



# 2023 Sustainability Progress Report

Town of Leesburg

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The 2023 Sustainability Progress Report is intended to summarize activities that the Town of Leesburg has taken to create more sustainable government operations and identify opportunities for enhancement in the future. As the sustainability program grows the Sustainability Progress Report will include status updates on communitywide sustainable actions in addition to government operations.

### Previous Town Accomplishments

Every year since 1989, The Town of Leesburg has been recognized as a Tree City, showing its commitment to persevering and protecting the natural environment. The Town established the Environmental Advisory Commission (EAC) to highlight the expanded commitment toward environmental stewardship which includes, air and water quality, energy efficiency and renewable energy, and community engagement.

Each year, the EAC hosts annual outreach events including presences at the Flowers and Garden Festival, organizing the Tolbert Awards, and the Keep Leesburg Beautiful Event. The EAC had a lot of success with these outreach events. Just last year, 126 volunteers collected over 1,000lbs of liter. In the recent past, the EAC has worked on an energy efficiency plan and advocated for the development of a Sustainability Manager position.

### Ramping Up Efforts

#### 1. Resources and Visioning

The Town of Leesburg hired its first dedicated full time sustainability staff to focus on developing an environmental sustainability program that will include creating an energy management plan and other environmental planning policies and initiatives. The work of the Sustainability Manager will involve collaborating across departments to audit government operations, develop strategies to reduce the Town's carbon footprint, and report to decision-makers and the community on progress. The initial charge for enhancing sustainability in the Town is to focus on government operations.

The Sustainability Manager interviewed members of different departments and key stakeholders to determine what sustainability means to them. Definitions varied with certain key phrases consistently being highlighted as outlined in the word cloud.

Town staff are dedicated and committed to enhancing the environment in the work that they do. Most departments support sustainable initiatives, but they are seen more as an indirect benefit rather than a main focus. The greatest opportunity for improvement is to do sustainability work in a



more purposeful and planned way, gather measurable results, share our stories and inspire our community to follow suit.

The Executive Steering Committee for Sustainable Government Operations (Sustainability Committee) was established to discuss potential policies and programs as well as ensure buy-in from departmental staff. The team is currently made up of the Deputy Town Manager, the Director of Community Development, the Director of Public Works and Capital Projects, the Director of Utilities, and the Sustainability Manager. Additional staff members will be brought on as needed. The team meets monthly. In the initial meetings the team worked on defining sustainability and creating a vision and mission statement to guide their work moving forward.

### *Sustainable Government Operations*

***Vision.** Efficiently managed town resources that meet the needs of all our residents while minimizing impacts on the environment.*

***Mission.** Support sustainable government operations that integrate environmentally conscious decision-making into Town operations.*

Additional sustainability resources have been secured that many jurisdictions are already utilizing to assess government operations and make efficient and environmentally conscious decisions:

- The Town is implementing an energy tracking software solution called EnergyCAP to get timely updates on energy data and measure the impact of Town actions. This tool will analyze energy data weekly and identify low hanging fruit and billing anomalies.
- Membership in ICLEI-Local Governments for Sustainability has been granted. ICLEI is a global network of local and regional governments committed to sustainable urban development. ICLEI provides tools, technical assistance, frameworks, and networks to advance sustainability actions.

## 2. Establishing the Baseline

Work has begun on establishing an FY21 baseline to measure sustainable government performance. The most widely used metric for measuring environmental impact is carbon emissions (CO<sub>2</sub>e) from different types of activities. Using emissions data enables prioritization of changes and upgrades to government systems in a way that reduces our emissions and related impact on the environment. This standard metric also enables the Town to benchmark its impact against similar jurisdictions.

Emissions can be measured based on what materials are bought, what different land management practices are in place and cars are driven. Staff utilized the Metropolitan Washington Council of

Government's *Community Scale Emissions Inventory for Loudoun County* to identify the largest contributors to emissions: facility energy consumption and transportation. Data, baselining, and benchmarking around those specific contributors should be prioritized.

**Facility Operations:** Town operations electricity consumption is made of up building energy, streetlights and traffic signals. The Town has 3 different vendors for supplying energy for our government infrastructure: Dominion Energy Services (DES), Northern Virginia Electric Cooperative (NOVEC) and Washington Gas (WGL). The Town receives more than 110 bills monthly from these vendors. Historically, the bills have been sent to each individual department for payment processing. The majority of energy consumption comes from electricity. Natural gas makes up only a small percentage. Therefore, this section of the report will focus on electricity.

