

Workshop report

International research collaboration opportunities fostering EU Clean Energy transition in Baltic States – PANTERA / SUPEERA joint workshop

27th of April 2022, Riga

PANTERA and SUPEERA projects jointly organised a workshop to discuss and raise attention on gaps and barriers that limit the R&I activities in the energy sector in the Baltic countries, facilitate knowledge exchange and showcase best practices of how international networking and cooperation between national stakeholders and key international associations and organisations can be beneficial for establishing long-lasting interactions and fostering joint R&I activities.

Opening the workshop

Aleksandra Kronberga (Policy Officer at New Energy Technologies' Unit, DG Energy, European Commission) set the tone with her mission to motivate Baltic stakeholders to do even more in the area of energy transition. Her presentation “EU on the way to clean energy transition” focused on achievements of the three Baltic countries, latest EU policy and legislative developments, overview of funding possibilities and concluded with open questions encouraging dialogue about means of how EC could support to facilitate R&I in Baltic States. One of the possible options, mentioned during her presentation, could be using the *European Regional Development Fund (ERDF)* more for innovation purposes, as the *ERDF* is relatively easy to access thanks to national allocation and quite big resources involved. Finally, Aleksandra highlighted the importance of collaboration and dialogue between national decision makers and the Commission.

Achievements so far (continued)

Recovery and Resilience Plans on overall R&I funding:

- EE public R&I funding 1% of GDP
- total R&I spending in LV and LT: 0,64% and 0,99% respectively
- private sector contribution small in all three MS

See relevant EC staff working documents & accompanying communications

EE is the only Baltic MS not underperforming within H2020

Drawback for all three: quasi-absence from the Strategic Energy Technology Plan and co-funded Clean-energy transition partnership

R&I activities supporting energy transition in Latvia

Next section included interventions of representatives of Latvian state institutions: **Jānis Ancāns** (Head of National Contact Point (NCP) for Horizon Europe, Latvian Council of Science) and **Einārs Cilinskis** (Senior Expert, Department of Sustainable Energy Policy, Ministry of Economics).

Jānis Ancāns shared information on Latvian participation and funding rate in Horizon 2020 (H2020). Eastern European countries’ performance is often considered as insufficient. However, data presented shows that Latvian performance in EU framework programmes has considerably improved. *Secure, Clean and Efficient Energy* thematic had the biggest share in H2020 in terms of number of participations. However, according to PANTERA estimations, most of funding in *Secure, Clean and Efficient Energy* thematic for Latvian organisations was granted to Coordination and Support Actions (CSA). This trend could mean that more efforts are needed to involve industry and increase the capacity of research institutes and universities. This supports the common idea that success in framework programmes usually goes hand in hand with the amount of national financing. Thus, in Latvian situation NCPs have a lot of

Participation of Latvian organisations in FPs since 1999

	FP5 (1999-2002)	FP6 (2002-2006)	FP7 (2007-2013)	Horizon 2020 (2014-2020)
Project proposals	667	1027	1127	2780
Participations in proposals	776	1206	1624	3469
Participations in proposals (excluding CSA)	217	217	240	432
Participations (number)	248	298	337	538
Success rate	36,7 %	24,5 %	23,3 %	14,23%
EC funding (EUR, M)	14,6	21,6	49,0	116,4

*update on 14.12.2021.

work to do to facilitate participation in Horizon Europe. One option that was expressed as a question during the workshop is establishing an R&I liaison office in Brussels. Jānis informed that Investment and Development Agency of Latvia (LIAA) has made first steps towards this by having a contact person working in Brussels.

Einārs Cilinskis talked about Latvian National Energy and Climate Plan (NECP) and the way how it is planned to revise the NECP based on the results of several scientific projects, confirming that Ministry of Economy is interested in cooperation with scientific community regarding energy transition. As for specific interest areas for future research, these could be positive energy districts, urban and rural energy communities, e-mobility, district heating, new types of solar cells, second generation biofuels. Answering to the question from the audience Einārs highlighted the absolute necessity of cooperation between Baltic and Nordic countries and gave example of Latvian-Estonian *ELWIND*¹ project on offshore wind.



Sharing experience in international R&I collaborative projects and best practice

Next section included interventions of experts coming from Latvia, Lithuania, Estonia and Norway sharing their experience in international projects' implementation, best practices and lessons learned.

