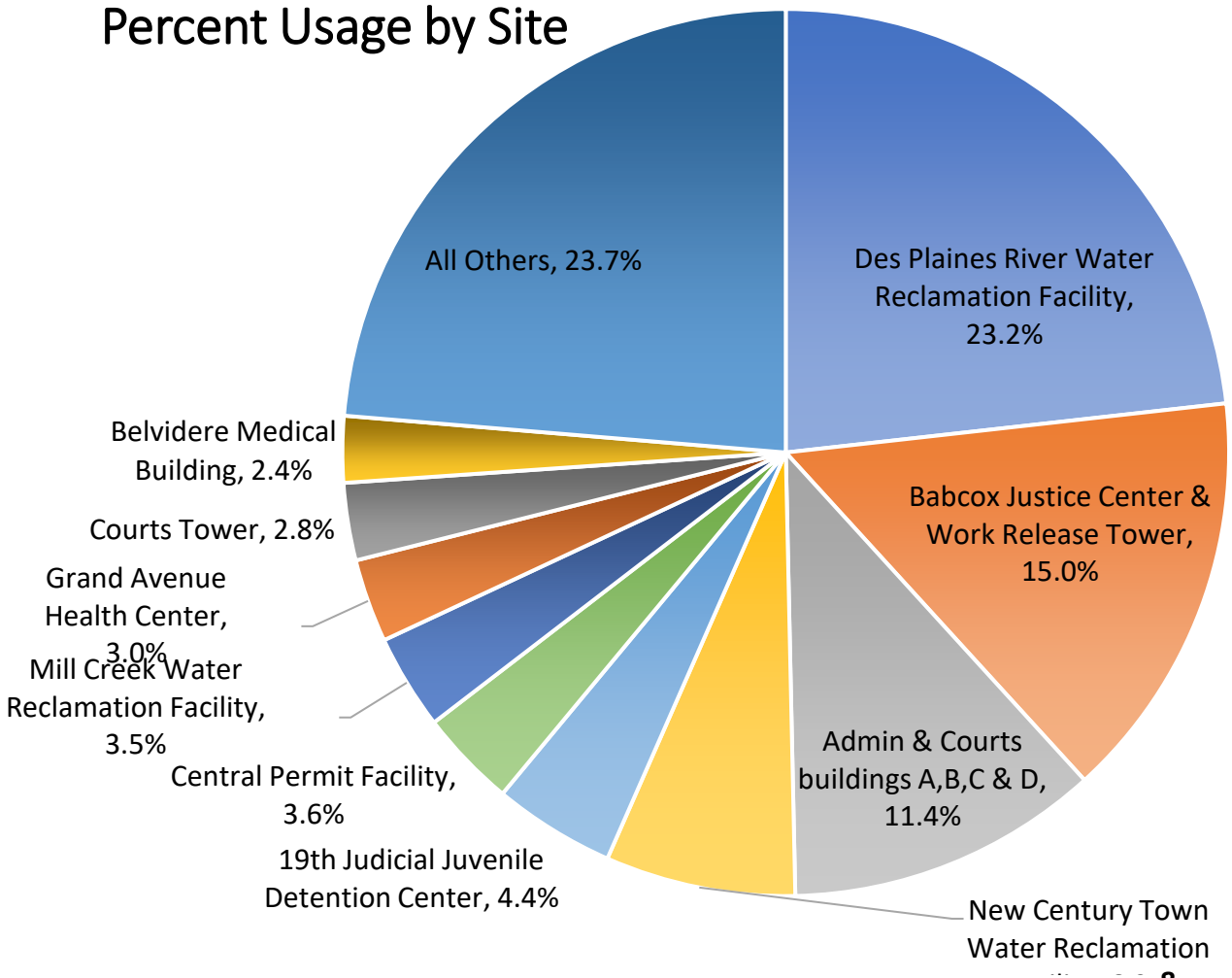
Department Breakdown

- The Public Works (PW) department is one of the County's two largest energy consumers and represents ~40-44% of total County energy use.
- The Facilities and Construction Services (FCS) department is one of Lake County's two largest energy consumers, typically representing ~42.5% of Lake County's total energy usage.
- The Health Department (HD) is the third largest energy consumer among the County's major departments and accounts for approximately ~10.7% of Lake County's total energy usage.
- The Department of Transportation (DOT) is the fourth largest consumer of Lake County's four major departments, typically using ~4.8% of Lake County's total energy usage.



Building Energy Use

- **The top 10 sites account for 76.33% of Lake County's energy portfolio over the last 3 years, with the top 3 and top 5 representing 49.66% and 61.03 % respectively.**
- **The three largest consumers are the Des Plaines Water Reclamation Facility, Babcock Justice Center & Work Release Tower, and the Admin & Courts Buildings A, B, C, and D.**



Where to next?

- Energy Report analysis
- Grant funded building energy assessments
- Developing a strategic energy plan
- Waukegan solar generation
- Employee commute programs for carpooling and guaranteed ride home
- FY27 Budget policy for EVs
- FY27 Community Solar subscriptions