



## Template for Evidence

University : Al-Mustaqbal University (formerly name: Al-Mustaqbal University College)  
Country : Iraq  
Web Address : <https://uomus.edu.iq/en/default.aspx>

### 13.2.1 Low carbon energy tracking

#### 1. Electricity consumption

Electricity is essential on the primary campus of Al-Mustaqbal University, serving various purposes such as lighting, cooling, heating, and powering laboratory equipment. The following is the total electricity usage of AL- Mustaqbal University between 2020 and 2023:

- In 2020, the total electricity usage of AL- Mustaqbal University is about 123,134 kWh.
- In 2021, the total electricity usage of AL- Mustaqbal University is about 205,350.91 kWh.
- In 2022, the total electricity usage of AL- Mustaqbal University is about 277,916 kWh.
- Till September 2023, the total electricity usage of AL- Mustaqbal University is about 347,395 kWh.

In addition, Figure 1 provides a visual representation of the monthly electrical energy consumption from 2020 to 2023, demonstrating a consistent linear increase in usage starting from 2020. This upsurge in energy demand can be attributed to the growing student population at the university, resulting in increased utilization of laboratories and classrooms.

However, it's evident that in 2021, there was a slight increase in energy consumption, reaching approximately 200,000 kWh. This uptick can be attributed to a government policy aimed at curbing the spread of COVID-19. To provide a more detailed breakdown of energy consumption throughout 2021, we can observe that in January, electrical usage stood at 22,000 kWh, decreasing to 13,000 kWh, which is a 69% reduction. Notably, the highest electricity demand occurred in April, recording 31,000 kWh. The following months exhibited varying electricity usage patterns influenced by factors like final examinations and holidays.

With the gradual easing of COVID-19 pandemic restrictions, universities and schools reopened their doors, leading to a noticeable increase in energy consumption over the past three years,



particularly due to a substantial rise in the number of students and staff. This surge in energy demand continued into 2022. Additionally, there has been some fluctuation in monthly energy demand, but a discernible increase in electrical energy consumption is observed in the current year (2023) up to September, followed by a decrease during the spring break.