Dr Antons Kutjuns (Head of Development and Research Division, Augstsprieguma Tīkls) Latvia shared experience from industrial perspective and talked about *Projects of Common Interest (PCIs)* where Latvia is doing very well in terms of attracting European funding. Ongoing Baltic States synchronisation project with continental Europe has been granted 75% co-financing from the *Connecting Europe Facility (CEF)*. Example of innovative solutions used for synchronisation project are synchronous condensers for providing system inertia. Antons highlighted, that implementation of such huge projects wouldn't be possible without political support (for example, allocating status of National Interest Object). Pre-studies, getting construction permits and complicated procurement procedures lasted for about 5-6 years. The most important challenge AST is facing today is dramatically increased costs due to geopolitical situation.



Dr Žaneta Stasiškienė (Director of Institute of Environmental Engineering, Kaunas University of Technology, Lithuania) looked at energy from environmental point of view, especially on level of the city, and promoting an interdisciplinary approach. Žaneta has a broad experience in collaborative projects, which started from cooperation with Scandinavian countries, then Eastern and Central Europe, then Africa and Central America and finally established with Lithuanian industrial stakeholders and municipalities. Her research focuses more on non-technical issues such as behavioural change and supportive legislation on municipality level and circular economy enabling solutions at company level. A promising direction for future research activities could be using Artificial Intelligence for climate change mitigation. In situation of insufficient national financing as it is in Lithuania, the main source of funding for research activities is



¹ <https://www.em.gov.lv/en/article/winds-progress-innovative-estonian-latvian-joint-offshore-wind-farm-project-sets-sail>

European funding programmes, which are very competitive. Therefore, KTU choice is not restricted only to Horizon 2020 and Horizon Europe. For example, one of KTU's successful projects – *Baltic Dialogue Platform on Smart Cities for Climate*² – was funded by European Climate Initiative by German Federal ministry for the Environment, Nature, Conservation and Nuclear. Some other examples are – *EV energy*³ and *LOCARBO*⁴ projects which were funded by Interreg. According to PANTERA observations, Horizon Europe tend to include more and more calls for Innovation Actions calling for industrial involvement and delivering practical solutions where the participation of industry and technology providers is a must. Engaging industrial partners seems to be an important challenge in low activity countries. Žaneta's experience confirms that this requires hard systematic work of explaining companies the benefits of participating in the R&I projects.

Karl Kull (researcher in Tallinn University of Technology, Department of Electrical Power Engineering and Mechatronics, Estonia) shared a success story of *SMAGRINET*⁵ project aiming at providing services to European universities, municipalities and industries to enhance their capacity in energy research and innovation to tackle the smart grid energy transition. The project developed in two main directions: launching challenge and case-based university programs to train students and organising short-term blending programs for the workforce to provide them insights into R&I and change outdated understanding and beliefs.



During project implementation multiple challenges appeared due to pandemic: educational programmes were delayed, mobility programmes were not possible to implement, the overall workflow had to be rearranged. On the other hand, COVID facilitated fast digitalisation of educational programs – what was good. Karl highlighted that having a good core idea helped to overcome all difficulties. Other success factors were attracting strong partners and public cooperation.

Dr Irina Oleinikova (Head of Power System Operation and Analysis group, Norwegian University of Science and Technology) introduced the NTNU's special initiative - *Energy for a Better Society* – usually referred as *NTNU Energy*⁶. *NTNU Energy* is driving interdisciplinary research by fostering cooperation between faculties through developing common strategies and activities. One important dimension of this work is active participation (taking part in discussions, creating reports and different position papers, visiting brokerage events) in different international initiatives, like *EERA*⁷, *ISGAN*⁸, *CIGRE*⁹, *ETIP SNET*¹⁰, etc. Furthermore, all research activities are supported by strong collaboration with industry, specifically Nordic TSOs, and cooperation with policy makers on different levels. For example, last activities included a feedback to EC on *Action Plan on the Digitalisation of Energy Sector*, feedback to *ENTSO-E*¹¹ on *RDI Implementation*



² <https://balticsmartcity.com/>

³ <https://ev.energy/>

⁴ <https://projects2014-2020.interregeurope.eu/locarbo/>

⁵ <https://www.smagrinet.eu/>

⁶ <https://www.ntnu.edu/energy>

⁷ <https://www.eera-set.eu/>

⁸ <https://www.iea-isgan.org/>

⁹ <https://www.cigre.org/>

¹⁰ <https://www.etip-snet.eu/>

¹¹ <https://www.entsoe.eu/>

Report 2021-2025 and now NTNU team is actively involved in commenting and contributing to *Horizon Europe Work Programme 2023-2024*. Thus, Irina has confirmed that active involvement in European initiatives is key to successful networking, increasing visibility and establishing new consortia.

