



University : Northern Technical University
Country : Iraq
Web Address : <https://www.ntu.edu.iq>

SDG 7.2: University measures towards affordable and clean energy

7.2.4 Does your university as a body have an energy efficiency plan in place to reduce overall energy consumption?

Northern Technical University (NTU) has adopted an energy efficiency plan as a critical component of its broader sustainability initiatives aimed at significantly reducing overall energy consumption across its campuses and facilities. This plan, meticulously crafted and strategically implemented, reflects NTU's commitment to enhancing resource management while minimizing its environmental impact. Here are key elements that describe the energy efficiency plan at NTU:

- ❖ Comprehensive Strategic Roadmap: NTU has developed a robust energy efficiency plan that provides a detailed roadmap for systematically advancing energy reduction efforts across all campus buildings and facilities. This comprehensive plan includes timelines, responsibilities, and outcome-oriented strategies.
- ❖ Commitment to Sustainability: Demonstrating strong leadership, the administration at NTU has established this energy efficiency plan to address energy waste, improve building systems, and instill a culture of energy conservation among students, faculty, and staff. Engagement and awareness campaigns will actively involve the university community in these efforts.
- ❖ Integration of Advanced Technologies: In alignment with its environmental stewardship goals, NTU's multi-year energy efficiency plan encompasses the retrofitting of existing buildings, the adoption of state-of-the-art energy-saving technologies, and the integration of renewable energy sources, such as solar and wind, to achieve significant reductions in energy consumption.
- ❖ Guiding Framework for Evaluation and Improvement: The energy efficiency plan serves as a guiding framework for consistently assessing and upgrading campus infrastructure. It includes the utilization of energy-efficient equipment and implements behavioral initiatives aimed at achieving quantifiable reductions in energy usage.
- ❖ Targets and Milestones for Continuous Improvement: With a visionary outlook for sustainable operations, the energy efficiency plan outlines specific energy reduction targets and sets achievable milestones for implementation. Additionally, it establishes a systematic cycle of monitoring, review, and adjustment to facilitate ongoing improvements.



- ❖ Demonstrating Responsible Resource Management: By following its carefully devised energy efficiency plan, NTU exemplifies its commitment to responsible resource management, results in cost savings, and supports environmental preservation. This plan positions the university as a role model for sustainable practices within the higher education sector.

By implementing and continually refining these strategies, Northern Technical University is poised to make significant strides in energy efficiency, ultimately contributing to a more sustainable future while enriching the campus community through education and engagement in environmental stewardship.

Northern Technical University (NTU) Energy Efficiency Plan Milestones (2022-2030)

Objective: Develop and implement a comprehensive energy efficiency plan to significantly reduce overall energy consumption across the university's campuses and facilities, aligning with the institution's commitment to sustainability and environmental responsibility.

2022-2023: Establishing the Foundation

- Launching NTU awareness campaigns to educate students, faculty, and staff about energy-efficient practices and their role in achieving the university's goals.
- Conduct a comprehensive energy audit of university buildings to assess current energy consumption and identify areas for improvement.
- Form an interdisciplinary energy efficiency task force comprising faculty, staff, and students to collaborate on plan development and implementation.
- Research and benchmark best practices from other universities renowned for successful energy efficiency initiatives.
- Set a clear baseline measurement for energy consumption across campuses.

2024-2026: Implementation and Infrastructure Upgrades

- Continuing NTU awareness campaigns to educate students, faculty, and staff about energy-efficient practices and their role in achieving the university's goals.
- implementation and Infrastructure Upgrades and begin phased retrofitting of older buildings with updated insulation, windows, and HVAC systems.

2026-2029: Continuing Infrastructure Upgrades

- Continuing projects to refine energy-saving technologies, such as smart building systems, efficient lighting, and renewable energy installations.
- continuing NTU awareness campaigns to educate students, faculty, and staff about energy-efficient practices and their role in achieving the university's goals.
- Collaborate with local energy providers to explore opportunities for integrating renewable energy sources into the university's energy mix.



- Establish a real-time energy monitoring and management system to track consumption patterns and identify deviations from targets.

2030: Achieving Sustainability Milestones

- Reach the mid-term energy reduction targets established in the energy efficiency plan.
- Celebrate the completion of major retrofitting projects that have significantly improved the energy performance of key university buildings.
- Showcase the university's achievements and progress at sustainability symposiums and conferences.
- Commence preparations for the next phase of the energy efficiency plan, with a focus on continued innovation and long-term sustainability.

Progress Assessment and Collaboration for Energy Efficiency at Northern Technical University (NTU)

To effectively monitor the implementation of its energy efficiency plan, Northern Technical University (NTU) will conduct regular progress assessments and make necessary adjustments to ensure alignment with its energy reduction goals. Maintaining open communication with stakeholders and fostering collaboration with external partners and experts in energy efficiency will further enhance these efforts.

