

2023 BEU-D SUMMARY

Town of Lexington

Issued September 2024

Lexington's Building Energy Use Disclosure bylaw (BEU-D) requires large buildings to disclose their energy and water use to the Town. BEU-D is an effort to increase transparency of energy use and understand the potential for emission reductions from the town's largest property owners. All buildings over 25,000 square feet and all municipal buildings fall under the reporting requirement. The first year of the program collected data from calendar year 2022. This report covers calendar year 2023. Visit lexingtononma.gov/1645/Building-Energy-Use-Disclosure to see an interactive map of the BEU-D properties and to export the full dataset.

Together, the 100 buildings that reported their data accounted for 78,575 metric tons of carbon dioxide. That's equivalent to over 10,000 homes' energy use for a year!

Total Square Footage



9,378,759 sf



Total Emissions

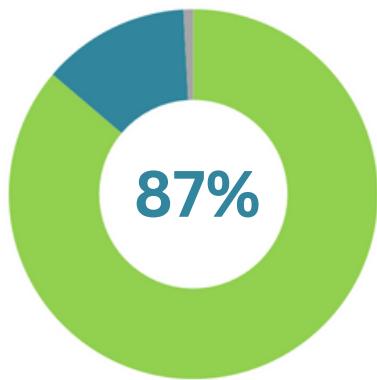


78,575 MtCO2e*

*104,498 MtCO2e when including associated gas leaks

Reporting compliance went up from 84% to 87% from the first to second year of the program.

