

SDG 7

7.2.3. carbon reduction and emission reduction process



1-LED l lamps

2- Energy Efficient fan



3-LED bulb



3- Energy Efficient Air Condition

Example of Energy Efficient Appliances: LED lighting lamps, bulbs , fans and air conditions

All parts of the UOS are using the energy efficient appliances to save the energy for example, insulation, LED lighting and the deployment of sustainable technology. The reason of that because our electricity in unstable and bad.

Appliance	Total Number	Total number energy efficient applications	
LED Lamp	1176	1176	100%
LED bulbs	1923	1923	100%
Fan (ceiling and wall)	683	683	100%
Air condition	300		
		Average Percentage	100%

Elements of Green Building Implementation as Reflected in All Construction and Renovation Policies



1-Natural ventilation



2- Full natural daylighting



3- Existence of a building energy manager



4- Natural building materials

- 1- Many of UOS buildings have big windows and doors faced the north direction which considers the best direction that very nice wind comes from, with windows in the opposite direction. This provides a passage for air currents that provide natural ventilation.
- 2- Most of UOS buildings have big windows handy controlled with 100% tnenperency glass that provide a natural daylighting.
- 3- All UOS faculties have the building energy manager which is a part of the maintenance and service department.
- 4- Most of UOS buildings made of natural materials like bricks and wood.

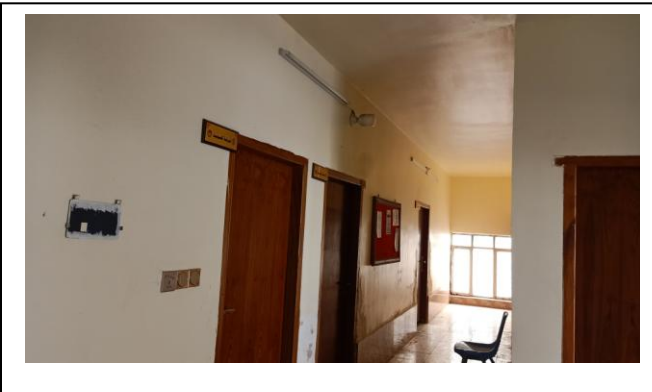
Greenhouse gas emission reduction program



1-Small water cooler



2- Using Shared cars



3- Shutting down of the electrical devices after the work hours



4- Turning off the Generations during their long time work

- 1- There is a program that deals with reduce the fugitive emission which is reduce the number of refrigerators and using the small water cooler.
- 2- Reduce the private cars and use shared cars which are already parked out of the university buildings.
- 3- Shutting down most of the electrical devices after the work hours which are after 2:30 PM.
- 4- Give a rest for the electricity generations during their works for cooling.

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The Total Carbon Footprint (CO₂ emission in the last 12 months, in metric tons)

$$\begin{aligned}\text{CO}_2(\text{electricity}) &= ((\text{electricity usage per year (kWh)}/1000)*0.84 \\ &= ((700540 \text{ (kWh)}/1000)*0.84 \\ &= 588.45 \text{ metric tons}\end{aligned}$$

CO₂ (bus)= 0 metric tons because our university colleges do not have any parking or road for cars, buses and motorcycle and no any vehicles can inter and travel inside the university colleges

CO₂ (cars)= 0 metric tons because our university colleges do not have any parking or road for cars, buses and motorcycle and no any vehicles can inter and travel inside the university colleges

CO₂ (motorcycle)= 0 metric tons because our university colleges do not have any parking or road for cars, buses and motorcycle and no any vehicles can inter and travel inside the university colleges

$$\text{CO}_2(\text{total})= 588.45 +0+0+0= 588.45 \text{ metric tons}$$

Carbon footprint in 2021= 588.45 metric tons