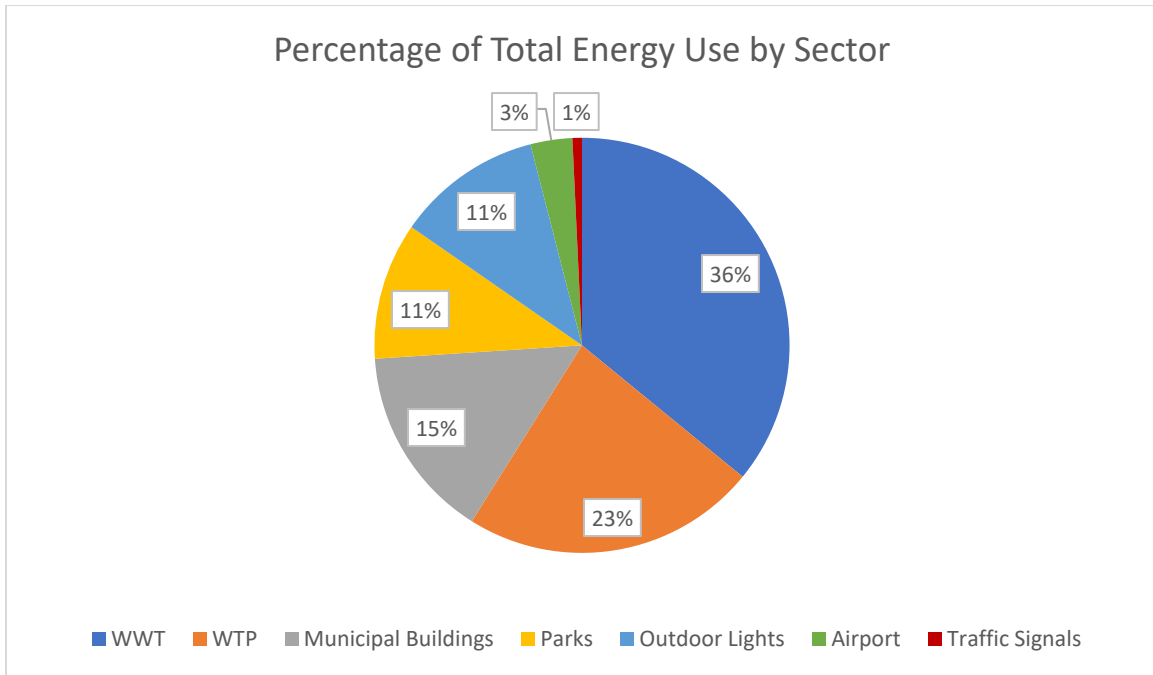
To create a baseline, staff pulled invoices from all vendors for a one-year period (FY21). Using a spreadsheet to capture as much details as possible from the invoices; billing period, kWh uses, demand charges (multipliers) and fee schedules. In FY21, the Town used over 20 million kilowatt hours (kWh) of energy. The large number can be better understood by seeing what activities make up electricity use in the Town. Staff has identified major sections of energy use that are broken down in the table below.

**Table 1: FY21 Town of Leesburg Major Energy Uses**

<b>Sector</b>	<b>Energy Consumption Source</b>	<b>FY21 Total kWh</b>
<b>Wastewater (WWT)</b>	WWT building, pumps, and processing Utilities Management Building	7,360,000
<b>Water Treatment (WTP)</b>	WTP building, pumps and processing	4,715,000
<b>Municipal Buildings</b>	Town Hall & Garage Log Cabin Thomas Balch Library Town Shop Maintenance and Storage Sheds Police Station	3,310,000
<b>Parks</b>	Park Buildings Park Shelters	2,190,000
<b>Outdoor Lights</b>	Streetlights Decorative lights	2,330,000
<b>Airport</b>	Terminal Hangars Associated Buildings	665,000
<b>Traffic Signals</b>	Traffic Signals Cross Walks Directional Signs	150,000
<b>Total</b>		2,720,000