Compliance Rate



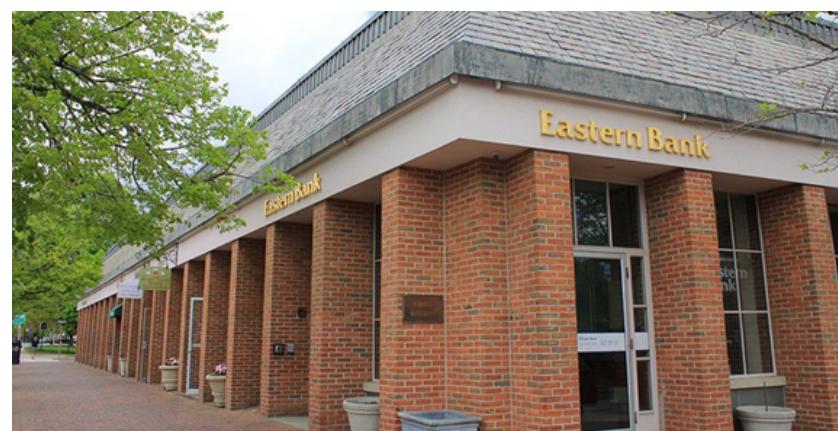
■ Compliant ■ Non-compliant ■ Exempt



BEU-D Buildings Data At a Glance

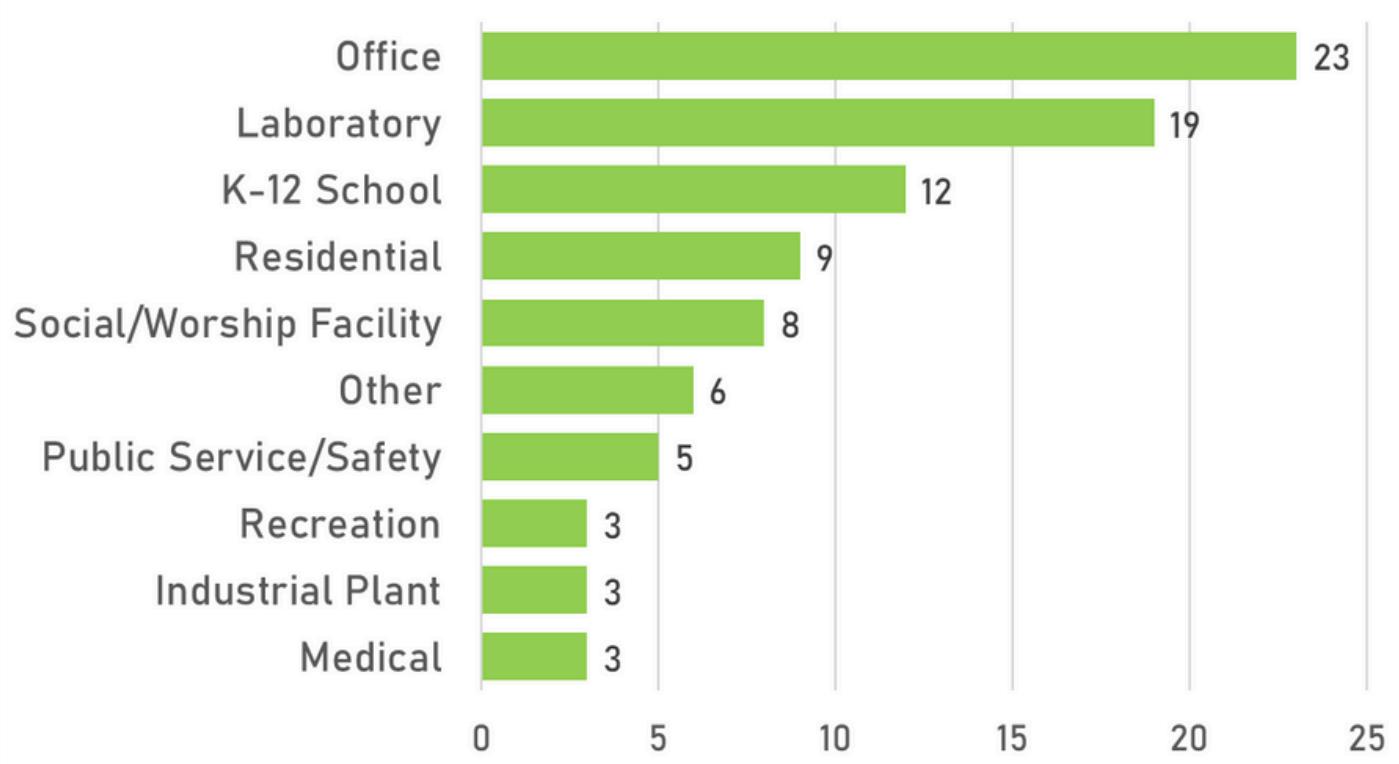
The table below shows an overview of some of the key metrics collected from property owners. The numbers in parentheses show the change in that particular metric from 2022. It is important to note that the total square footage of buildings that reported this year went up by over 850,000 square feet, which likely explains many of the increases in energy and water use across the entire BEU-D portfolio compared to last year.

	Minimum	Maximum	Median	Average	Total
GFA (square feet)	1,221	576,098	59,159 (+159)	93,788 (+4,061)	9,378,759 (+854,695)
GHG Emissions (MtCO2e)	6 (+5)	8,995 (+53)	351 (+42)	786 (+2)	78,575 (+4,848)
Electricity Use (kWh)	1245 (+537)	15,832,430 (+206,943)	716,294 (+69,111)	1,613,038 (+92,285)	151,625,574 (+17,201,389)
Natural Gas Use (therms)	0	806,330 (+13,383)	22,985 (+2,317)	62,684 (+4,696)	5,766,971 (+316,073)
Energy Use Intensity (kBtu/square foot/year)	1.7 (+1.5)	683.7 (-73.4)	74.6 (+7.0)	127.6 (+6.2)	
Water use (kgal)	0 (-2)	25,476 (-3,051)	600 (-66)	1,880 (-157)	175,225 (+12,797)



