Iceland Liechtenstein Norway grants

Norway grants

Funded by the European Union

R.E.S and Circular Economy Applied in an Academic Community as an Example for Smart Sustainable Development

University of Life Sciences "*King Mihai I*" from Timisoara, Romania

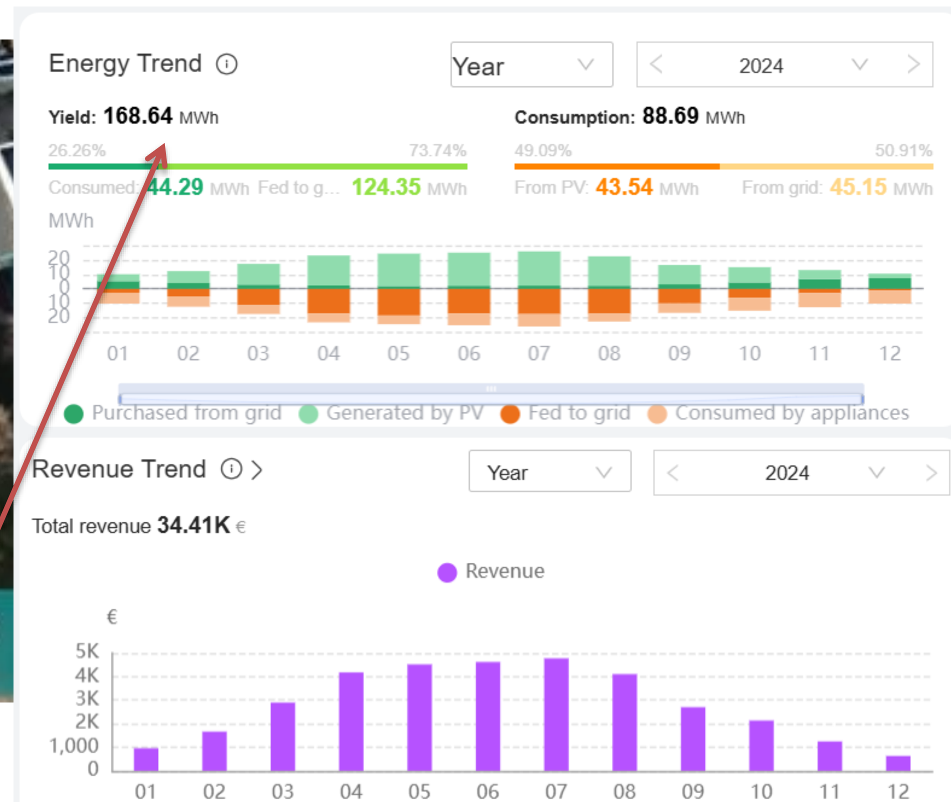
ULST

ULST installed a **150 kW_p** **photovoltaic system** **and** **a** **biogas plant** **of 100 kW_e** for a total electric energy production of over **800 MWh per year**.

In order to cover the increasing daylight electric energy campus consumption a state-of-the-art roof-top PV system have been installed on the campus buildings.

Production of energy from **PV: 170 MWh / year 2024.**

An important design factor was **to not exceed the campus consumption** during the low energy adsorption period (i.e. summer time).



Production of PV in 2024

Biogas Plant

Approx. **3000 tons per year available feedstock for bioenergy production**

Feedstock available in campus or in the farms in the near proximity of the campus:

- **animal waste** from livestock farm (4-5 tons per day available);
- **plant biomass,** such as plants and crops residues from the experimental lots;
- **other organic materials** resulted from research activities **in the campus**;
- **food residues** from campus canteen;
- **organic residues** available at 0 costs **in the area** of Timisoara.

CH_4 green house effect 25 x than CO_2

Budget of RES-CIRCULAR project:
1 122 514 000 EURO,
GRANT from Innovation Norway:
954 000 Euro

Total expenditures: 2 130 430 Euro, from which:
Biogas plant: 1 810 470 Euro,
Photovoltaic system: 178475 Euro
Total for constructing energy system: 1988945 Euro

Total **gross energy obtained in PV system + biogas**, approximately **2000 MWh/year.**
Approx. **3000 tons per year organic wastes converted into feedstock for bioenergy.**
Average methane yields to be obtained up to **2 million m^3/year.** Biogas converted in the cogeneration unit delivering up to **650 MWh electricity + 800 MWh** thermal energy per year.
Digestate resulted from the biogas plant, used as organic fertilizer, closing the loop in the circular bioeconomy

Benefits:
environmental health, balanced energy system, education&training, example for good practice, development of the green economy for a sustainable society

ULS TIMISOARA

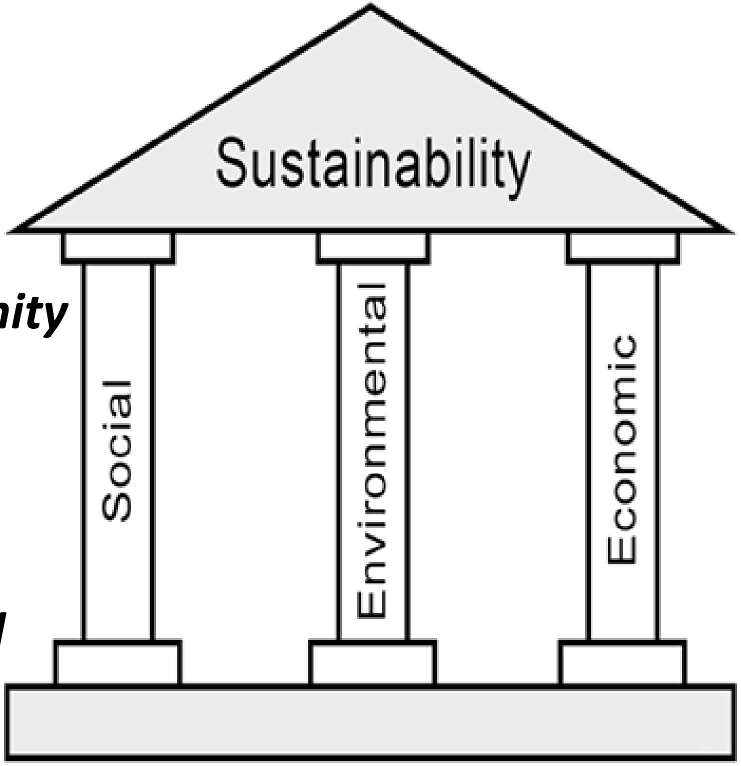
Support the economic, environmental and social pillars for **sustainable development.**

Implemented projects to create **sustainable self-sufficient energy** production and consumption system with a **circular economy** approach.

ULST contributes to the **modernization of the education system** for sustainable development in the one-health concept.

Develops models to be replicated in similar scenario, university as starting point to **scale up new sustainable business models.**

Academic community
to Town
to County
to Regional
to National
to International

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