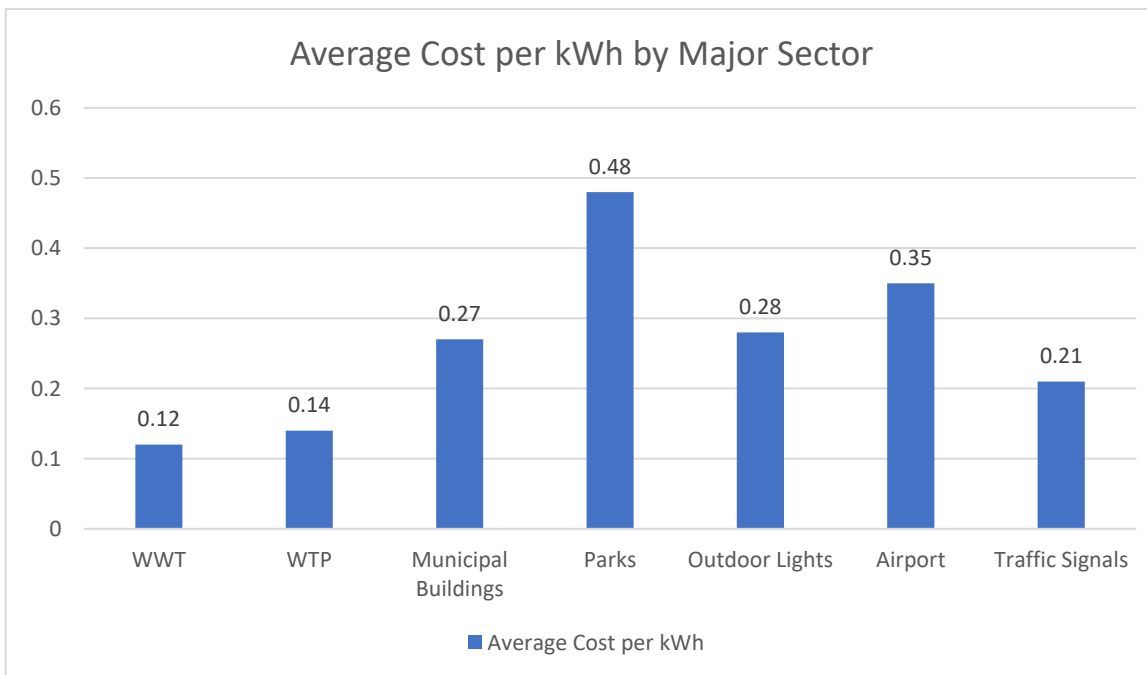
*\*This analysis does not include electricity use from leased spaces. Leased spaces have electricity costs backed into the fees, so actual use is not available.*

**Figure 1: Town of Leesburg Major Energy Uses**



The amount of energy consumed influences cost per kWh at various facilities. Average cost per kWh is estimated in the chart below by dividing total kWh consumed by the cost of all bills in each major sector. This type of analysis helps to understand individual meter fees and determine other opportunities for easy improvements that could make funds available for the upfront cost of bigger energy efficiency upgrades.

**Figure 2: Average Rate of Major Energy Costs**



After the integration of EnergyCAP, the Town’s energy use can be benchmarked against similar facilities. The tool will work with the Energy Star, the national benchmarking standard that considers populations size, building size, weather conditions and usage.