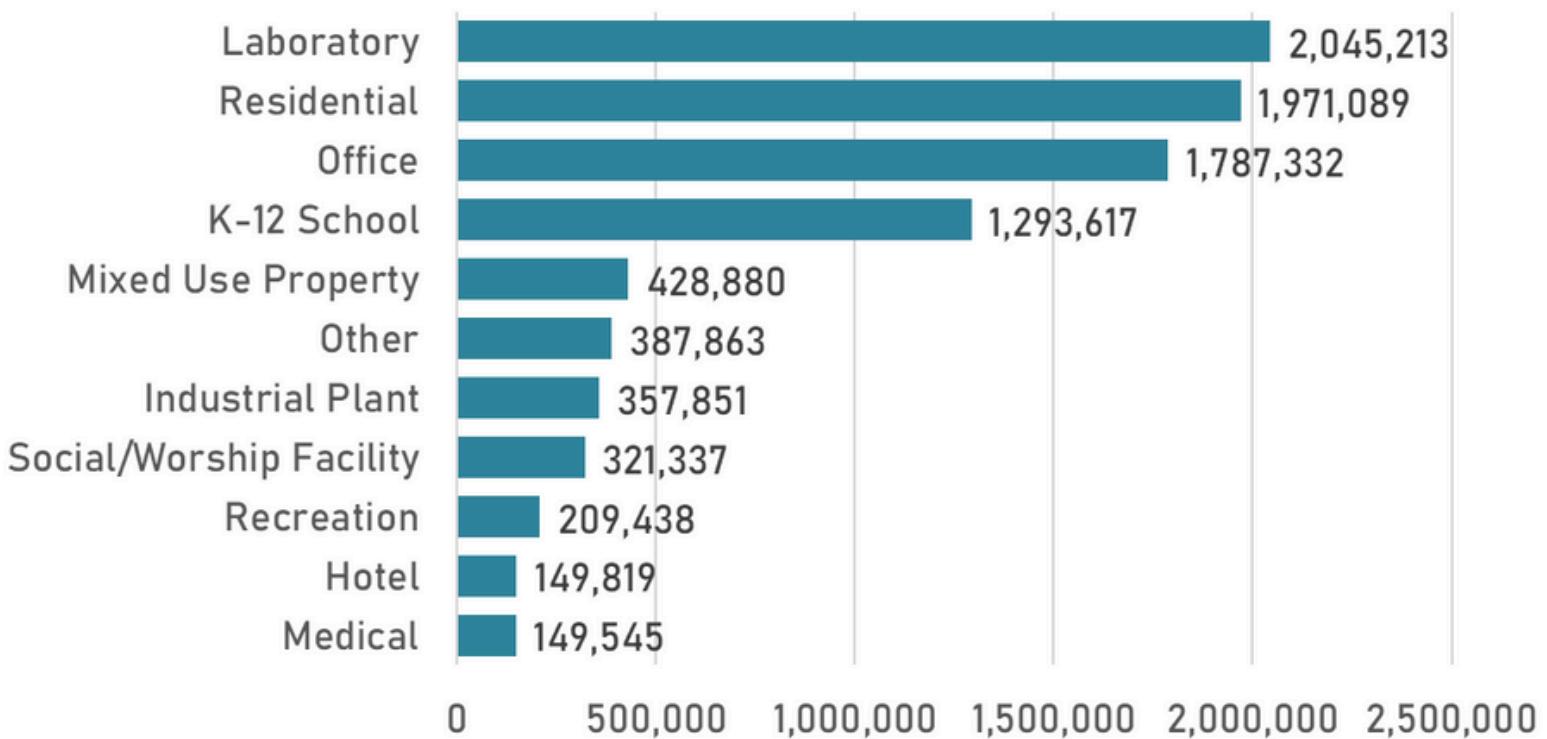
Number of Buildings by Property Type (Top 10)

The distribution across property types did not change notably from 2022, but there were an additional building or two reporting in the office, laboratory, and industrial plant categories.



