



Transforming our relationship with nature is key to a sustainable future



Mrs. Mouna Marrakchi



1. Research and academic activities:

The University of Tunis El Manar (UTM) is conducting a number of research projects on clean energy production, mainly through the National Engineering School of Tunis (ENIT) and the Higher Institute of Applied Biological Sciences of Tunis (BeB, ISSBAT).

- The Higher Institute of Applied Biological Sciences of Tunis (ISSBAT) is involved in a project focusing on the production of clean energy through the BIOTEC H2 International Joint Laboratory, to be launched in March 2022. The research activities of this laboratory, which brings together Tunisian (ISSBAT, INRAP and FSB) and French (MIO and TBI) researchers with multidisciplinary skills, focus on the production and storage of biohydrogen and methane from fermentable agri-food by-products. ISSBAT has an anaerobic dark fermentation platform consisting of two automated fermentation lines of 2L volume and a 10L fermenter. The aim of this project is to develop an efficient bioprocess for converting organic waste into clean energy carriers. It represents a significant step forward in the field of renewable energy.





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- University of Tunis El Manar, École nationale d'ingénieurs de Tunis : Chiheb Bouden (Materials, Optimisation and Energy for Sustainability Laboratory) http://www.edsti.enit.rnu.tn/fr/structures_02.php?id=5. Creation of a professional Master co-constructed in partnership with Technical University of Munich (TUM), Mediterranean Centre for Renewable Energies (MEDREC), Société Tunisienne d'Electricité et de Gaz (STEG), Agence Nationale de Maîtrise de l'Energie (ANME), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.
- A Tunisian-Bavarian hub on green hydrogen at ENIT, which aims to popularise H₂ technologies, strengthen the link between the academic world and the socio-economic environment, contribute to the development of a strategic approach to promote Tunisia's position as a leader in the field of green hydrogen and the associated value chain, and explore the opportunities offered by using the country's renewable energy potential.



2. Photovoltaic solar stations as part of a clean energy transition program

The University of Tunis El Manar (UTM), through institutions like the Higher Institute of Applied Biological Sciences of Tunis (ISSBAT) and the National School of Engineers of Tunis (ENIT), is advancing sustainability by participating in a transformative energy transition program. This initiative involves equipping public facilities with photovoltaic solar stations for self-sustained electricity production and implementing energy efficiency measures, enabling these institutions to lower energy consumption and reduce electricity costs. This program aligns with UTM's commitment to sustainable infrastructure and its active contribution to the Sustainable Development Goals.



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3. Student entrepreneur Hub of the University of Tunis El Manar:

The UTM Student-Entrepreneur Hub is actively supporting the Sustainable Development Goals, especially SDG 7, by incubating projects that promote sustainable energy use. A notable project, *Optinergie* by EyaTouzri, provides a complete solution to optimize energy consumption through intelligent supervision. In line with SDG 7, *Optinergie* features real-time monitoring to detect deviations, predictive algorithms to forecast energy needs, and remote management to reduce waste. With functions like intelligent prediction, user awareness, and automated control, *Optinergie* empowers businesses to reduce their carbon footprint, lower energy expenses, and contribute to a sustainable energy future.





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Prof. Kamel Ben Saad, Director of the ENIT, UTM

"ENIT: Pioneering Energy Efficiency and Renewable Energy Innovations at UTM"



Since its establishment, the National Engineering School of Tunis (ENIT) has consistently been a responsible institution, recognized as a leader not only in engineering education but also in integrating society's environmental concerns into its strategic objectives. Its contributions to sustainable development issues are of paramount importance to the institution.

Energy Efficiency Initiatives

In this regard, ENIT has engaged in several projects to promote energy efficiency and regularly undertakes activities to raise awareness about environmental challenges.



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Energy Efficiency

Through the MEDREC project, a photovoltaic solar power plant with a capacity of 71 kWc was installed on the roof of the Osman El Bahri Tower.

Furthermore, in 2021, ENIT joined the Energy Transition in Public Institutions (TEEP) project by the National Agency for Energy Conservation (ANME). As part of this initiative, 146 kWc of solar panels were installed on the fourth level of the school in 2024.

These two installations collectively cover approximately 48% of ENIT's electricity needs.

Under the TEEP project, plans are underway to replace:

All halogen bulbs and fluorescent tubes with LED technology equivalents.

Old air conditioners with energy-efficient class 1 models.



Raising Awareness of Environmental Issues

To raise awareness among its students, faculty, and staff about environmental issues, ENIT organizes annual action days that have become traditions, such as:



LABEL ENIT: A day dedicated to education and awareness on the theme of aesthetics and cleanliness at ENIT and its surroundings.

GreENIT: A day focused on raising awareness of the importance of trees and their role in the environment.



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These initiatives reflect ENIT's commitment to fostering an environmentally responsible community and promoting sustainable practices.