



TwinPeaks

TWINNING FOR PROMOTING EXCELLENCE, ABILITY AND KNOWLEDGE TO DEVELOP ADVANCED WASTE GASIFICATION SOLUTIONS

BACKGROUND

Lithuania is slowly stepping forward towards economic, technological and sustainable development in the field of Waste-to-Energy (WtE) as well as Power-to-X (PtX), especially in processing of waste into alternative renewable fuels and hydrogen. This will be mostly done by sorting at Mechanical and Biological waste treatment plants and municipal solid waste incineration plants. Waste (municipal solid waste (MSW), refuse derived fuels (RDF), solid recovered fuels (SRF), various types of biomass), not suitable for recycling or recovering but still having energetic value, can be successfully utilised for energy, fuels or chemicals production via thermochemical pathways. So far, two MSW incineration plants have been in operation in Lithuania (in Klaipėda and Kaunas). One more MSW incineration plant is under commissioning in Vilnius. Therefore, some highly qualified specialists and engineers will be required to maintain their operation. Moreover, new more advanced thermochemical conversion technologies, e.g. plasma gasification, must be developed to manage waste in a more sustainable way instead of direct waste incineration. Additionally, the PtX concept should be enhanced from laboratory to industrial scale. This can only be ensured through the periodic trainings, skills development and knowledge exchange, which LEI researchers can provide.

TWIN-PEAKS ACTIVITIES

The overall objective of the TWIN-PEAKS project is to establish a research and innovation collaboration between LEI, VMU, TUM, CTH and WIP to raise the scientific excellence, capacities and international reputation of LEI and VMU in advanced waste gasification.

- Develop a joint-research strategy between the TWIN-PEAKS project partners
- Apply to research grant programmes together as TWIN-PEAKS project partners
- Transfer scientific and soft-skill knowledge and know-how between the TWIN-PEAKS project partners
- Build networks of international academic and non-academic partners
- Reach out to users and stakeholders to understand needs and co-design solutions
- Pool research infrastructure between the TWIN-PEAKS project partners
- Tackle gender equality issues at LEI and VMU
- Improve research management and administration capacities at LEI



INTERNATIONAL COOPERATION

The TWIN-PEAKS collaboration will increase the research excellence of LEI and VMU, build capacities to form the critical mass of researchers in WtE in Lithuania, develop the international networks of LEI and VMU, increase the production and exploitation of intellectual property, grow the opportunities for collaborations with the industry, and allow LEI and VMU to contribute to national and international efforts for increasing the use of renewable energy through the WtE association to be created by LEI and VMU at the end of TWIN-PEAKS. The following specific actions will be implemented:

- Short term staff exchanges
- On-site or virtual training
- Conference attendance
- Dissemination and outreach activities, including organisation of joint summer schools and conferences
- Joint application for grants
- Coaching to establish a new research management and administration unit
- Diversity initiatives to reach gender balance in research and research management roles.



CONSORTIUM



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