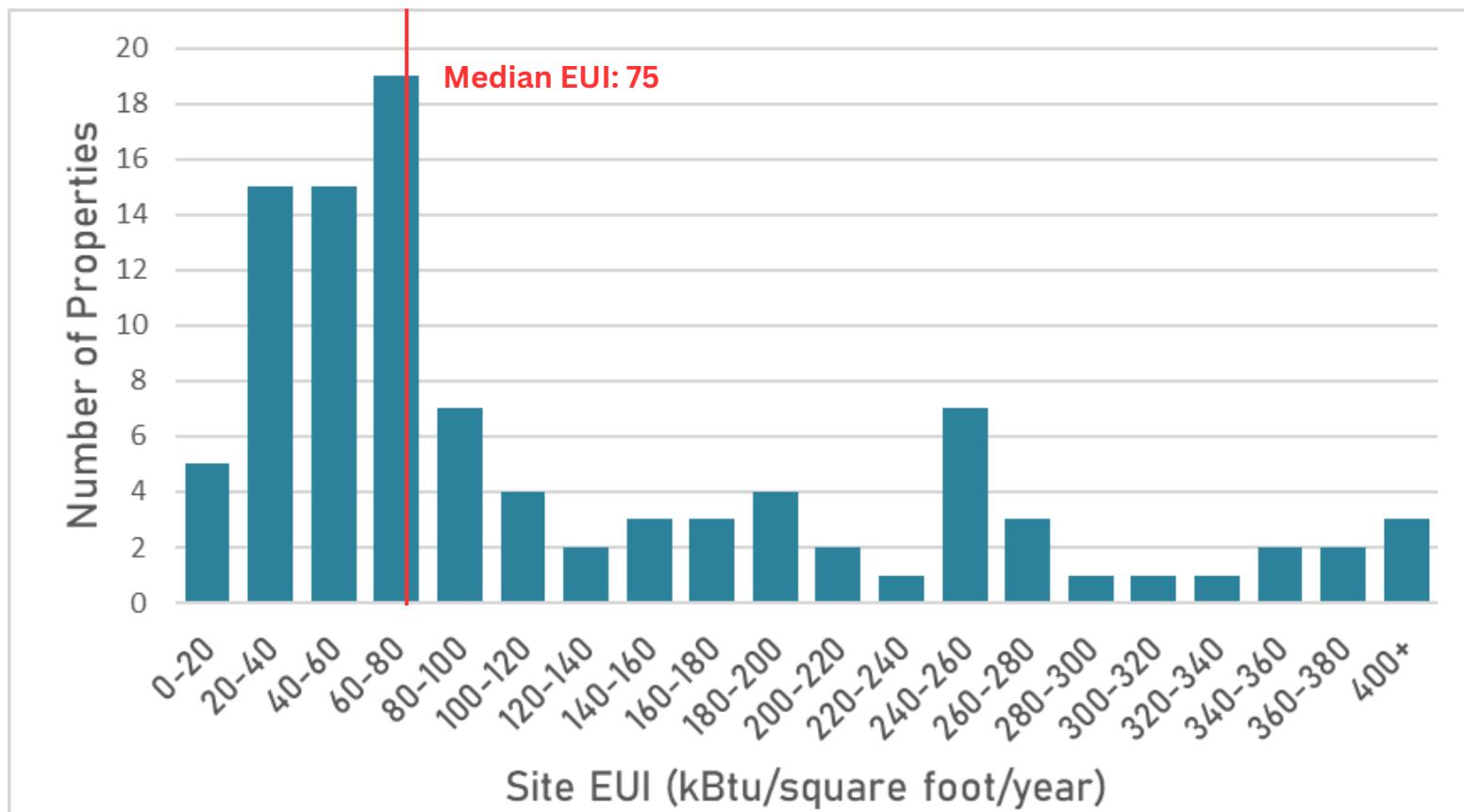
Gross Floor Area by Property Type (Top 10)

Compared to 2022, there was an additional 442,686 square feet of laboratory space reported on. This is relevant to note because laboratories tend to be energy intensive spaces.