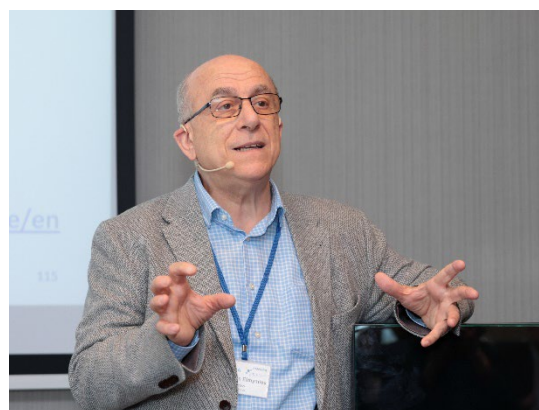
Opportunities to increase participation in joint R&I activities

The main idea of the section was to encourage knowledge exchange and open discussion on the pathways to improve the performance in national and international projects towards energy transition.

Dr Ivan Matejak (SUPEERA coordinator, EERA, Belgium) introduced the *European Energy Research Alliance* (EERA), which is officially the research pillar of the *European of the European Strategic Energy Technology Plan* (SET plan) and the SUPEERA project aiming at facilitating coordination of research community and promoting the SET plan. He projected statistical data that indicate low participation rates of EU13 countries in the SET Plan and limited awareness of the Clean Energy Transition priorities by their national research organisations. This limited commitment to the SET Plan translates to low H2020 performance, with only marginal contribution in terms of funding compared to EU15 countries. Ivan explained that possible reasons behind this performance gap include among others: weaknesses of the R&I systems, administrative and regulatory burdens obstructing R&I, and absence of integration between business and academia. Concluding, he stressed the importance of collaboration and the key role of working together towards common 2050 EU climate goals.



Dr Venizelos Efthymiou (PANTERA coordinator, FOSS Research Centre of University of Cyprus) presented the PANTERA process targeting in setting up a European forum composed of different stakeholders active in the fields of smart grids, storage and local energy systems (including policy makers, industry, standardisation bodies, research and academia, European organisations, etc.), and therefore supporting energy transition.



Panel discussion

Dr Paula Carroll (Centre for Business Analytics | Energy Institute Management Information Systems Department, University College Dublin) moderated a round table discussion on Opportunities to increase participation in joint R&I activities in the Baltic region. Panellists were Karl Kull, Dr Antons Kutjuns, Dr Irina Oleinikova, and Dr Žaneta Stasiškienė. The panel reviewed the responses to the online questions, noting that the majority of respondents answered that Horizon is too competitive and more advanced countries have an advantage, and that the support provided by national funding agencies was just sufficient – participants rated that as “neither good nor bad”. The discussion relevant touched on several related themes.

Education: there is a need for education to upskill current workforce through continuing professional development particularly to help them understand national and EU policy. There is also a need for new programmes to attach young students into the area and build a pipeline of skilled workers to contribute to the energy transition. There is a need to educate and communicate with ordinary citizens and lay people to understand the opportunities and challenges of the energy transition, e.g. the choices of low carbon technologies, and how government energy policies support achieving national energy and climate targets.

National Funding: call designs need to connect theory to practice and consider local and national needs – need more tailored calls are needed for local solutions. The panel noted that pilot and demonstration projects would have high visibility to address education of consumer and would connect theory to practice. Multi- and interdisciplinary calls are needed to facilitate cooperation with social science. In addition, more dialogue across national agencies and ministries is needed so that calls connect technical and social science disciplines. There is a need for support to be successful in writing Horizon submissions – while teams may have the technical expertise and their submission be highly ranked, there was a sense that submissions failed because of weak presentation.

Alignment of policy and strategy: The panel noted that each sector has its remit, for example TSOs are regulated and must firstly ensure transmission system technical problems are addressed. It was also noted that decisions on grid tariffs to maintain grid will be needed in parallel with the development of energy communities so that the core network is adequately funded. For long term clean energy objectives to be met, community (local) opposition to infrastructure projects will need to be addressed to realise ambitious project in short time line. The whole energy community needs to hold its nerve in the face of current war in Ukraine which has put a spotlight on energy independence.



