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Widening. Final progress report and recommendations for mobilising National Public Research resources in EU-13 countries

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DISCLAIMER

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EXECUTIVE SUMMARY

The overall objective of Work Package 1 was to facilitate the execution of the SET Plan prior to its revision process (still ongoing as of June 2023) that will set not only its new high-level objectives but will also enhance means of its execution. The success of this major undertaking aiming at boosting European R&I of low carbon technologies will finally depend on the same crucial principle as in 2007: on active and balanced participation of all EU Member States and Associated Countries. There is a clear evidence that after 15 years of its inception, a timely and effective execution of its Implementation Plans by 30 national stakeholders appears to be uneven to such an extent that two parallel binaries have emerged: on one side, the fast-paced one guided by the EU14 Member States (EU prior to 2004 enlargement process) - complemented by Associated Countries such as Norway - and, on the other side, the slow-paced one, encompassing the EU13 Member States (those joined after 2004). Although today the SET Plan, based on the findings from the 2022 consultation process[1], continues to facilitate the accomplishment of its originally highly level objectives, the unbalanced contribution of all parties to its IPs not only jeopardizes the systemic deployment of low carbon technologies but also challenges the full achievement of 2030 and 2050 climate and energy goals across the continent.

Against this background, one of the strategic SUPEERA activities was to map, mobilise and ideally engage EU13 most prominent national research organisations with a concrete potential to contribute to the realisation of the SET Plan IPs.

This final report complements the two previous deliverables on the same subject: D1.8 (*Widening. Preliminary recommendations for mobilising National Public Research resources in EU13 countries)* & D1.10, *(Report on the progress regarding widening EU13 participation in the SET Plan and EERA activities),* that already provided a general overview on the participation of all EU13 Member States in the execution of the identified SET Plan Implementation Plans (IPs) needs, by analysing in detail the context of eight out of thirteen countries. The course of action in the final reporting period followed the methodology described in the GA, where the desk research was properly followed by physical workshops in eight EU13 countries in order to raise awareness on the SET Plan and CET; on the state of play of the former and on the funding opportunities dedicated to the analysed countries.

[1] European Commission. Directorate-General for Research and Innovation, Deloitte & Touche, Empirica (2022), SET Plan Interim Evaluation: Final Report, *https://www.cde.ual.es/wp-content/uploads/2022/11/set-plan-interim-evaluation-KI0422012ENN-1.pdf*

LIST OF ACRONYMS

AC(s)	Associated Country(ies)
CCS	Carbon Capture and Storage
CCU	Carbon Capture Utilisation
CET	Clean Energy Transition
CETP	Clean Energy Transition Partnership
CERA	Cyprus Energy Regulatory Authority
CSA	Coordination and Support Actions
CYI	Cyprus Institute
DMIRD	Ministry of Research, Innovation and Digital policy
EC	European Commission
EERA	European Energy Research Alliance
ERA	European Research Area
ETIP(s)	European Technology and Innovation Platform(s)
EU	European Union
FP	Framework Programme
GA	Grant Agreement (referring to the one of the SUPEERA project)
H2020	Horizon 2020
HE	Horizon Europe
HVDC – DC	High Voltage Direct Current – Direct Current
IP(s)	Implementation Plans
IWG(s)	Implementation Working Group(s)
NECP(s)	National Energy and Climate Plan(s)
NCP(s)	National Contact Point(s)
MS(s)	Member States
PV	Photovoltaics
R&D	Research and Development
R&I	Research and Innovation
RIF	Research and Innovation Foundation
RTO(s)	Research and Technology Organisation(s)
SC3	Societal Challenges 3 - Secure, Clean and efficient energy
SET Plan	Strategic Energy Technology Plan
SETIS	Strategic Energy Technology Information System
SUPEERA	SUPport to the coordination of national research and innovation programmes in areas of activities of the European Energy Research Alliance
TSOC	Transmission System Operator in Cyprus
WP(s)	Work Package(s)

LIST OF TABLES

I INTRODUCTION

1.1 Objectives of the SUPEERA project

On January 1st, 2020, the SUPEERA project[2] – SUPport to the coordination of national research and innovation programmes in areas of activities of the European Energy Research Alliance – was launched.

In the 42 months of its execution, the project has aimed at reaching four high-level objectives:

1. Facilitate the coordination of the research community in support to the execution of the SET Plan towards the CET;
2. Accelerating innovation and uptake by industry;
3. Provide recommendations on Research and Innovation (R&I) priorities and policy frameworks through the development and analysis of energy and macroeconomic indicators;
4. Support and promote the connection of the SET Plan and the CET with all stakeholders.

To achieve the first objective, the SUPEERA project on one hand has executed a series of actions in order to analyse status and needs of R&I activities of the SET Plan Implementation Plans (IPs) and it has contributed to its revision process (link to the report) while, on the other, has sought to spread excellence and widen participation in the SET Plan across Europe by fostering a stronger engagement of the MS that joined the EU after 2004, the so-called EU13 countries. These countries, which have rather limited participation rates in the realisation of the SET Plan through its IPs, are mainly eastern countries (Poland, Slovakia, Czech Republic, Hungary, Romania and Bulgaria), the Baltic states (Estonia, Latvia, Lithuania), and south and south-eastern countries (Malta, Slovenia, Croatia and Cyprus).

1.2 Setting the scene

The R&I gap in the European Union remains a pressing challenge. The group of the EU13 countries have a low, or even inexistent, participation in the SET Plan and underperforms in the European Research and Innovation Framework Programmes (FPs) compared to the Member States that had joined the EU before 2004 – the so-called EU14 countries.[3]

Although most EU13 countries are reported to participate, at least formally, in some of the SET Plan Implementation Plans and the related Implementation Working Groups (IWGs), their involvement has been rather limited and inconsistent over time.

[2]SUPEERA Website: https://www.supeera.eu.
[3] Julien Ravet, *From Horizon 2020 to Horizon Europe #2.1 Dynamic Network Analysis* (European Commission, Nov. 2018),https://ec.europa.eu/info/sites/default/files/research_and_innovation/knowledge_publications_tools_and_data/documents/h2020_monitoring_flash_112018.pdf.

This R&I gap, as data shows, was clearly reflected in an unequal participation in Horizon 2020 and Horizon Europe programmes, which they have represented the most substantial EU instrument to support and foster cooperation among Member States in R&I and develop the European Research Area (ERA) as a "single, borderless market for research, innovation and technology across the EU."[4] In the seven years of Horizon 2020 operation in fact, the new members have received only a marginal contribution of its budget.

With a few exceptions, the two-velocity mechanism (EU14 on one side and EU13 on the other) in both participation in the SET Plan and in supporting schemes still endures in the current FP Horizon Europe. The negative results of such disparity can be mitigated only if a series of corrective measures are timely put in place to promptly readjust the underrepresentation of the EU13 countries in the execution of the Plan.

In this context, the aim of the SUPEERA project was to analyse more in the detail the reasons of the lower performance of EU13 countries in EU R&I polices and strategies (including the SET Plan) and to identify and facilitate the mobilisation of key research organisations and national funding bodies towards the CET process. Based on the factual findings emerged during the workshops organised in targeted countries, and on already gathered data in the previous two deliverables, several recommendations and policy options have been developed. In parallel, SUPEERA has also launched and successfully delivered a digital campaign called "Meet the EU13" consisting of one success story for each of the 13 Member States showcasing the scientific landscape, major players, networks, infrastructure, expertise, and current engagement in the SET Plan of the selected countries.

As part of these efforts, the report is structured in five chapters. While Chapter I provides a series of introductory remarks, Chapter II focuses on the participation of EU13 countries in the context of the SET Plan. Chapter III offers an update on general R&I gap between EU13 and EU14 countries presenting the latest data from their participation in Horizon Europe. Chapter IV consolidates main obstacles and barriers related to the limited participation in the SET Plan and EU funded programmes and at the same time provides a set of recommendations and policy options to bridge the R&I gap in EU13 countries in general. Finally, Chapter VI draws some concluding remarks.

[4] Michal Pazour, Vladimir Albrecht et al., *Overcoming innovation gaps in the EU13 Member States* (European Parliament, Mar. 2018), 11, https://www.europarl.europa.eu/RegData/etudes/STUD/2018/614537/EPRS_STU(2018)614537_EN.pdf.

1.3 Adaptation of the initial planning

a) With the scope to compensate a limited number of workshop organised in RP1 and RP2, due to general restrictions imposed to contain the Covid-19 pandemic, SUPEERA partners in the RP3 envisaged an ambitious plan aiming at reaching the initially planned number of physical workshops. In the interest therefore of both project partners and several EU13 countries, the following workshops were organised: Hungary (Oct 2022); Malta (Nov 2022); Romania (March 2023) and Lithuania (April 2023).

II THE R&I GAP BETWEEN EU13 AND EU14 COUNTRIES

2.1 The gap in relation to the SET Plan

During the project execution, the "filed research" carried out through the series of workshops have in essence proved the findings emerged from previous in-depth desk analysis: most EU13 countries have a very limited participation in the realisation of the SET Plan through the execution of its Implementation Plans. Although some of them officially take part in selected IWGs, their actual involvement is rather limited, as often they do not allocate national funding to any IPs and the information they provide on how the SET Plan may contribute to achieve the national energy and climate objectives is incomplete and unsatisfactory. Such conclusions are particularly evident in the assessments of the NECPs of the new members carried out by the EC. NB: due to time constraints, this Report did not evaluate revised NECPs.

Sometimes it is not even possible to assess with certainty to which IPs and IWGs EU13 countries participate. There is a discrepancy between the information provided in publications from the Strategic Energy Technology Information System (SETIS) covering in detail EU MSs involvement in SET Plan IPs, and any other sources, such as the aforementioned NECPs and the related EC's assessments.

The tables below assessing EU13 involvement to the SET Plan rely on the most updated information released from SETIS[5] about the EU Members formal involvement in specific IWGs and on the desk research preformed in June 2023.

Country	Batteries	CCU-CCS	CSP-STE	Deep Geothermal	Energy Efficiency in Buildings	Energy Efficiency in Industry	Energy systems
Bulgaria							
Croatia	X						
Cyprus	X		X	X		X	X
Czechia	X	X				X	
Estonia	X						
Hungary	X	X					
Latvia	X				X	X	X
Lithuania	X						
Malta	X						
Poland	X					X	
Romania	X						
Slovakia	X					X	
Slovenia	X			X			

Table 1 - EU13 participation to SET Plan Implementation Working Groups (1)

[5] SETIS - SET Plan information system: Implementing the actions (https://setis.ec.europa.eu/implementing-actions_en)

Country	HVDC-DC	Nuclear safety	Ocean energy	Offshore wind	Photovoltaics	Positive energy districts	Renewable fuels and bioenergy
Bulgaria		X					
Croatia		X					
Cyprus	X		X		X	X	X
Czechia	X	X				X	
Estonia							
Hungary	X	X					
Latvia						X	
Lithuania	X	X					
Malta							
Poland		X				X	X
Romania	X	X				X	
Slovakia		X					
Slovenia		X					

Similar to what has been already reported in D1.10, EU13 countries participation is mostly visible in nuclear safety, batteries, energy efficiency in industry and positive energy districts. Among the EU13 countries, Cyprus firmly remains the most active country, participating in 10 IWGs.

III COUNTRY ANALYSIS

3.1 Introduction

The participation of most the EU13 countries in the EU FPs traces back to before their accession of 2004, when they were admitted to the FP5 (1998-2002) through specific association agreements. Nevertheless, despite two decades of experience with FPs funding, the evidence shows that EU13 group still lags behind EU14 in terms of participation and success rate in FPs and that this gap has not significantly decreased over time.

This chapter, in line with the approach adopted for the whole deliverable, will focus on the analysis of nine EU13 countries, building on the already existing assumptions embedded in the D1.8 and D.10. Therefore, this section assesses Croatia's, Latvia's, Bulgaria's, Cyprus', Czech's Republic, Malta's, Hungary's, Romania's and Lithuania's performance in Horizon Europe and offers a list of main obstacles and barriers relative to each of the countries' participation in the above-mentioned funding instruments.

3.2 Individual country analyses

The following chapter examines the most recent information on countries' participation in Horizon Europe FP. Individual analysis, here beneath, is complemented by first-hand information collected during the execution of the physical workshops in respective countries. Table 2 below provides an overview of the implemented workshops.

	When	Hosted by	Participants
Croatia	10th Sep 2021	University of Split, Island of Brac	13 on site 37 online
Latvia	27th Apr 2022	Technical University of Riga, Riga	25 on site 56 online
Bulgaria	25th May 2022	Technical University of Sofia, Sofia	15 on site 23 online
Cyprus	1st June 2022	University of Cyprus, Nicosia	18 on site 24 online
Czech Republic	22-23 June 2022	EERA aisbl, back-to-back to ASM	36 on site
Malta	8th Nov 2022	MEDPOWER22 Conference Malta	27 on site
Hungary	26th Oct 2022	Budapest University of Technology and Economics	20 on site 4 online
Romania	23rd March 2023	Politehnica University of Bucharest	20 on site 20 online
Lithuania	27th April 2023	Lithuanian Academy of Sciences	26 on site 19 online

Table 2 - Basic Information about the Workshops on EU-Widening

3.2.1 Croatia

This section shows the participation of Croatia in Horizon Europe, since 2021, when the programme started, until June 2023, to which the following updated data trace back.

Sample	Horizon Europe signed grants	Horizon Europe signed grants (percentage of EU total)	Organisations involved in Horizon Europe projects	Organisations involved in Horizon Europe projects (percentage of EU total)	Horizon Europe net EU contribution (in Mil €)	Horizon Europe net EU contribution (percentage of EU total)
Croatia	165	1,92%	150	1,13%	48,34	0,27%
EU total	8.575	100%	13.238	100,00%	17.760	100%
EU13 total	1.929	22,50%	2.175	16,43%	1.510	8,50%
EU14 total	6.646	77,50%	10.116	76,42%	16.250	91,50%

Table 3 - Croatia. Horizon Europe performance analysis

Eligible Proposals	Eligible Proposals (percentage of EU total)	Marie Skłodowska-Curie Actions Participation	Marie Skłodowska-Curie Actions Participation (percentage of EU total)	European Research Council Principal Investigators
853	1,77%	22	0,27%	0

Table 4 - Croatia. Horizon Europe proposals

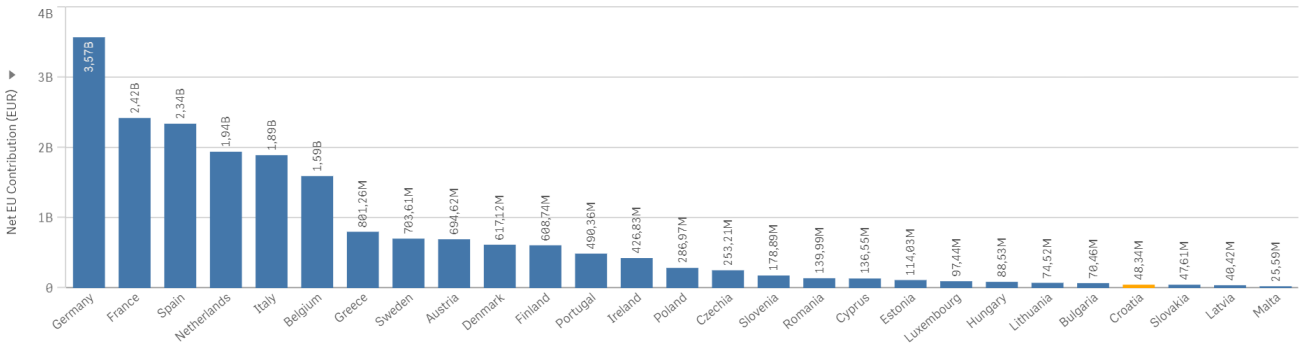


Figure 1 Horizon Europe contribution (€) to Member States

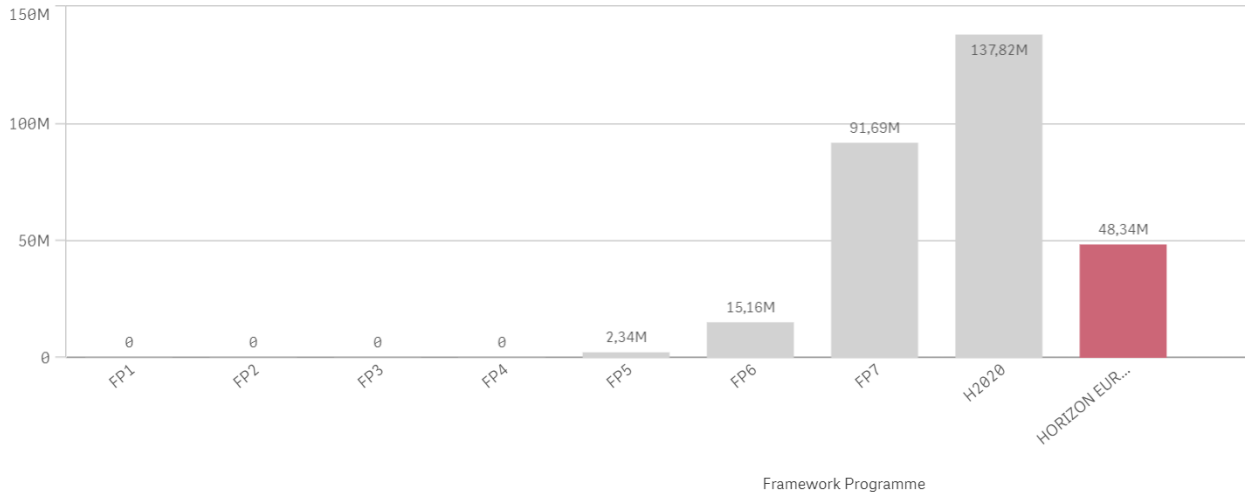


Figure 2 - EU contribution (€) across programmes

The R&I intensity of Croatia is stated as 1,2%, being 2,3% the EU average. R&I intensity represents the total intramural R&D expenditure (GERD) as a percentage of gross domestic product (GDP). Among the 27 EU member states, Croatia holds the 18th position in terms of R&I intensity. This ranking indicates that Croatia's investment in research and innovation, relative to its GDP, is higher than that of nine other EU13 countries in the EU. Only five EU13 countries score higher than Croatia: Slovenia, Czechia, Estonia, Hungary and Poland.

Croatia's success rate in securing grants from Horizon Europe is mentioned as 19,20%, with 165 signed grants, whereas the European average is stated as 22,55%. In terms of Horizon Europe contribution, Croatia received EUR 48,34 million. This figure positions Croatia below most of the other Member States in terms of funding received from the programme. Croatia's funding amount is slightly higher than that of Slovakia, Latvia, and Malta, but it falls behind the majority of the EU Member States participating in Horizon Europe.

Workshop in Bol, Island of Brač, 10th September 2021

On the 10th of September 2021 PANTERA and SUPEERA projects jointly organised a workshop in on the occasion of the SplitTech Conference on the island of Brač, Croatia, with the aim to discuss and raise attention on gaps and barriers that limit the R&I activities in the energy sector and especially hinder a true integration of Croatian R&I stakeholders at EU level. The workshop gathered in total 50 participants both online and on site.

The event was held in hybrid modality, and it saw the participation of experts from the R&I community, the business sector and the Croatian and Hungarian National Contact Points.

The agenda was structured into two main blocks.

The morning session opened with an introduction on the PANTERA project and EIRIE platform by FOSS (Research Centre for Sustainable Energy). Both were presented as important tools easing EU wide connectivity and open access to data at a European level. This first contribution was followed by an oral presentation of the Croatian Energy and R&I landscape by RSE (Ricerca sul Sistema Energetico) while also reporting on data about decarbonization targets and renewable energy sources penetration in the country.

The third and last presentation of the first session was jointly given by Suite 5 and DERlab (European Distributed Energy Resources in Laboratories) and focused on EIRIE functionalities and on the benefits for its users; in particular, two important areas of the platform were covered: the search tools and training and education material.

The second block of the workshop, taking place during the afternoon, opened with a presentation by EERA on the SUPEERA Project and on R&I gaps between EU13 and EU14 which reflect on their participation in H2020; a special attention was eventually dedicated to some recommendations to overcome such challenges: Harmonizing national and EU R&I priorities, strengthening EU networks, increasing funding, fostering academia-business cooperation, reducing administrative barriers and enhancing NCPs' activities.

The Panel discussion that followed allowed both online and on-site participants to ask questions and exchange views on how to accelerate regional R&I activities through research collaboration, national regulations, policy issues, financing opportunities and good practices.

During the discussion, IERC (International Energy Research Centre) introduced the PANTERA RICAP process together with the R&I status and priorities in Croatia and presented the country's NECPs. At the end of the presentation, recommendations were made in order to accelerate the R&I activities in the field of Smart Grids and renewable energy.

The Croatian NCP outlined the national support system for R&I activities and presented some statistics about the contribution of Croatia to H2020 and on the funds received in addition to specific measures to support participation in Union programmes for R&I. HEPODS (HEP-Distribution System Operator doo) intervened by revealing their strong support to R&I activities despite being quite hard for the DSO to depend on products and solutions that are under development.

REGEA (North-West Croatia Regional Energy Agency) intervened in the conversation by highlighting the importance of providing regions and cities with tools to implement the NECPs

strategy, which requires a dedicated budget and lamented a lack of communication between local and regional governments and start-up incubators.

The discussion that followed also involved the public and focused on the following main subjects: barriers to R&I in Croatia, the main difficulties for the Academia in data finding and the challenges in trying to build successful Consortia for research activities. A more detailed summary of the workshop can be found in the ANNEX I.

3.2.2 Latvia

This section shows the participation of Latvia in Horizon Europe, since 2021, when the programme started, until June 2023, to which the following updated data trace back.

Sample	Horizon Europe signed grants	Horizon Europe signed grants (percentage of EU total)	Organisations involved in Horizon Europe projects	Organisations involved in Horizon Europe projects (percentage of EU total)	Horizon Europe net EU contribution (in Mil €)	Horizon Europe net EU contribution (percentage of EU total)
Latvia	143	1,67%	71	0,54%	40,42	0,23%
EU total	8.575	100%	13.238	100,00%	17.760	100%
EU13 total	1.929	22,50%	2.175	16,43%	1.510	8,50%
EU14 total	6.646	77,50%	10.116	76,42%	16.250	91,50%

Table 5 - Latvia. Horizon Europe performance analysis

Eligible Proposals	Eligible Proposals (percentage of EU total)	Marie Skłodowska-Curie Actions Participation	Marie Skłodowska-Curie Actions Participation (percentage of EU total)	European Research Council Principal Investigators
633	1,32%	8	0,10%	0

Table 6 - Latvia. Horizon Europe proposals

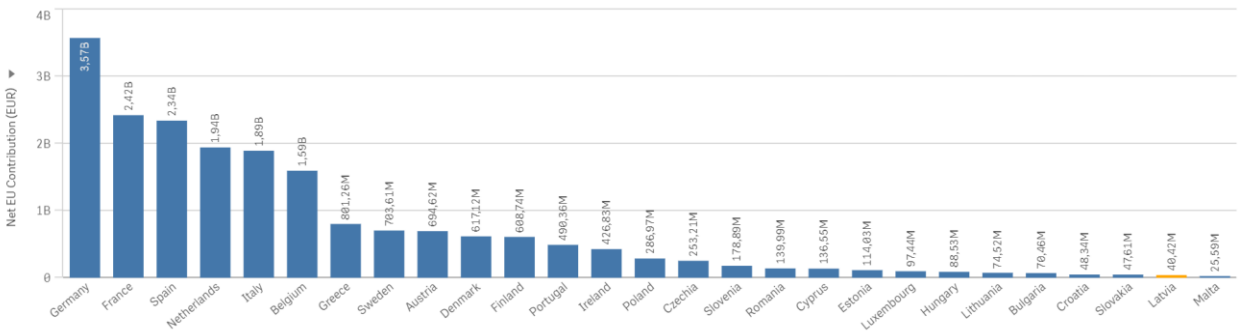


Figure 3 - Horizon Europe contribution (€) to Member States

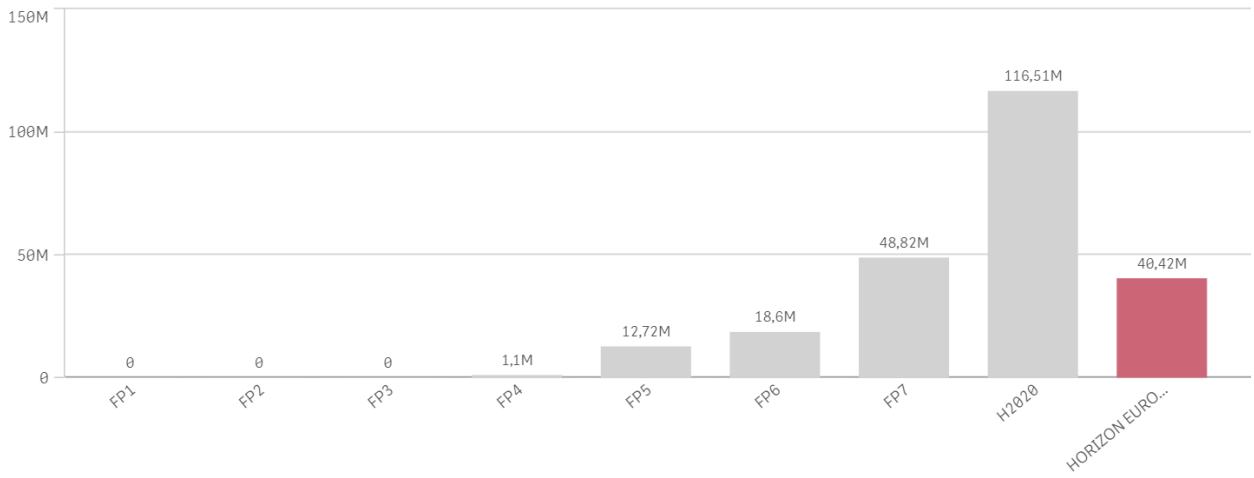


Figure 4 - EU contribution (€) across programmes

The R&I intensity of Latvia is stated as 0,7%, which is significantly lower than the EU average of 2.3%. Among the 27 EU member states, Latvia holds the 25th position in terms of R&I intensity, indicating that its investment in research and innovation, relative to its GDP, is lagging behind most of the other Member States.

Latvia's success rate in securing grants from Horizon Europe is mentioned as 21,63%, with 143 signed grants; slightly below the European average at 22,55%.

In terms of Horizon Europe contribution, Latvia received EUR 40,42 million. This figure positions Latvia below most of the other Member States in terms of funding received from the programme. Latvia's funding amount is slightly higher than that of Malta.

Workshop in Riga, 27th April 2022

The first workshop on EU-widening organized within task 1.4 was held jointly with the EU H2020 project PANTERA – PAN European Technology Energy Research Approach - in Latvia, Riga, on 27th April 2022. The workshop gathered 81participants, both on site and online, with the aim to enhance collaboration in R&I activities in the Baltic States, facilitate knowledge exchange and showcase best practices of how international networking and cooperation between national stakeholders and key international associations and organizations can be beneficial for establishing long-lasting interactions and fostering joint R&I activities.