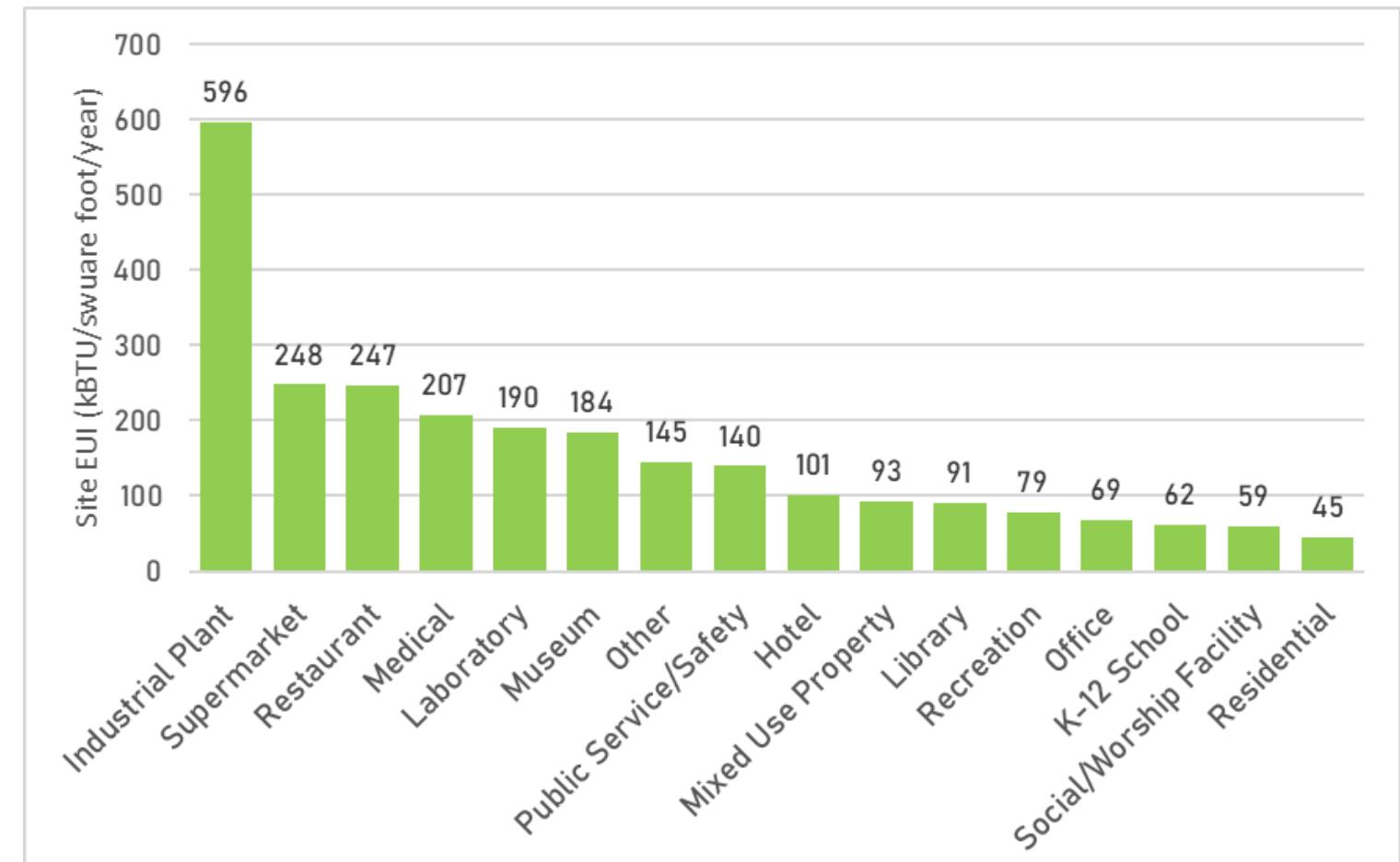


Energy Use Intensity Distribution

