

Starting in 2019, the City of Chicago required large buildings to report energy use and display their rating placard publicly. The team used energy benchmarking data from 2015-2023 to examine whether these policies are working as intended.

From 2019 to 2023, Chicago's building energy use changed substantially, but it is difficult to separate the effects of the placard policy from the disruptions caused by COVID-19 and other unrelated trends (see Figure 1). To distinguish between the impact of the placards and other effects, we focused on building types less affected by COVID, performed difference-in-differences analysis, compared local trends to national benchmarks, and examined year-to-year changes for individual buildings to track how their energy use evolved over time. Figure 2 shows one of these analyses, comparing the energy use of Chicago to the nationwide average: notably, Chicago had a much steeper decline in 2020 and lower overall energy use per square foot.

To give the City of Chicago a way to explore our results and analyses, the team created and deployed an interactive dashboard with Streamlit. The dashboard lets users filter buildings, compare pre and post placard years, and view trends for different COVID impact groups.

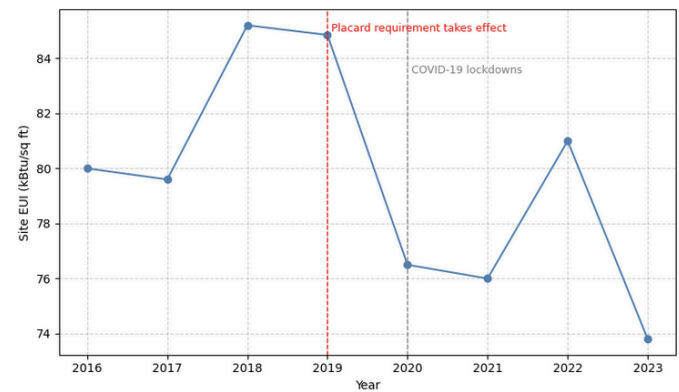


Figure 1: Median Site EUI for Buildings with Complete Data from 2016-2023

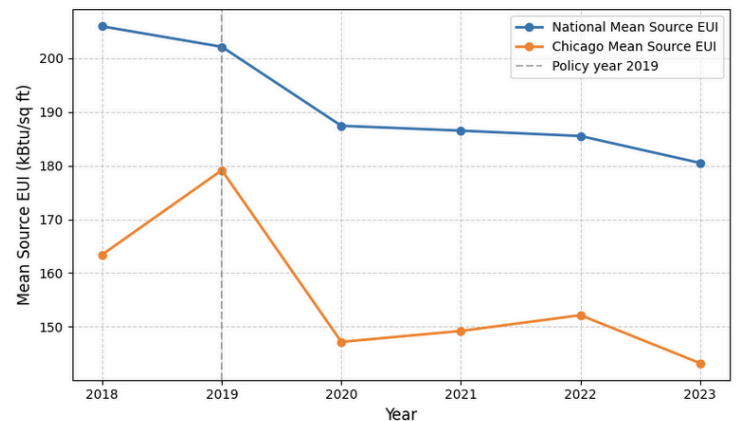


Figure 2: Chicago CBSA vs National Source EUI, from the ENERGY STAR Portfolio Manager.