

Auditing report

I have examined the effect of HU loads on the electricity monthly bills by examining the power of loads and dividing the loads according to consumption and priority into high consumption load, low consumption load, low priority and high priority.

High consumption High Priority	High consumption Low priority	Low consumption High priority	Low consumption Low Priority
Educational laboratory devices. Motors- Elevators.	Air conditioners – Kettles – Heaters – coffee machines- electrical heaters - cooking equipment.	Lightening- PC - laptops-mobile chargers- fans- ventilating fans – projectors- Smart boards- printers- water dispenser -	CCTV – Telephone system- Access points

In my opinion, the most affecting the consumption of electricity and it can be dispensed with or replaced with what is saved and consumes less electricity is the high consumption low priority section, so the solutions are represented through the following points:

1- Regarding air conditioners:

- Air conditioners with less efficiency can be replaced with high-efficiency devices that contain an inverter, as they can reach the required cooling degree in record time while consuming the least amount of electricity.
(The most expensive solution).
- Electricity can be separated from the air conditioners from eight o'clock until ten o'clock in the morning, when the weather is beautiful and there is no need for air conditioners.
(Inexpensive solution).
- Sensors can be placed and connected to each other through a control network, where the air conditioners can be controlled remotely by mobile phone and the temperature can be set to 25 degrees Celsius.
(Medium expensive).

- 2- Regarding restaurant and cafeteria, we can Reliance on gas fitting as gas is more affordable than electricity.
- 3- All kettles, heaters and coffee machines can be removed and allocate one place in each building that contains a kettle and a coffee machine, and allocate a person responsible for preparing drinks, with a warning to be careful to save electricity by heating the amount of water according to the need and not to restart the boiler just when it is disconnected.
- 4- Electrical heaters can be replaced with solar heaters.
- 5- Solar panels located on HU roof can be replaced with high-capacity panels of more than 500 watt, so we can get higher capacity with the same area and save more electricity.
- 6- Regarding motors and elevators: Electricity consumption can be reduced by placing capacitors that increase the power factor and reduce the reactive power.