

# SUSTAINABLE DEVELOPMENT GOALS



## **7.2.5 Undergo energy reviews to identify areas where energy waste is highest?**

Yes, UBT conducts regular and comprehensive energy reviews to pinpoint areas with the greatest potential for energy savings. These reviews demonstrate the university's strong commitment to energy conservation and align with its dedicated energy policy, which focuses on minimizing waste and maximizing efficiency. Each review involves a detailed assessment of energy consumption across campus facilities, with particular attention to systems and behaviors that significantly influence usage—such as HVAC operations, lighting, and equipment performance.

A key element of these reviews is the integration of Building Management Systems (BMS) in newly constructed buildings. These systems use advanced light and heat sensors to monitor and automatically adjust energy consumption, providing precise data that enables UBT to

identify and address inefficiencies effectively. In older facilities, the university has initiated the installation of motion-detection and lighting sensors as part of a pilot program designed to measure and reduce energy use through sensor technology.

The findings from these reviews directly inform UBT’s energy-efficiency initiatives, including the upgrade of HVAC units to high-efficiency models, installation of motion-sensing lighting systems, and promotion of energy-conscious habits among faculty, staff, and students. Through these periodic evaluations, UBT continuously refines its energy management practices, ensuring ongoing improvement, reduced waste, and long-term sustainability across its campuses.

### **Supporting Institutional Evidence**

The following material provides visual documentation of UBT’s Building Management System (BMS), illustrating how real-time monitoring, automated control, and detailed dashboards are used during energy reviews to identify and reduce energy waste.

#### **Figure 7.2.5 A – UBT Building Management System Interface**

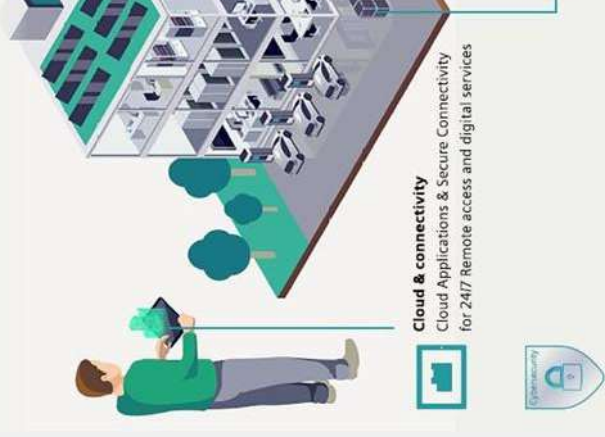
Screenshots from the internal BMS platform show real-time monitoring of HVAC and lighting performance, chiller-load management, and Enlighted sensor integrations that optimize energy use across Dahban and Corniche Campuses.

# Building Management System

To conserve energy the university will be using a building management system that tracks energy usage and uses automated AC switch on and off mode.

Operation department is responsible on track energy consumption and can remotely turn off and turn on when needed

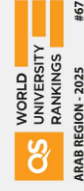
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# Why BMS integrated in UBT

## Energy Efficiency

**Monitoring and Control:** A Building Management System (BMS) continuously monitors energy consumption across various systems, including lighting and HVAC (Heating, Ventilation, and Conditioning).

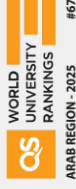
It ensures that these systems operate efficiently and are turned off when they are not