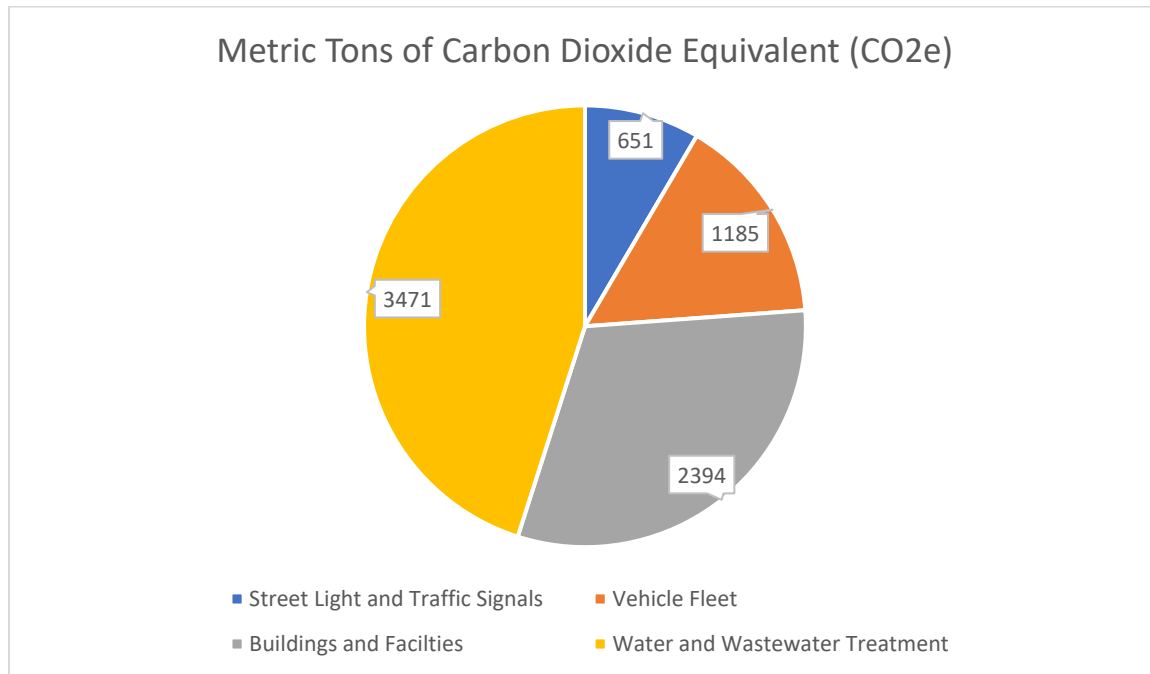
**Transportation:** To determine the baseline for transportation related emissions, fuel usage was analyzed. In the baseline year, FY21, the Town of Leesburg’s 484 fleet assets used more than 136,000 gallons of fuel. Fleet assets include cars, trucks, SUVs, and heavy, medium, and lightweight equipment.

*The Fleet Division added its first electric vehicle in July 2023! The Nissan Leaf S replaced a Ford Fusion in the Utilities department. The new Leaf has 212 miles of range on a single charge and will be used for business around Town.*

Of the cars, trucks and SUVs there were 25 vehicles that traveled less than 1000 miles in the year.

**Translating Energy into Emissions.** Data for facility energy use and transportation will become the baseline for the Town’s emissions inventory. Energy usage data was inputted into ICLEI’s ClearPath online emissions tracking platform to calculate the emissions inventory displayed in the chart below. The Town’s FY21 emissions inventory for government operations is approximately 7,701 metrics tons of CO2e annually.

**Figure 4: FY21 Town of Leesburg Emissions Inventory**



The category "Buildings and Facilities" includes government buildings, parks, and the airport. The Town’s FY21 Emissions Inventory is not a full picture. Natural gas and generator use have not

been factored into this analysis. As data collection becomes more refined, more factors can be added into the inventory.

### Next Steps

As the town become more proactive in its sustainability journey, these short-term goals (less than one year) steps will mark important strides.

1. Energy
  - Create energy efficiency conservation strategy (EECS)<sup>1</sup>
  - Develop a building walkdown team review all town property on a regular basis and identify potential energy losses and other efficiency opportunities.
  - Review peak hours of energy usage to determine if operational changes could reduce energy cost
  - Add sustainability as a category in the bid review process
  - Encourage additional Telework to reduce building footprint needs
2. Transportation
  - Identify opportunity for pool vehicles and develop standards for using pool vehicles
  - Install electric vehicle charging stations at key town facilities
3. Long Term Planning
  - Create sustainability webpage on the Town's website as a hub for information and updates
  - Share environmental hazard mitigation plan

The following longer-term goals (more than one year) should be prioritize over the next year to ensure that the vision of *efficiently managed town resources that meet the needs of all our residents while minimizing impacts on the environment* is prioritized.

1. Energy
  - Create a facilities master plan that prioritize building upgrades and efficiency planning
  - Install renewable energy technologies on Town Property
  - Advocate for state level policies that encourage energy efficiency in the community
2. Transportation
  - Create an alternative fuel replacement plan
3. Long Range Planning
  - Develop a carbon sequestration profile for the Town
  - Establish carbon reduction goals
  - Create a Climate Action and Resiliency Plan

“Sustainability takes forever, that’s the point” – Willem McDonough, Dean of the School of Architecture at the University of Virginia. The work to become more sustainable is both urgent and consistent. The recommendations throughout this report outline important next steps in our journey, but this is not the whole picture. As we continue to advance, our work will become more advanced and more refined, but the Town of Leesburg is ready.

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<sup>1</sup> An EECS is a requirement for several grant applications.