The event speakers included representatives from the European Commission (DG Energy) and from the three Baltic States as well as from the two projects organizations, i.e. from partners' organization of SUPEERA and PANTERA.

The EC started presenting their strategy and latest policy and legislative developments on the CET and thereafter an overview of R&I activities in Latvia supporting such transition was provided by senior representatives from the Latvian authorities. It is worth mentioning the established agreement between the government and several R&I actors to model future energy scenarios, making evident the importance of research and innovation in national decision-making. In this respect, several possible research areas for Latvia to focus on in the coming future such as deep renovation of buildings, energy efficiency, and integration of renewables was listed up.

These three presentations set the scene for four additional speakers from all three Baltic States as well as Norway, and representing both industry and academia, who shared best practices and own experiences in international R&I collaboration. These four presentations alongside with an introduction of the PANTERA process and of the SUPEERA findings on the engagement of the Baltic States in H2020 laid the groundwork for a fruitful round-table discussion addressing opportunities to increase participation in joint R&I activities. Some key take-aways from this first table-discussion were the need to align national and European agendas/priorities and the importance of education in building future knowledge.

The second half of the workshop was particularly devoted to creating awareness about the SET Plan. A detailed overview of the mobilization of EU13 countries in the SET Plan was provided, with special emphasis on The Baltic States, and the added value/opportunities arising when participating actively in the SET Plan. It was complemented with two additional presentations on R&I funding opportunities. First, a presentation on funding opportunities within Horizon Europe was given, particularly with regards to the CETP and to Widening Participation and Strengthening the European Research Area. The second funding opportunity presented addressed the so-called EEA/Norway Grants, a dedicated funding mechanisms for EU13 countries often unknown by part of the research community from such countries.

The third and final block of the workshop covered Lithuania's role in the energy transition and the role of the ETIP SNET platform in facilitating collaboration between national stakeholders and European R&I entities. A representative from the Lithuanian government, presented the current national energy policy priorities as well as the participation/investment in the CETP and underlined that the ministry is now in the phase of selecting the CETP-energy areas to focus on in collaboration with national stakeholders through a public consultation. Thereafter, the Lithuanian Energy Institute shared own experiences and best-practices on participating in international energy networks. Despite their existing activity in such networks, it was stressed the importance to keep on promoting further cooperation, particularly on regional level within the Baltic States, in order to join forces to be more prominent on the EU level, and shared his views on barriers for the establishment of a Baltic research alliance. A more detailed summary of the workshop can be found in the ANNEX II.

3.2.3 Bulgaria

This section shows the participation of Bulgaria in Horizon Europe, since 2021, when the programme started, until June 2023, to which the following updated data trace back.

Sample	Horizon Europe signed grants	Horizon Europe signed grants (percentage of EU total)	Organisations involved in Horizon Europe projects	Organisations involved in Horizon Europe projects (percentage of EU total)	Horizon Europe net EU contribution (in Mil €)	Horizon Europe net EU contribution (percentage of EU total)
Bulgaria	193	2,25%	191	1,44%	70,46	0,40%
EU total	8.575	100%	13.238	100,00%	17.760	100%
EU13 total	1.929	22,50%	2.175	16,43%	1.510	8,50%
EU14 total	6.646	77,50%	10.116	76,42%	16.250	91,50%

Table 7 - Bulgaria. Horizon Europe performance analysis

Eligible Proposals	Eligible Proposals (percentage of EU total)	Marie Skłodowska-Curie Actions Participation	Marie Skłodowska-Curie Actions Participation (percentage of EU total)	European Research Council Principal Investigators
990	2,06%	43	0,54%	0

Table 8 - Bulgaria. Horizon Europe proposals

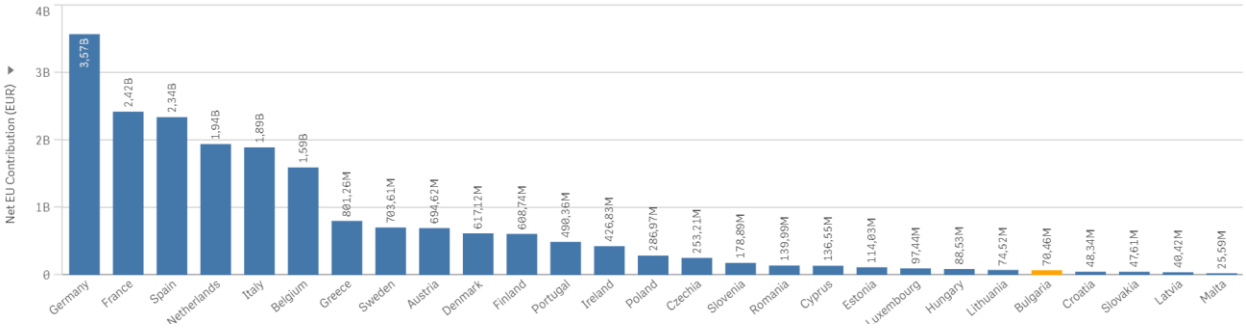


Figure 5 - Horizon Europe contribution (€) to Member States

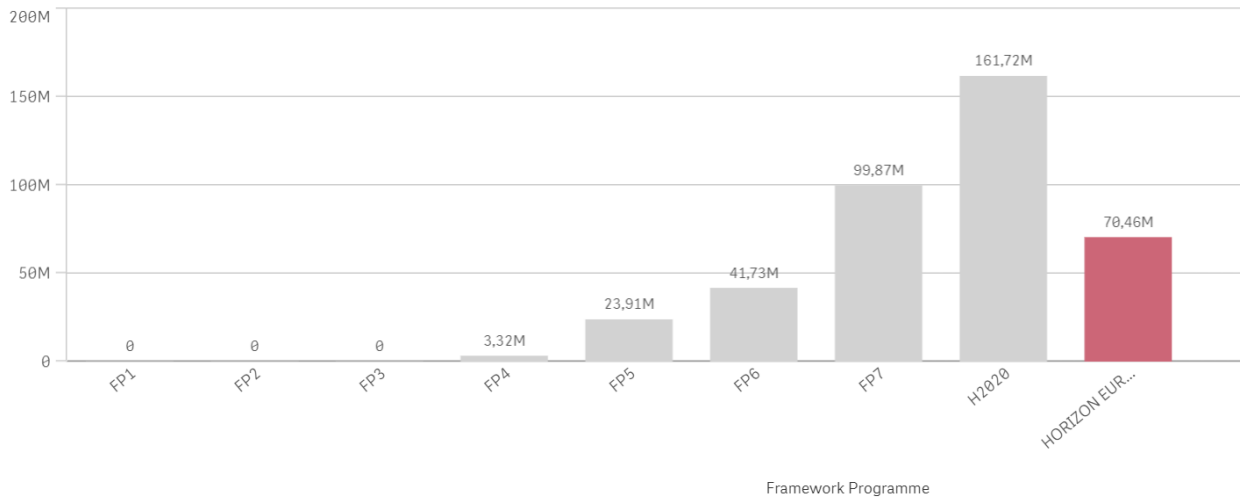


Figure 6 - EU contribution (€) across programmes

Bulgaria's R&I intensity is reported as 0,8%, significantly lower than the EU average of 2,3%. Among the 27 EU member states, Bulgaria holds the 24th position in terms of R&I intensity, placing it above Latvia, Malta, and Romania.

Bulgaria's success rate in securing grants from Horizon Europe is mentioned as 20,26%, with 193 signed grants. The European average is stated as 22,55%.

Regarding Horizon Europe contribution, Bulgaria received EUR 70,46 million in funding. This funding amount positions Bulgaria 23rd among the Member States in terms of the funding received from the programme. Notably, Bulgaria's funding level is slightly higher than that of Croatia, Slovakia, Latvia, and Malta.

Furthermore, Bulgaria has demonstrated commendable performance in Horizon Europe by accessing an amount that corresponds to the 43,6% of the total H2020 contribution (in seven years) within just two and a half years of the Horizon Europe programme, considering that the expected percentage for this timeframe, based on a seven-year program, would have been 35,7% if its performance was similar to the previous FP.

Workshop in Sofia, 25th May 2022

The second SUPEERA/PANTERA workshop on EU-widening was held in Sofia, Bulgaria, on 25th May 2022. This second event was also organized in a hybrid mode, allowing for online and onsite participation, and gathered 38 participants. The overall objective was to enhance collaboration in R&I activities in Bulgaria and as for the previous workshop in the Baltic States, to facilitate knowledge exchange and showcase best practices of how international networking and cooperation between national stakeholders and key international associations and organizations can be beneficial for establishing long-lasting interactions and fostering joint R&I activities.

The event speakers included mainly representatives from the Bulgarian research community as well as from the two projects' organizations, i.e., SUPEERA and PANTERA. Unfortunately, Bulgarian governmental authorities did not join despite significant efforts to get them onboard.

The session started with an overview of the gap between EU13 and EU14 countries on H2020 contributions and Bulgaria's performances on this research program. This introductory note was followed by a presentation addressing the importance of the SET Plan and the CET in the current European and World Context. Bulgaria has up to date only participated to the SET Plan marginally. For instance, all EU13 countries are active on batteries (crucial in the future energy system), except Bulgaria. This poor engagement in the SET Plan could explain to a certain degree the low funding received from H2020. Contributing to the effort for turning around the current situation, a number of advantages arising from participating in the SET Plan were presented.

Thereafter three presentations representing the national research/education community and a presentation by the Sofia Energy Agency (SOFENA) were given. Three assistant/associated professors from University of Varna and University of Sofia provided an overview of key research activities supporting the energy transition and shared best-practices, both in terms of EU-projects as well as relevant lab infrastructure. On the other hand, SOFENA explained the important role they play in developing a sustainable energy policy in the capital of the country, showcased projects in the public sector and presented European green energy financial opportunities for Bulgaria such as Structural Funds and Cohesion Funds as well as LIFE.

The four presenters participated in a panel discussion that started addressing barriers hindering the participation in EU funding schemes. All participants agreed on the lack of national energy priorities leading to a lack of national coordination, the existence of administrative burdens, and a rather poor knowledge capacity on EU in general. The difficulty to reach National Contact Points (NCPs), lack of network on EU level and the significantly less available infrastructure, where additional barriers mentioned and discussed during the panel discussion.

The second half of the workshop was devoted to present R&I opportunities for collaboration and funding within Horizon Europe (HEU) on the one hand, particularly looking at the Cleaning Energy Transition Partnership and Widening Calls, and Norway /EEA Grants on the other hand, the latter two as dedicated funding mechanisms for EU13 countries. An open discussion on how to further assist Bulgarian stakeholders on improving their EU participation took place and a number of recommendations were suggested. Among those, taking an active role during Info Days organized by the EC, particularly on the organisation of brokerage events; becoming an EERA member, opening doors for participation in agenda setting and network building and; registration of your interest and expertise for a dedicated call within the HEU participant portal. A more detailed summary of the workshop can be found in the ANNEX III.

3.2.4 Cyprus

This section shows the participation of Cyprus in Horizon Europe, since 2021, when the programme started, until June 2023, to which the following updated data trace back.

Sample	Horizon Europe signed grants	Horizon Europe **signed** grants (percentage of EU total)	Organisations involved in Horizon Europe projects	Organisations involved in Horizon Europe **projects** (percentage of EU total)	Horizon Europe net EU contribution (in Mil €)	Horizon Europe net EU contribution (percentage of EU total)
Cyprus	278	3,24%	398	3,01%	136,6	0,77%
EU total	8.575	100%	13.238	100,00%	17.760	100%
EU13 total	1.929	22,50%	2.175	16,43%	1.510	8,50%
EU14 total	6.646	77,50%	10.116	76,42%	16.250	91,50%

Table 9 - Cyprus. Horizon Europe performance analysis

Eligible Proposals	Eligible Proposals (percentage of EU total)	Marie Skłodowska-Curie Actions Participation	Marie Skłodowska-Curie Actions Participation (percentage of EU total)	European Research Council Principal Investigators
1.569	3,26%	34	0,43%	0
990	2,06%	43	0,54%	0

Table 10 - Cyprus. Horizon Europe proposals

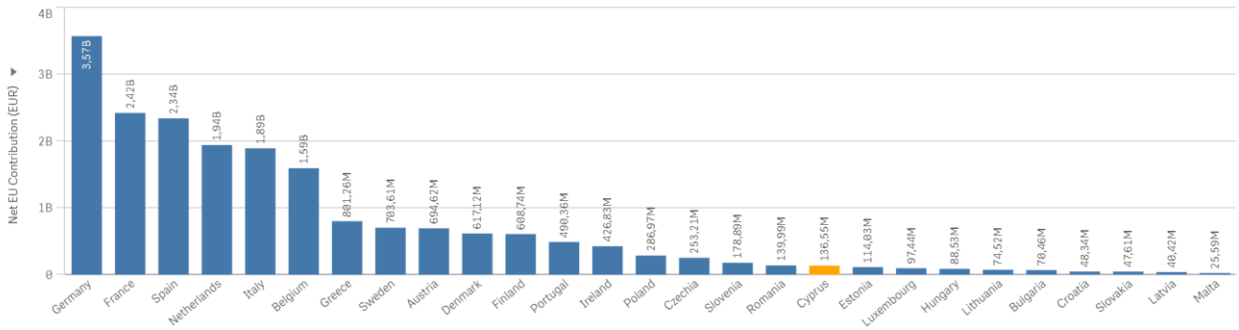


Figure 7 - Horizon Europe contribution (€) to Member States

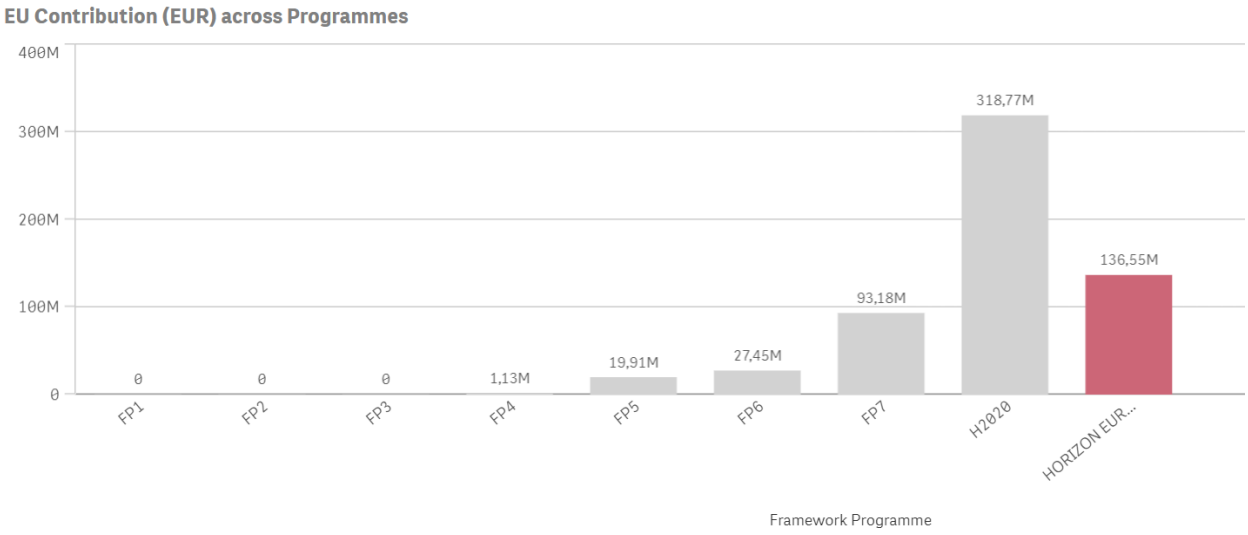


Figure 8 - EU contribution (€) across programmes

Cyprus's R&I intensity is reported as 0,9%. Among the 27 Member States, Cyprus ranks 23rd in terms of R&I intensity. This places Cyprus ahead of Bulgaria, Latvia, Malta, and Romania in terms of the investment in research and innovation.

Cyprus's success rate in securing grants from Horizon Europe is mentioned as 17,28%, with 278 signed grants, while the European average is stated as 22,55%.

In terms of the funding received from the Horizon Europe programme, Cyprus has been allocated EUR 136,6 million. This funding amount positions Cyprus 18th among all EU member states in terms of the funding received from the programme. It is worth noting that Cyprus's funding level is surpassed only by Poland, Czechia, Slovenia, and Romania among the EU13 countries.

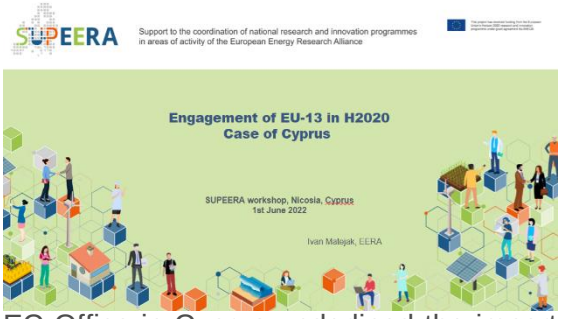
Finally, in terms of HEU contribution, Cyprus has demonstrated a good performance by achieving 42,85% of the total H2020 contribution within just two and a half years, considering that the expected percentage for this timeframe, based on a seven-year program, would have been 35,7%.

Workshop in Nicosia, 1st June 2022

The third SUPEERA/PANTERA workshop on EU-widening was held in Nicosia, Cyprus, on 1st June in a hybrid mode, allowing for online and onsite participation. It gathered 42 participants in total. The overall objective was to enhance collaboration in R&I activities in Cyprus and as for the previous two workshops, to facilitate knowledge exchange and showcase best practices of how

international networking and cooperation between national stakeholders and key international associations and organizations can be beneficial for establishing long-lasting interactions and fostering joint R&I activities.

The event covered a large variety of sectors, with representatives from the EC, the public and private sectors in Cyprus as well as speakers from the two projects' organizations, i.e., SUPEERA and PANTERA.



The program was structured into three main blocks. The first one included an oral presentation by the EC on the current EU strategy and latest policy and legislative developments supporting the CET, followed by two presentations on the engagement and performances of Cyprus in H2020 and its activity in SET Plan, and a final overview showcasing R&I best practices in Cyprus. The representative of the EC Office in Cyprus underlined the important role sunny countries like Cyprus shall play in the CET in Europe, especially after the REPowerEU communication, and encouraged Cypriots to multiply their renewable energy activity (PV) to achieve climate neutrality by 2050. When someone asked for the lack of financing to accelerate the fast role out of renewables, the EC stated that the funds are available and referred specifically to IRF European Finance Investments.

The presentation on the role of Cyprus in the EU in terms of H2020 performance and SET Plan activity showed that among EU13 countries, this country is doing fairly well and is the most active one in the SET Plan IWGs. However, alignment between SET Plan targets and national energy and climate targets is still lacking.

The second block of the workshop was devoted to a very alive and fruitful discussion on the energy strategy of Cyprus and main barriers to achieve climate targets with the participation of the Ministry of Energy of Cyprus, the Cyprus Energy Regulatory Authority (CERA), the national Research and Innovation Foundation (RIF) and the Transmission System Operator in Cyprus (TSOC). The Ministry of Energy explained the most important ongoing activities on renewables both at small and large scale systems, mainly on PV and wind energy, and pinpointed the challenges on R&I related to the lack of involvement of the private sector due to the fact that Cyprus has a service-based economy with absence of heavy industry. However, the ministry representative valued the cross-ministerial collaboration established through the development of the national energy and climate plan for Cyprus. CERA indicated the numerous activities the agency is promoting to engage citizens in the CET, for instance, offering them a price comparison tool to check tariffs and identify best energy suppliers. Furthermore, RIF informed about a dedicated new program to fund projects on renewable energy technologies (so far RIF has not had specific thematic areas for funding) and underlined that one of the main barriers to achieve future climate targets is the lack of alignment between researchers. Finally, TSOC indicated that

the national grid and the operators are ready to accommodate for the large capacities that will be needed in the energy transition, and for that clarity, trust and coordination are needed.

The third block initiated with two presentations by RIF and the Ministry of Research, Innovation and Digital policy (DMIRD). By RIF it is with mentioning the participation of Cyprus in two very important European Partnerships such as the CET Partnership and the Blue Economy Partnership. On the other hand, DMRID showed the commitment of the government on R&I, revealed by the steady increase in R&D expenditure since 2015, and stressed the fast-growing innovation ecosystem in the country, despite the fact that on EU level Cyprus is as of today categorized as moderate innovator. As for the national R&I strategy, the ministry mentioned that is under preparation and that one of the main objectives is to facilitate commercialization of research results.

This final block ended up with a presentation on the Norway/EEA Grants, a dedicated funding mechanism for EU13 countries, and a presentation of the PANTERA project and the EIRIE platform. Even though the EEA/Norway Grants were known to the audience, the presentation and follow-up discussion provided new insights onto the process for such mechanism and on how to influence the selection for research areas. A more detailed summary of the workshop can be found in the ANNEX IV.

3.2.5 Malta

This section shows the participation of Malta in Horizon Europe, since 2021, when the programme started, until June 2023, to which the following updated data trace back.

Sample	Horizon Europe signed grants	Horizon Europe **signed** grants (percentage of EU total)	Organisations involved in Horizon Europe projects	Organisations involved in Horizon Europe **projects** (percentage of EU total)	Horizon Europe net EU contribution (in Mil €)	Horizon Europe **net** EU contribution (percentage of EU total)
Malta	86	1%	108	0,82%	25,59	0,14%
EU total	8.575	100%	13.238	100,00%	17.760	100%
EU13 total	1.929	22,50%	2.175	16,43%	1.510	8,50%
EU14 total	6.646	77,50%	10.116	76,42%	16.250	91,50%

Table 11 - Malta. Horizon Europe performance analysis

Eligible Proposals	Eligible Proposals (percentage of EU total)	Marie Skłodowska-Curie Actions Participation	Marie Skłodowska-Curie Actions Participation	European Research Council Principal Investigators

			(percentage of EU total)	
405	0,84	23	0,29	0

Table 12 - Malta. Horizon Europe proposals

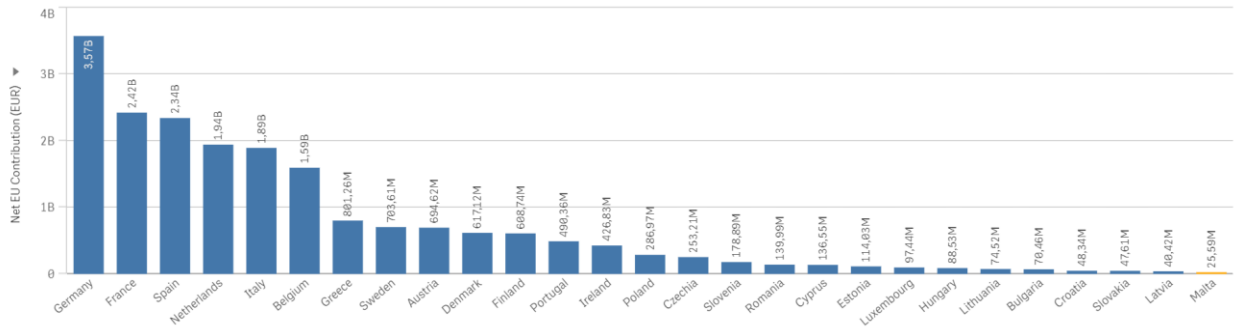


Figure 9 - Horizon Europe contribution (€) to Member States

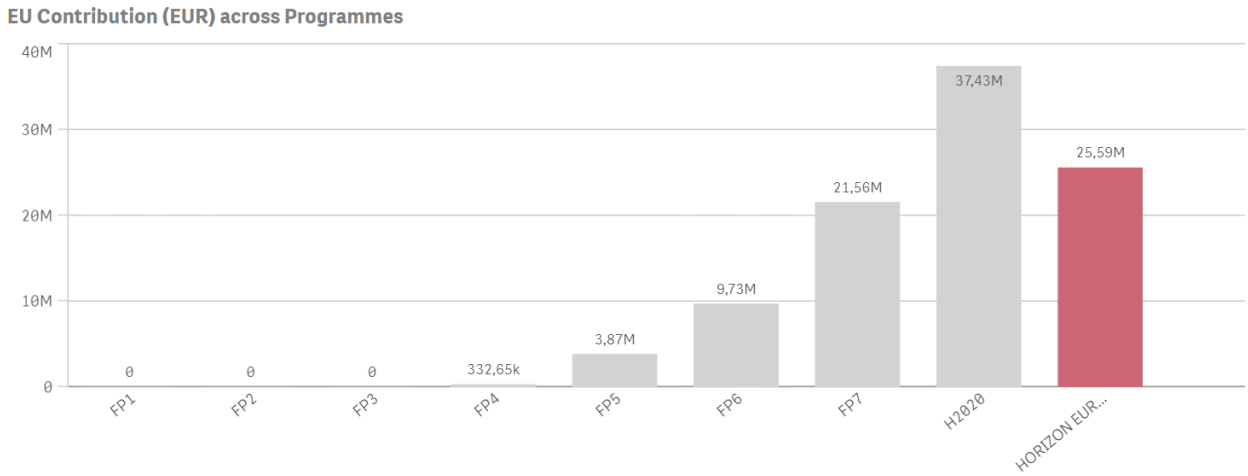


Figure 10 - EU contribution (€) across programmes

The R&I intensity of Malta is reported to be 0,6%. Among the 27 Member States, Malta ranks 26 in terms of R&I intensity, with only Romania below of its position.

In terms of securing grants from Horizon Europe, Malta has achieved a success rate of 21,10%. This means that approximately 21,10% of the grant applications submitted by Malta have been approved, resulting in 86 signed grants.

When it comes to the funding received from the Horizon Europe programme, Malta has been

allocated EUR 25,59 million. This funding amount positions Malta in the last position among all EU member states in terms of the funding received from the programme. This indicates that Malta has received a relatively the lowest amount of funding compared to other EU countries participating in the Horizon Europe programme.

Overall, the statistics portray Malta as having a lower R&I intensity and a lower ranking among EU member states in terms of R&I intensity.

Nevertheless, Malta has demonstrated an excellence performance in terms of HEU contribution by achieving 68,36% of the total H2020 contribution within just two and a half years, considering that the expected percentage for this timeframe, based on a seven-year program, would have been 35,7%.

Workshop in Valletta, 8th November 2022

The fourth SUPEERA/PANTERA workshop on EU-widening took place in Valletta, Malta, with the aim of addressing challenges and opportunities for the country's energy transition to a low-carbon economy. The workshop gathered 27 experts and stakeholders from the smart grids, storage, and energy communities.

The workshop began with an introduction to the PANTERA project and the EIRIE platform, which serves as a reference point for information sharing, collaboration, and knowledge creation in smart grids. The significance of a common taxonomy and the consortium's activities were also emphasized. Presentations covered various topics, including mobilizing national research resources, the energy sector in Malta, and opportunities within an energy crisis. The EIRIE platform and its functionalities were extensively discussed, highlighting the benefits for researchers, R&I organizations, and policymakers.

