# 7 AFFORDABLE AND CLEAN ENERGY



GOOD HEALTH AND WELLBEING

### RESEARCH

#### Not All About the Money

One of the Impact Projects supported by the Division of Innovation & Sustainability has resulted in the research article, <u>'Not All About the Money:</u> The Role of Financial Information in Promoting Residential Rooftop Photovoltaics'. The research by Mr. David Boaz, M.A. student from the School of Environmental Sciences, under the supervision of Prof. Ofira Ayalon.

# Renewable Energy and the Centralization of Power

Hilah Segal-Klein, a PhD student from the Department of Natural Resources and Environmental Management, co-authored an article on the Lake Turkana Wind Power project in northern Kenya. The study explores the sociopolitical challenges faced by local pastoralists and their relations with the political center, offering insights into the political effects of renewable energy in developing countries. The authors conclude that SDG7 cannot be achieved in isolation and must be pursued alongside other SDGs.



Solar Roofs (Credit: Volta Solar)

## COMMUNITY ENGAGEMENT Harnessing the Wind

Adv. Einav Aaron and Eng. Ori Keshet-Lan's initiative seeks to transform energy production by utilizing wind turbines as an eco-friendly alternative to conventional energy sources. By strategically installing wind turbines on marine infrastructure, they maximize wind speeds and minimize land usage, ensuring efficient energy generation. This groundbreaking approach not only addresses the urgent need to reduce carbon emissions but also promotes a sustainable future. Their wind turbines provide a clean, renewable energy solution that supports global environmental goals and

mitigates the effects of climate change.

#### Unlocking Safe, Eco-Friendly Hydrogen Storage Beneath Israel's Seas

Geological hydrogen storage is already in use globally, offering an eco-friendly and safe solution. In Israel, beneath the sea, an ideal salt layer exists for safe and ecological hydrogen storage. A project, led by Bogdan Plotnikov, will map and analyze these layers to ensure safe, environmentally friendly, and cost-effective storage for decarbonization without CO2 emissions. Data collected will guide decisions on the best storage locations and their verification.

## LEARNING AND STUDENTS

'Renewable Energies' taught by Prof. Ofira Ayalon focuses on the principles of energy production from renewable sources such as solar, wind, water, geothermal, and biomass. It explores energy conservation, efficiency principles, and green



Prof. Ofira Ayalon (Credit: Ofer Hajayov).

construction. Additionally, the course delves into possible policy measures required to implement renewable energy in the economy. Prof. Ayalon also teaches the course 'Earth, Wind, and Fire: Environmental Challenges in the 21st Century'. Both courses provide valuable knowledge and insights into renewable energy sources and their sustainable utilization.

#### New! MA Program Specializing in Energy Policy Management

The new Energy Policy Management program offers a specialization designed to deepen and broaden the expertise of professionals in the energy sector, both nationally and internationally. The curriculum emphasizes social sciences and management, covering areas such as energy efficiency, the development and promotion of renewable energy, energy, and environmental economics, and the analysis of environmental, economic, and regulatory aspects of energy resource development. The program also aims to prepare students for leadership and policy-making roles in industry and to foster research in the field.

#### **Energy Economics**

A new course, 'Energy Economics', taught by Dr. Ruslana Rachel Palatnik from the Department of Natural Resources and Environmental Management, explores the role of energy in the economy and the key characteristics of energy supply and demand.

## OPERATIONS

## **Photovoltaic Roof Panels**

The techno-economics of photovoltaic panels and electricity storage systems are being evaluated by the University to enhance clean energy use and reduce carbon emissions.