**Load Management:** The BMS adjusts energy loads based on occupancy and real-time demand to prevent energy waste.

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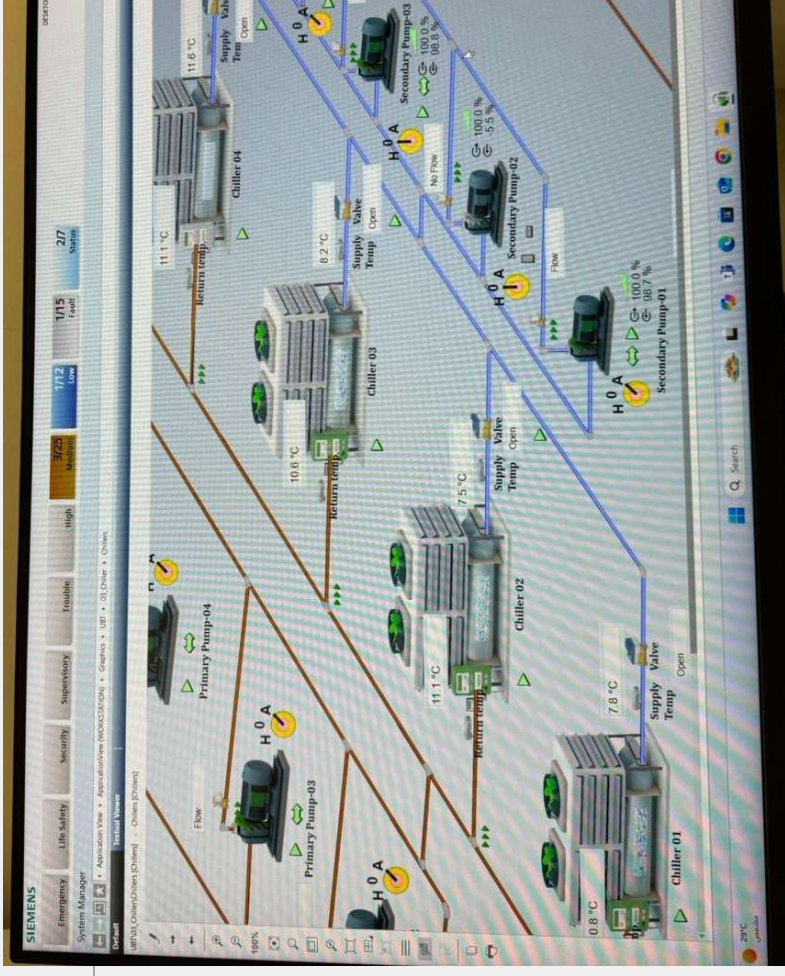
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# Chillers integration

HVAC BMS integration is that it provides the opportunity for energy optimization.

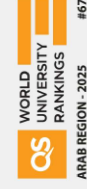
BMS can schedule the operation of the chillers as well as record the efficiency and power consumption of the chillers



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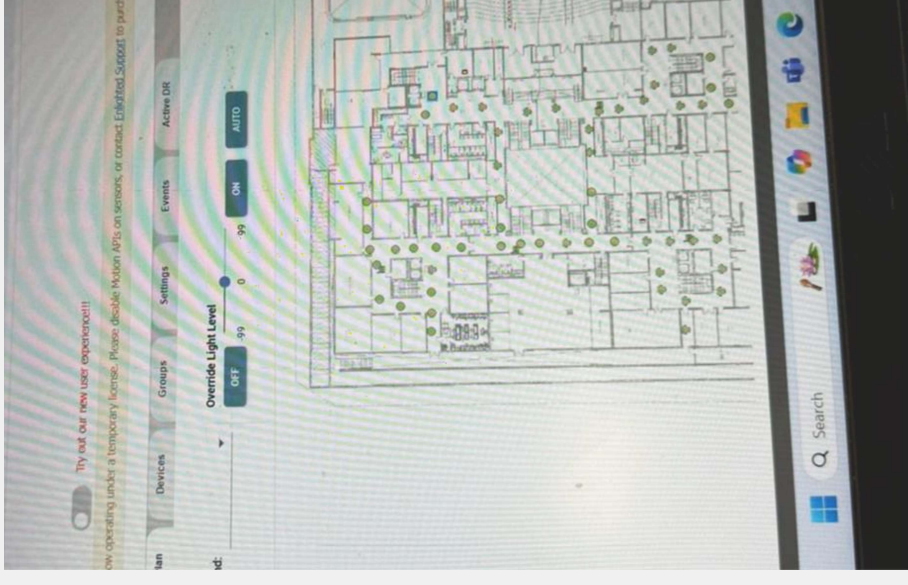


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# UBT Enlighted System

- Enhance the overall quality of lighting through the utilization of LED and sensor-equipped light fixtures.
- To promote efficient operations, Achieve energy savings in lighting of up to 90% and reduce maintenance costs for lighting by as much as 25%.

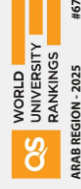
**UBT has implemented lighting sensors within its corridors to minimize energy consumption and automatically deactivate lighting in areas with low occupancy.**



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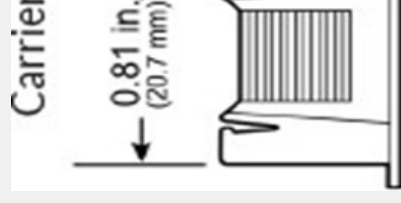
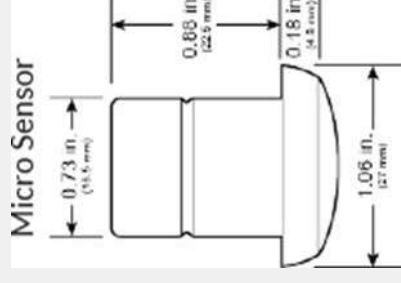
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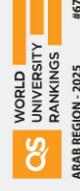
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