A panel discussion and Q&A session focused on accelerating R&I activities in Malta to support the energy transition. Key areas addressed included research collaboration, national regulations, policy issues, financing opportunities, and good practices. Barriers to R&I activities, such as limited budgets, lack of industry alignment, and bureaucratic practices in different countries, were also explored. Insights were provided on the EEA and Norway Grants, as well as funding opportunities for the clean energy transition

through Horizon Europe and the CETP. The importance of collaboration, capacity-building, and access to excellence were emphasized. Furthermore, participants gained insights into the Clean Energy Transition and main funding opportunities. An overview of a major R&I framework program and its new instruments to boost the EU R&I landscape was presented. The Clean Energy Transition Partnership and its joint programming platform involving stakeholder groups were also discussed. The procedure, current deadlines, and main project requirements for proposal submissions were explained, along with highlighting R&I opportunities for collaboration and funding within the framework program. The presentation concluded with an overview of the program's Widening calls and its three destinations.

Overall, the workshop provided a valuable platform for knowledge exchange and discussion on clean energy transition. Participants acquired insights into funding opportunities, collaborative initiatives, and the pivotal role of innovation in driving the transition to clean energy sources. The workshop concluded on a positive note, underscoring the benefits of connecting to the EIRIE platform for ongoing engagement and collaboration. A more detailed summary of the workshop can be found in the ANNEX VII.

3.2.6 Hungary

This section shows the participation of Hungary in Horizon Europe, since 2021, when the programme started, until June 2023, to which the following updated data trace back.

Sample	Horizon Europe signed grants	Horizon Europe **signed** grants (percentage of EU total)	Organisations involved in Horizon Europe projects	Organisations involved in Horizon Europe **projects** (percentage of EU total)	Horizon Europe net EU contribution (in Mil **€**)	Horizon Europe **net** EU contribution (percentage of EU total)
Hungary	285	3,32%	164	1,24%	88,53	0,5%
EU total	8.575	100%	13.238	100,00%	17.760	100%
EU13 total	1.929	22,50%	2.175	16,43%	1.510	8,50%
EU14 total	6.646	77,50%	10.116	76,42%	16.250	91,50%

Table 13 - Hungary. Horizon Europe performance analysis

Eligible Proposals	Eligible Proposals (percentage of EU total)	Marie Skłodowska-Curie Actions Participation	Marie Skłodowska-Curie Actions Participation (percentage of EU total)	European Research Council Principal Investigators
1.373	2,85%	41	0,51%	0

Table 14 - Hungary. Horizon Europe proposals

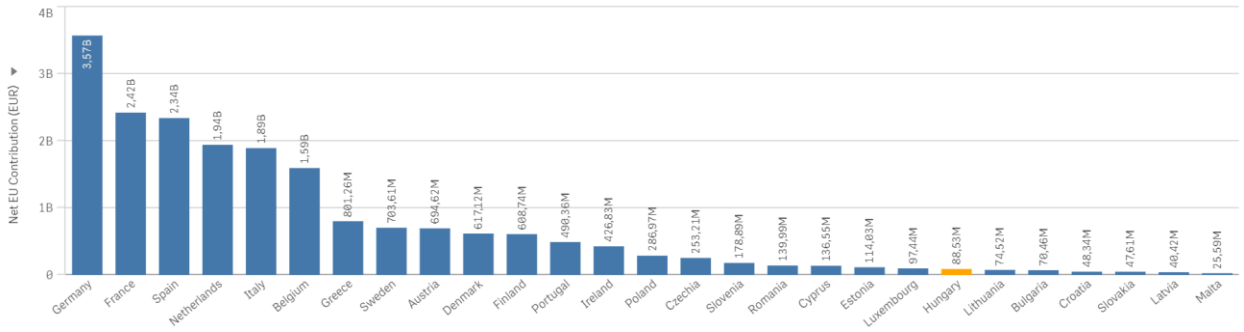


Figure 11 - Horizon Europe contribution (€) to Member States

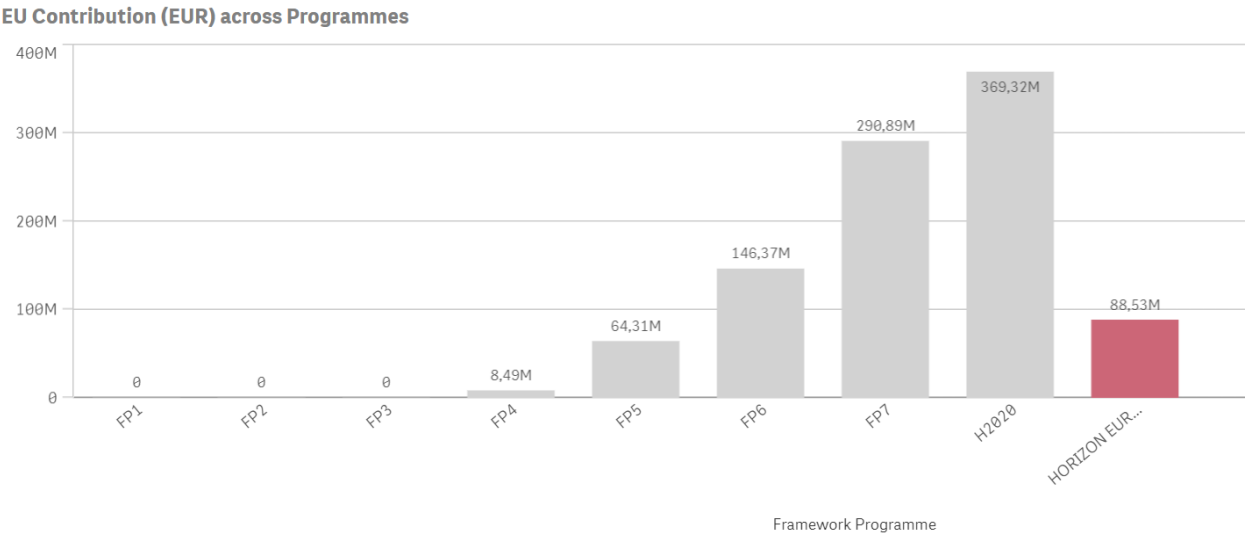


Figure 12 - EU contribution (€) across programmes

The R&I intensity of Hungary is reported to be 1,7%. Among the 27 Member States, Hungary ranks 13 in terms of R&I intensity.

In terms of securing grants from Horizon Europe, Hungary has achieved a success rate of 19,76%, with 285 signed grants,

When it comes to the funding received from the Horizon Europe programme, Hungary has been allocated EUR 88,53 million. This funding amount positions Hungary 21st among all EU member states in terms of the funding received from the programme.

Regarding HEU contribution, Hungary has demonstrated low performance by achieving 23,97% of the total H2020 contribution within two and a half years, considering that the expected percentage for this timeframe, based on a seven-year program, would have been 35,7%.

Workshop in Budapest, 26th October 2022

A new workshop on fostering EU Clean Energy transition in EU-13 countries was jointly organised by SUPEERA and PANTERA projects in Budapest on the 26 October 2022 with the aim to enhance collaboration on R&I in Hungary, facilitate knowledge exchange, and showcase best-practices among Hungarian institutions active in R&I. Despite the large efforts by the organisers to mobilise the Hungarian research community and industry, the participation was poor (20 participants), yet this did not prevent from exciting and fruitful interventions by eminent speakers/panellists from research organisations, industry, and authorities. The audience agreed on the importance of events like this workshop as catalysts to bring together key national and EU stakeholders in the energy sector.

The first session of the workshop was devoted to present and discuss about Hungary's involvement in the SET Plan and in H2020/Horizon Europe. The figures presented showed that Hungary, unfortunately, has had and continue having a poor participation both in the SET Plan, with only engagement in three Implementation Working Groups, and in EU R&I framework programmes.

With regards to the SET Plan, it was made evident that Hungary is still highly dependent on Russian fossil fuels, yet it is nationally recognised that the green transition is a fundamental component of the Hungarian carbon neutrality target for 2050 and district heating from renewables, system integration and energy efficiency were pinpointed to play crucial roles in the coming decades when reducing natural gas dependency. One of the panellists also commented that there is an increasing commercial activity and interest in green technologies such as batteries and a second panellist inspired the audience with best practices on how to engage in SET Plan to achieve its objectives, in particular on nuclear energy and through the Hungarian nuclear energy R&D programme.

As for the participation in EU R&I framework programmes, the numbers presented during this first session indicated a very poor success rate in H2020, with a limited 0,6% net EU contribution (percentage of EU total). The panellists referred to i) lack of alignment between national and European priorities, ii) limitations of the R&I systems and iii) abundance of domestic and cohesion

funds available in the country, which are easier to access and less competitive compared to the European ones, as three main factors to explain such poor performance. However, the National Research and Innovation Office has a clear strategy to support Hungarian stakeholders and the ambition to improve current results.

The second half of the workshop focused on R&I opportunities for collaboration and funding, with particular emphasis on Horizon Europe, Clean Energy Transition and Widening and on international research collaboration opportunities in Hungary. As for R&I funding opportunities, a short overview of i) Horizon Europe- Pillar II, ii) the Clean Energy Transition Partnership and iii) the Widening Participation and Strengthening the European Research Area were given, including a list of selected upcoming calls within these areas. One of the speakers made a point on the Widening scheme, indicating that Hungary has experienced difficulties in joining widening activities mainly due to the lack of communication between commission and project coordinators. With regards to international research collaboration in Hungary, a couple of best practices were presented. On the one hand, a H2020 CSA-project was presented and it was showed that through this project the Hungarian partners managed to create a strong network with up to 35-40 people, with long-lasting collaborations still alive today. A second best practice related to the creation and maintenance of a competence map by one Hungarian university, providing an overview of in-house expertise as a useful tool for boosting networking possibilities, both internally and externally. A more detailed summary of the workshop can be found in the ANNEX VIII.

3.2.7 Romania

This section shows the participation of Romania in Horizon Europe, since 2021, when the programme started, until June 2023, to which the following updated data trace back.

Sample	Horizon Europe signed grants	Horizon Europe **signed** grants (percentage of EU total)	Organisations involved in Horizon Europe projects	Organisations involved in Horizon Europe **projects** (percentage of EU total)	Horizon Europe net EU contribution (in Mil €)	Horizon Europe net EU contribution (percentage of EU total)
Romania	327	3,81%	267	2,02%	140	0,79%
EU total	8.575	100%	13.238	100,00%	17.760	100%
EU13 total	1.929	22,50%	2.175	16,43%	1.510	8,50%
EU14 total	6.646	77,50%	10.116	76,42%	16.250	91,50%

Table 15 - Romania. Horizon Europe performance analysis

Eligible Proposals	Eligible Proposals (percentage of EU total)	Marie Skłodowska-Curie Actions Participation	Marie Skłodowska-Curie Actions Participation (percentage of EU total)	European Research Council Principal Investigators
1.888	3,92%	41	0,51%	0

Table 16 - Romania. Horizon Europe proposals

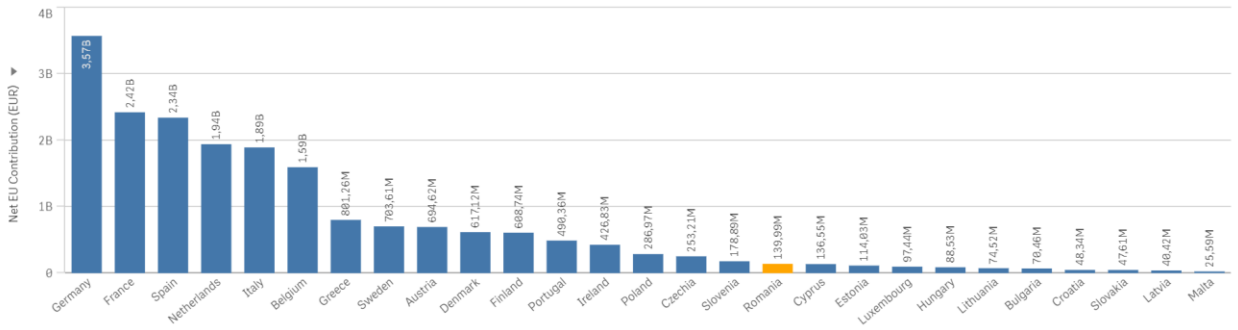


Figure 13 - Horizon Europe contribution (€) to Member States

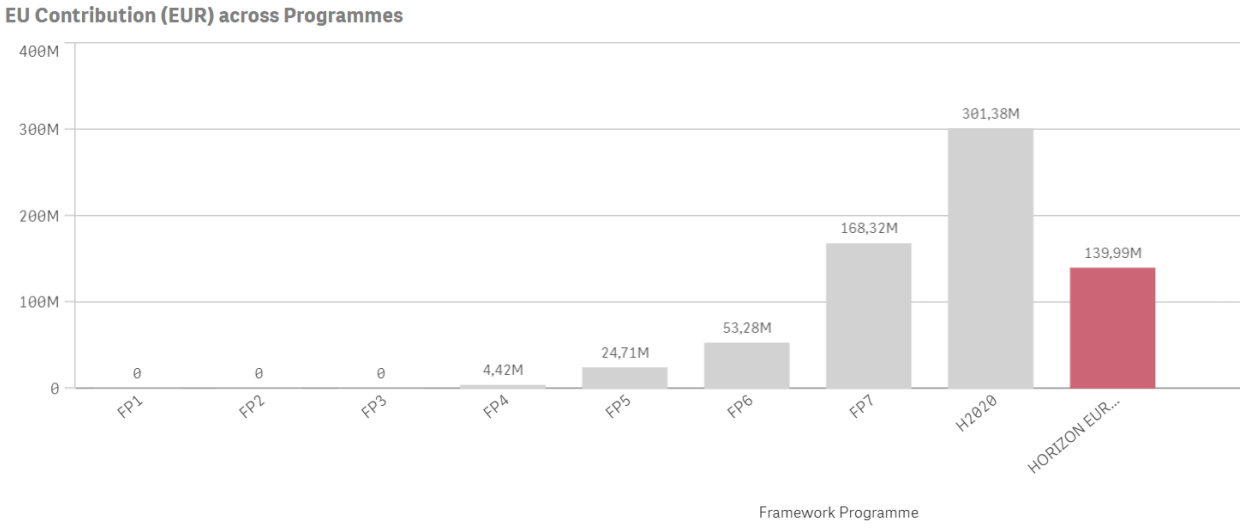


Figure 14 - EU contribution (€) across programmes

The R&I intensity of Romania is reported to be 0,5%. Among the 27 Member States, Romania ranks 27 in terms of R&I intensity. This suggests that Romania has a lower level of investment in research and innovation compared to other EU countries.

In terms of securing grants from Horizon Europe, Romania has achieved a success rate of 21,10%, resulting in 327 signed grants.

When it comes to the funding received from the Horizon Europe programme, Romania has been allocated EUR 140 million. This funding amount positions Romania 17th among all EU member states in terms of the funding received from the programme.

Romania's funding level is surpassed by Poland, Czechia and Slovenia among the EU13 countries.

Romania has showcased a good performance in terms of its contribution to Horizon Europe (HEU) by achieving 46,5% of the total contribution from H2020 within a span of only two and a half years. It is worth noting that this achievement surpasses the expected percentage for this timeframe, which was projected to be 35,7% based on the seven-year programme duration.

Workshop in Bucharest, 23rd March 2023

On Thursday, 23rd March 2023, the SUPEERA and PANTERA projects organised a workshop held at the Faculty of Electrical Engineering in Bucharest. The workshop, conducted in a hybrid format, was part of a series of events focused on the EU-13 countries. Its main objective was to increase the involvement of Romanian entities in Research and Innovation (R&I) activities.

The workshop aimed to promote knowledge exchange and best practices among Romanian entities actively engaged in R&I. Specifically, the goal was to encourage their participation in the Implementation Working Groups of the SET Plan and related initiatives. Additionally, the workshop featured the presentation of the EIRE platform, developed by the PANTERA project, which serves as a reference point for R&I activities in the energy system, facilitating EU-level collaboration.

Distinguished speakers from various organisations provided insights into Romania's energy sector, including its energy mix, dependencies, and its engagement in the SET Plan, Clean Energy Transition (CET), and H2020. The panel discussion addressed challenges such as the

lack of collaboration between national entities, low national investment in R&I, limited resources, and structural issues.

The workshop also highlighted R&I opportunities for collaboration and funding. It shed light on funding options available through the European Innovation Council (EIC), with a particular focus on Clean Tech, and emphasized the importance of collaboration in European projects. The session also introduced the EEA and Norway Grants, showcasing successful proposals and underlining the significance of research quality and collaboration.

Overall, the workshop served as a step forward in enhancing collaboration and promoting research and innovation in Romania. Its aim was to increase the country's participation in EU-funded R&I activities, particularly within the Implementation Working Groups of the SET Plan.

Romania has received a funding allocation of EUR 139,99 million from the Horizon Europe programme, placing it at the 17th position among all member states in terms of the funding received from the programme.

In terms of HEU contribution, Romania has demonstrated a good performance by achieving 46,45% of the total H2020 contribution within just two and a half years, considering that the expected percentage for this timeframe, based on a seven-year program, would have been 35,7%. A more detailed summary of the workshop can be found in the ANNEX X.

3.2.8 Lithuania

This section shows the participation of Lithuania in Horizon Europe, since 2021, when the programme started, until June 2023, to which the following updated data trace back.

Sample	Horizon Europe signed grants	Horizon Europe signed grants (percentage of EU total)	Organisations involved in Horizon Europe projects	Organisations involved in Horizon Europe projects (percentage of EU total)	Horizon Europe net EU contribution (in Mil €)	Horizon Europe net EU contribution (percentage of EU total)
Lithuania	178	2,08%	96	0,73%	74,52	0,42%
EU total	8.575	100%	13.238	100,00%	17.760	100%
EU13 total	1.929	22,50%	2.175	16,43%	1.510	8,50%
EU14 total	6.646	77,50%	10.116	76,42%	16.250	91,50%

Table 17 - Lithuania. Horizon Europe performance analysis

Eligible Proposals	Eligible Proposals (percentage of EU total)	Marie Skłodowska-Curie Actions Participation	Marie Skłodowska-Curie Actions Participation (percentage of EU total)	European Research Council Principal Investigators
848	1,76%	9	0,11%	0

Table 18 - Lithuania. Horizon Europe proposals

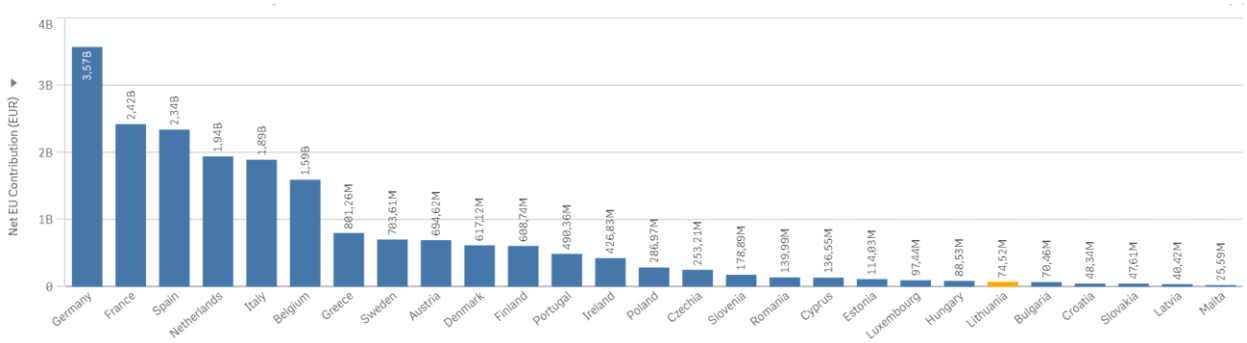


Figure 15 - Horizon Europe contribution (€) to Member States

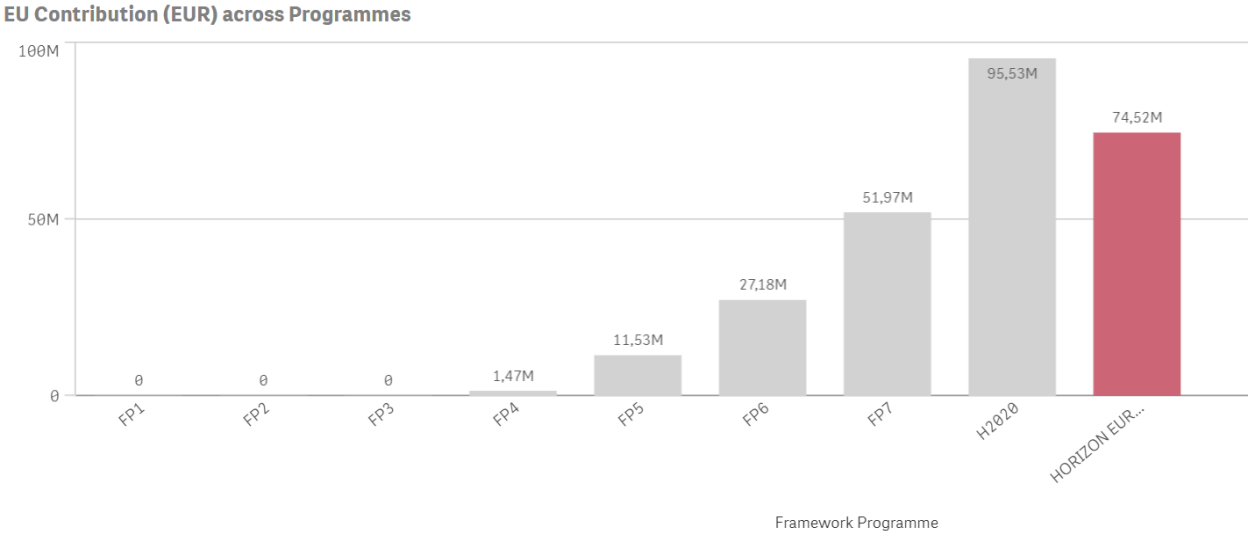


Figure 16 - EU contribution (€) across programmes

The R&I intensity of Lithuania is reported to be 1,1%. Among the 27 Member States, Lithuania ranks 19 in terms of R&I intensity.

In terms of securing grants from Horizon Europe, Lithuania has achieved a success rate of

20,33%, resulting in 178 signed grants, accounting for approximately 2,08% of the total signed grants across the entire EU.

Lithuania has received a funding allocation of EUR 74,52 million from the Horizon Europe programme, which constitutes approximately 0,42% of the total net EU contribution allocated, placing it at the 22nd position among all member states in terms of the funding received from the programme.

Lithuania's HEU contribution showcases outstanding performance, as it has achieved 78% of the total H2020 contribution in a short period of two and a half years. It is noteworthy that this accomplishment surpasses the expected percentage of 35,7% for this timeframe, which was calculated based on a seven-year program.

Workshop in Vilnius, 27th April 2023

On April 27th, the final workshop of the 10-series was held in Vilnius, jointly organised by SUPEERA and PANTERA projects. The event brought together experts from academia, industry, and government sectors in a hybrid format.

The participants shared valuable insights and experiences, contributing to a fruitful exchange of knowledge. The main topics discussed were the challenges and opportunities in bringing the research communities of the EU-13 countries closer together and fostering collaboration among them. Specific challenges faced by Lithuanian actors were highlighted, such as the lack of coordination between national and European priorities.

The benefits of enhanced collaboration between industry and research sectors were underscored, and the active participation of Lithuanian actors in the SET Plan and the European Energy Research Alliance was encouraged. The panel discussion delved into the revision of Lithuania's National Energy and Climate Plan and the role of community involvement in refining NECP objectives. The importance of informal networking, connecting with neighbouring countries and concentrating efforts in areas where countries have a competitive advantage were also highlighted.

In the second part, the discussion presented various R&I opportunities for collaboration and funding, highlighting the significance of EU programs like the European Innovation Council (EIC), the EEA and Norway Grants, and Horizon Europe. The presentations also discussed the challenges and opportunities for widening countries' participation in the Horizon Europe program,

the benefits of being part of European Partnerships. The PANTERA project was also presented, which aims to create a European forum for stakeholders in smart grids, storage, and local energy systems, and the EIRIE platform was discussed as a multi-functional collaborative platform for knowledge and data related to R&I activities in Europe.

Overall, the presentations and discussions showcased the interconnectedness of the topics being addressed and the funding opportunities available to Lithuania to enhance its scientific and technological landscape and drive innovation in Europe. A more detailed summary of the workshop can be found in the ANNEX XI.

3.2.9 Czechia

This section shows the participation of Czechia in Horizon Europe, since 2021, when the programme started, until June 2023, to which the following updated data trace back.

Sample	Horizon Europe signed grants	Horizon Europe signed grants (percentage of EU total)	Organisations involved in Horizon Europe projects	Organisations involved in Horizon Europe projects (percentage of EU total)	Horizon Europe net EU contribution (in Mil €)	Horizon Europe net EU contribution (percentage of EU total)
Czechia	468	5,46%	259	1,96%	253,20	1,43%
EU total	8.575	100%	13.238	100,00%	17.760	100%
EU13 total	1.929	22,50%	2.175	16,43%	1.510	8,50%
EU14 total	6.646	77,50%	10.116	76,42%	16.250	91,50%

Table 19 - Czechia. Horizon Europe performance analysis

Eligible Proposals	Eligible Proposals (percentage of EU total)	Marie Skłodowska-Curie Actions Participation	Marie Skłodowska-Curie Actions Participation (percentage of EU total)	European Research Council Principal Investigators
2.309	20,90%	138	1,73%	0

Table 20 - Czechia. Horizon Europe proposals

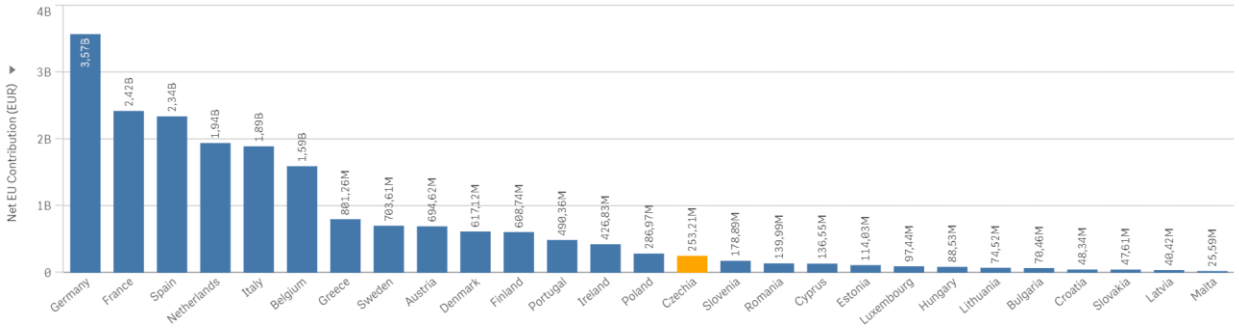


Figure - Horizon Europe contribution (€) to Member States

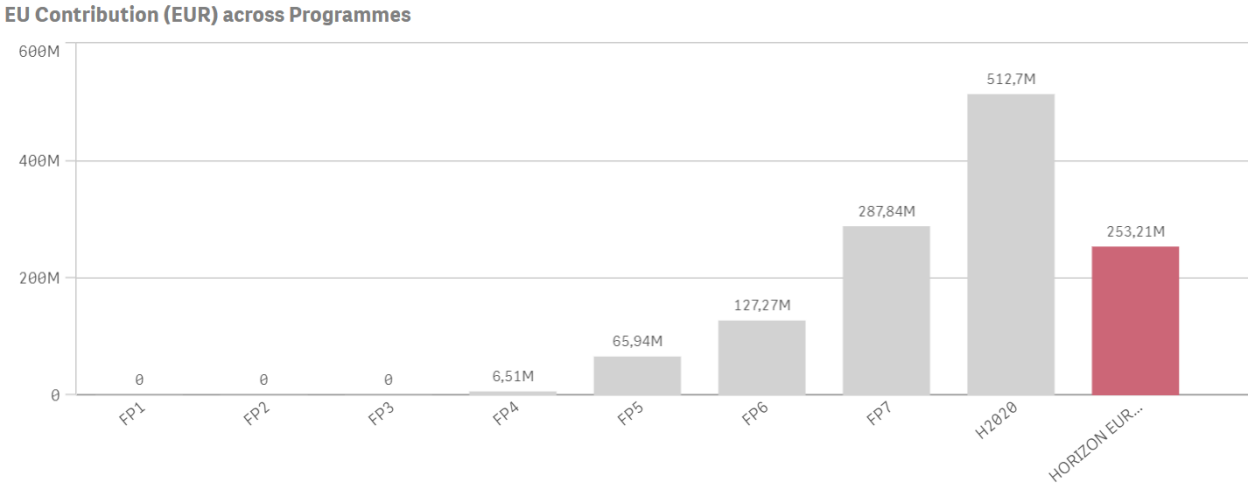


Figure 17- EU contribution (€) across programmes

Czechia has a reported R&I intensity of 1,8%. Among the 27 MS, Czechia is ranked 10th.

