

## Energy efficiency plan in place to reduce overall energy consumption, 2020



JAN,01-2020 - PRESENT

**Mutah University**

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## Mutah University,

Mutah University is located in the town of Mutah in the Karak Governorate, 135 km south of the Jordanian capital Amman and 12 km from the ancient Karak Castle. The university was established by royal decree in 1981, and it is a two-pronged university, civil and military. The military wing began its work in 1984, and in 1986 the Council of Higher Education decided to establish a civilian wing in it.

The area of the university in its main site is 400 acres, 15 colleges, including 7 scientific colleges: science, engineering, medicine, pharmacy and nursing, and 7 humanities colleges: public arts, law, Sharia, educational sciences, sports sciences and a college for graduate studies, in addition to two deanships, namely: the Deanship of Scientific Research, and the Deanship of Student Affairs, and the university offers 105 academic programs, including 53 programs at the bachelor's level, 42 programs at the master's level, 9 programs at the doctoral level, and one program at the higher diploma level.

***Toward  
“Green University-Surplus Energy University”***

Mutah University is making many changes and procedures that ensure the rationalization of energy consumption within the university campus through all its operating units. The university has adopted many plans through a group of executive arms inside it to achieve rationalization of energy consumption and its security through environmentally friendly sources. Such as:

The Maintenance and sustainable Unit, through its department, continuously reviews all sources of energy production at the university campus to ensure that all university energy needs are ensured based on energy which is environmentally friendly and renewable sources. Examples of the action taken:

- ✓ All entire need of electrical power of Mutah University is secured through the university's photovoltaic system with a capacity of 5 megawatts installed capacity inside the university campus.
- ✓ The university adopted a plan to convert all facilities that need the thermal energy to use natural gas, which is environmentally friendly and has low emissions instead of diesel fuel.
- ✓ All university vehicles are powered by electrical power. It is forbidden to use conventional vehicles inside the university campus.

Also, the university was not limited with physical work to change the pattern of energy security and the diversity of sources, but the university, through the public education units, spread awareness among the university's employees and students about the need to provide and rationalize energy consumption and encourage constructive initiatives aimed at creating new opportunities to rationalize energy consumption.

Examples of rationalizing energy consumption on campus by staff and students:

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| <p><b>Improve Usage Information and Monitoring</b></p>   | <p>It is only possible to provide information on achievement against targets and the success of specific initiatives if we have the correct monitoring and reporting processes in place. This detail will also provide valuable feedback to users about their energy consumption levels.</p> |
| <p><b>Behavioral Change</b></p>                          | <p>The University has been successful in targeting specific behavioral change through campaigns. The provision of additional usage information will allow these campaigns to be more targeted and allow an element of competition to be included.</p>  |
| <p><b>Upgrade Existing Energy Supply Capability</b></p>  | <p>Switching to the natural gas instead of diesel oil</p>  |
| <p><b>Introduce New Low Carbon Sources of Energy</b></p> | <p>The University is keen to introduce diversification within the energy supply market and this is to include sources of renewable energy. This set of initiatives includes the introduction of solar energy.</p>  |
| <p><b>Encouraging constructive initiatives</b></p>       | <p>sun umbrellas, Lighting through the use of solar energy for the streets, and others.</p>  |

The table below shows the procedural plan based on the university's strategy to activate all procedures that ensure optimal use of energy, as the implementation of this plan began in 2020 and the work continues to achieve its goals in combination with the executive procedures until 2025. evidenced by the fifth goal of the procedural plan, which is concerned with developing the efficiency and of human, financial and material resources at the university in accordance with the best international practices.

[https://www.mutah.edu.jo/Documents/Action-Plan\\_ar.pdf](https://www.mutah.edu.jo/Documents/Action-Plan_ar.pdf)

| Strategies  | executive procedures   | Implementation responsibility   | The cost | Time schedule               | Performance indicators   |
|---|--|---|----------|-----------------------------|--|
| <p>Working on developing the university's facilities and using them effectively so as to contribute to increasing the university's production capacity, rationalizing expenditures, and using all available capabilities to achieve the university's goals.</p> | <ul style="list-style-type: none"> <li>• Completing the horizontal expansions of the infrastructure according to the standard specifications</li> <li>• Raising the operational efficiency of all university facilities, facilities, and services</li> <li>• Providing a highly reliable technical infrastructure for educational services and activities</li> <li>• Preventive and rehabilitative maintenance of facilities, facilities, and equipment</li> <li>• Controlling the movement of financial transaction procedures.</li> <li>• Management and collection of financial dues by the student and donors.</li> <li>• Managing the university's operating financial expenses.</li> <li>• Cash management.</li> <li>• Managing fixed assets and inventory in all units of the university Achieving operational efficiency for revenue collection.</li> <li>• Raising the efficiency and effectiveness of financial management.</li> </ul> | <ul style="list-style-type: none"> <li>• University administration</li> <li>• relevant departments</li> </ul> |          | <p>2020<br/>To<br/>2025</p> | <ul style="list-style-type: none"> <li>• performance appraisal reports</li> <li>• Written reports from the Vice President for Financial and Administrative Affairs, managers of investment units and feasibility studies.</li> <li>• Rationalizing energy consumption by no less than 20% of the base year and annually.</li> <li>• Rationalizing water consumption by no less than 20% of the base year and annually.</li> <li>• Completion of a waste recycling project</li> <li>• Studies on consumption rates</li> </ul> |

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|  | <ul style="list-style-type: none"><li>• Rationalizing electrical energy consumption by controlling the timing of turning on and off lighting and air conditioning units</li><li>• Rationalizing water consumption and recycling used in irrigation work</li><li>• Conducting the necessary studies to benefit from waste recycling</li><li>• Using modern technologies that support energy and resource conservation trends</li><li>• Carrying out technical studies for statistics and analysis of electrical energy consumption rates before and after the application of sustainability systems</li></ul> |  |  |  |  |
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Within the framework of the strategic plan of Mutah University, the university has taken upon itself to adopt the transformation in the university from an energy-consuming university to an energy-producing and environment-friendly university.

The transformation of University campus to energy-saving, high-efficiency campus has been started since 2018 until now.