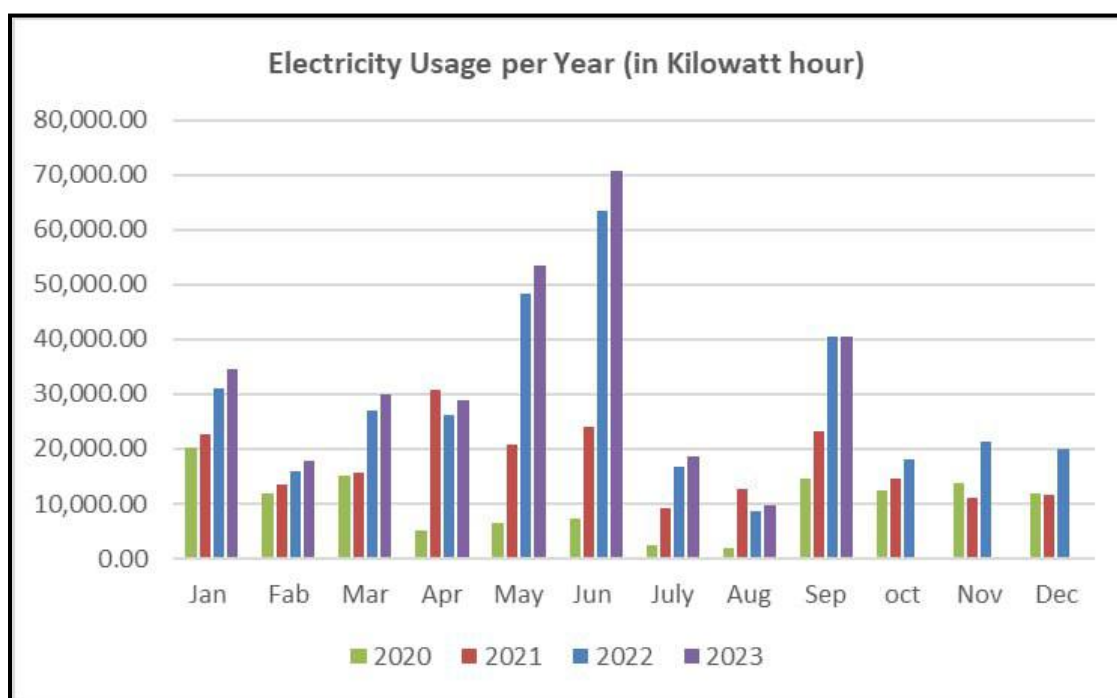


Figure 1: Monthly electricity consumption for years: 2020 till September, 2023

## 2. Carbon Emission

Carbon emissions resulting from our activities represent a substantial environmental impact, and we are committed to ambitious targets for reducing these emissions to minimize our ecological footprint. Establishing a sustainable campus is vital, as it serves as a tangible model of environmental responsibility. This approach extends not only to our operational practices but also to how we integrate sustainability principles into our teaching and learning environments.

Referring to Figure 2, which illustrates carbon dioxide emissions from four distinct sources (buses, cars, motorcycles, and electricity) over the 2020-2023 period.

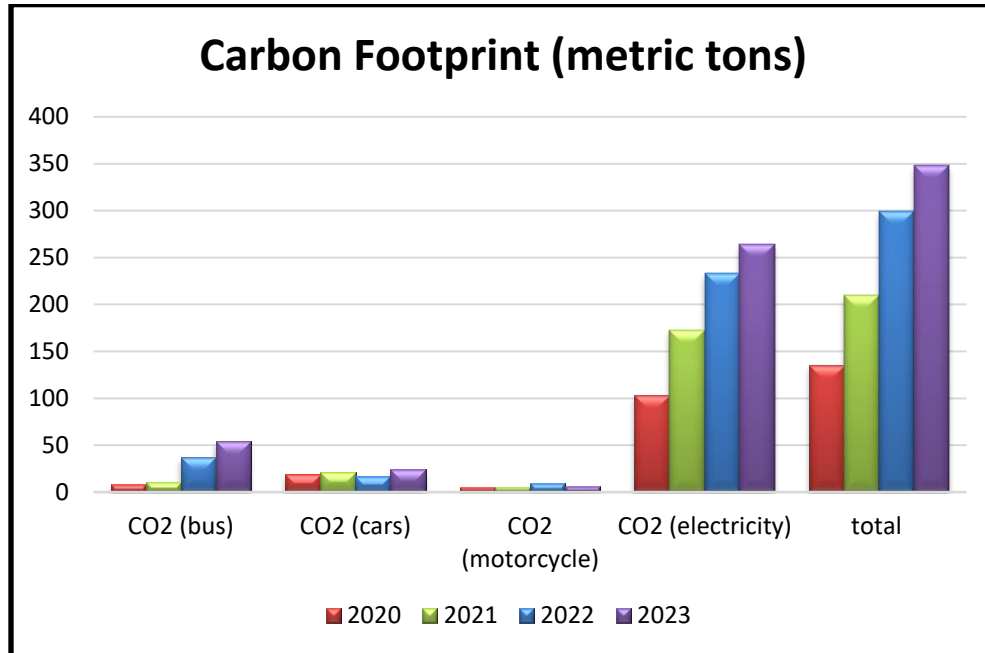


Figure 1. Carbon emissions (metric tons) in Al-Mustaqbal University

Concerning buses, it's noteworthy that their impact on CO<sub>2</sub> emissions was relatively low due to their limited usage in Babylon province, especially when compared to Baghdad.

CO<sub>2</sub> emissions from cars exhibited a noticeable reduction, mainly attributed to the government's "stay home" measures during the COVID-19 pandemic, which restricted car movement.

The contribution of motorcycles to atmospheric CO<sub>2</sub> concentration remained relatively minor.

In contrast, CO<sub>2</sub> emissions from electricity showed the highest rates. The prevalence of COVID-19 and the "Stay Home" policies had a significant influence on CO<sub>2</sub> emissions as schools, universities, and industrial factories remained closed. In 2022, CO<sub>2</sub> concentration rates increased by approximately 30% compared to 2021.

In 2023, there was a slight uptick in CO<sub>2</sub> emissions as public transportation increased and life returned partially to normal with the reopening of universities, factories, and schools. Additionally, CO<sub>2</sub> emissions from electrical energy continued to rise steadily, primarily due to the heightened demand for electrical energy, driven by the hot summer weather necessitating increased use of fans and air conditioning systems in university buildings.