When it comes to securing grants from Horizon Europe, Czechia has achieved a success rate of 20,90%, resulting in the signing of 468 grants (5,46% of the total signed grants in the EU) Union.

Czechia has received a funding allocation of EUR 253,20 million from the Horizon Europe programme, which represents approximately 1,43% of the total net EU contribution allocated. This places Lithuania in the 15th position among all member states in terms of funding received from the programme, with only Poland ahead of it in this ranking.

In terms of HEU contribution, Czechia has demonstrated a good performance by achieving 49,39% of the total H2020 contribution within just two and a half years, considering that the expected percentage for this timeframe, based on a seven-year program, would have been 35,7%.

IV FINDINGS AND RECOMMENDATIONS

This chapter aggregates the empirical information collected during the workshops in the nine visited countries, categorising them by obstacles and challenges of different nature. This information builds upon the findings illustrated in the previous report D1.10, (*Report on the progress regarding widening EU13 participation in the SET Plan and EERA activities*), complements the findings of the desk research performed in the D1.8, (*Widening. Preliminary recommendations for mobilising National Public Research resources in EU13 countries*) and provides a set of recommendations and policy options to bridge the R&I gap.

4.1 Main findings from field research in the visited EU13 countries

1. Low interest and engagement of key stakeholders

From the initiation phase of the agenda set up and the initial dialogues with EERA's contact points in each of the visited countries, it was made clear the importance of inviting representatives of the SET Plan Steering Group, or an officer from the respective ministries in charge of portfolios relevant to the SET Plan and CET related activities (including relevant funding programmes). Even though this proved to be quite straightforward for Croatia, Czech Republic, Latvia, Lithuania, Hungary and Cyprus, the situation was rather different in Bulgaria and Romania.

In the case of Bulgaria, the first invitation was sent to an official at the Bulgarian ministry of Energy that was suggested by SUPEERA contact person from the Technical University of Sofia. Due to unavailability of the contacted person, SUPEERA partners proceeded immediately with two different approaches: a) contact directly via a phone call those who had already registered for the event and other contacts from the RTO's contact list put together in the previous years by SUPEERA partners b) contact via phone the Bulgarian Permanent Representations in Brussels, so as to get in touch with representatives from the respective Bulgarian ministries to convey the invitation to their colleagues in Bulgaria. Unfortunately, none of them resulted to a speaker accepting the invitation.

In both Bulgaria and Romania **it was not possible** to attract NCPs as speakers, despite the different approaches followed, including email invitations and direct phone calls. On the contrary, no similar obstacles were observed in the other visited countries. Especially, in the workshop in Croatia, two NCPs participated in the panel discussion from both Croatia and Hungary (also an EU13 country), while in Latvia, Lithuania and Hungary NCPs supported the promotion efforts of the event.

Low interest to participate in such events was observed from the side of the potential stakeholders in almost all visited countries, despite intensive promotion efforts. The organisers' methodology was to engage the local contact point (co-organiser and main contact for organising the workshop

and suggesting speakers) in promotion efforts and reach out to their network to promote the event. Especially in the case of Hungary, the NCP informed that in the recent past they organised open Info Days for Horizon Europe calls, inviting a large number of national stakeholders. Unfortunately, even though the invitation was sent adequate time in advance, the participation to the event was limited to just few people. The Hungarian NCP promoted the invitation of the SUPEERA workshop as well to the same audiences, but as expected, the participation was equally limited. During the organisation of this workshop, we were informed that if we in parallel organise a small-scale trade fare where companies are able to promote their products and engage to networking activities, we would be able to increase the number of participants by great numbers.

2. Structural and administrative barriers at both national and RTO level

Structural and administrative barriers at both national and RTO level are hampering the participation of universities and research institutes at EU funded R&I activities and enable them to be engaged in energy related European fora. In Lithuania and Malta, there is insufficient funding for R&I activities which are not topping the list of the national policy priorities. In Bulgaria, currently, there **isn't any strategy at national level to define the R&I priorities**, and the coordination of different stakeholders in this respect is still missing. The picture is quite similar in Romania where the national **efforts to finance R&I have been very low**. As a result, this situation has pushed RTOs to search for R&I funding opportunities at EU level. As reported, **volatile collaboration at higher level**, the existence of a culture of **unfair competition** and the **lack of collaboration among national entities and stakeholders** are some of the main underlying reasons that draw this reality. Of course, this is a multifaceted problem that is also partly fuelled by the limited resources of the responsible entities and the different interests and priorities at higher level.

Lack of structured management and applied methodology related to the supporting schemes, was also mentioned as an important barrier among targeted countries. More specifically, in the current administrative structure of many research organisations, project management and financing departments are centralised and there isn't any mechanism in place for efficient information and data exchange. The same applies for information collection processes, where there isn't in place any mechanism at centralised level to track progress of the different departments regarding their participation in EU funded projects. This creates an obstacle on interdepartmental collaboration within the same institute, as information exchange between different departments and faculties doesn't occur through an established or top-down communication process – but only from personal initiative which relies heavily on interpersonal relationships between faculty members in each department. Though, intensive efforts to overcome this obstacle was reported in Hungary and Lithuania. A good practice observed in this aspect comes from the Budapest University of Technology and Economics which has setup and use the BME competence map which aims to boost networking possibilities of researchers in the university and identify areas of collaboration.

3. Weak collaboration between RTOs, industry and ministries

In most of the visited countries, there seem to be certain structures in place to support communication and collaboration between research, industry and the respective ministries, underpinned in some cases by bilateral agreements and national R&I projects. However, even though in some of the countries established communication channels do exist, as well as the bilateral interest for collaboration at national level, there are several barriers that could be overcome.

As far as the communication between RTOs and ministries, the latter is oftentimes the facilitator of such interactions but as mentioned during several workshops, communication channels rarely result in collaboration between parties and **RTOs are rarely seen as potential partners** by the ministries. Where collaborations do occur, it is more likely that they are a result of good **personal relationships** between two parties and/or personal initiatives, rather than the result of a well-established collaboration channel or platform.

As reported in the workshop in Latvia, engaging industrial partners in R&I projects has been proved challenging as they are **not fully aware of the benefits** of such participation. In that end, continuous and systematic efforts in establishing mid and long-terms collaborations, ideally bridging gaps lab-fab, are needed. In Romania the **limited national R&I investment** has also been noted as a principal reason for loose collaboration between industry and research in the low-carbon energy sector, as R&I funding would attract such interactions from both sides. Lastly, in Malta there is a **disconnection between universities and local industries**, where the former do not connect their R&I activities to the needs of the latter.

In Bulgaria, international collaboration is more attractive than the one at national/local level**.** For instance, one research institute collaborates closely on R&I activities with globally renowned technology companies, but substantial **collaboration at national level** with other research institutes is currently missing. The same observation was reported by an NGO active in the energy sector, where it has established collaborations with partners outside the country, but not with national research institutes within the country. This is also the case in Romania where the SMEs and NGOs that are well established in the EU funding scene at European level, their collaboration with national stakeholders is still limited. This barrier oftentimes leads to difficulties in identifying **the right partners** with specific expertise. This challenge was recorded as one of the main ones that hamper the participation in EU funded projects in Croatia, Romania and Bulgaria, where the audience remarked the lack of **collaboration and match-making platforms** that would facilitate the process of building successful consortia for R&I activities. In this direction, the audience perceived these challenges as limited interest and support by the government. **Lack of collaboration and networking opportunities** between faculty members within the same RTO is also missing. Especially in Bulgaria, it was reported that there is a lack of a centralised database with the fields expertise of the different faculty members; therefore, making it hard for project initiators to start a dialogue with a potential project partner from the same university.

4. **Limited proposal drafting capacity and administrative barriers**

EU funded projects are seen as highly demanding in terms of infrastructure, human resources and administrative capacity that would enable applicants in EU13 countries to increase their participation and success rates.

During the workshop in Latvia, the audience was asked what in their opinion are the most important reasons for low R&I activity in their country in the domain of smart grids. The majority replied that Horizon Europe (including Horizon 2020) is very competitive and more advanced countries have an advantage over less engaged ones in EU funded projects, making the playing field at EU level rather **challenging in terms of competitiveness**. The main reasons for this were reported to be from one hand, the **lack of advanced research infrastructure** within the research institutes in the country and from the other, the **lack of technical capacity** of the university staff to **draft proposals** but also **coordinate EU funded projects**. Elaborating on the latter point, it was noted that the "project culture" is missing in the research institutes and is not as developed as in other EU countries. The same reasons were reported in Hungary, Bulgaria and Romania. When it comes to human resources, it was remarked that some organisations cannot afford their participation in an EU funded project, given that they have to allocate a considerable **amount of workload** to this activity without any success guarantee. These extra costs and the associated risks weigh heavily in the budget of an organisation, especially if it is coordinating the drafting process of a proposal. Similar obstacles were observed in almost all of the visited countries, referring also to **high complexity** of the application process when compared to national project applications. On top of that, a general **brain-drain** trend affecting several EU13 countries make the **retention of talents** very difficult for RTOs and SMEs, setting back at the same their proposal drafting capacity.

5. **Competition between national and EU funded R&I opportunities**

An important aspect that was underlined in the workshops in Croatia, Hungary and Romania is that the respective institutes **focus more on national funding programmes** rather than international ones, by emphasising that universities are quite busy with solving the local challenges and in short-term, without expanding to European projects and funds with long-term and international outlooks. As it was underlined in the workshop in Hungary, the abundance of domestic and cohesion funds available in the country are **easier to access and less competitive** than the EU ones. However, when national R&D funding is limited, HE calls are becoming more attractive.

Additionally, accessing to **substantial indirect EU funds** (i.e. those managed by national and/or regional governments such as ERDF, ESI, CF, et sim) is part of a competitive process which can be heavily influenced by major national stakeholder and policy makers (referring also to the challenge of **unfair competition** mentioned in the paragraphs above). As a result, national RTOs'

participation to direct EU grants (such as HEU), which are managed *inter alia* by non-influenceable structures, becomes less appealing to potential applicants.

6. **Inhomogeneous degree of engagement by NCPs**

In most of the visited countries, it wasn't any challenging to engage NCPs to participate and contribute to the workshop. Some of them also supported the promotion efforts of the event by forwarding it to their national contacts and promoting it on social media. As mentioned at the beginning of this chapter, a dissimilar situation was faced in Bulgaria and Romania where it was **not possible to engage any NCP** to participate. During the workshops, the invited RTOs' representatives underlined that they would find it very helpful if the NCPs had provided more information about the participation rules and application procedures to HE programme; for instance in a form of periodic webinars or a help-desk type of support. Additionally, and given the aforementioned barriers on finding partners to collaborate in an EU funded project, NCPs could facilitate this process via, for example, brokerage events.

7. **Not sufficient national funding for R&I projects**

Insufficient national funding towards the R&I in general, and the energy sector in particular, was noted as one of the main reasons behind the low involvement of RTOs in R&I actions in several countries, where the main source of relevant funding are European R&I funding programmes. Especially in the workshop of Romania it was stated that there is an imbalance in the different sources of funding, and RTOs rely on European funds to support their research needs. This barrier was mentioned both from speakers/audience and via the Sli.do polls, underlining that **low national R&I budget** is a major barrier from being actively involved in such activities and it is needed to bridge the current R&I funding gaps. The reported needs of national R&I funding extend beyond their quantitative dimension, where in several countries, it was commented that the respective **calls are not well aligned with the EU R&I priorities** and should be tailored to also address the regional specificities.

4.2 Recommendations

The recommendations below aggregate the information and knowledge attained during the organisation and implementation of the physical workshops. These recommendations validate the initial preliminary recommendations elaborated in the D1.8 (*Widening. Preliminary recommendations for mobilising National Public Research resources in EU13 countries*) and D1.10 (*Report on the progress regarding widening EU13 participation in the SET Plan and EERA activities*) and are still valid and relevant for any future action at EU and national level. For the sake of complementarity, these recommendations are as follows below. Most of them are

interconnected and interdependent but they are also meant to be applied separately. Moreover, given the heterogeneity of the EU13 cluster, some of them are more relevant for some of these countries but not others.

1. Link national R&I priorities to European ones

EU13 should align their national priorities in terms of R&I with those at the EU level. Enhancing their participation in the SET Plan through selected Implementation Plans would be pivotal to get involved in the wider EU discourse pertaining to research in low carbon energy technologies and understand current priorities, other than enhancing international ties, sharing research infrastructures and profit from all the other opportunities arising from participating in the SET Plan. Aligning national CET strategies to European ones it needs to be accompanied by the same degree of alignment between national and European R&I funding.

2. Strengthen participation in EU R&I networks

EU13 would benefit from being involved in R&I European communities and networks to bring their national priorities closer to the EU ones and, at the same time, to have a say over and contribute giving shape to the latter. Among such communities and networks, a pivotal role is played by those related to the SET Plan implementation landscape – and hence EU13 countries should focus more on those, such as ETIPs, EERA Joint Programmes, CSAs, European Partnerships and academic/industry associations. Actors in EU13 should become more active on informal European R&I networking platforms (e.g. RTD liaison offices network like IGLO; Lino Office as an example for Lithuania) and increase their participation on information sharing and event organisation activities. To this end, EU13 countries are encouraged to increase the engagement of active students and researchers with the relevant expertise, active in the respective domains (e.g., smart grids - ETIP SNET), as an effort to also increase their visibility at international networks and collaboration platforms, participating also in experts' committees.

3. Increase national R&I funding and align them with EU funds

The analysis in the previous deliverables (D1.8, D1.10) showed a clear correlation between the low quality of national R&I systems and scientific institutions and poor performance in Horizon 2020 – an issue confirmed by the NCPs of several countries. Even though the statistics for their participation in Horizon Europe indicates a rather positive trend (as shown in Chapter 4) for some of them, EU13 should invest more in R&I to close the gap with EU14.

It is also necessary to make R&I systems more competitive and comparable to the ones in EU14. For most of the Horizon Europe research grants, salaries in public research institutions are fixed and linked to civil servants' wages, which in EU13 countries are far below the average pay for a

scientist in Western Europe, something that also fuels the increasing trend of brain-drain in EU13 countries. To this end, where possible, salaries of actors in EU13 should instead be left free to fluctuate.[6]

National R&I funding should aim to connect theory and practice and be adjusted to the local and regional needs. They should also be more visible to the consumers and facilitate a closer dialogue between national agencies and ministries. They should also promote cross-disciplinary cooperation and should incorporate technical but also non-technical fields of collaboration (e.g., social sciences).

As mentioned above, when it comes to R&I funding, it is important to adopt a long-term vision and align the national R&I funding with the European ones, identifying also complementarities and possible overlaps. For instance, the recent example of Lithuania[7] where they have put in place a formal system that allows regional funds to be transferred to Horizon Europe projects, is seen as a good example in this direction.

4. Foster stronger academia-business cooperation and improve collaboration of different entities at national level

Several NCPs pointed to the shape of their economies, the relative limited industry sector, and the absence of integration between business and academia as one of the main causes for their limited participation in Horizon 2020. EU13 should strengthen this connection, tracing a stronger link between universities and industry, accelerate uptake by industry and translate research into concrete business opportunities. To this end, an increase in the national R&I funding, aligned with national R&I needs and European R&I strategies could support such collaborations. Additionally, further support on networking and match-making events is necessary to identify areas of research-industry collaboration and enable finding the expertise needed at national level. Ministries and NCPs can play an important role in this direction, and they should strive to increase their collaboration with both industry and research. During the workshops, EIRIE platform was mentioned as a tool that could facilitate the collaboration between academia and industry. Also, in Cyprus, the national funded CO-DEVELOP Programme aims to bridge the gap between academia and industry and utilise the existing know-how to meet specific needs and challenges of the economy.

[6] Florin Zubașcu, *Newer member states facing conundrum in extracting value from Horizon Europe* (Science Business, May 2021), https://sciencebusiness.net/news/newer-member-states-facing-conundrum-extracting-value-horizon-europe

[7] Thomas Brent, *Lithuania takes a lead on transferring regional development money to Horizon* (Science Business, June 2022), https://sciencebusiness.net/news/Synergies/lithuania-takes-lead-transferring-regional-development-money-horizon-europe

5. Reduce administrative barriers and improve application procedures

Develop, modernise and enhance the administrative and management capacities of research institutions to allow for an efficient management of existing EU funded projects, but also better communication and coordination between different faculties and departments for future projects. For instance, the example of the BME competence map which aims to boost networking possibilities of researchers in the university and identify areas of collaboration could be replicated to other RTOs and countries.

Several countries pointed to the administrative and regulatory burdens that impinge on R&I in these countries. These bureaucratic procedures should be shortened and simplified so as to also ease of tracing international connections and participating in EU structures such as the SET Plan.

In terms of evaluation processes, there should be a better understanding from the applicants' side on how the evaluation process for EU-funded projects works and increase the transparency of the process. As an effort to diminish the attractiveness of national R&I funding in terms of application procedure (given that is perceived as simplified when compared with EU funding), it was suggested that the HE application process and evaluation criteria should be applied also to national R&I calls - making them comparable in terms of administrative requirements.

6. Enhance the role and activities of National Contact Points

The roles and activities of NCPs across Europe should be homogenised, so RTOs across EU to have access to the same level of services. For instance, in some countries, the NCPs organise webinars with outlining the application guidelines to EU funded projects, Info days, Brokerage evens etc., while in other countries they are not active at all. National Contact Points should be reformed, from rather information-providing bodies to promoters of excellence and internationalisation, providing assistance and support with proposals preparation, organising training sessions for applicants and support project coordinators in their countries. In view of the Horizon Europe programme, some countries (e.g. Lithuania) restyled their NCPs completely, increased their ties at the European level and put in place a more informative communications strategy to both advertise the work of these institutions and share information and expertise related with Horizon Europe. NCPs could also serve as providers of administrative assistance to applicant institutions and promoters of the opportunities arising from funding schemes to academia. Other recommendations taken as implemented examples from active NCPs include the following activities: providing incentives and rewards to successful applicants; introducing of KPIs and binding commitments under HE and domestic calls; facilitate research-industry cooperation through innovations ecosystem programmes of RTOs.

7. Support capacity-building programmes for EU grant applications

As analysed in D1.8 (*Widening. Preliminary recommendations for mobilising National Public Research resources in EU13 countries*), the eligibility rate – i.e., the number of proposals that have not failed at the eligibility or admissibility step – is lower in EU13 countries as compared to EU14. Additionally, in most of the visited countries it was reported the limited capacity of RTOs to set up consortiums and coordinate successful project proposals, which entails in making them less competent against RTOs in states that are more experienced with such application processes. In that end, EU13 countries should take measures to improve the administrative expertise of institutions applying for Framework Programme grants by creating national bodies providing administrative assistance and guidance to applying institutions. These measures could be supported by the NCPs and include *inter alia* the establishment of an inter-sectoral group for strategic support and collaboration at national level, or even a liaison R&I office in Brussels. An example on this direction comes from Lithuania where there is a close collaboration between the respective ministry, the NCP and the LINO office in Brussels. They have also adopted a "package" approach on HE and provide capacity building programmes for successful HE application, supporting at the same time researchers and organisations to effectively align their goals, resources, and activities to maximise the impact and outcomes of their HE projects.

8. Encourage RTOs to cultivate a "project culture"

As mentioned in several workshops, there is a lack of "project culture" among researchers and RTOs should take decisive steps to cultivate it within their institutions. This issue was also framed by the need of "mindset change" where researchers should broaden their collaboration horizons beyond the "boarders" of their institutions and seek to participate in project consortia. This requires a step ahead from the researchers to lean not only on their traditional academic networks and put themselves in the marketplace and look for potential partners. At a broader scale, EU13 countries should focus on their competitive advantage and in the areas where they are strong compared to other countries.

V CONCLUSION AND WAY FORWARD

For a successful implementation of the SET Plan and its targets in the broader context of the CET it is essential to spread research excellence across the entire EU, with specific focus to the EU13 countries. In a long term, in fact, the relatively weak position of the EU13 in R&I programmes poses a concrete risk that the 2030 and 2050 climate and energy targets will not be met, while, in a short term, identified limited participation might be reproduced also in Horizon Europe, thereby broadening even more the disparities among EU27 RTOs.

The current deliverable as the final in the series, builds upon D1.8 *(Widening. Preliminary recommendations for mobilising National Public Research resources in EU13 countries)* and D1.10, *(Report on the progress regarding widening EU13 participation in the SET Plan and EERA activities)*, complementing and enriching the information provided in these.

This set of recommendations can be used by the EC services complementarily to similar ones on the same topic that could assist on understanding better the national contexts and the specific dynamics of entities in each country.

After the end of the SUPEERA project, EERA will keep open the communication channels with the network that was established in these EU13 countries and will continuously strive to identify areas of common interest and cooperation. For instance, some of the visited RTO's were brought in contact with stakeholders of other areas that EERA is involved, such as Batteries Europe, StoRIES project etc. and some of the contact in EU13 countries showed interest of getting involved in promoted collaboration platforms (e.g. working groups of ETIP Batteries).

ANNEX I Report on SUPEERA Widening Workshop in Croatia

Boosting the R&I activity on Smart Grid Technologies (SPLITECH conference Croatia)

PANTERA & SUPEERA Joint Workshop

10th September 2021 - 09:00 - 15:30 EEST

Agenda of the workshop

Time (CEST)	Topics	Description	Presenter
9:15 **9:25**	The PANTERA project and the regional approach	Short description of the project, the importance of the regions, introduction to the bottom-up approach of regional desks	**Dr Venizelos Efthymiou (FOSS)**
9:25 **9:45**	Croatia: energy and	Analysis, facts and figures from the energy and R&I contexts highlighting	**Mr Mattia Cabiati (RSE)**
9:45 **10:45**	EIRIE – how the regional arm accelerates yourSG R&I activities	Use case solutions with the participation of local stakeholders, that can match the needs and profiles of the region.	**Mr Tasos Tsitsanis (Suite5)** **Mr Mohamed Shalaby (DERlab)** ***Representatives of local stakeholders:*** Prof. Tomislav Capuder (Univ. of Zagreb)
10:45 **14:00**	**Break**		
14:00 **14:20**	The SUPEERA project	Linking objectives with PANTERA: Mobilization of EU-13 national public research resources in the Clean Energy Transition: challenges and	**Dr Ivan Matejak (EERA)**

		opportunities	
14:20 **15:20**	Panel Discussion and Q&A session	How to accelerate the R&I activities of theregion? • Research Collaboration • National regulations • Policy issues • Financing opportunities • good practice	***Moderators:*** **Dr Venizelos Efthymiou** **Dr Ivan Matejak** **Contribution from:** **Dr Shafi Khadem** *(IERC)* ***Panelists****:* **Ms Zorana Barišić**, *Croatian NCP* **Ms Orsolya KÜttel**, *Hungarian NCP;* **Mr Damir Pirić**, *Director HEPODS – Croatian DSO;* **Dr Tomislav Novosel**, *REGEA*
15:20 **15:30**	**Closing Remarks**	**Wrap up of all sessions giving emphasis to** **the outcomes related to the region**	**Dr Luciano Martini - RSE**

PANTERA and SUPEERA EU projects jointly organized a workshop at the SpliTech conference aiming to discuss and raise attention on gaps and barriers that limit the R&I activities in the energy sector and especially hinder a true integration of Croatian R&I stakeholders at EU level.

The SpliTech conference was an excellent occasion to organise a side event for the PANTERA project being an IEEE conference dealing with “Smart and sustainable technologies” thus collecting a good participation from the energy field stakeholder from the R&I field, first stakeholders of the PANTERA project.

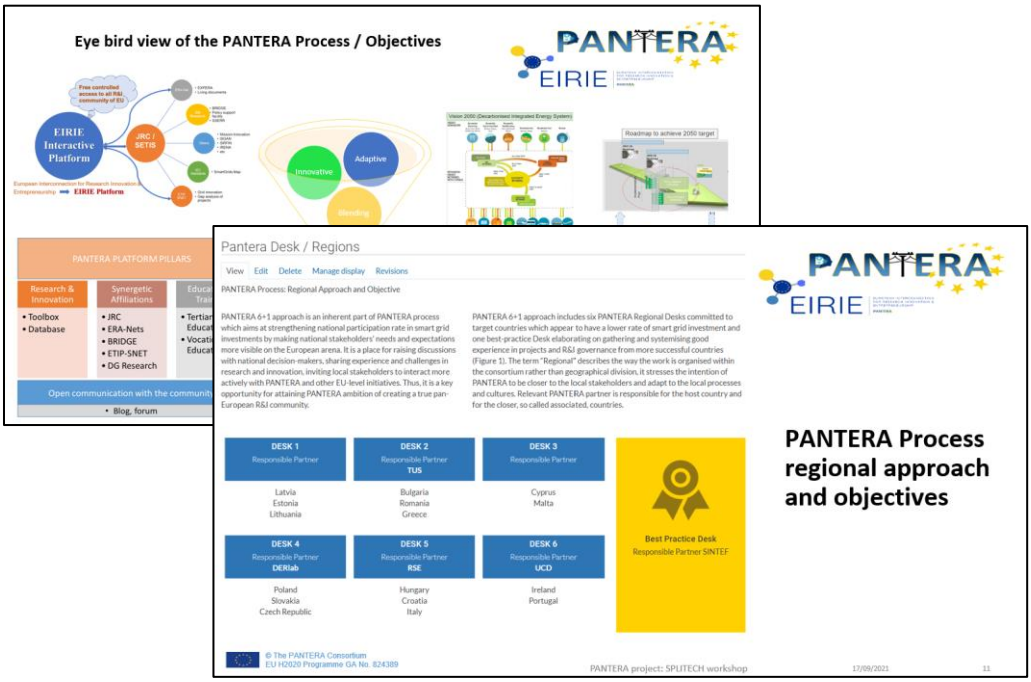
The event was also the occasion to present the EIRIE platform highlight its role in supporting the R&I unified approach across Europe aiming to act as a single stop-shop for searching and finding information related to project on smart grids and the energy system at large.