Finally, **Dr Venizelos Efthymiou**, **Tasos Tsitsanis** (Suite5, Cyprus) and **Dr Kyriaki Psara** (FOSS Research Centre of University of Cyprus) presented the *EIRIE*¹² platform that stands for European Interconnection for Research Innovation & Entrepreneurship. *EIRIE* vision is to become a reference operational point to unify European activity, incentivise further investments in smart grids and support access to exploitable results that can spark further cooperation and bridge the existing gaps.

¹² <https://ses.jrc.ec.europa.eu/eirie/en>

During the afternoon session, Mr. Matejak presented the challenges and opportunities for the mobilization of EU13 national public research resources in the Clean Energy Transition, highlighting key information per Baltic country. He stressed the importance for Baltic countries on participating in the *SET Plan*, mentioning that the associated benefits could be numerous; from enhancing international ties, to sharing research infrastructure and increasing their involvement in transnational funding schemes.

Spyridon Pantelis (EERA Project Manager, Belgium) provided an outline of Horizon Europe programme and the Clean Energy Transition Partnership (CETP). In tandem with **Petter Støa** (Vice President Research at SINTEF, Norway), they informed the audience about the open calls for applications on Cluster 5, Widening calls, EEA and Norway grants.

Daumantas Kerezis (Adviser at the Innovation Group of the Ministry of Energy of the Republic of Lithuania) presented the current and upcoming activities in energy technology policy from the side of the ministry, indicating its intention to join and invest into the Horizon Europe 's Clean Energy Transition Partnership. He also added that the ministry is part of the joint Baltic-Nordic roadmap for co-operation on clean energy technologies.

Rolandas Urbonas (Deputy Director of the Lithuanian Energy Institute) presented the experiences and benefits from the participation in the international energy networks. He underlined that, although being a part of an international association that leads to a boost in the number of projects and general activity of the institution, Baltic countries have to face several challenges in order to be prominent on a European level. He suggested that one way to overcome these obstacles is to promote further cooperation on a regional level in the Baltics.



In the discussion that followed Mr. Kerezis stated that nuclear technology is not included in the ministry's strategy at the moment, although the plan is to include modular reactors in the future energy mix. On this matter, Dr. Urbonas added that nuclear energy is a subject of interest within his institution. Regarding the Clean Energy Transition Partnership, Mr. Kerezis explained how the ministry is trying to connect stakeholders from research and business through a consultation process that aims to find shared common

priorities. Furthermore, the idea of establishing a research collaboration between the Baltic states was brought up, and possible challenges and strategic differences were examined.

PANTERA Coordinator and Cyprus representative on the *SET Plan Steering Committee* **Dr Venizelos Efthymiou** underlined the role of *ETIP SNET* to provide a platform for collaboration between national stakeholders and European R&I entities, underlining that actions in this direction are reinforced by a series of regional workshops across EU. Replying to a question from the audience, Dr. Efthymiou explained that Cyprus' success on being the most active country amongst the EU-13 countries within the *SET Plan* stands in its active student and research population, which is able to offer strong contributions to the ad-hoc committees that were formed specifically for the implementation of the *SET Plan*. This is underpinned by increased financial support by the Cypriot government towards R&I activities.



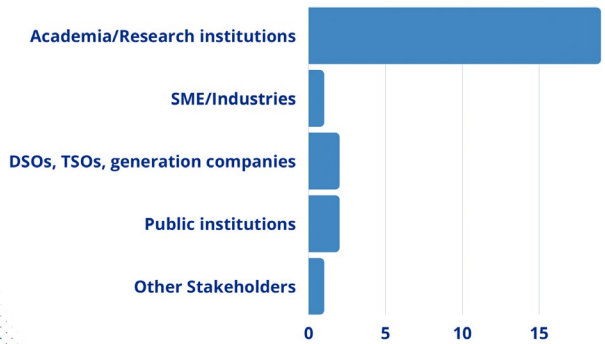
During the workshop audience actively used the on line provided system to ask questions. In total 38 questions were received. Our experts tried their best to answer those question during presentations and discussion sections. Questions reflected challenges researchers and innovators are facing in their activities like establishing close working relations with industry, regional collaboration opportunities, support in proposal preparation as well as more general issues as consumer empowerment and country specific policies in energy transition.

Workshop Statistics

The workshop was organised in a hybrid mode and gathered together 25 participants physically in Riga and 56 visitors connected remotely.