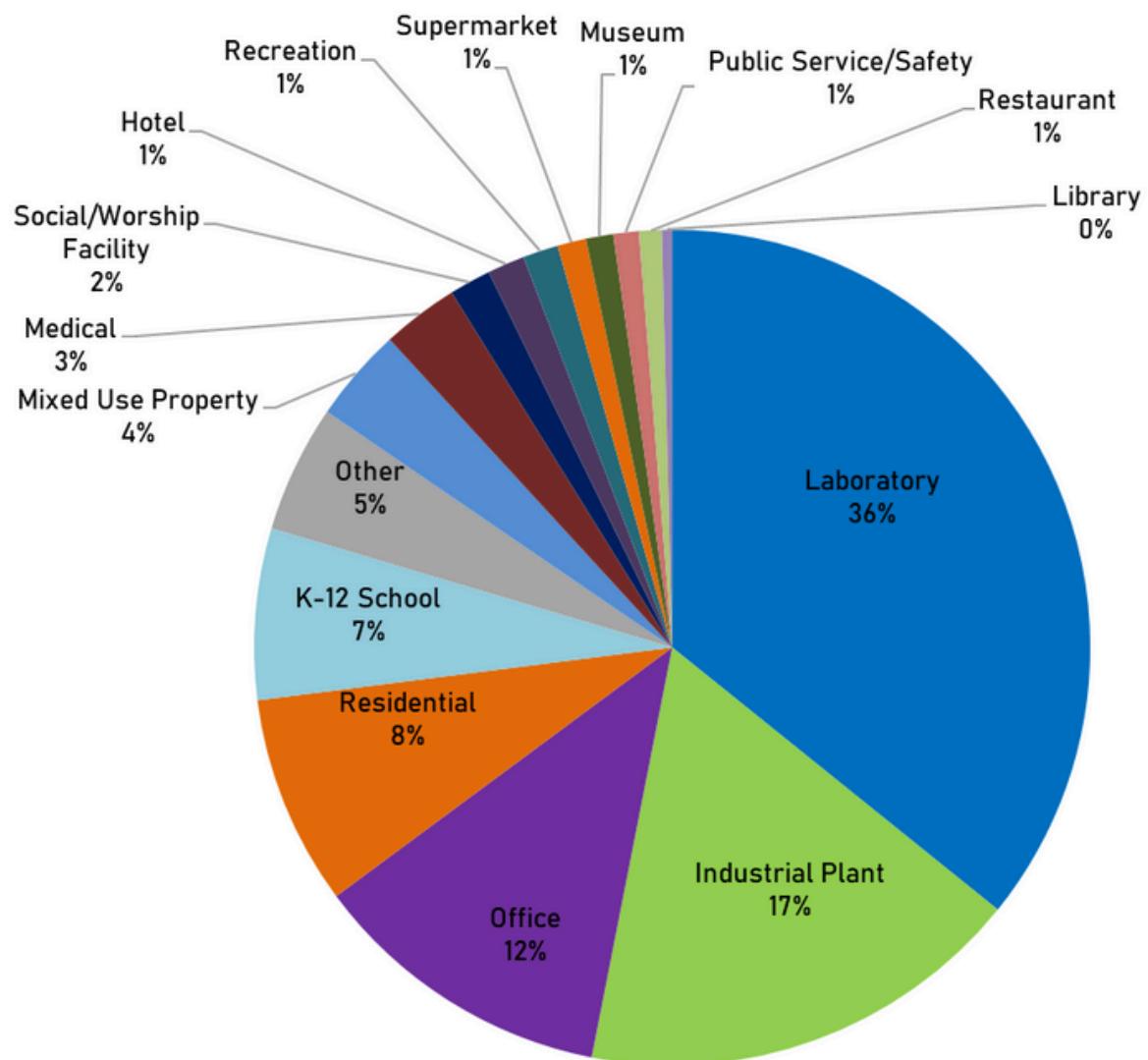
The median energy use intensity of BEU-D properties rose from 68 to 75.