The workshop saw the participation of project stakeholders from the countries neighbouring Croatia following an approach perfectly in line with the PANTERA scope. Moreover, the joint organisation with the SUPEERA projects, that shares with PANTERA different key objectives, allowed to foster stakeholder participation and to enhance the discussion in the panels.

Opening of the workshop - The PANTERA project and the regional approach

Venizelos Efthymiou (PANTERA project coordinator - FOSS - Cyprus) opened the workshop welcoming all the participants. After having briefly introduced the PANTERA project, its main objectives and the approach, he presented the recently released EIRIE platform. The vision behind the platform development and how this has been transferred to reality were explained.

PANTERA aims to substantially contribute to the needs of the R&I community in Europe delivering the EIRIE platform that facilitates EU wide connectivity and access to state of the art data,

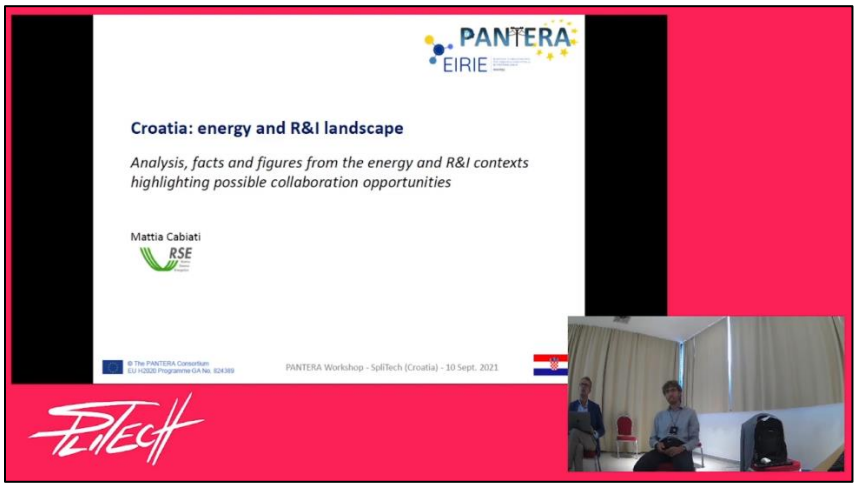


information and knowledge to support on a level playing field the R&I endeavours of member states.

Before the end of his introductory speech Venizelos highlighted also how the PANTERA regional approach will support the EIRIE platform development through information collection and stakeholder engagement. Moreover, the platform itself has an area dedicated to regional collaboration fostering knowledge and information sharing.

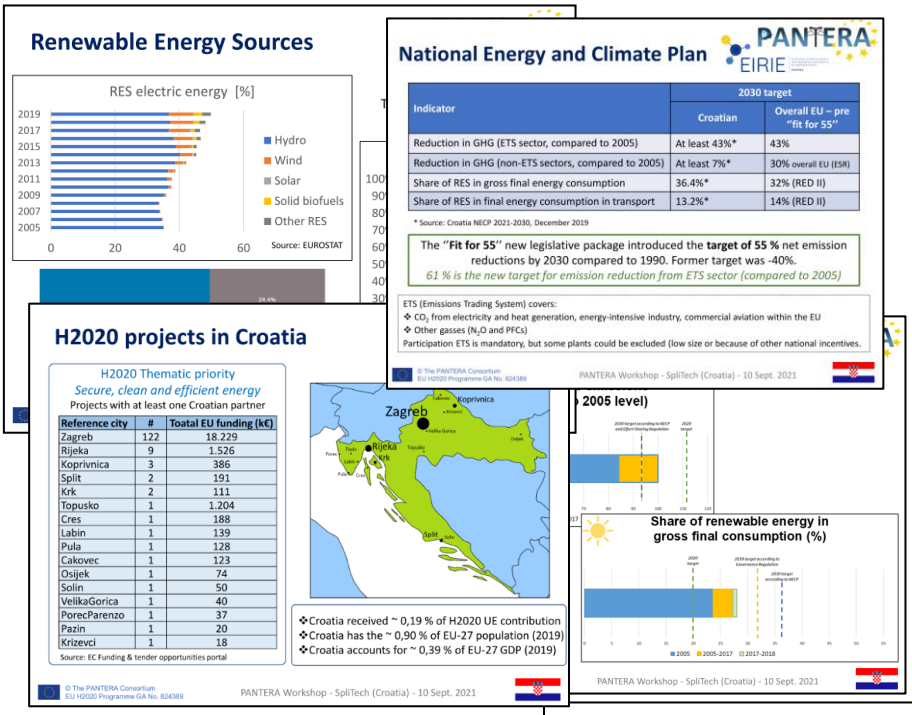
Before starting the next session, quick questions to the audience were addressed using the Slido tool. In the following figure it is reported the participant affiliation with respect to the type of organisation.

Croatia: energy and R&I landscape - Analysis, facts and figures from the energy and R&I contexts highlighting possible collaboration opportunities

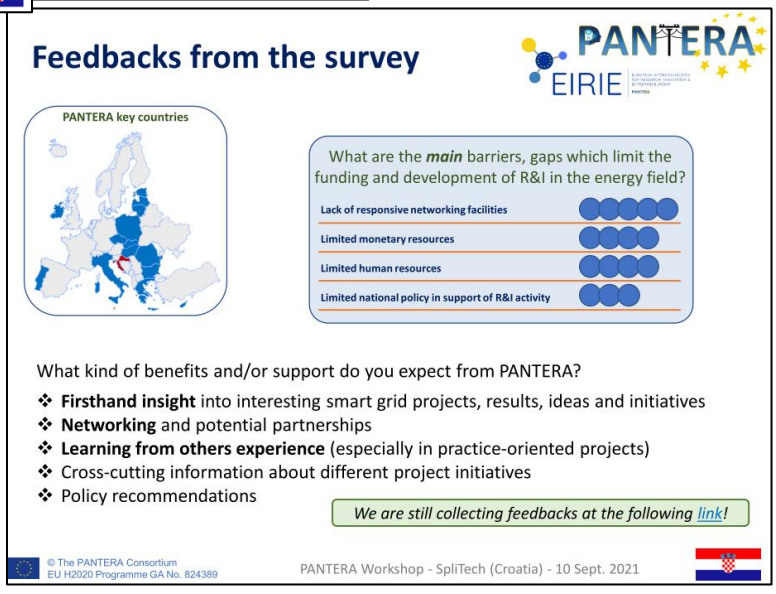


Mattia Cabiati (RSE - Italy) introduced the general Croatian background within R&I activities took place reporting high level data about decarbonization targets and renewable energy sources (RES) penetration. Both EU level and Croatian targets were mentioned and the actual RES penetration was showed. Besides good amount of hydro energy production nowadays wind power plants are being installed while photovoltaic has still to reach a wide diffusion. It was pointed out during a brief discussion that hydro power plants are indeed an important source to meet clean energy targets and through retrofitting of old plants the amount of energy produced could still increase.

In order to understand better how the situation of the Croatian R&I activities integration at EU level in the field of smart grids and energy system is at large, an analysis of H2020 projects with Croatian participants in the H2020 thematic priority “Clean and secure energy” was conducted by the PANTERA project. Besides the actual number of projects and funding received, it was shown the location of the project partners. The large majority came from Zagreb, leaving large room also for improvements with local (coming from other part of Croatia with respect to the capital city) stakeholder involvement.



After the first part aimed to set the background of the workshop, Mattia presented what the PANTERA project could offer to foster EU integration in R&I activities. Firstly, the results of a survey were shown considering the replies coming from Croatian representatives, reported in the figure above. The results show the main barriers that the Croatian stakeholders are indicating as hindering R&I activities and the main benefits that they are expecting from the PANTERA project.



Starting from these results, the following initiatives

- DERLab
- ISGAN
- ERIGrid 2.0 project

with which PANTERA is closely collaborating were presented since they could actually support R&I and especially the following identified barriers:

- lack of responding facilities
- limited human resources
- limited monetary resources

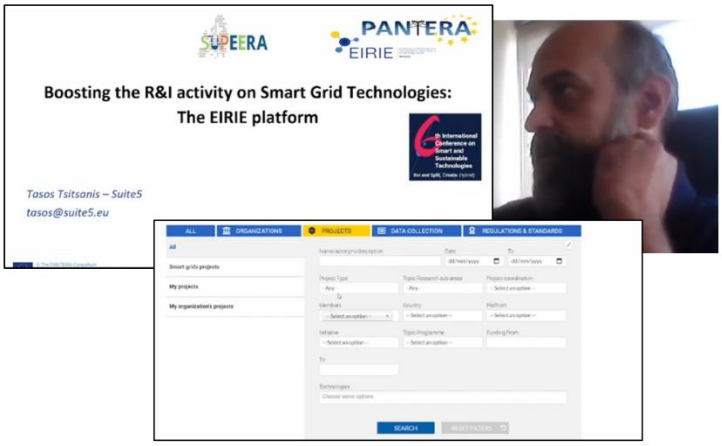
Finally, a recap of the main activities of the PANTERA project in support of true EU integration of R&I activities were made especially in addressing the main benefits expected from the PANTERA project.

EIRIE platform: How the regional arm accelerates your SG R&I activities - Use case solutions with the participation of local stakeholders, that can match the needs and profiles of the region

Mr Tasos Tsitsanis (Suite5) presented in detail the EIRIE platform functionalities starting from the EIRIE "mission statement":

A reference platform and one-stop shop for information sharing, collaboration and knowledge creation aiming at evidently supporting the advancement of R&I activities in Smart Grids at national, regional and pan-European level and, subsequently, facilitating the energy transition.

After having introduced the platform, real live demo case study using the EIRIE platform capabilities was proposed. Both the following two important areas of the platform were covered:



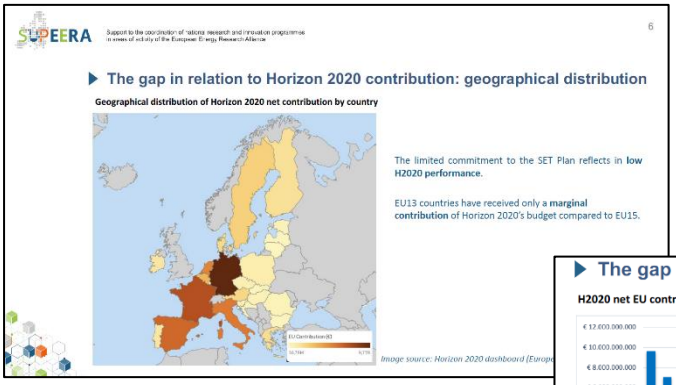
- The search tools
- Training and education material

The aspects relevant for the different typology of users were tackled, especially considering researchers, R&I organisations and policy makers.

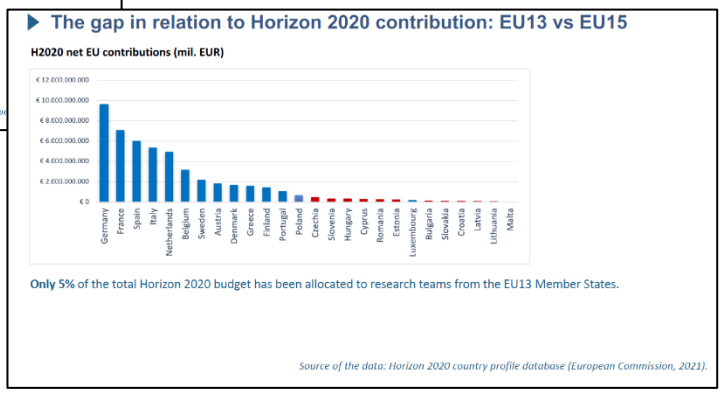
To close the overall overview of the EIRIE platform ***Mr Mohamed Shalaby*** (DERlab) presented the EIRIE platform section related to training and education. This section has been developed in close collaboration with the ASSET and EDDIE projects.

The SUPEERA project: Linking objectives with PANTERA: Mobilization of EU-13 national public research resources in the Clean Energy Transition - challenges and opportunities

Dr Ivan Matejak (EERA) briefly introduced the SUPEERA (Support to the coordination of national research and innovation programmes in areas of activity of the European Energy Research Alliance) project that was co-organizing the workshop. The SUPEERA project supports the SET-Plan and the clean energy transition by facilitating the coordination of the research community, accelerating innovation and uptake by industry and providing recommendations on policy.



It has been noticed that there is a research & innovation gap between EU138 and EU14 member states. The EU13 countries have low participation rates in the SET-Plan, their national research organisations have limited awareness of the CET priorities, funding schemes and initiatives and have received only a marginal contribution of Horizon 2020's budget. Only 5% of the total H2020 budget has been allocated to research teams from the EU13 Member States.



Dr Matejak presented the main causes that lead to EU13 performance gaps, which are:

- National priorities not aligned with European ones;
- Weakness of the R&I systems;
- Administrative and regulatory burdens obstructing R&I;
- The socio-economic relevance of fossil fuels (especially coal) making the transition towards a low-carbon economy less appealing;
- Limited involvement in the SET-Plan landscape;
- Lack of ties at European and international level;
- Absence of integration between business and academia.

Bridging the gap between EU13 and EU14 countries would allow to achieve an untapped opportunity for growth and development of EU13 national economies and the EU as a whole, ensure that underlying policies and strategies will unfold in an even way throughout the whole EU, narrowing disparities across member states and increase the likelihood of meeting 2030 and 2050 targets.

At the end of ***Dr Matejak***'s presentation, he recommended the following points to reduce the gap between EU13 and EU14 countries:

- Link national R&I priorities to European ones
- Strengthen participation in EU R&I networks
- Increase R&I funding

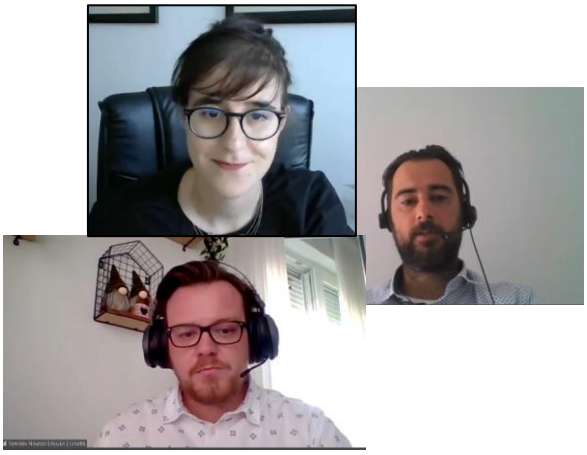
[8] Countries that have joined the EU since 2004: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia.

- Foster stronger academia-business cooperation
- Improve administrative procedures and reduce administrative barriers
- Enhance the activities of National Contact Points

Panel Discussion and Q&A session: How to accelerate the R&I activities of the region?

Dr Venizelos Efthymiou and ***Dr Ivan Matejak*** jointly coordinated the panel discussion aimed to discuss around how to accelerate the R&I activities of the region through the following main items:

- Research Collaboration
- National regulations
- Policy issues
- Financing opportunities
- Good practices



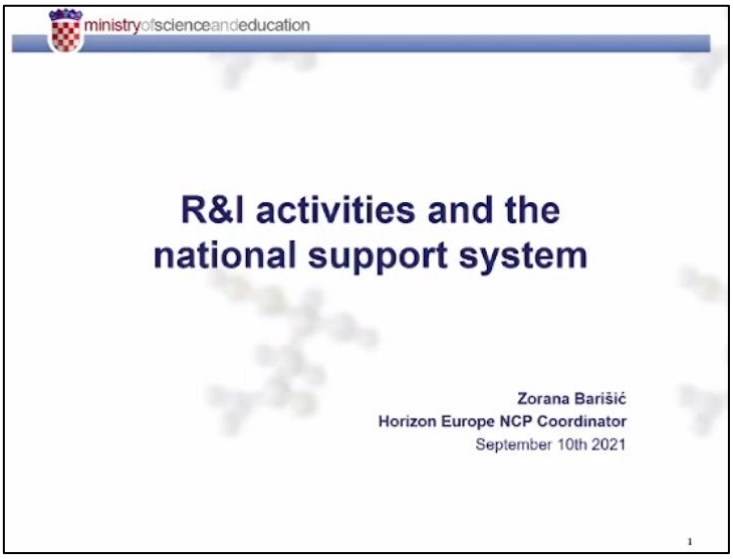
The panellists of this roundtable were:

- ***Ms Zorana Barišić***, Croatian NCP
- **Mr. Damir Pirić**, Director HEP ODS – Croatian DSO;
- ***Dr Tomislav Novosel***, REGEA

Also, ***Ms Orsolya KÜttel***, Hungarian NCP contributed to the discussion by sending in advance a presentation kindly presented by Ivan Matejak.

At the beginning, ***Dr Shafi Khadem*** (IERC) gave a presentation to better explain how the PANTERA project is working in supporting the enhancement of R&I activities through the PANTERA RICAP process. He also presented R&I status and priorities in Croatia based on the analysis done of 22 projects. Moreover, the National Energy and Climate Plans (NECP) for Croatia were presented. At the end of the presentation, recommendations were made to accelerate the R&I activities in the field of Smart Grid and renewable energy in Croatia.

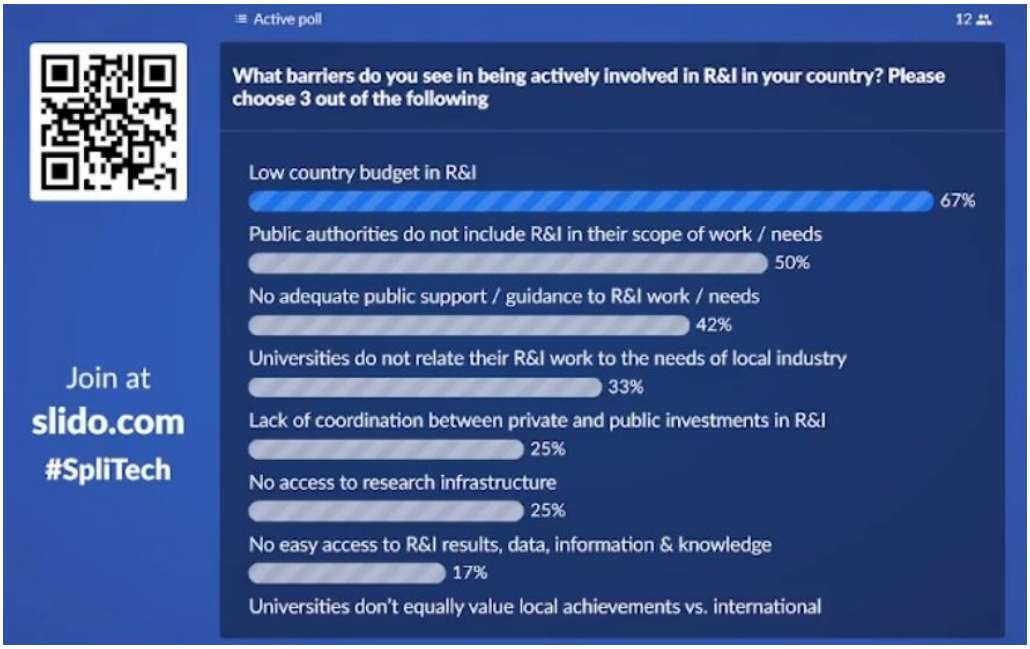
After Dr Khadem presentation, Dr Matejak welcomed ***Ms Zorana Barišić*** (Croatian NCP). She gave a presentation on R&I activities and the national support system. She presented some statistics about the contribution of Croatia to the Horizon 2020 program and the amount of funds received. Furthermore, some measures to support participation in Union programmes for research and innovation were presented e.g., the establishment of an inter-sectoral group for strategic support and collaboration on the national level. In addition to that, she highlighted the importance of improving the quality of the project proposals, increase the excellence and participation of partners and enabling synergy between sections.

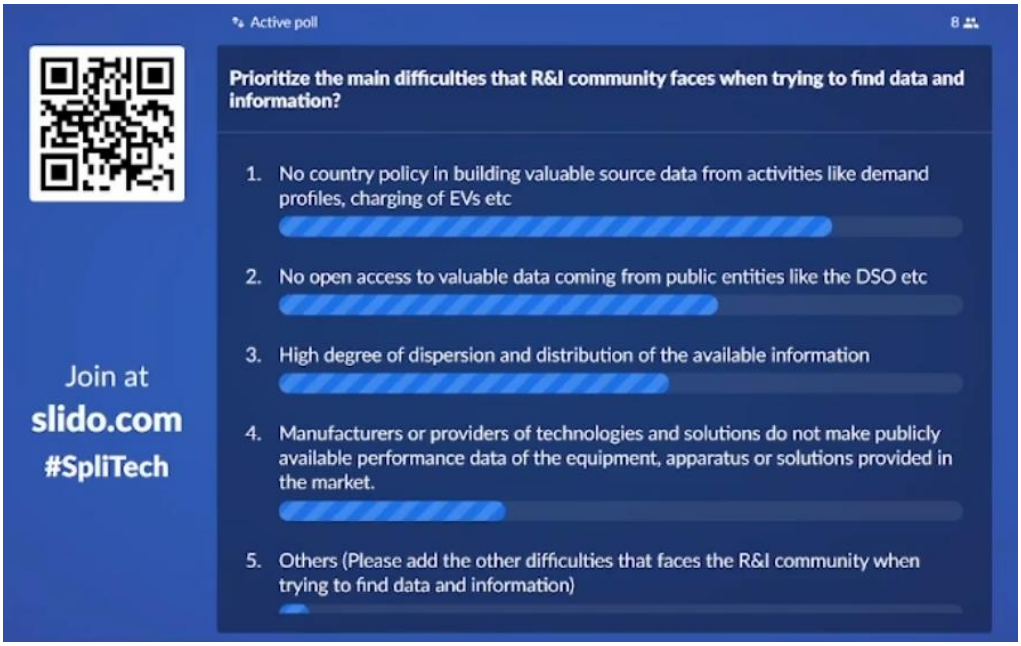


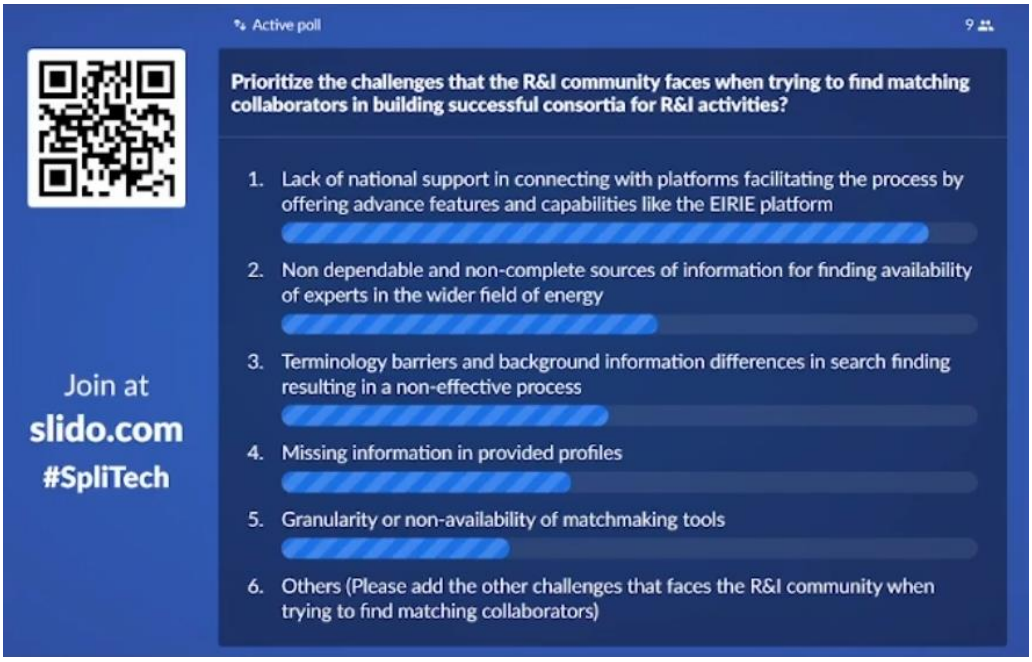
After Ms Barišić presentation, Dr Efthymiou welcomed and introduced ***Mr Damir Piric*** (Director of HEPODS the Croatian DSO). Dr Efthymiou addressed the following question “How do DSO approach the need for change to cope with the energy transition, seamlessly integrating emerging technologies like storage, vehicle to grid?”. Mr Piric highlighted that HEPODS is the only DSO in Croatia and it is fully state-owned. The DSO role is to deliver high-quality power to the end customer and ensure the balance between supply and demand. Therefore, they have to depend on certified technologies and solutions to guarantee their power quality to the customer and it is quite hard to depend on products and solutions that are under development/research. Nevertheless, the DSO strongly supports the R&I activities coming from academia.

After Mr Piric presentation, Dr Efthymiou welcomed and introduced ***Dr Tomislav Novosel*** (North-West Croatia Regional Energy Agency). Dr Efthymiou addressed the following question to Dr Novosel “Can you please identify areas which need specific attention through the National Energy and Climate Plan (NECP) of Croatia?”. Dr Novosel highlighted the importance of providing regions and cities with tools to implement the NECPs strategy, which requires a dedicated budget. Furthermore, he recommended connecting the national strategy with the implementation plan and budget for it. Moreover, he highlighted the point that there is a lack of communication between local and regional governments and start-up incubators. In addition to that he underlined the importance of the EIRIE platform and the role it plays in the R&I community, however, he recommended increasing the visibility of the platform, as it is not quite well known to the R&I community at this stage.

Before ending the roundtable, the audiences were encouraged to the following three questions on Slido:







Ms Barišić commented on the first question that Croatia spends more than 3% of GDP on R&I. Meanwhile, Dr ***Novosel*** underlined the importance of expanding R&I activities to focus more on the future challenges that will face the DSO. ***Prof. Capuder*** commented on “Universities don’t

equally value local achievements vs. international", by emphasizing the point that universities are quite busy with solving the local challenges, without expanding their thoughts to long term to European projects and use European funds.

During the discussion it was also pointed out that many EU projects involving Croatia stakeholders are Coordination and Support Actions (CSA) therefore not directly dealing with R&D activities. The need to increase the involvement of Croatian stakeholder in Research and Innovation Actions (RIA) as well as in Innovation Actions (IA) has been indicated as a point to improve.

A barrier related to the education side has also been indicated as a possible factor hindering the R&I activities in smart grids. This is the fact that current university courses are especially dealing with high voltage related topics while an important amount of R&D activities are actually happening at distribution / medium voltage level.

After the round table discussion ***Dr Venizelos Efthymiou*** and ***Dr Ivan Matejak*** thanked the audience and closed the workshop. All materials related to this event can be found on the SUPEERA Website.

ANNEX II Report on SUPEERA Widening Workshop in Latvia

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

27th April 2022 - 09:00 - 17:00 EEST

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.