Key Success Indicators

- ❖ Percentage Reduction in Energy Consumption: Measure the overall percentage decrease in energy consumption across all university buildings, providing a clear metric to gauge progress towards established energy reduction goals.
- ❖ Integration of Energy-Efficient Technologies: Track the number and type of energy-efficient technologies and practices adopted in the university's building systems, highlighting innovative solutions that contribute to enhanced energy performance.
- ❖ Engagement in Conservation Efforts: Evaluate the level of awareness and involvement of students, faculty, and staff in energy conservation initiatives. This could be measured through participation rates in energy awareness programs, surveys, and feedback mechanisms.
- ❖ Cost Savings from Efficiency Measures: Calculate the cost savings resulting from reduced energy consumption and improved operational efficiencies. This financial metric will demonstrate the economic benefits of the energy efficiency plan.



- ❖ Recognition and Awards for Sustainability: Document the recognition, certifications, and awards received for sustainable practices and energy reduction achievements. External validation of NTU's efforts will showcase its leadership in sustainability in higher education.
- ❖ Collaboration and Partnerships: Monitor the establishment of partnerships with external organizations, experts, and community stakeholders focused on energy efficiency. The number and impact of these collaborations can serve as a measure of the university's engagement in best practices and innovation in sustainability.
- ❖ Feedback Mechanisms and Adjustments: Implement mechanisms for gathering continuous feedback from the university community on energy efficiency initiatives, allowing for real-time adjustments and improvements based on input and suggestions.

By regularly assessing these key success indicators, Northern Technical University can ensure effective progress in meeting its energy reduction objectives while promoting a culture of sustainability and collaboration within the academic community and beyond. This strategic approach not only positions NTU as a leader in energy efficiency but also supports its overarching mission of environmental stewardship and sustainable development.









THE IMPACT
RANKINGS











Charge parking at NTU campus





Renewable energy that reduces purchased electricity for Heating water, HVAC systems, and lighting

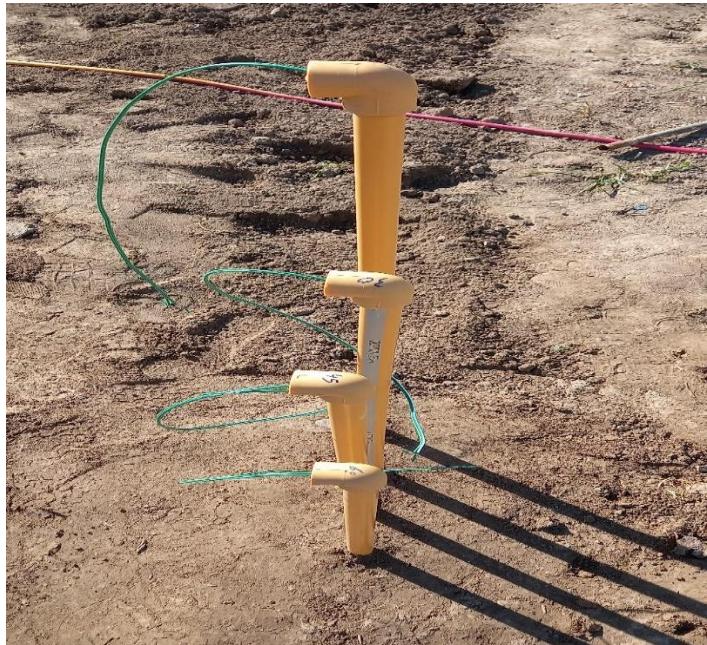




Adopt healthy and sustainable transportation options (shuttle bus, bicycles, and friendly path-ways)

Irrigating plants at the Northern Technical University using Internet of Things technology (IOT) is one of our programs that has been implemented on our campuses for saving water:





Waste recycling program that implemented by Northern Technical University as well to reduce the wastage and protect the environment and reuse it in fertilizing plants.







For more information, please click on [wastage recycle](#).

In addition, many Impactful programs on Energy and climate change have been implemented. These are some examples of it:

No	Programs	Scope	Total Participants	URL	Short Description
1	The second international scientific conference entitled Women and Climate Change	international	100	https://ntu.edu.iq/ar/%d8%a7%d9%84%d8%b3%d9%8a%d8%af%d8%a9-%d8%b1%d8%a6%d9%8a%d8%b3-%d8%a7%d9%84%d8%ac%d8%a7%d9%85%d8%b9%d8%a9-%d8%a7%d9%84%d8%aa%d9%82%d9%86%d9%8a%d8%a9-%d8%a7%d9%84%d8%b4%d9%85%d8%a7%d9%84%d9%84%d9%8a%d8%a9-553/?lang=en	With support from the United Nations Development Programme, the climate change consequences are discussed





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Furthermore, many research have been published by Northern Technical University under the caption of ""Northern Technical University, Iraq "& clean energy"" you can refer to the link below for more information:

https://scholar.google.com/scholar?q=%22Northern+Technical+University%2C+Iraq+%22%26+clean+energy%22&hl=ar&as_sdt=2007&as_ylo=2022&as_yhi=2023