Energy Use Intensity By Property Type



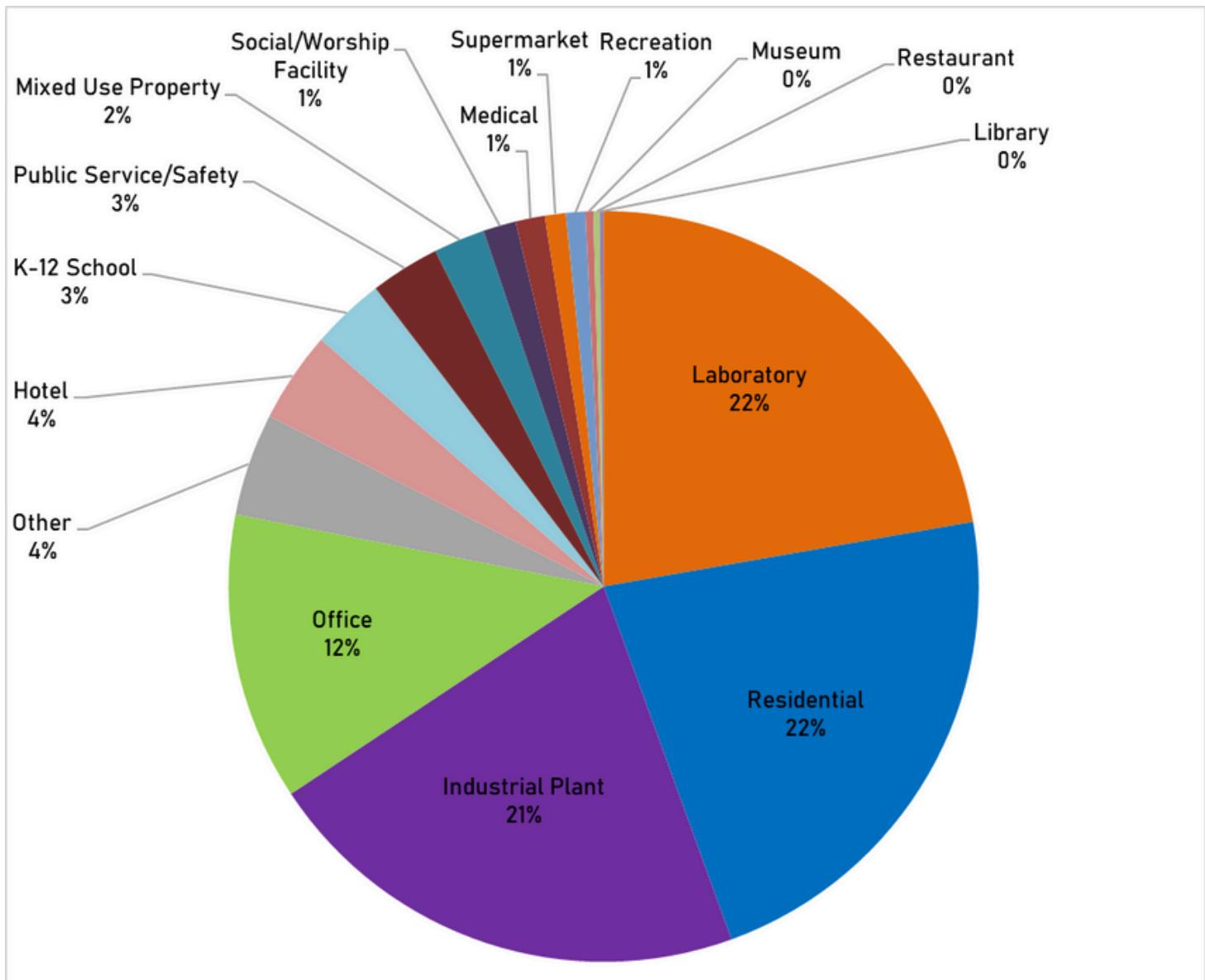
GHG Emissions by Property Type



The order of property types with the highest emissions across the BEU-D portfolio remained nearly identical between 2022 and 2023. The percentage coming from labs increased by 3%, which may be a result of two additional lab buildings reporting in 2023.