Agenda of the Workshop

Time	Content	Presenter
9:00 – 9:30	Registration and coffee	
09.30 – 09:35	Welcome address	**Dr Anna Mutule**, Head of Smart Grid Research Centre, Latvia
9:35 – 09:50	European strategy and latest policy and legislative developments supporting clean energy transition	**Aleksandra Kronberga**, Policy Officer at New Energy Technologies' Unit, DG Energy, EC
09:50 – 10:20	R&I activities supporting clean energy transition in Latvia: • Strategy • Priorities • Challenges and opportunities	**Einārs Cilinskis**, Senior Expert, Department of Sustainable Energy Policy, Ministry of Economics **Jānis Ancāns**, Head of National Contact Point for Horizon Europe, Latvian Council of Science
10:20 – 11:20	Sharing experience in international R&I collaborative projects and best practice: • Latvian best practice in energy R&I, experience in implementation of	**Dr Antons Kutjuns**, Head of Department of International Projects, Augstsprieguma Tīkls, Latvia **Dr Žaneta Stasiškienė**, Director of Institute of Environmental Engineering, Kaunas University of Technology, Lithuania

	Projects of Common Interest • Lithuanian best practice in energy R&I • Estonian best practice in energy R&I • Nordic best practice in energy R&I	**Karl Kull**, researcher in Tallinn University of Technology, Department of Electrical Power Engineering and Mechatronics, Estonia **Dr Irina Oleinikova**, Department of Electric Power Engineering, Faculty of Information Technology and Electrical Engineering, Norwegian University of Science and Technology
11:20 – 11:40	Coffee break	
11:40 –11:55	SUPEERA findings: engagement of Baltic States in H2020 or R&I	**Dr Ivan Matejak**, SUPEERA coordinator, EERA, Belgium
11:55 –12:10	PANTERA process	**Dr Venizelos Efthymiou**, PANTERA coordinator, University of Cyprus
12:10– 13:00	Panel discussion: Opportunities to increase participation in join R&I activities	***Moderator:*** **Dr Paula Carroll**, Centre for Business Analytics | Energy Institute Management Information Systems Department, University College Dublin ***Panellists:*** **Dr Antons Kutjuns** **Dr Žaneta Stasiškienė** **Karl Kull** **Dr Irina Oleinikova**
13:00-13:20	EIRIE platform, how is accessed, the roles of various users, collaboration area, matchmaking area etc.	**Dr Venizelos Efthymiou** **Tasos Tsitsanis**, Suite5, Cyprus **Dr Kyriaki Psara**, University of Cyprus
13:20-13:30	Wrap up and feedback	**Dr Venizelos Efthymiou**, PANTERA coordinator, Cyprus
13:30-14:30	Lunch and networking	

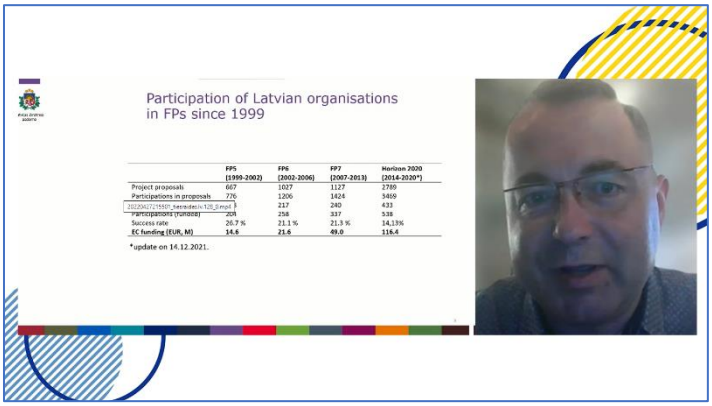
14:30-14:50	The SUPEERA project: Mobilization of EU-13 national public research resources in the Clean Energy Transition: challenges and opportunities ○ SET Plan and CET - benefits and engagement possibilities ○ Investment and reform measures for Baltic States for CET	**Dr Ivan Matejak**, SUPEERA coordinator, EERA, Belgium
14:50-15:20	R&I opportunities for collaboration and funding • Horizon Europe ○ Clean Energy Transition Partnership ○ Widening Calls • Norway/EEA Grants	**Spyridon Pantelis**, Project Manager, EERA, Belgium **Petter Støa**, Vice President Research, SINTEF Energi AS, Norway
15:20-16:20	• Energy technology policy formation in Lithuania • Experience and benefits from the participation in the energy international networks • ETIP SNET as an active link of national stakeholders with EU's R&I prime movers	**Daumantas Kerezis,** Adviser at the Innovation Group of the Ministry of Energy of the Republic of Lithuania **Dr Rolandas Urbonas**, Deputy Director of the Lithuanian Energy Institute **Dr Venizelos Efthymiou,** PANTERA coordinator, FOSS Research Centre of University of Cyprus
16:20-16:30	Wrap-up and closing remarks	**Dr Ivan Matejak**, SUPEERA coordinator, EERA, Belgium
16:30-17:00	Networking	

Opening the workshop

Aleksandra Kronberga (Policy Officer at New Energy Technologies' Unit, DG Energy, EC) 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 presentation, could be using the European Regional Development Fund (ERDF) particularly 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.

R&I activities supporting energy transition in Latvia

The 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 FPs 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 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 FPs usually goes hand in hand with the amount

of national financing devoted to mobilise and support the national community towards EU. Thus, in the Latvian situation NCPs have a lot of 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 the 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 the Latvian National Energy and Climate Plan (NECP) and the way it is planned to revise the NECP based on the results of several scientific projects, confirming that the Ministry of Economics is interested in cooperation with the scientific community in the topic of energy transition. Einārs also informed about the agreement the government has with several R&I actors to model future energy scenarios. 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 and 2nd generation biofuels. Answering to a question from the audience, Einārs highlighted the absolute necessity of cooperation between Baltic and Nordic countries and gave as example the Latvian-Estonian *ELWIND* project on offshore wind.

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

This section included interventions of experts coming from Latvia, Lithuania, Estonia and Norway, representing both industry and academia, 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 an industrial perspective and talked about *Projects of Common Interest (PCIs)* where Latvia is doing very well in terms of attracting European funding. Anton referred in particular to importance of synchronizing systems across Europe, especially after the REPowerEU communication. The latest and ongoing Baltic States synchronisation project with continental Europe has been granted 75% co-financing by the *Connecting Europe Facility* (*CEF*). Example of innovative solutions used for synchronisation project are synchronous condensers for providing system inertia. Antons highlighted, that the 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 the dramatically increased costs due to the geopolitical situation in Europe

Dr Žaneta Stasiškienė (Director of Institute of Environmental Engineering, Kaunas University of Technology, Lithuania) looks at energy issues from an environmental point of view, especially from a city perspective, and recommends discussing solutions in 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 on company level. She also devotes part of her time to train consumers and prosumers, thus increasing citizen engagement, in line with one of the EC's priorities. 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 European funding programmes, which are nonetheless very competitive. For this reason KTU's choice is not restricted only to Horizon 2020 and Horizon Europe, and that is partially due to the fact that the playing field at the EU level is rather challenging in terms of competitiveness. For example, one of KTU's successful projects – *Baltic Dialogue Platform on Smart Cities for Climate* - was funded by the European Climate Initiative by the German Federal ministry for the Environment, Nature, Conservation and Nuclear. Some other examples are the *EV energy* and *LOCARBO* projects which were funded by the Interreg Europe programmes. According to PANTERA observations, Horizon Europe tends 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 precondition. Engaging industrial partners seems to be an important challenge in less involved countries. Žaneta's experience confirms that this requires hard systematic work of explaining companies the benefits of participating in R&I projects.

Karl Kull (researcher in Tallinn University of Technology, Department of Electrical Power Engineering and Mechatronics, Estonia) shared a success story from the H2020 *SMAGRINET* project aiming at providing services to European universities, municipalities and industries to enhance their capacity in energy research and innovation to tackle challenges related to the smart grid energy transition. The project developed in two main directions: from one hand, the launching challenge and case-based university programs to train students and on the other, the organisation of short-term blending programs for the workforce to provide them insights into R&I and change outdated understanding and beliefs. During the 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, the positive outcome of the pandemic period was the acceleration of the digitalisation of educational programmes. Karl highlighted that having a vision and a good core idea helped to overcome several difficulties. Other success factors include the attraction of strong partners and enhancement of 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*. *NTNU Energy* is driving interdisciplinary research by fostering cooperation between faculties through developing common strategies and activities. One of the most important drivers of this work is the active participation (taking part in discussions, creating reports and different position papers, visiting brokerage events) in different international initiatives, like *EERA*, *ISGAN*, *CIGRE*, *ETIP SNET*, etc. Furthermore, all research activities are supported by strong collaboration with industry, specifically Nordic TSOs, and cooperation with policy makers at different levels. For example, last activities included the coordination of feedback to the EC on the *Action Plan on the Digitalisation of Energy Sector*, feedback to *ENTSO-E* on *RDI Implementation Report 2021-2025* and currently, NTNU's team is actively involved in commenting and contributing to the *Horizon Europe Work Programme draft for 2023-2024*. Thus, Irina confirmed that active involvement in

European initiatives is key to successful networking, increased 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 CET 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 EU14 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 lack 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 which targets the set-up of a European forum composed of different stakeholders active in the fields of smart grids, energy storage and local energy systems (including policy makers, industry, standardisation bodies, research and academia, European organisations, etc.), and therefore supporting the energy transition.

Panel discussion

Dr Paula Carroll (Centre for Business Analytics | Energy Institute Management Information Systems Department, University College Dublin) moderated the 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 formulated during the discussion. The majority of

respondents answered that Horizon Europe is too competitive and more economically developed countries are more advantaged. The respondents also stated that the supports provided by national funding agencies were insufficient – participants rated that as “neither good nor bad”. The followed discussion touched upon several related themes.

Education: Education is key in improving participation in EU projects and therefore there is a need for education to upskill current workforce through continuing professional development, particularly to help them understand national and EU policy and to train them on proposal development to showcase best-practices. While some proposal drafting teams may have the technical expertise and their submission is sometimes highly ranked, there is a sense that submissions failed because of weak presentation.

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. Further, there is a need to educate and communicate with ordinary citizens and lay people, so as 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 – more tailored calls are needed for local solutions. The panel noted that pilot and demonstration projects would have high visibility to address education of consumers and would connect theory to practice. Multi and interdisciplinary calls are needed to facilitate cooperation with social sciences. More dialogue across national agencies and ministries would lead to such calls where technical and social science disciplines can be interconnected.

Alignment of policy and strategy: It was stated that national and European strategies and policies are not always well aligned. This misalignment is also the case between policies and strategies at national level. 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 projects with short timelines. The whole energy community needs to hold its nerve in the face of the current war in Ukraine which has put a spotlight on European energy independence.

Finally**,** ***Dr Venizelos Efthymiou***, ***Tasos Tsitsanis*** (Suite5, Cyprus) and ***Dr Kyriaki Psara*** (FOSS Research Centre of University of Cyprus) presented the EIRIE platform that stands for European Interconnection for Research Innovation & Entrepreneurship. *EIRIE's* 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.

During the afternoon session, Mr Matejak presented the challenges and opportunities for the mobilization of EU13 national public research resources in the CET, highlighting key information per Baltic country. He stressed the importance for Baltic countries to participate 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 the Horizon Europe programme and the CETP, highlighting Pillar II and in particular Cluster 5 on Climate, Energy and Mobility, and the section on Widening Participation and Strengthening the European Research Area as the two most important funding pathways for the participants. Spyridon provided a list of selected upcoming calls within the two aforementioned funding pathways, encouraging all participants to consider these calls for proposal submission.

Petter Støa (Vice President Research at SINTEF, Norway), presented the EEA and Norway Grants, a dedicated funding mechanism for EU13 countries, with the aim to create awareness about this unique funding scheme and encourage participants to consider it in near future. In the Baltic region, Lithuania and Estonia have been the only two countries receiving funding for energy-related projects in the funding period 2014-2021. After an introductory explanation of these mechanisms, Petter presented three projects/success stories as inspiration to the audience.

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

Rolandas Urbonas (Deputy Director of the Lithuanian Energy Institute) presented the experiences and benefits from the participation in international energy networks. He underlined that, although being a part of an international association 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 at a European level. He suggested that one way to overcome these obstacles is to promote further cooperation on a regional level in the Baltics.

Panel discussion

In the followed panel discussion ***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 CETP, 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. This process was identified as a best practice that could be replicated in other countries. Furthermore, the idea of establishing a research collaboration between the Baltic states was brought up, and possible challenges and strategic differences were examined.

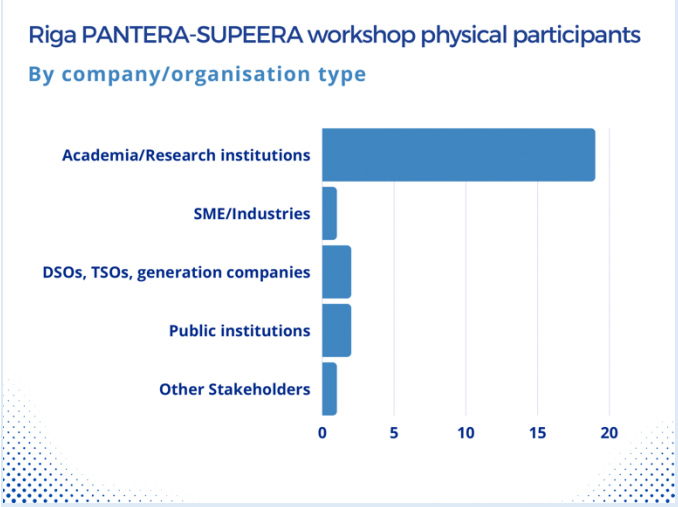
PANTERA Coordinator and Cyprus representative on the *SET Plan Steering Committee* ***Dr Venizelos Efthymiou*** underlined the role of *ETIP SNET* to provide a platform for collaboration between national stakeholders and European R&I entities, highlighting that actions in this direction are reinforced by a series of regional workshops across EU. Replying to a question from

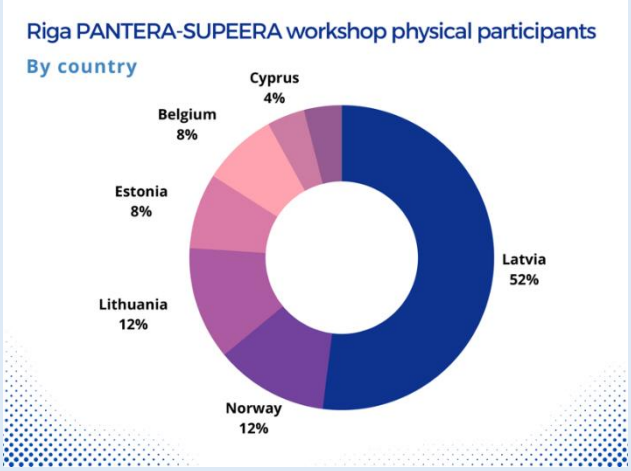
the audience, Dr Efthymiou explained that Cyprus' success on being the most active country amongst the EU13 countries within the *SET Plan* stands in its active student and research population, which is able to offer strong contributions to the ad-hoc committees that were formed specifically for the implementation of the *SET Plan*. This is underpinned by increased financial support by the Cypriot government towards R&I activities during the past few years.

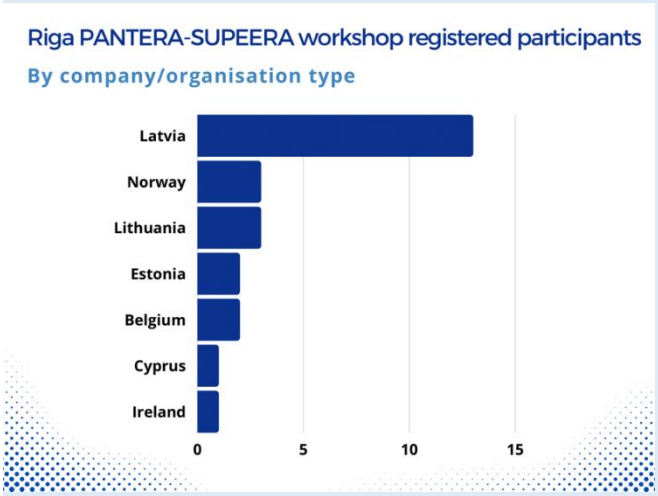
During the workshop, the audience actively used the possibility to ask questions. The experts tried to respond to as many - of the 38 questions received in total - as possible. These questions reflected the challenges researchers and innovators are facing in their activities, like establishing close working relationships with industry, regional collaboration opportunities, support in proposal preparation as well as more general issues, such as consumer empowerment and country specific policies in energy transition. All materials related to this event can be found on the SUPEERA Website.

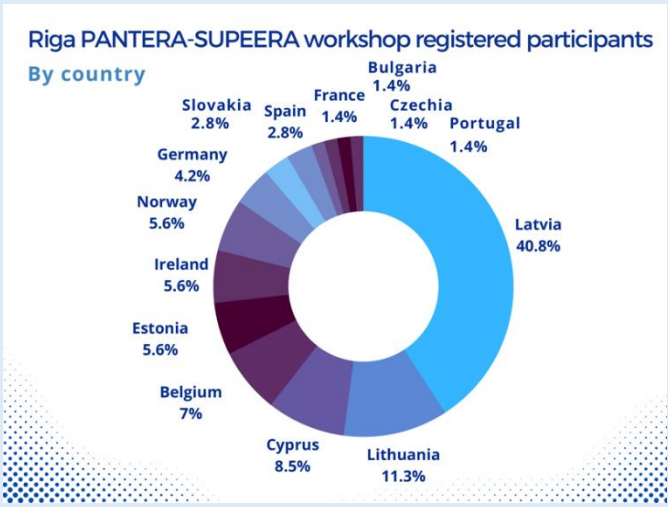
Workshop Statistics

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



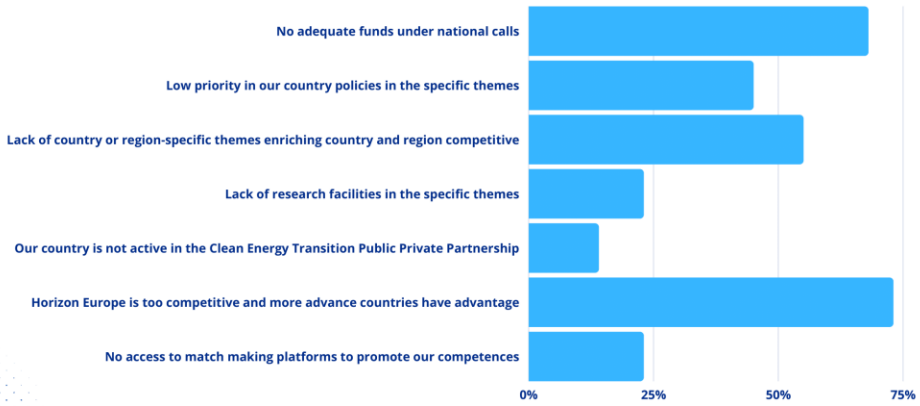




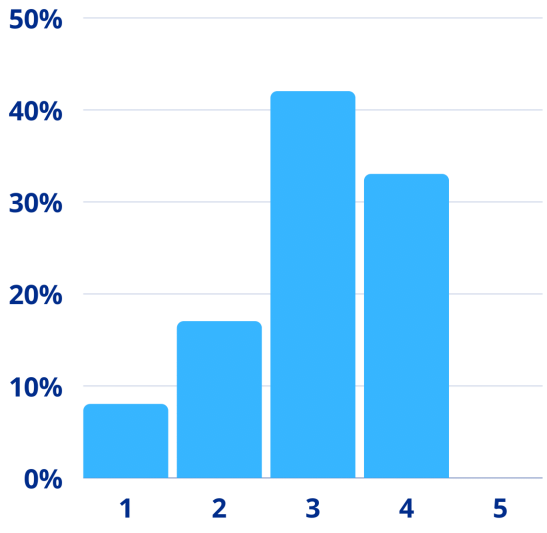


Survey results

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?



ANNEX III Report on SUPEERA Widening Workshop in Bulgaria

International research collaboration opportunities fostering EU Clean Energy transition in Bulgaria

SUPEERA / PANTERA joint workshop

25th May 2022 - 09:00 - 15:00 CEST

Agenda of the workshop

Time (EEST)	Topic	Speaker
09:00	**Registration and coffee**	
09:30	Welcome address	**Valentin Kolev, Dean of the Electrical Engineering Faculty of TU-Sofia**
09:40	Mobilization of EU-13 national public research resources in the Clean Energy Transition: challenges and opportunities SUPEERA findings: engagement of Bulgaria in H2020 or R&I	**Ivan Matejak, SUPEERA coordinator, EERA**
10:00	Sofia University's research activities and collaboration with the business in support of the energy transition EU funding for energy efficiency projects - the experience of SEA SOFENA Research team in the area of "Electric Power Systems" at the Technical University of Varna PANTERA process	**Mariya Trifonova, Assistant Professor Department of Industrial Economics and Management** **Lily Stammler, Senior Energy Security expert, SOFENA** **Dimitar Georgiev, Assistant Professor, Department Electric Power engineering, Technical University of Varna** **Rad Stanev, TU-Sofia / Dr Venizelos Efthymiou, PANTERA coordinator,**

		FOSS Research Centre of University of Cyprus
11:00	Panel discussion and Q&A	**Moderator: Ivan Matejak**
11:30	**Coffee break**	
12:00	R&I opportunities for collaboration and funding • Horizon Europe ○ Clean Energy Transition Partnership ○ Widening Calls Norway/EEA Grants	**Spyridon Pantelis, Project Manager, EERA** **Petter Støa, Vice President Research, SINTEF Energi AS**
12:25	The EIRIE Platform	**Tasos Tsitsanis, Suite5 / Dr Kyriaki Psara, FOSS / Rad Stanev, TU-Sofia**
13:10	Open discussion and Q&A	
13:40	**Lunch break**	

Workshop report

One month after the appointment in Riga, on the 25th of May, the SUPEERA and PANTERA Projects jointly organised a second workshop in Sofia, with the aim of sharing best practices in the field of the Clean Energy Transition and fostering the engagement of non-EERA stakeholders towards EERA activities and the SET Plan.

The workshop, which took place in hybrid modality, was joined by 15 participants in presence and 23 online and it gathered experts mainly from the research sector and local organisations active in R&I activities.

Welcome address

The Workshop was officially opened by ***Valentin Kole***, Dean of the Electrical Engineering Faculty of the Technical University of Sofia who welcomed all participants and recalled the importance of these kinds of events for the university.

First session of the workshop: existing barriers

Ivan Matejak**,** SUPEERA Coordinator, gave an overview on Bulgaria's scarce engagement in Horizon 2020 activities based on the relatively low number of signed grants, the modest attention to the SET Plan and the degree of involvement in the Implementation Working Groups. He also highlighted the root causes and structural challenges for EU13 countries in moving towards the CET, underlining the opportunities that would arise by bridging such gap.

Next, ***Maryia Trifonova***, from Sofia University (SU), presented the research activities implemented by SU along with the numerous collaboration agreements with many different actors in Bulgaria and abroad. In addition to participating in Horizon 2020 and Horizon Europe proposals, the Department of Industrial Management and Economics has been working with smaller research grants and collaborates closely with policy makers and industry.

Lilly Stammler, Senior energy expert at SOFENA (Sofia Energy Agency), opened her speech with a map displaying the energy associations currently active in Bulgaria and the interactions among them. Next, Ms Stammler provided an overview of SOFENA's activities in collaboration with the Sofia Municipality, mainly on the topic of energy efficiency in buildings, facilitating workforce upskilling activities and addressing issues relevant to energy poverty and citizens engagement.

Dimitar Georgiev, from Technical University of Varna, after giving an overview on the research team in the Dept. of Electric Power Systems at TU Varna, outlined a series of ongoing and past projects in the field of CET. He highlighted the strong collaboration of the university with industry stakeholders and especially ongoing research projects with renowned industry players (e.g. Siemens) in the field of power systems modelling.

Rad Stanev, Associate Professor at Technical University of Sofia, gave an introduction on the University's structure by presenting TU Sofia's facilities to support students' training activities in the field of power and grid management, also underlining the current R&I activities of the university in these fields and its involvement in EU funded projects.

Panel Discussion and Q&A

The first part of the event prompted a fruitful Q&A session and panel discussion, moderated by Ivan Matejak, which allowed participants to share opinions on Bulgaria's low involvement in H2020 and other European research prograMs The first question addressing the speakers aimed at investigating their views on the challenges and obstacles for Bulgaria's participation to funding schemes.

First respondent, Ass. Prof. ***Maryia Trifonova*** complained, on the one hand, the lack of a national strategy on CET and, on the other hand, the absence of data collection mechanisms on past proposals' success rate within the University. In addition, she lamented lack of know-how on EU funding programmes and proposal writing, submission and reporting process which, together with the low organisation at administration level, has been the main reason for the non-engagement of the University in leading roles. Nevertheless, Ms Trifonova explained that the University of Sofia has been trying to address these kinds of issues by developing ad-hoc workshops and training activities in European Project Management for Research addressing PhD students, with the general objective of creating a "*project culture*" within the Institution.

Lilly Stammler underlined the lack of collaboration between the municipality and the Bulgarian higher education institutions, possibly to be traced back to the absence of structured understandings and cooperation agreements between research centres and NGOs.

Finally, ***Rad Stanev*** underlined on the one hand TU Sofia's difficulty to reach and establish durable communication channels with Bulgarian National Contact Points and on the other the good collaboration between the Ministry of Energy and the University.

After presenting and discussing the main bottlenecks for Bulgaria's involvement in H2020 and HEU, the second part of the conversation regarded how to tackle such challenges and how to improve collaboration at EU and national level.

Maryia Trifonova stressed that in the last couple of years there has been a huge interest from the business to pursue collaborations with universities whereas, despite the existent dialogue with government authorities, it is hard to establish more structured collaborations with Ministries. Ms Trifonova added that the University of Sofia has been working on a strategy to create specific tools, such as assessment framework and models to ease the process of developing successful collaborations and applying for EU calls.

On the topic of improving networking with other stakeholders, ***Lilly Stammler*** mentioned that one of the most pressing issues concerns making the first contact with other organisations, being very hard to even have a response from them.

On the other hand, ***Dimitar Georgiev*** stated that TU of Varna, although being geographically distant from the capital, over the years has managed to establish a good network of collaborations in Bulgaria, in particular with TSO and DSO.

Rad Stanev wrapped up the Q&A session by listing the challenges for TU Sofia in participating in EU research programmes: from the disadvantage of being less experienced to the difficulty in securing the financial resources needed to generate quality proposals and from Bulgaria's limited infrastructures to the inadequate national funding dedicated to research. Nevertheless, he emphasized the importance for TU Sofia to be involved in European Initiatives such as ETIP-SNET, being it an advantageous way for the University to work its way into the prolific environment of other organisations.

