

# INnovative Practices in Renewable Energies TO Improve RURAL Employability

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**TECHNICAL MEETING AND STUDY CASES** 

Summary: • Technical meeting at the UJI •National study cases • International sudy cases – students abroad

TECHNICAL MEETING AT THE UJI



IN2RURAL 5<sup>th</sup> Transnational Meeting was held in Universitat Jaume I (Spain) from 6<sup>TH</sup> to 8<sup>th</sup> March 2017. During the meeting, the representatives of Hungary, Romania and Spain monitored the ongoing activities (intellectual outputs and students' mobility) and reviewed the advances to promote the impact, dissemination and sustainability of the project.

The meeting counted with the participation of Noémi Fiser (Eszterházy Károly University of Applied Sciences), Lenor Hernández (project coordinator, Universitat Jaume I), Liliana Topliceanu (Universitatea Vasile Alecsandri din Bacău), Valerica Rusu (General Electric) and Zsuzsanna Kray (UMANS). In addition, there was a special session to meet the IN2RURAL students that were in Castellón during the meeting.



NATIONAL STUDY CASES

SPANISH STUDY CASES IN UMANS



Francisco Vidan, student of Engineering in Industrial Technologies, is developing his case study in UMANS, one of the SME that is partner of the project. His work aims to identify the most appropriate solution to provide energy access to an isolated house of Vistabella, a village with 500 inhabitants in Castellón highlands. To do so, he is considering different alternatives, such as photovoltaic, small wind and biomass, from a triple perspective (technical, economic and social).



Ivan Segura, student of the Master in Industrial Engineering, is also hosted by UMANS to prepare his IN2RURAL case study. During the needs analysis phase, he has detected the interest of the Municipality of Vistabella in promoting the use of biomass in municipal buildings. To this end, Ivan is preparing a comparative study about the advantages and disadvantages of central and distributed biomass boilers for various municipal buildings and from a rural development perspective.

ROMANIAN STUDY CASES IN GENERAL ELECTRIC



Cosmin Bucur is student in Economic Engineering in the Mechanical. The goal of its project is building a renewable energy system composed of a wind turbine for providing electricity in the rural area of Pincesti for power supply of a guest house and for a water pump used for irrigation. The wind turbine has to be designed so that it can supply electricity for the 10 room guest house and for the water pump used in agriculture, fish farming, fishing and different recreational activities.



The objective of Mihai Comanescu project is to design and apply a photovoltaic system that is able to accommodate a pig farm, located in the North-Eastern part of Romania. The energy must suffice the use of electricity for 7 days a week. In a similar time, all energy sources have some effect on our condition. This project makes sure to take them all into consideration, in order to have the slightest negative impact over the soil, air, generally the rural area in which the photovoltaic system will be installed.



### HUNGARYAN STUDY CASES IN GENERAL ELECTRIC



Installing biomass-fired boiler in the Forest Budapest LTD.'s head office building, a project developed by Benjámin Korcz. The objective of the project is to design a biomass combustion boiler. The study, conducted at Szentendre - located within the Military Academy NCO. An important aspect is the economic analysis, which includes different effects on the environment. Not only they have been

carefully monitored for environmental and financial impacts but has been also created a picture of social impact of boiler operation.



The aim of Dóra Lénárt's study is to investigate the use of biomass and other renewable energy resources at NÖDIK. Up to day one can see there are various ways to get greener.

The NÖDIK owns 40-50 hectares of forest from which a considerable amount of woodchips could be produced. In addition some agricultural by-products are likely to be usable as well.

INTERNATIONAL SUDY CASES – STUDENTS ABROAD.

SPANISH STUDENTS

#### Javier Castelló, UJI student in Hungary.



Case study title: The role of biomass at GAIA Eco-village and its utilization in establishing new-eco-houses.

"Probably the best academic experience, improving my level of English and my ability to adapt outside of my comfort zone, but also on a personal level, I never thought that I could meet so many people from so many countries in such a short time and learn so many things in just a month. I really like to

travel and learn, the In2Rural program offers these two things at the same time, therefore an experience that I recommend to all students."

### Mario Muñoz, UJI student in Romania

Case study title: Photovoltaic with hybrid wind energy system for an isolated consumer.



"I found this project to be much more enriching for me that expected, to grow as a professional and feel I'm improving, even if it is a small part, of the world. Romania's landscape and culture is quite different from Spain, but that's what make it even more interesting to me"

**ROMANIAN STUDENTS** 

### Corneliu, UB student in Spain



Case study title: Differences between 2 PV systems in irrigation

"In2Rural projet gave me the opportunity to improve my technical, linguistically and informational abilities and not the last, me as a person. Moreover, it gave me the possibility to learn about Spanish culture and work ethic thanks to Heliotec team and the teachers involved".

## Mouhamad Athena Georgiana, UB student in Hungary



Case study title: Agricultural biomass production for bioenergy in integrated RE systems of small agricultural enterprises

"That project was a new experience for me in a field of great interest. I think that renewable energy will become the main source of energy in a near future ".

HUNGARIAN STUDENTS

### Vivien Balog, Eszterhazy Karoly student in Spain



Case study title: Development of renewable energy models for children education.

"It is important that we teach kids about renewable energies early. This is interesting way to learning English. I deal about three types of models (solar, wind and hydraulic). We can show how do renewable energies work, and children can improve their knowledge about this topic. It is essential that we inform the future generations about renewable energy sources importance and kids are aware of we must take

care of our Earth".

### Dora Okos, Eszterhazy Karoly student in Romania



Case study title: Study concerning optimization of photovoltaic lighting system in Margineni village. "The life in Romania is very interesting for me, meet new people and new cultures is always a pleasure. I gained many friends from Romania, and I am glad to be a member such a cohesive team for this two months".

This two months give me a lot of experience and memories, and also my languegae skills is becoming more practical, what nowadays a very important thing.

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