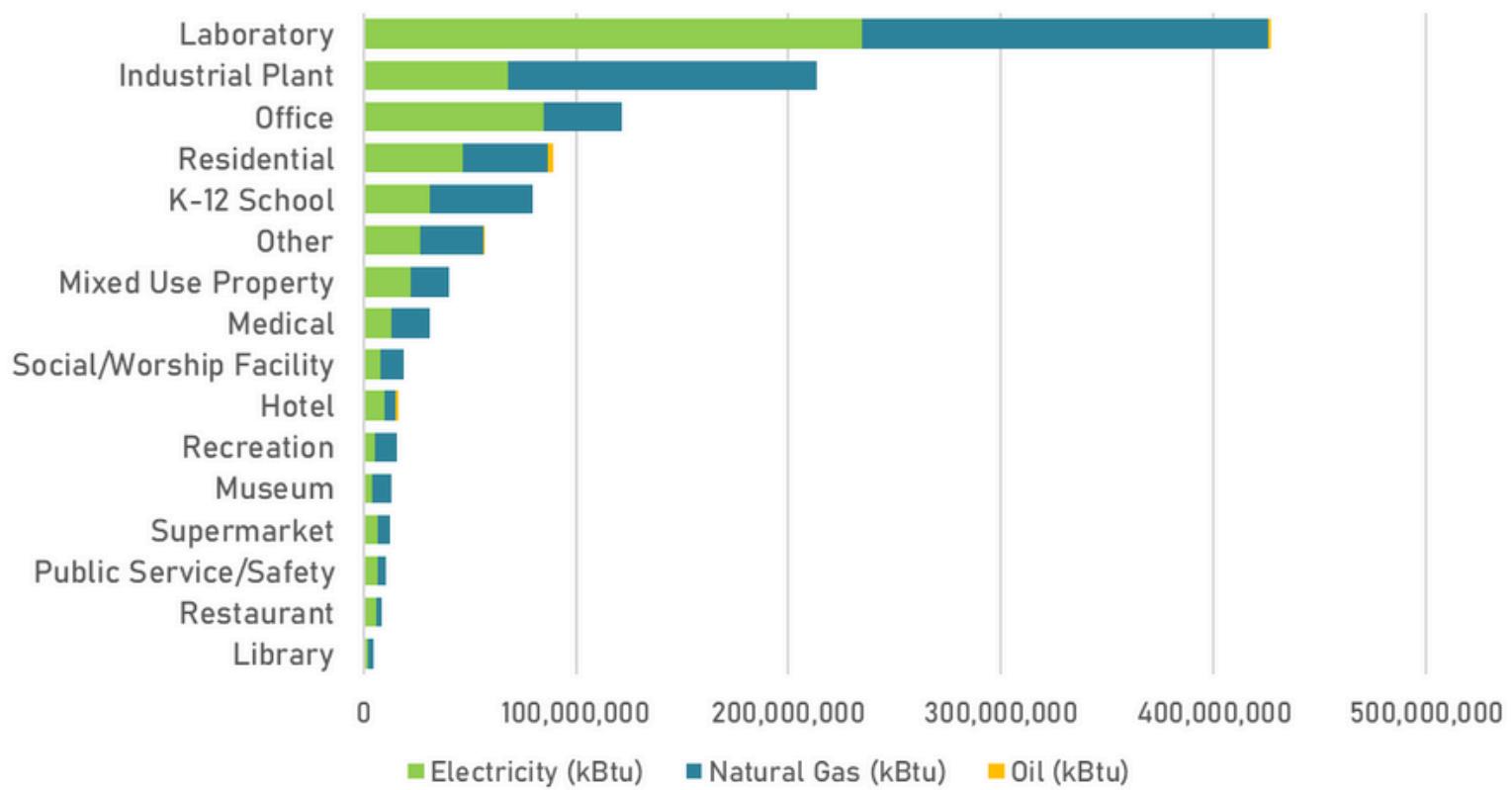
Water Use by Property Type



Looking at water use by property type in 2023 compared to 2022, we see a higher percentage of water use coming from labs, a lower percentage coming from residential properties, and a lower percentage coming from industrial plants. Again, this variation could be explained by variations in the buildings that reported rather than changes in water consumption patterns across property types.



Energy Source by Property Type



Fuel Switching

In order for Lexington to meet its climate goals, buildings will have to move away from using fossil fuels like oil and gas by electrifying their building systems. Between 2022 and 2023, the percent of energy coming from electricity rose by 1.3%, the percent from gas decreased by 1.2%, and the percent from oil decreased by 0.2%.