Second session of the workshop: available opportunities for collaboration

The second session of the workshop focussed on existing opportunities and platforms for collaboration; it was opened by ***Spyridon Pantelis***, Project Manager at EERA, who introduced the CET Partnership's structure and involved stakeholders' groups. After an overview on Horizon Europe's pillar 2, Mr Pantelis presented a selection of upcoming calls under Cluster 5 (Climate,

Energy and Mobility) and the HEU Widening calls with a focus on the Hop On Facility, aiming at integrating one participant from the widening countries to an ongoing project under pillar 2.

Berta Matas Güell, Senior Researcher at SINTEF, gave an overview on EEA and Norway Grants for the period 2014-2021, which are directed to the EU13 States. EEA and Norway Grants for the period 2014-2021, which are directed to the EU13 States. Ms Matas Güell showed the programme's structure, the eligibility criteria and concluded with examples of ongoing projects in Bulgaria under the umbrella of EEA funds.

The second session of the workshop continued with the display of two recorded presentations by ***Venizelos Efthymiou***, PANTERA coordinator and Chairman of FOSS Research Centre. The first presentation focused on the PANTERA Project, whose aim is to strengthen the involvement and cooperation of all EU Member States to achieve the CET through the development of R&I. The second presentation focused on the EIRIE Platform, an online collaborative environment aiming at bringing all the knowledge created in Europe on smart grids and green energy under the same umbrella and make it accessible to the public.

Panel Discussion and Q&A

The second part of the workshop triggered a meaningful discussion among participants, on new collaborations and new funding opportunities for Bulgaria.

Dimitar Georgiev recognized the value and advantages of EU Funding in concretizing research ideas within the university. Likewise, ***Lilly Stammler*** revealed SOFENA's strong interest in participating to the outlined funding opportunities once potential project topics have been identified. Nevertheless, Ms Stammler expressed concern towards the "not intuitive" application process for EU funding and for the shortage of professional figures that have the competences to complete the setting-up of the Consortium and the drafting and submission of proposals. In this regard, ***Spyridon Pantelis*** presented various options to be taken into account for collecting useful information and get in touch with potential future project partners: from using the funding and tenders portal, to participating in infodays organised either at a European (EC) or national level

(organisations, NGOs). ***Ivan Matejak*** intervened in the discussion by also mentioning the crucial role of National Contact Points in providing specific information and in offering research institutions and businesses with free training on the process of proposal drafting and submission. Mr Matejak also reminded the audience of the role of EERA in creating synergies and fostering cooperation through the 18 Joint Programmes at a European level.

On this note, ***Berta Matas Güell*** underlined the importance of activating NCPs and draw attention on the value of matchmaking events as occasions to meet with different stakeholders that could be interested in collaboration opportunities.

Angel Nikolaev from Black Sea Energy Research Centre expressed its concern over the lack of infrastructure and capacity for his Association to coordinate projects and called for authorities to develop a process aimed at helping smaller organisations prepare the proposals and get in touch with other European partners. In this respect, Mr Nikolaev mentioned the role of the Association of the Bulgarian Energy Agencies in organising annual events which are, however, mostly addressing NGOs, and not research centres, invested in the topic of CET. In this respect, **Mr Stanev**, stated that, despite this option it is not easy to find partners willing to engage in proposal writing and that it would be helpful for the research community of EU13 countries to also have a special support coming from the EC.

Closing remarks

Although actively working towards achieving a low carbon economy, Bulgaria, features low participation rates in research and innovation (R&I) activities and in the realisation of the EU's SET Plan Implementation Plans. As a consequence, and unlike more successful Member States, Bulgaria has received only a marginal contribution of EU R&I Horizon 2020's budget. By organizing these kinds of events, the SUPEERA Project aims at raising awareness about the SET Plan and Clean Energy Transition among research organisations and funding bodies from EU13 countries, while encouraging their mobilization towards their implementation. All materials related to this event can be found on the SUPEERA Website.

ANNEX IV Report on SUPEERA Widening Workshop in Cyprus

International research collaboration opportunities fostering EU Clean Energy transition in Cyprus (Nicosia)

PANTERA / SUPEERA joint workshop

1st June 2022 - 09:00 - 15:30 CEST

Agenda of the workshop

Time (EEST)	Topic	Speaker
09:00	**Welcome and objectives of the workshop**	**Ivan Matejak, EERA**
09:05	**Green deal objectives and beyond** European strategy and latest policy and legislative developments supporting the Clean Energy Transition	**Thanos Athanasiou, EC Office in Cyprus**
09:30	**The SUPEERA project: Mobilization of EU-13 national public research resources in the Clean Energy Transition: challenges and opportunities** ○ SET Plan and CET - benefits and engagement possibilities ○ Investment and reform measures of Cyprus for CET **SUPEERA findings: engagement of Cyprus in H2020 or other EU R&I financial instruments**	**Ivan Matejak, EERA** **Spyridon Pantelis, EERA**
10:00	**R&I best practices for Cyprus** Sharing experience in international R&I collaborative projects and best practices: Cyprus best practices in energy R&I	**Nestor Fylaktos, Cyprus Institute**
10:20	Q&A	
10:40	**Coffee break**	

11:10	**Panel Discussion** Energy strategy of Cyprus and pressing needs in relation to: ○ Policy and regulation ○ Addressing the needs of the Green Deal and REPowerEU ○ System infrastructure and services ○ R&I supporting mechanisms and growth	• **Nikos Hadjinikolaou, Ministry of Energy of Cyprus** • **Marilena Delenta, CERA** • **Anna Maria Christoforou, RIF** • **Alexandros Nicolaides, TSOC** **Moderator: Ivan Matejak, EERA**
12:10	Q&A	
12:30	**Lunch break**	
13:30	**Cyprus R&I strategy: Focus to Energy** R&I activities of Cyprus in building appropriate policies and actions in line with the strategic objectives of the country: ○ Policies and actions ○ European and national programmes	**Evgenios Epaminondou, DMRID** **Anna Maria Christoforou, RIF**
14:10	**Norway/EEA Grants**	**Berta Matas Güell, SINTEF Energy Research**
14:20	**PANTERA project and the EIRIE platform** PANTERA project and the launching of the EIRIE platform in support of the R&I community in Cyprus: • Objectives and opportunities • Actively participating & contributing in the EIRIE platform: The Cyprus corner)	**Venizelos Efthymiou, FOSS** **Kyriaki Psara, FOSS**
15:10	**Q&A**	
15:25	**Wrap up and closing remarks**	**Ivan Matejak, EERA**

After the successful outcomes produced in Riga and in Sofia, on the 1st June 2022, the SUPEERA project team flew to Cyprus where, in collaboration with the PANTERA Project, organised a workshop aimed at sharing best practices in the field of green energy and at fostering the engagement of external stakeholders in EERA activities and towards the implementation of the SET-Plan.

The workshop, which took place in hybrid modality, was joined by 18 participants on site and 24 online and it mainly gathered experts from the research sector, local organisations active in R&I activities, members of the government and representatives from the industry.

Welcome address

The workshop was officially opened by ***Ivan Matejak***, SUPEERA Project Coordinator, and ***Venizelos Efthymiou***, PANTERA coordinator and Chairman of FOSS Research Centre, who welcomed the participants and presented the objectives of the workshop.

Mr Efthymiou proceeded with an overview of the PANTERA Project and he provided an insight into the PANTERA RICAP process, a tool providing the main methodology on how EU initiatives' come together with stakeholders and other resources to unify and align forces under the same umbrella.

Thanos Athanasiou, Press Officer at the EC Representation in Cyprus, opened with a reflection on the insufficient solar thermal panel installation rate in Cyprus, especially when associated with the number of sunny days on the island. Starting from this statement, Mr. Athanasiou underlined the need for Cyprus to multiply efforts and foster collaboration between authorities, research and industry in order to reach energy independence and to gain profits on the development and implementation of renewables.

Ivan Matejak presented the SUPEERA project and outlined the R&I gaps between EU13 and EU14 in terms of performance in the Horizon 2020 Programme. The displayed tables revealed that Cyprus' percentage of H2020 eligible proposals is higher than the EU13 average and almost twice as big as the European average. Nevertheless, Mr. Matejak highlighted, only 6% of the net amount of funds received has gone to research; the reasons for this are to be found in the low level of national investment in R&I, the young research community, the limited capacity of Cyprus industry and the scarce access to high-quality international networks.

Nestor Fylaktos**,** Associate Research Scientist the Cyprus Institute (CYI), offered an interesting overview of R&I best practices for Cyprus. Mr. Fylaktos highlighted some of the lessons learned from the management of R&I projects, i.e.: defining proper budgeting, finding the right people, having the right management tools and holding efficient meetings. Based on these four key elements, Mr. Fylaktos illustrated: the INSHIP Project on solar heat for industrial processes, the CySTEM Project on solar and thermal energy, the SFERA III Project on mobility of researchers and shared use of research infrastructure and, last, the Green Deal Project providing scientific

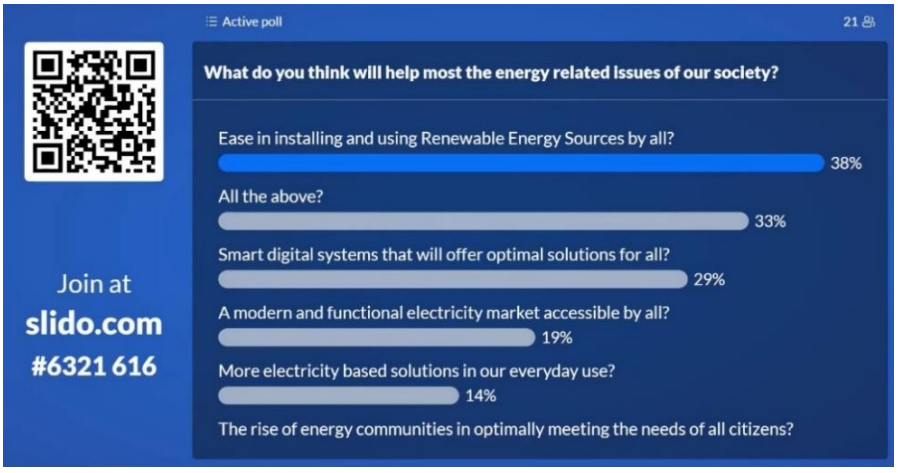
support for the implementation of the EU Green Deal in Cyprus. Mr. Fylaktos closed his presentation by sharing four important tips learned more specifically in the management of energy related projects: joining alliances, embracing multi-disciplinarity, working with diverse stakeholders and supporting collaborations among local, regional and international scientific institutions.

The panelists' presentations prompted an interesting discussion which was moderated by ***Ivan Matejak***. ***Mr Efthymiou*** took the floor arguing that when we talk about Cyprus' performance in R&I in statistical terms, it is important to always keep in mind the small size of the country and its low number of inhabitants: it is only by taking these elements into account that we get a realistic (and also rather positive) picture of the situation. On his side, ***Mr Athanasiou*** shed light on another problem affecting CET in the EU, which is the inability for the EC to enforce decisions to Member States and called for a stronger EU able to impose itself more on the prerogatives of the EU Council.

Theodoros Zachariadis, Associate Professor at the CYI, underlined the great role of Cyprus in the region and outlined how it teams up with countries from Central and Eastern Europe and Western Asia to design common energy and climate strategies and to bring the performance of the global energy community forward.

Panel discussion

The panel session opened with a question that addressed both panellists and audience and which represented the basis for the following discussion e.g.: what do you think will help most the energy related issues of our society? The majority of participants answered: "ease and installing renewable energy sources by all" whereas the second favourite chosen answer was "smart digital systems that will offer optimal solutions for all".



Nicos Hadjinicolaou, Industrial Extension Officer at the Ministry of Energy of Cyprus, explained that the Ministry is working towards easing the implementation of renewable energy sources across the country by acting on two fronts: by enforcing regulations to make the installation of PV compulsory for new households and by granting incentives for families and businesses that decide to install PV on existing buildings.

Venizelos Venizelou**,** Energy Engineer at Cyprus Energy Regulatory Agency (CERA), stated that CERA promotes schemes that are structured to promote the renewable energy by encouraging the establishment of renewable energy communities, collective self-consumption and all provisions coming out of the electricity directive.

Anna Maria Christoforou, Scientific Officer at the Research and Innovation Foundation (RIF), explained that RIF (mainly subsidized through government structural funds) has been providing funding, of minimum 1 million euros each, in specific projects that are submitted by researchers to improve efficiency and make the energy systems more innovative.

Alexandros Nicolaides from Cyprus Transmission System Operator underlined the importance to work hand in hand with other stakeholders in order to ensure that all the resources and technologies are coming at the right time so that supportive solutions (for energy storage for instance) catch up with the rapid deployment of new technologies.

On the same topic, ***Mr. Hadjinicolaou*** intervened and claimed the need to support initiatives aimed at ensuring energy efficiency for their vital role in reducing energy demand which is a first important step towards a more effective and better functioning energy system.

After the discussion, ***Mr Venizelou*** outlined the core activities and R&I Projects of CERA and presented a paper on "Regulatory Sandboxes in Incentive Regulation" seeking to provide clarity and a framework for the different tools that energy national regulatory authorities can use to facilitate innovation in the context of incentivizing regulation for grid operators. On the topic of technology maturity in Cyprus, Mr Venizelou underlined that the country is still in the process of digitalising the electricity sector and important steps have to be taken to fully adopt the flexibility of the energy market.

Throughout the following Q&A session, panelists had the opportunity to answer ad hoc questions specifically regarding their area of expertise.

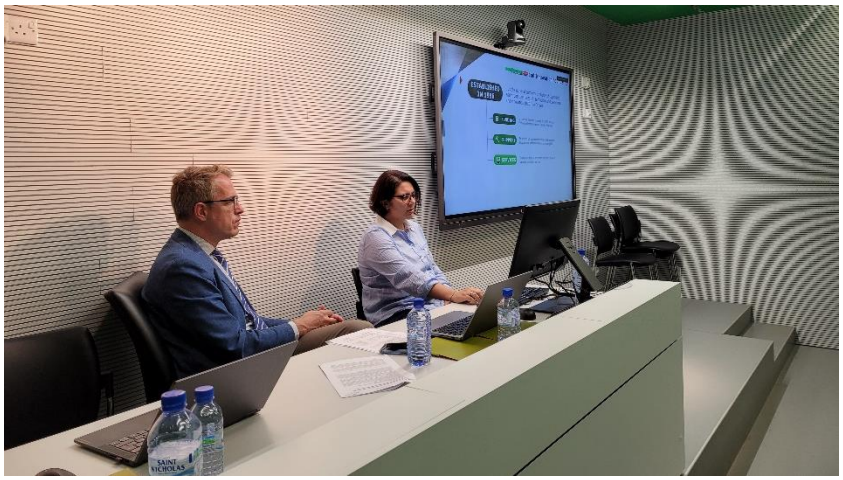
On the importance of the living environment for meeting energy objectives, ***Mr. Hadjinicolaou*** highlighted two main points. After shedding light on the great relevance of transport share in Cyprus' energy consumption, he claimed that a special attention should be paid to this sector since it involves a lot of stakeholders and requires lots of structural and behavioral changes from the side of the citizens as well. In addition, Mr. Hadjinicolaou focused on another issue that is concerning not only Cyprus but all countries in general, which is the lack of interest/motivation of the private sector to invest in R&I, an area that is almost completely funded through public resources.

Asked on Cyprus' response to the 5th pillar of the energy union on "research, innovation and competitiveness", ***Ms Christoforou*** listed some of the most important national tools that the country has adopted to comply with the green energy targets. Among the mentioned regulatory instruments there was the Smart Specialization Strategy for Cyprus, which was adopted in 2015 and aims at supporting R&I activities and investments while fostering cooperation between the academic community and the business world in established thematic areas, including energy. Ms Christoforou concluded her intervention by recalling that while it is important to have funding for basic science and bottom-up research, it is equally significant to have targeted thematic areas.

On the issue of adopting a more holistic approach encompassing also social and economic, not just engineering criteria, ***Mr Venizelou*** stated that active citizenship is part of CERA's strategy. Such commitment is reflected in activities like the development of a price comparison tool that will enable citizens to check the tariffs of the various suppliers that are registered to the market thus offering them the opportunity to easily switch their energy provider if they find it convenient. In the same vein, ***Mr Hadjinicolaou*** confirmed that the involvement of the consumer is one of the policy pillars of the Ministry and added that the government is working towards making the CET in Cyprus as much of a democratic process as it can be by also involving diverse groups of stakeholders from both public and private sectors.

On top of the previous comments and intervention, ***Mr Efthymiou*** stressed the importance of cooperation with the authorities on activities addressing energy issues.

The first session was wrapped up by panellists with short conclusive remarks statement on what are the major barrier for the Cypriot research community in reaching 2030 - 2050 energy goals. Among others, speakers mentioned: alignment of interests from different stakeholders; alignment of researchers towards societal needs, the need to catch up with the rapid changes, the need to align clarity, coordination and trust.



The second part of the workshop focussed on national and European funding opportunities and was opened by ***Anna Maria Christoforou*** who introduced 4 funding programmes aimed at accelerating the green energy transition in Cyprus: the National Funding Programme, organised through the Restart Work Programme (130 Million euros), the CO-DEVELOP Green Transition Programme aiming at bridging the gap between industry and Academia (6 million euros), the CET Partnership covering 7 transition Initiatives (3 million euros) and the Climate Neutral, Sustainable and Productive Blue Economy Partnership (2 million euros).

Evgenios Epaminondou from the Deputy Ministry of Research, Innovation and Digital Policy (Directorate for Research and Innovation) gave an overview of Cyprus R&I governance system and strategy with a focus on the energy sector. Mr Epaminondou showed that Cyprus ranks 1st in the absorption of H2020 funds per capita in the EU[9] and gave an overview of the current research ecosystem of the country, including 10 Universities, 8 research institutes, 6 Centres of Excellence and more than 2100 researchers. After presenting the Smart Specialisation Strategy, Mr Epaminondou also mentioned some of the most relevant European Initiatives of which Cyprus is part: the CET partnership, ERA discussion and actions, Euromed R&I initiatives, the ESFRI Projects and the Technical Committee 5 on research innovation, competitiveness and digitalisation.

[9] STOCKwatch (2021), "Cyprus first among EU Member States on funds absorption", source: https://www.stockwatch.com.cy/en/article/voyli-eyropi-oikonomia/cyprus-first-among-eu-member-states-funds-absorption#:~:text=Cyprus%20ranks%20first%20among%20EU,EU%20average%20being%20at%2062%25.

Berta Matas Güell, Senior Researcher at SINTEF, gave a presentation on EEA and Norway Grants for the period 2014-2021, directly addressing the so-called EU13 States. Ms Matas showed the programme's structure, the eligibility criteria and concluded with examples of new cooperation agreements signed with Cyprus on a number of new programmes in 2019, that also aimed at reducing vulnerability to climate change and improving environmental status.

Venizelos Efthymiou and ***Kyriaki Psara*** from FOSS concluded the second session of the workshop with a presentation of the PANTERA Project and the EIRIE Platform in support of the R&I community in Cyprus. Mr. Efthymiou described the EIRIE Platform as the meeting point of all actors active in the fields of green energy and as the tool aimed at bridging the gaps that currently exist in the energy field between EU MS, by bringing together successful national, regional or European partnerships. Mr. Efthymiou gave a general overview of EIRIE's vision, key functionalities, user roles, value propositions whereas Ms Psara took over the presentation by going more into details in the platform's open architecture and functionalities.

Mr. Efthymiou closed the workshop by remarking the importance of communication among the R&I community and by noting the relevance of these kinds of events for exchanging best practices and for fostering collaboration at different levels.

Closing Remarks

Despite the small size of the country, Cyprus' research community is very active in the field of CET, a trend that is reflected in the country's performance in Horizon 2020 and Horizon Europe Programmes and in its involvement in 10 out of 14 SET Plan IWGs. Nevertheless, several are still the barriers that prevent Cyprus from further increasing its performances in the R&I and energy fields**.**

By organizing these kinds of events, the SUPEERA Project aims at raising awareness about the SET-Plan and CET among research organisations and funding bodies from EU13 countries, while encouraging their mobilization towards their implementation. All materials related to this event can be found on the SUPEERA Website.

ANNEX V EERA Annual Strategy Meeting 2022

In addition to the above, EERA also organised its Annual Strategy Meeting in Prague, Czech Republic, on 22 and 23 of June 2022. This was meant as a clear signal from the EERA community (in particular from the Executive Committee and Joint Programme Coordinators) to further contribute to the onboarding of EU13 countries in key policy dossiers, spanning from the REPowerEU plan to the revamp of the SET Plan. Discussions were based on the deep work that EERA has been carrying out in these fields and counted on the contributions from prominent EU and Czech policymakers, also with the view of informing the work of the Czech Presidency of the European Union, which started on last 1st of July.

During the discussions, it was stressed the importance of the efforts to increase the participation of EU13 in the SET Plan, CET and Horizon Europe Programme and different types of approach at different levels are needed to increase their engagement. Overall, it is important to clearly illustrate the benefits of such activities for these countries and understand better which aspects should be attractive to them.

It was also mentioned that a possible course of action towards this, would be to introduce eligibility criteria for the inclusion of a minimum number of beneficiaries from EU13 in Horizon Europe projects, similar to the existing ones (e.g. Gender Equality Plan). Furthermore, it was noted that officials in EU13 countries might not be possessing the necessary language skills that would enable them to participate in the SET Plan IWGs, or their busy schedules do not leave space for activities at EU level. To this end, and as also suggested in Chapter V, a possible solution would be to engage younger and more active researchers.

Additionally, the dialogue around the engagement of EU13 countries could be facilitated at a separate IWG meetings, as an important non-technical cross-cutting topic that could see the participation of IWG members from the existing, technology-oriented IWGs. As closing remarks, it was underlined that EERA can play an important role on involving EU13 countries and identifying more concretely the existing barriers that would result in tangible and targeted recommendations.

EERA's efforts under the SUPEERA project to involve more stakeholders from the EU13 countries was also discussed with the Czech representatives from the Ministry of Industry and Trade and the Ministry of Science and Science Research and Innovation. There were discussed SUPEERA's future plans to organise similar to the above workshops in the country during the SET Plan conference in Prague in Nov. 2022 with the participation of relevant entities and key stakeholders.

ANNEX VI Deep Geothermal workshop 2022

Joint workshop addressed ways to strengthen transnational cooperation in Clean Energy throughout Europe

On 19th January 2022, 65 participants from across Europe came together to discuss the opportunities that the SET Plan and the Clean Energy Transition (CET) hold for the European countries that become actively involved. Alternatives to further integrate EU13 countries and facilitate communication and information exchange were also debated.

The EU has set an ambitious target for the decarbonisation of the European energy system by 2050. This breakthrough decision opens up new opportunities for innovative, cross-sectoral activities and stimulates solution-oriented approaches. Nevertheless, a successful Clean Energy Transition can only be achieved through collaboration and innovation in energy research from all European member states.

In light of this, the Implementation Working Group Deep Geothermal Support Unit, SUPEERA, and EERA aisbl jointly addressed this issue by giving the representatives of the EU13 countries (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia) and Greece and Portugal, the opportunity to gain more knowledge about the initiatives favouring their countries' institutions. Also, ways to strengthen the cooperation in the EU were brought forward.

The webinar highlighted the importance of the SET Plan and the CET, the crucial role of all European countries' involvement, and the need to align national and regional strategies with the European plans for a carbon-free society.

The event kickstarted by presenting the current involvement of the EU13 countries in the SET Plan and the CET. In this regard, three aspects were highlighted:

- EU13 countries possess, use, and continue to develop renewable energy sources (PV, wind, ocean, geothermal, hydro) according to the regional possibilities.
- The representativity of EU13 countries in the SET Plan communities is very low, which prevents them from actively influencing its course.
- Only about 5% of the H2020 funds were allocated to EU13 countries.

With the purpose of addressing the previous point, funding opportunities favouring the EU13 countries (and Greece and Portugal) were introduced. Representatives of research institutions and universities were informed about the EU's Widening initiative, the EEA and Norwegian grants and the Just Transition Founds. Moreover, success stories in the voice of EU13 institutions were portrayed to illustrate that participation in funded projects is often the starting point of new and fruitful initiatives.

To conclude, the webinar focused on cooperation and networking opportunities that facilitate participation in European consortia and winning projects and enable exchange between organisations on administrative issues. Specifically, the EIRIE platform was introduced to the

participants, while the benefits of participating in the European Energy Research Alliance (EERA) were highlighted.

The key question that permeated the discussions was how to bring more active researchers from EU13 countries closer to the SET Plan and the CET community. One of the clear answers that emerged was the organisation of informative and participatory instances in the country concerned, where national research institutions and universities could learn first-hand about the opportunities these initiatives open up. All materials related to this event can be found on the SUPEERA Website.

ANNEX VII Report on SUPEERA Widening Workshop in Malta

Boosting the R&I of Smart Grids, Storage and Energy communities The 13th Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (Valletta, Malta)

PANTERA / SUPEERA joint workshop

8th November 2022 - 14:00 - 17:30 CET

Malta is an active member of the EU since 1st May 2004 and actively works in the success of the energy transition objectives to achieve the declared policies for achieving a low carbon economy. However, the following areas are still a concern in achieving carbon neutrality and we would like to address them in this panel that brings together stakeholders in the field of smart grids, storage and local energy systems:

- R&I activities in the field are weak calling for more national and European support to raise opportunities, bring closer to the wealth of EU knowledge and offer the means to address local needs with the support of the industry and broader communities.
- Enabling technologies like digitalisation, storage, smart grids, e-Mobility and reliable communications are not adequately addressed to facilitate the much-wanted transition for the effective use of emerging technologies that include distributed RES, e-mobility with smart charging and V2G attributes and demand flexibility.
- End users and citizens are not adequately empowered through codes, appropriate regulation and market instruments to build and operate effective energy management systems utilizing the emerging technologies that can grow into efficient energy communities with appropriate technologies in place to facilitate optimal use of local resources for the benefit of the citizens.

The panel was intended to bring the stakeholders of Malta actively participating in the proceedings to address all the above issues and together try to pave the way forward for helping the country to move faster toward the much-wanted energy transition to the low carbon economy.

