



GREEN INNOVATORS

Energy of Future Generations



NextGen Energy



www.nextgenenergy.sk



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1. Introduction of our project

In September 2024, youth representing five European organizations, NextGen Energy (Slovakia) in collaboration with four partner organizations: ASOCIATIA EDULIFELONG (Romania), Horizon Resource Network (Germany), Vision Gen (Lithuania), and FUNDACJA WAŻNE RZECZY (Poland), gathered in Podhájska, Slovakia, for a six-day youth exchange program focused on renewable energies. The aim was to provide participants with an engaging learning experience centered around renewable energy solutions and the development of key competencies under the Erasmus+ framework.

During the program, participants explored various renewable energy sources such as solar, wind, hydropower, and geothermal energy through a mix of workshops, discussions, and site visits. Non-formal learning methods were used extensively, encouraging teamwork, critical thinking, and active participation. The event also featured self-reflections and cultural exchange nights, fostering mutual understanding and appreciation of the participating countries' traditions and values.



2. Renewable energies - Overview

RENEWABLE ENERGIES – WHAT IS IT? WHY IS IT BETTER?

HOW CAN WE IMPLEMENT ITS USE IN OUR LIVES?

Description: This interactive presentation provides a comprehensive introduction to renewable energy. It explains the different types of renewable energy (e.g., solar, wind, hydropower), their benefits compared to fossil fuels, and the role they play in reducing carbon emissions and combating climate change. The session also explore how individuals and communities can incorporate renewable energy solutions into their daily lives.

Objective: Equip participants with foundational knowledge on renewable energy, highlighting its environmental, economic, and social benefits.

Links:

1. [Vocab](#)

2. [Presentation](#)

3. [Kahoot](#)

3. Solar , hydro, wind, geothermal and biomass power

Description: In this role-playing exercise, participants simulate the process of generating electricity from renewable sources—solar, wind, and hydropower. Divided into three groups, each group will act out a different power station:

Group 1 (Solar Power): One person acts as the sun, shining "light" (using a flashlight or gestures) onto others who represent solar panels, transferring "energy" by passing a ball or object.

Group 2 (Wind Power): Participants mimic wind turbines by spinning and transferring energy as they "capture" wind power, passing it on to the grid.

Group 3 (Hydropower): Acting as a flowing river, participants will simulate the movement of water turning turbines to generate electricity.

Group 4 (Biomass and Geothermal):

Since both sources of energy are based on heat-generated power, participants simulate water

Objective: Teach participants how different renewable energy sources work through physical, engaging activities that reinforce energy generation concepts.

4. Responsible walk

Description: Participants take a guided walk around the venue or nearby community to assess potential sites for renewable energy installations. In small groups, they look for locations that could support solar panels, wind turbines, or small-scale hydropower systems. Participants document their findings, noting factors like space, sunlight, wind conditions, and proximity to water sources. Each group drafts a proposal outlining the potential benefits and costs of implementing renewable energy at the selected sites.

Objective: Encourage participants to actively engage with their surroundings and think critically about the practicalities of implementing renewable energy solutions.

Links:

1. [Template for the activity](#)
2. [Grading and feedback template](#)

5. Geothermal and biomass energies

Description: This session introduces participants to geothermal and biomass energy, two less commonly discussed forms of renewable energy. Through presentations and group discussions, participants learn how geothermal energy harnesses heat from the Earth and how biomass energy uses organic materials (e.g., plant matter, agricultural waste) to produce energy. Real-life examples of geothermal plants and biomass usage in rural and urban areas are explored, along with environmental considerations and technological innovations.

Objective: Expand participants' knowledge of alternative renewable energy sources and encourage them to consider diverse energy solutions.

Links:

1. [Video](#)

6. Hydro power plant in Želiezovce

Description: Participants visit the hydropower plant in Želiezovce to see renewable energy in action. The guided tour explains how the plant generates electricity by harnessing the power of flowing water. Participants learn about the technical aspects of hydropower, the infrastructure required, and the environmental impact. The tour also includes a discussion of the challenges and benefits of operating a hydropower plant in a modern energy system.

Objective: Provide hands-on experience and a deeper understanding of hydropower's role in renewable energy generation.

7. Simulation

Description: Participants are divided into six groups, with each group representing a different energy source (solar, wind, hydropower, geothermal, biomass, and nuclear). One group, consisting of five participants and facilitators, acts as the audience—representing the human community impacted by energy decisions. Each group advocates for their assigned energy source, presenting its benefits and addressing potential concerns, such as environmental impact, sustainability, and feasibility. The challenge concludes with each group attempting to convince the facilitators to join their advocacy group.

Objective: Foster critical thinking, advocacy, and collaboration as participants defend the merits of their assigned energy source while exploring synergies between different renewable energies. Participants will sharpen their persuasive skills and learn to build alliances for a common goal.



8. Energoland

Description: In this hands-on workshop, participants work together to build a small-scale solar energy system. Using simple materials (e.g., solar panels, wiring, inverters), they construct a functioning model that demonstrates how solar energy can be captured and converted into usable electricity. This practical experience gives participants insight into the technical aspects of solar power generation and helps them understand the challenges and opportunities involved in setting up solar installations.

Objective: Provide a practical, hands-on learning experience to reinforce knowledge of solar energy and its real-world applications.



9. Let's build small solar power station

Description: Description: In this hands-on workshop, participants work together to build a small-scale solar energy system. Using simple materials (e.g., solar panels, wiring, inverters) or solar-energy kits, they construct a functioning model that demonstrates how solar energy can be captured and converted into usable electricity. This practical experience gives participants insight into the technical aspects of solar power generation and helps them understand the challenges and opportunities involved in setting up solar installations.

Objective: Provide a practical, hands-on learning experience to reinforce knowledge of solar energy by building a model of solar-powered device.

10. Mission impossible

Description: This team-building exercise challenges participants to complete a series of tasks related to renewable energy under time constraints, simulating the pressures often faced in real-world project management. The tasks include designing a renewable energy system for a specific scenario, solving problems related to energy generation, or presenting a proposal to a mock "funding board." The challenge fosters collaboration, creativity, and critical thinking.

Objective: Develop problem-solving, collaboration, and leadership skills in high-pressure, real-world-like scenarios.

Links:

1. [Mission impossible](#)

11. Results of the project

Thanks to the interactive nature of the project Energy of Future Generations, Polish participants felt inspired and started an informal initiative on educating young people about renewable energy and executed a number of activities.

Building on the success of this youth exchange and aiming to increase our outreach to wider group of young people, we decided to organise a training for youth workers. The PowerUP project will combine a wide range of innovative methods of youth work in the field of renewables with hands-on experiences in the form of on-site visits to powerplants. We hope, that working with both youth worker and youth will increase awareness about the importance of renewable energy and help the EU decarbonize, upskill young people and provide them with new employment opportunities in emerging sectors.

Link:

Participants Evaluation Form Results

Partners of Energy of Future Generations