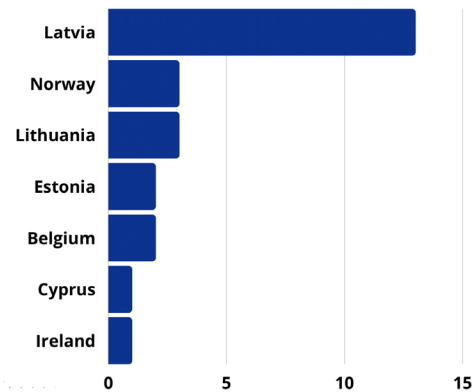
Riga PANTERA-SUPEERA workshop physical participants

By company/organisation type



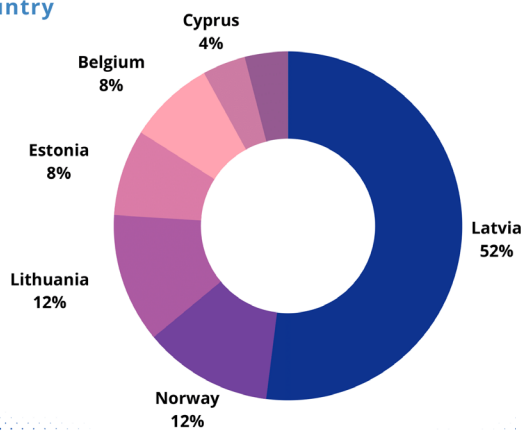
Riga PANTERA-SUPEERA workshop registered participants

By company/organisation type



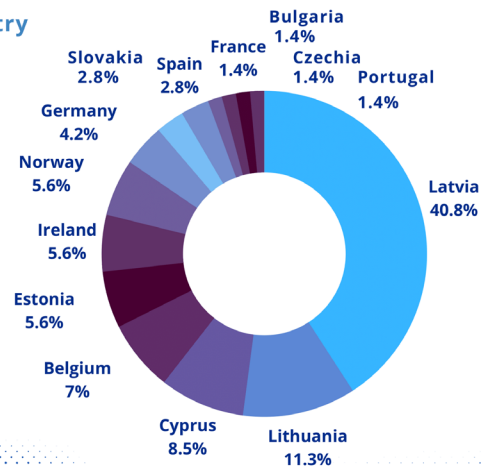
Riga PANTERA-SUPEERA workshop physical participants

By country



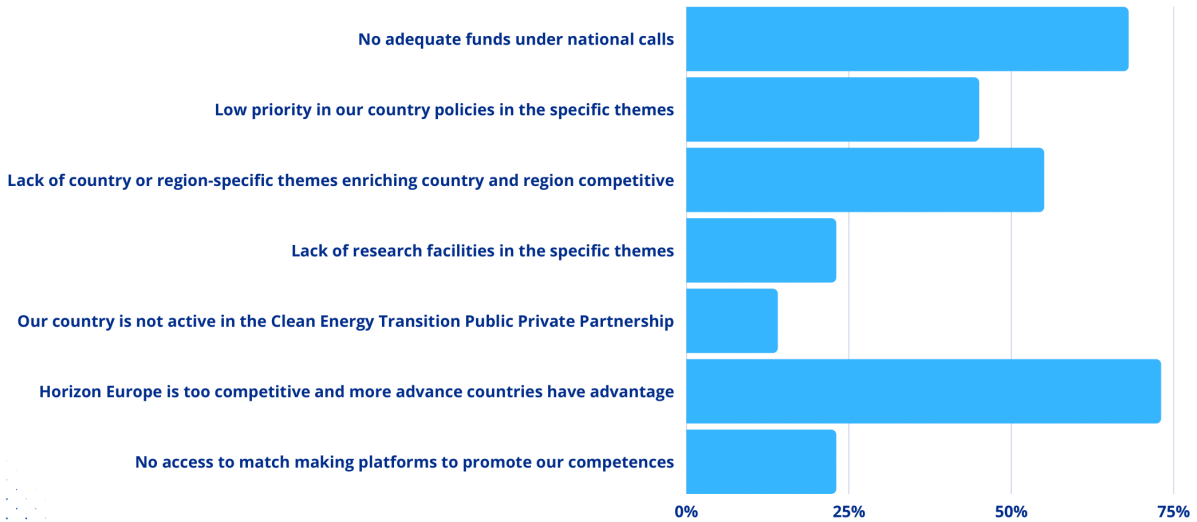
Riga PANTERA-SUPEERA workshop registered participants

By country



Survey results

What do you think is the most important reasons for low R&I activity in your country in smart grids, storage and local energy systems? Choose three of the following reasons that suit best your case:



Are there any mechanisms supporting the initiation and completion of R&I projects organized by national institutions? How do you rate support services provided by national institutions / agencies?

