7. Affordable and Clean Energy

Scholary Output:
127

International Collaboration:
43

Field-weighted Citation Impact:
1.65

Number of Current Projects:
6

Number of Annual Events:
15

1.
Energy Use

ÖzU continues to operate onsite tri-generation plants at the campus and it has installed solar PV across the rooftops of the University building portfolio, maximizing the use of on-site renewable energy generation wherever practical.

In 2022, ÖzU consumed 9,000,000 kWh of energy. Approximately 122,000 kWh of electricity was saved by using renewable energy sources on the university campus. It is expected that this savings will increase to 565,000 kWh (4X) in 2023 and be sustained in the coming years.

The total solar energy capacity on the ÖzU campus is 378 kWp. Every saving in our operational expenses, particularly in energy costs, contributes to the creation of funds for the Equal Opportunities in Education Scholarship (EFEB) at our university. The savings in 2022 and beyond are equivalent to approximately 1-2 EFEB student scholarships.

ÖzU has several applications to restrict its carbon footprint including the use of wind power and solar panels on all the non-green roofs, as well as a trigeneration system for heating and cooling. It has recently started using a web-based carbon footprint calculator and carbon management software that provides the capacity to measure, track, report and manage its carbon footprints based on the guidelines of "The Greenhouse Gas Protocol". Özyegin calculates Scope One and Two Emissions: emissions intensity and emissions reductions, using 2018 as the base year. ÖzU carbon emission calculation shows 6.316 tonnes Co2 for the year 2022 with 0,931 tonnes per person Co2 calculations.

2.
The Energy Efficiency and Environmental Sustainability of Housing (EEESH) Working Group

ÖzU Architecture faculty Ebru Ergöz Karahan is one o the coordinators of The Energy Efficiency and Environmental Sustainability of Housing (EEESH) Working Group under European Network for Housing Research. The working group provides a forum for research-based discussions about specific aspects of energy efficient housing, as well as wider environmental sustainability aspects of housing. It aims to look at key concepts and methodologies; technologies and policies, applications for different stages in the housing process i.e. planning/ policy, design, certification, regulation/ legislation, construction, occupation, renovation/ demolition, pre- and post-occupancy evaluations etc., lessons and implications for policymaking and industry.

3.

University-Business World Cooperation Award

Özyegin University has been honored with the "University-Business World Cooperation Award" in the "Institutional Outstanding Achievement" category at the YÖK Outstanding Achievement Awards 2022 organized as part of the Opening Ceremony of the 2022-2023 Academic Year for Higher Education.

The prestigious award was conferred in recognition of an exemplary project led by Dr. Göktürk Poyrazoglu, a faculty member at the Electrical-Electronics Engineering Department. The project "Harvesting Energy Efficiency in the Electric Distribution Sector (Harvest Phase 2 Project)- Transformer Efficiency Work Package (TRAFORM)" was implemented in cooperation with eight electric distribution companies and the Electric Distribution Services Association with the approval and support of the Energy Market Regulatory Authority (EPDK).

4.

Turkey's Energy Efficiency Outlook in Industry' Project

Özyegin University's Center for Energy, Environment and Economy (CEEE/EÇEM) and Turkish Industry and Business Association (TÜSİAD) Jointly Launch 'Turkey's Energy Efficiency Outlook in Industry' Project

EÇEM and the Turkish Industry and Business Association (TÜSİAD) are collaborating on a new project called "Turkey's Industrial Energy Efficiency Outlook". The kick-off meeting was held at TÜSİAD Headquarters on Sep. 13, 2023. The goal of the project is to raise awareness about energy efficiency through the project, to highlight the potential for energy efficiency and savings in the leading sectors of our industry by comparing them with international references, and to contribute to the process of transitioning from energy savings to efficiency by preparing guidelines.

5.

LEGOFIT Project

Özyegin University is a partner in the LEGOFIT project which aims to work adaptable technological solutions based on early design actions for the construction and renovation of Energy Passive Homes.

The project is coordinated by Demir Enerji and is composed of 19 partners representing 10 countries, bringing together a multidisciplinary team, involving academic partners, small, medium and large enterprises from the energy and building sector and large European networks. Due to the residential building characteristics, it is urgent to promote actions aimed at increasing the share of both existing buildings and new dwellings built with higher efficient standards and promoting energy renovation strategies at a large scale.

The LEGOFIT project aims to revolutionize energy efficiency in multi-family residential buildings by designing, implementing, and validating a flexible and integrated approach. This innovative approach is tailored for renovations but will also be adapted for new constructions during the project. It addresses long-standing challenges faced by LEGOFIT partners over the past decade in implementing energy-efficient projects in residential buildings.