7 AFFORDABLE AND CLEAN ENERGY

GOOD HEALTH AND WELLBEING

RESEARCH

Trigo Solar: Agri-voltaic Solutions

A study aimed to explore promising methods to integrate a solar system into the cultivation of barley and wheat will enable Trigo Solar to develop viable and scalable Agri-voltaic solutions for rain-fed crops that are combining cost-effectiveness with ease of deployment. While traditional Agri-voltaic solutions focus on optimal sharing of the sun, Trigo Solar focuses on water management. Ph.D. student, Nikolai Govta, worked with his advisor, Prof. Tamar Krugman, curator of the Lady Barbara Davis Wild Cereal Gene Bank (ICGB) to conduct feasibility testing and carry out a report to assist Trigo Solar.

Preventing Bat Death by Wind Turbines

An innovative facility, developed by Prof. Nir Sapir and Ph.D. student Yuval Werber from the Department of Evolutionary and Environmental Biology in collaboration with researchers from Tel Aviv University, the Wingo Energy company, and the entrepreneur Gadi Harali, is designed to prevent the killing of bats by wind turbines - a problem that currently prevents the efficient and continuous operation of the turbines that produce energy.

Prof. Tamar Krugman and her team, The Lady Barbara Davis Wild Cereal Gene Bank (Credit: University of Haifa)

Wildlife Mitigation Technologies for Wind Energy

Published in *Energy Policy*, 'Institutional Acceptance of Wildlife Mitigation Technologies for Wind Energy' by Dr. David Katz, of the Department of Geography and Environmental Studies, and his colleagues from Hebrew University, shifts the focus from individual preferences to the socio-political dimension of acceptance. It explores stakeholders' revealed preferences through a case study involving a Shutdown On Demand (SOD) technology to mitigate wildlife harm in a proposed wind farm near a bird migration route.

PUBLIC ENGAGEMENT

A new report regarding A 'net-zero' economy

Adv. Orin Shefler, from the Maritime Policy and Strategy Research Center, focuses on future needs and methods for the production and generation of energy in the sea for Israel. The underlying assumption is that Israel is currently a producer and exporter of natural gas, with sufficient natural gas reserves to sustain itself and its neighbors in the near future. He writes that development of additional natural gas fields in the sea will create new opportunities for transitioning to a 'net-zero' economy.

Solar Aspirations and Realities on the ground

In a paper, part of an annual report available for the public and stakeholders and produced by the Maritime Policy and Strategy Research Center, Dr. Elai Rettig, describes the numerous benefits of renewable energy for Israel spectrums in the country. However he believes that the 2030 renewable energies goal is unattainable at this point and there is a need for more time to develop technologies to assist and achieve the 30% usage of renewable energy goal.

LEARNING AND STUDENTS

Teaching Energy Challenges and Solutions

'Renewable Energies' a course 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 construction. Additionally, the course delves into possible policy measures required to implement renewable energy in the economy. Prof. Ayalon also teaches '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.

Taiwanese Student Delegation

UofH recently welcomed the first student delegation from Tunghai University, led by the head of the Taipei Economic and Cultural Mission to Israel, H.E. Ya-Ping (Abby) Lee. The 23 Taiwanese students participated in the International School's festive opening ceremony of the Entrepreneurship Summer School Program. The tour was led by co-founder of EcoWave and UofH alumni Inna Braverman.

OPERATIONS

Carbon Emissions Report

As a first step in our attempt to further reduce the university's impact on the environment, the administration commissioned an assessment of its carbon footprint. The report helps to establish a baseline that will inform our plans for further reducing our facilities' emissions. The analysis was conducted according to the GHG Protocol guidelines –and relates to the carbon footprint of the three campuses and associated facilities, including dormitories, cafeterias present in the campus, as well as other rented spaces such as post office, bank, etc.

Piloting Energy solutions

Several new energy-efficient pilot projects were launched on campus this year, including the installation of six new electric car charging stations, as well as two "solar benches" that both light up in the dark and allow students to charge their phones while sitting.

7.5% reduction in Electricity Use

This year witnessed an impressive 7.5% decrease in campus energy consumption compared to the pre-COVID-19 shutdown period, showcasing our commitment to sustainability and efficiency.