Agenda of the workshop

Time (CEST)	Topics	Description	Presenter
14:30 14:50	The PANTERA project and the regional approach	Opening the workshop and setting the scene for open dialogue on the role of the PANTERA process in helping Malta to grow stronger in sustainable energy R&I	**Dr. Venizelos Efthymiou** (FOSS)
14:00 14:30	SUPEERA	The SUPEERA project: Mobilization of EU-13 national public research resources in the Clean Energy Transition: challenges and opportunities • SET Plan and CET - benefits and engagement possibilities Investment and reform measures for Malta for CET	**Dr Ivan Matejak**, SUPEERA coordinator, EERA, Belgium
14:50 15:10	Malta: Energy and R&I landscape	Malta's Integrated National Energy and Climate Plan for the period 2021-2030 and beyond.	***Ing. Abigail Cutajar*** *(Advisor to the Minister on Energy and Sustainable Development)*
15:10 15:30	EIRIE at your service	EIRIE: The multifunctional platform that can make the difference: Step-by-step introduction to its capabilities that serve your needs	**Dr. Venizelos Efthymiou** (FOSS) and **Dr Anna Mutule**
15:30 **15:50**	**Coffee Break**		
16:20 17:20	Panel Discussion and Q&A session	How to accelerate the R&I activities of Malta in support of the energy transition? • Research Collaboration • National regulations • Policy issues	***Moderator:*** *Dr Venizelos Efthymiou* ***Panelists (TBC):*** ***Ing. Abigail Cutajar*** *(Advisor to the Minister on Energy*

		• Financing opportunities • good practice	*and Sustainable Development)* ***Dr Brian Azzopardi*** *(Senior Lecturer II at Malta College of Arts, Science and Technology (MCAST))* ***Prof. Natalija Lepkova*** *(Professor (Associate) at Vilnius Gediminas Technical University)*

15:50
16:20
	SUPEERA	Norway/EEA Grants
		
		R&I opportunities for collaboration and funding
		• Horizon Europe
		  ○ Clean Energy Transition Partnership
		  ○ Widening Calls
			Berta Matas Güell, Senior Researcher, SINTEF, Norway
			
			Spyridon Pantelis, Project Manager, EERA, Belgium

17:20 17:30	Closing Remarks	Wrap up giving emphasis to the outcomes of the workshop	**Dr Shafi Khadem** (IERC)

Opening of the workshop:

The role of the PANTERA process in helping Malta to grow stronger in sustainable energy R&I

Dr Venizelos Efthymiou (PANTERA project coordinator -FOSS - Cyprus) opened the workshop welcoming all the participants. After having briefly introduced the PANTERA project, its main goal and mission, he presented the developed EIRIE platform. After that he

presented regional desk approach with 6+1 regional desks, and described the PANTERA process. After that, Dr Efthymiou mentioned that the relation of projects with the different technologies and solutions is very important and indicates that a common taxonomy on how to relate projects to technologies, systems and solutions has been agreed. Finally, he concluded the presentation by informing the audience on the rich activities of the consortium in relation to the many workshops organised so far.

Ivan Matejak: Mobilization of EU13 national public research resources in the Clean Energy Transition: challenges and opportunities

The second presentation of the workshop has been given by Dr **Ivan Matejak**, SUPEERA coordinator and Operations Director at the European Energy Research Alliance. During his presentation, Dr Matejak presented the EERA and SET Plan and gave an overview of the current energy status of EU. Furthermore, he presented the most important initiatives to be expected in 2023. He continued by presenting Malta's energy sector and an overview of Malta's involvement in the SET Plan Implementation Working Groups (IWGs), underlining its participation in only one Implementation Working Group, Batteries. Regarding Malta's performance in Horizon 2020 projects, he projected statistical data that indicates that Malta receives the lowest net contribution Among EU13. Finally, he concluded by analysing the opportunities that arise through the active participation in the SET Plan and the added benefits of being an EERA member.

Abigail Cutajar: The Vision and Opportunities amidst an Energy Crisis

The workshop continued with a presentation by Ing. Abigail Cutajar, the Advisor to the Maltese Minister for Energy, Enterprise and Sustainable Development responsible for

projects in the Energy, Electrification and Sustainable Development areas. Ing. Abigail with through her presentation addressed the vision, objectives and targets of Malta with regards to the energy sector and energy transition. Among others, Ing. Abigail focused on the importance of energy efficiency in buildings and indicated that it is vital that all the countries should support schemes for energy efficiency in households and businesses. Finally, she presented the government financial commitment for 2023.

EIRIE platform at your service

Dr Venizelos Efthymiou (FOSS) presented in detail the EIRIE platform functionalities starting from the EIRIE "mission statement":

A reference platform and one-stop shop for information sharing, collaboration and knowledge creation aiming at evidently supporting the advancement of R&I activities in Smart Grids at national, regional and pan-European level and, subsequently, facilitating the energy transition.

He then went on to identify the value propositions for having a fully functional platform accessible by all R&I community:

To researchers

- Access to a pan-European data base with analytical and exploitable information on smart grid projects
- Information about best practices in R&D sector
- First-hand insights into interesting smart grid projects, results, ideas, initiatives
- Access to SotA Training Material and Education Programmes

To R&I Organizations

- Cross-promotion opportunities, encouraging synergies with projects and initiatives through information sharing and promotion opportunities through highlighting key achievements as best practices
- Making feasible for the low spending, in R&I, countries to be engaged in a more active manner in EU R&I activities

To Policy makers

- Define inefficiencies of R&I activities at national, regional and EU level and prioritization of policy actions towards advancing R&I in low-performing thematics

Pooling together different available instruments into one platform, in such a way that it will effectively contribute to the increase of knowledge, coordination of R&I activities and networking.

Dr Anna Mutule, took the floor and continued the EIRIE coverage with the vision to create, through the planned multi-functional collaborative platform, a reference operational point to:

- Unify European activity
- Incentivize further investments in smart grids
- Support access to exploitable results
- Spark further work and cooperation capable of bridging the existing gaps.

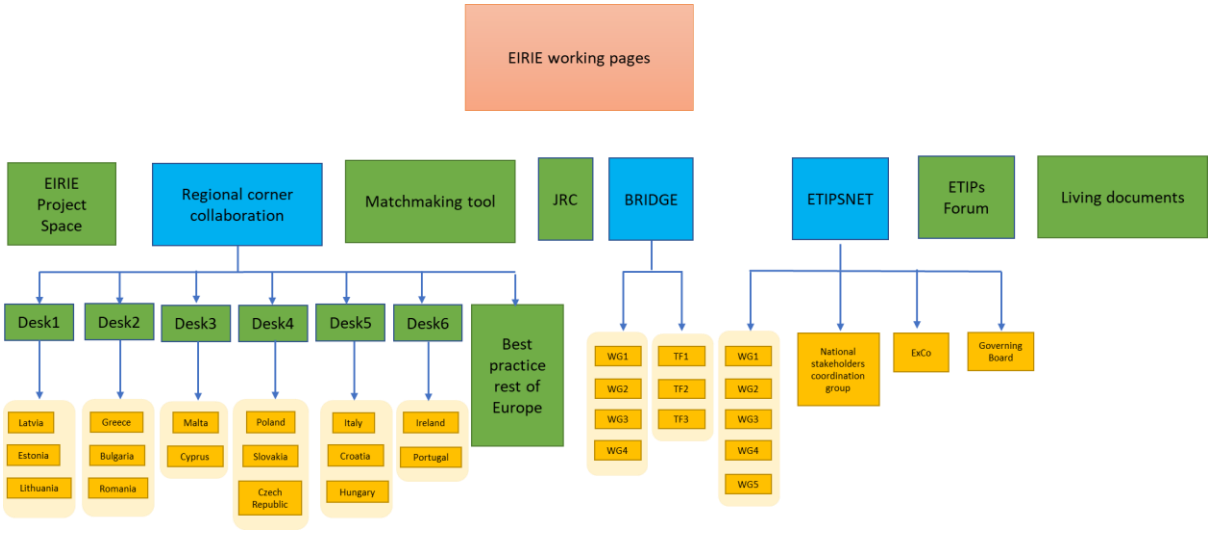
Building on the wide benefits that EIRIE is offering to tis users, has given further insides on the wealth that the current design of the regional corner offers, allowing all countries in Europe to create and nurture successful collaborations that strengthen the R&I activities throughout the EU.

DESK 1	DESK 2	DESK 3	
LATVIA	GREECE	MALTA	
LITHUANIA	ROMANIA	CYPRUS	
ESTONIA	BULGARIA		
DESK 4	**DESK 5**	**DESK 6**	
CZECH REPUBLIC	ITALY	PORTUGAL	BEST PRACTICE DESK
SLOVAKIA	CROATIA	IRELAND	
POLAND	HUNGARY		

Particular emphasis was given to the versatility given by the CONFLUENCE platform generated for further enhancing the collaboration work on EIRIE:

- Confluence is a collaboration wiki tool used **to help teams to collaborate and share knowledge efficiently**.
- Confluence is a **team workspace** where knowledge and collaboration meet by creating, collaborating, and organising all the work done within EIRIE in one place.

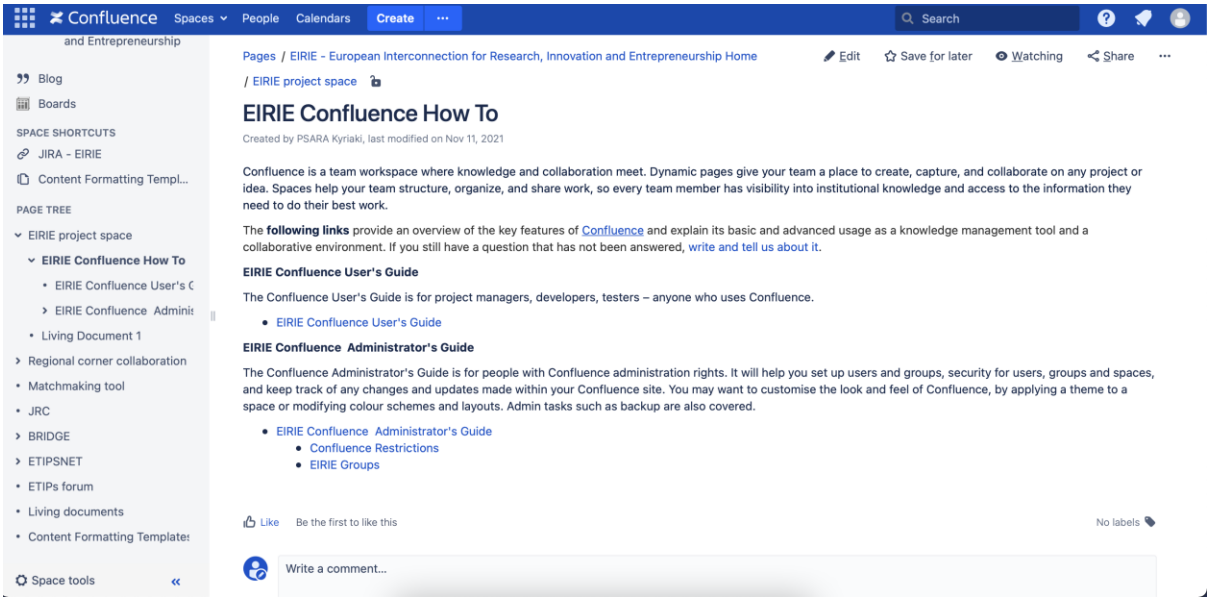
- Confluence is for teams of **any size and type**, from those with mission-critical, high-stakes projects that need rigor behind their practices, to those that are looking for a space to build team culture and engage with one another in a more open and authentic way.



Anna has analysed the developed architecture on EIRIE / CONFLUENCE giving evidence that all are welcome to strengthen their widening possibilities for enriched R&I work in Europe:

The EIRIE space in CONFLUENCE has been designed and it is ready for all to use for enhanced collaboration. Building on well-designed CONFLUENCE pages this is achievable with universal benefits:

- All content resides in **pages** – composing living documents created on EIRIE Confluence site.
- Different **types of pages** can be created such as project plans, meeting notes, troubleshooting guides, policies, and more.
- Confluence comes bundled with **templates** that can be used as a basis for almost any kind of content.
- In case none of the existing templates can be used for a specific type of content you want to create, **a blank page** can be used and adjusted accordingly.



Panel Discussion and Q&A session

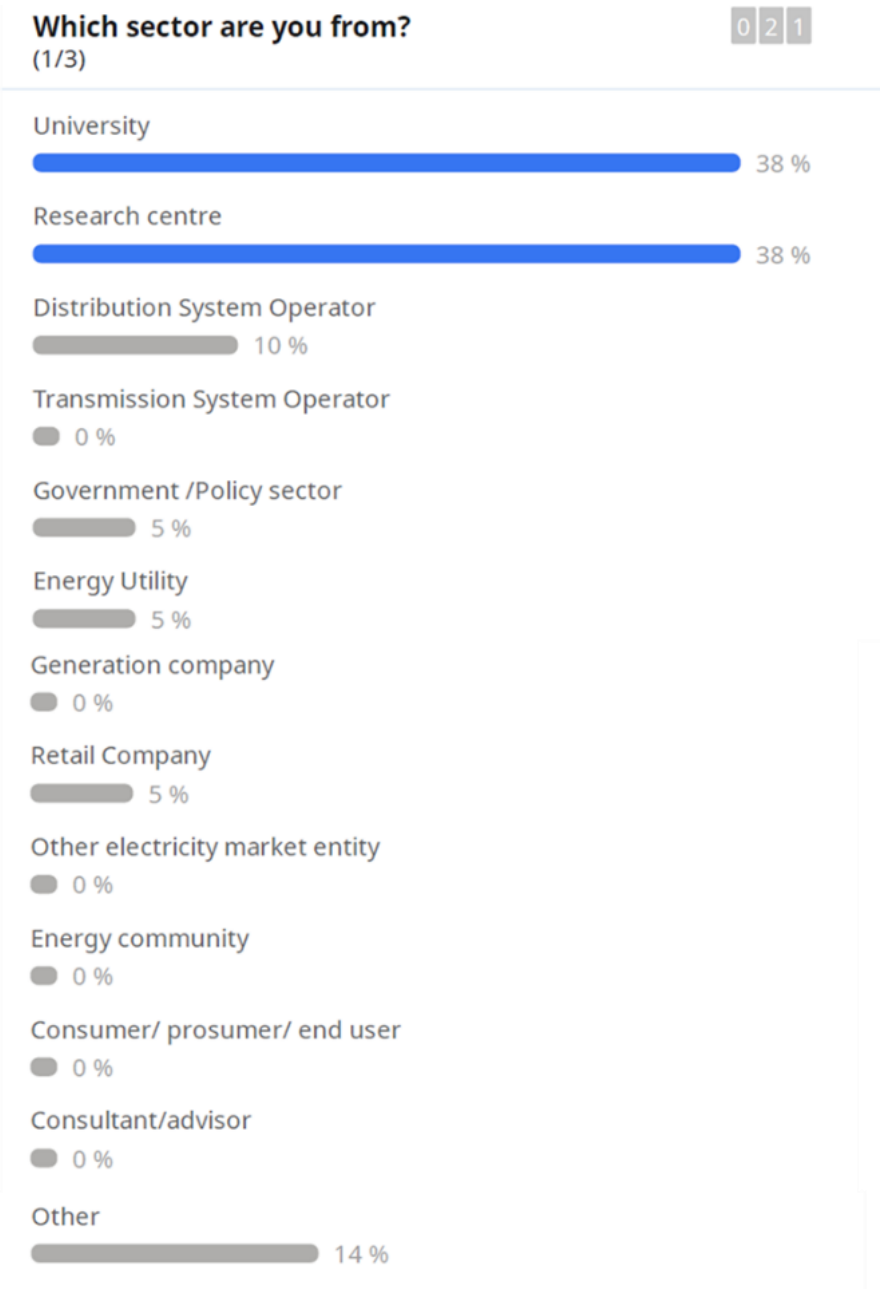
The panel was coordinated by Dr Venizelos Efthymiou (FOSS) taking care of introducing the themes to be addressed to help the participants in following and contributing.

In order to help the contribution of the participants in the discussion, use was made of the online tool SLIDO through which the response is imminent on posed questions and thus useful for the conducted discussion.

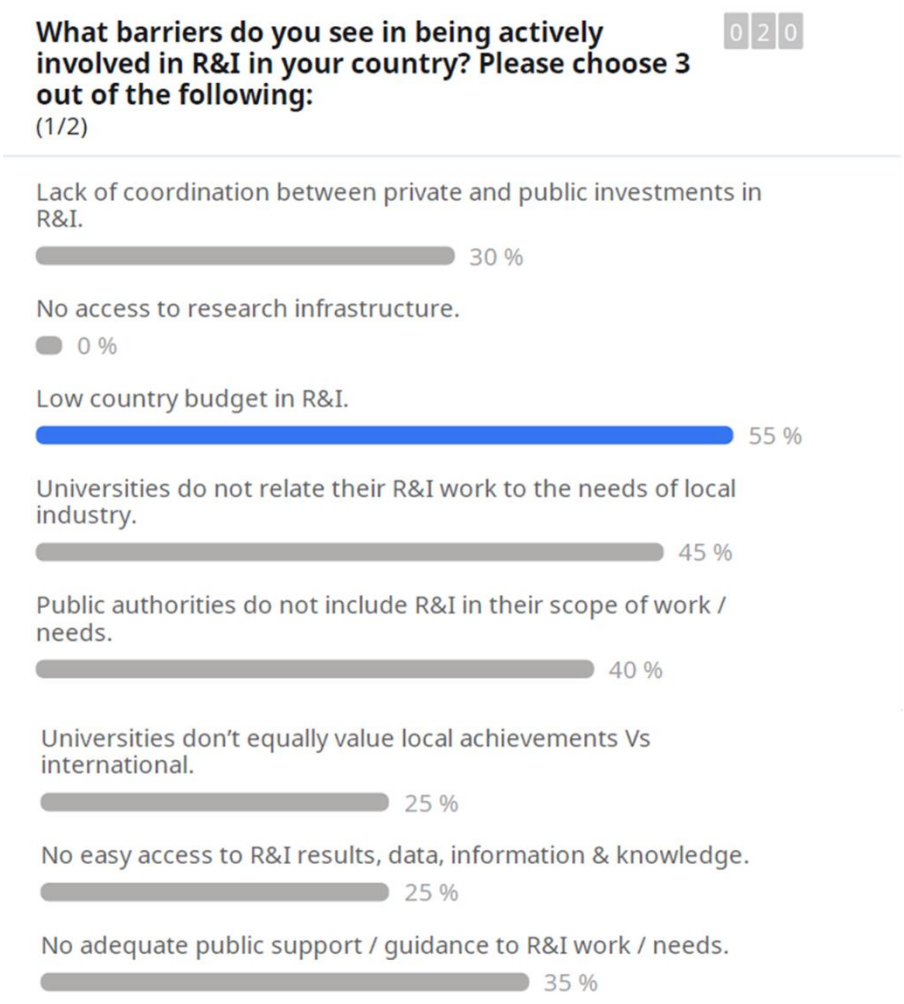
As a warmup question to the participants to learn to use the SLIDO online tool the question of "**Which is your country of residence?"** was asked. The interesting results are the following:


Greece
Cyprus
Lithuania
Malta
Indonesia
United Kingdom
India
#2217999
Latvia
Belgium
Croatia

As a follow up question, the participants were asked the question: **Which sector describes best your affiliation?** The results were revealing, and they were as follows:



he following question triggered interest among the participants and their responses were highly relevant to the panel discussion with the panellists positioning themselves on the noted outcome:



Panel discussion: How to accelerate the R&I activities of Malta in support of the energy transition?

• Research Collaboration

• National regulations

• Policy issues

• Financing opportunities

• good practice

Moderator:

Dr Venizelos Efthymiou (FOSS)

Panellists:

Ing. Abigail Cutajar (Advisor to the Minister on Energy and Sustainable Development)

Dr Brian Azzopardi (Senior Lecturer II at Malta College of Arts, Science and Technology (MCAST))

Prof. Natalija Lepkova (Professor (Associate) at Vilnius Gediminas Technical University)

As input to the discussion, the results of the third question were noted and the panellists were asked to position themselves. The responses to the third question about the barriers to R&I activities in your countries, has given the highest score to the following:

- Low country budget in R&I

- Universities do not relate their R&I work to the needs of the local industry and communities
- Public authorities do not consider R&I as inherent to their daily activities

Discussing on the results, Ing. Abigail indicated that she is not surprised at all. Then she continued by mentioned that this doesn't apply only on R&I. There are a lot of R&I funding at EU level that as a country we are not stepping into. As a Country we obviously support the energy sector however we might need to give more attention to R&I.

Then, Dr Brian took the floor to indicate that one of the ruling problems is that the funding allocated though projects is limited in time (2-3 years) and this has a negative effect in attracting the best talents. So as a country it is important to ''sustain the talents'' and we need to address this issue.

Prof. Natalija, said that same problems are in her native country Lithuania and maybe true in every European country. She indicated also that the results of this poll reflect the situation prevailing in many countries, adding to the identified list the common problem that many face and is related to the high bureaucratic practices in dealing R&I activities.

After that the moderator of the panel Dr Efthymiou, mentioned that ministries put a lot of effort on this and set the question if the panellists think that the support they receive from Ministries in Malta is adequate, and if there is any sector that is lacking?

Responding, Ing. Abigail said that R&I is vast and wide, we have to segregate the issue. The water and energy agency open different calls for R&I. Normally there are two calls per year, there are certain requirements, but they are not bureaucratic as at EU level. She continued saying that Malta aims to invest heavily on R&I especially in new technologies such as offshore renewables etc.

Then, Dr Brian mentioned that there is a lot of potential untapped in the Maltese island. In the PV sector every surface could be covered by PVs. Offshore there might be more difficulties, and therefore before going offshore we should deplete any onshore resources.

Following to Dr Brian's comment, Ing. Abigail wanted to make clear that the vision of the government is not to fill each space with renewables, but to give better quality of life to people.

Moreover, Dr Efthymiou set the following question to the panellists: Do ministries rely on the academia of Malta, using them as a source of scientific evidence that helps R&I to take effective decisions?

Ing. Abigail stressed the importance of the interrelation of the government and energy and water agency with the universities and research centres. She mentioned that it is important

to act on scientific evidence, underlying the importance of close collaboration between industry and the Maltese universities. She believes that there is a lack of knowledge for blue collar jobs and concluded by saying that the government trusts universities and try to have close communication with them.

Furthermore, a representative of ENE Malta (audience), indicated that as ENE Malta, they are collaborating with the industry and they need to invest more to improve their network. There are a lot of challenges, and the involvement of the universities is crucial.

Finally, Dr Efthymiou indicated that the EIRIE platform is giving the possibility of strong collaboration between researchers in Europe, opening the door for collaboration possibilities with experts from all over Europe. Ending this panel session, Dr Efthymiou thanked all the panellists and the participants, and he underlined the importance of the EIRIE platform and how it can help R&I community to work together and collaborate transforming it into a real tool for the benefit of R&I community in Europe as a whole.

Berta Matas Güell: The EEA and Norway Grants 2014-2021

After the roundtable discussion, the workshop continued with two presentations for SUPEERA project. Miss Berta gave a virtual presentation on the topic of EEA and Norway Grants 2014-2021. She started her presentation by mentioning that this funding mechanism was mainly established to reduce the economic and social disparities between the regions of the EU13 countries and at the same time to strength the relations beneficiary states with donor states. After that she presented briefly the funding programme and presented the funding of beneficiary countries from 2014 to 2021 from EEA grants and Norway grants. Then she presented in detail the programme design process and how it works and gave an overview of EEA/Norway grants 2014-2021 in Malta.

New cooperation agreements with Malta on a number of new programs on February 2017

Areas of support

- Alleviating poverty and supporting local and regional development Facilitating bi-communal cooperation.
- Supporting vulnerable children and youth at risk of social exclusion and poverty
- Strengthening civil society and empowering vulnerable groups, including refugees and migrants
- Support for cultural tourism and public access to culture

Programmes

- Active Citizens Fund
- Local development and Poverty Reduction
- Social Dialogue –Decent Work
- Bilateral Fund

Spyridon Pantelis: Clean Energy Transition and main funding opportunities

The final presentation of this workshop was given by Spyridon Pantelis (EERA) presenting the Clean Energy Transition and main funding opportunities. He started his presentation with a general overview of the Horizon Europe.

- EU's most ambitious R&I framework programme ever and largest transnational programme of its kind worldwide
- Budget **of EUR 95.5 billion** to be distributed between 2021 and 2027
- Provides new instruments such as the **European Innovation Council, Research Missions and Partnerships** to boost the EU R&I landscape.

After that, Spyridon presented the Clean Energy Transition Partnership (CETP) and the CETP transition initiatives on a joint programming platform with the involving stakeholder groups:

- ERA-NETs
- SET Plan IWGs
- EERA
- ETIPs
- Representatives of MS/AC

Then he presented the procedure and the current deadlines for proposal submissions and the main project requirements.

After that he proceed with a presentation on **R&I opportunities for collaboration and funding**
Horizon Europe (Cluster 5), and finished his presentation by presenting the Widening calls. More specifically he presented the 3 destinations of Horizon Europe:

- **DESTINATION 1: IMPROVED ACCESS TO EXCELLENCE**
    - Aims at underpinning geographical diversity, building the necessary capacity to allow successful participation in the R&I process and promoting networking and access to excellence
- **DESTINATION 2: ATTRACTING AND MOBILISING THE BEST TALENTS**
    - Aims at reverting the brain drain from widening countries, emphasis on intersectoral mobility, better exploitation of existing research infrastructures
- **DESTINATION 3: REFORMING AND ENHANCING THE EU RESEARCH AND INNOVATION SYSTEM**
    - Four objectives: Prioritise investments and reforms, improve access to excellence, translate R&I results into the economy and deepen the EERA

Outcomes of the workshop and concluding remarks

Dr Shafi Khadem (IERC) concluded the workshop by summarizing the most important points and conclusions of the workshop and underlined the importance and the benefits of connecting to the EIRIE platform.

Then Dr Shafi thanked all the participants to the workshop and especially the panelists for their time to be with us in this useful workshop and for sharing their thoughts and knowledge about this topic.

ANNEX VIII Report on SUPEERA Widening Workshop in Hungary

International research collaboration opportunities: fostering EU Clean Energy transition in Hungary

SUPEERA / PANTERA joint workshop

26th October 2022 - 09:00 - 17:30 CEST

SUPEERA and PANTERA projects jointly organised this workshop aiming to enhance collaboration in R&I activities in Hungary, facilitate knowledge exchange, and showcase best practices of how international networking and cooperation between national stakeholders and key international organisations can be beneficial for establishing long-lasting interactions in R&I activities. The event, that took place in Budapest on the 26th of October 2022, was attended by 20 participants and gathered stakeholders, including representatives from RTOs, industry, and government.

Agenda of the workshop

9:00 - 9:30	**Registration and coffee**
09.30 - 09:35	**Welcome address** ***János Levendovszky**, Vice-Rector for Science and Innovation, Budapest University of Technology and Economics*
09:35 - 09:55	**The SUPEERA project:** Mobilization of EU-13 national public research resources in the Clean Energy Transition: challenges and opportunities ➢ SET Plan and CET - benefits and engagement possibilities ➢ Investment and reform measures for Hungary for CET SUPEERA findings: engagement of Hungary in H2020 or R&I ***Ivan Matejak**, SUPEERA coordinator, EERA*
09:55 - 11:00	**Panel discussion and Q&A** *Moderators: Ivan Matejak (SUPEERA, EERA) & Andrei Morch (PANTERA, SINTEF)*
	Towards a carbon neutral Hungary ***Péter Kaderják**, Director of Zero Carbon Hub, Budapest University of Technology and Economics* **Hungary's Horizon Europe performance in the field of energy** ***Orsolya Küttel**, Counselor/(Hungarian NCP), Department for International Affairs at National Research Development and Innovation Office*

	SET Plan objectives and the Hungarian Nuclear Energy R&D Program ***Ákos Horváth**, Director General, Centre of Energy Research* **Research, development and innovation at MVM Group** ***Márton Pete**, Senior Knowledge Management Expert, MVM*
11:00 – 11:15	**Coffee break**
11:15 – 11:30	R&I opportunities for collaboration and funding: ➢ Horizon Europe ○ Clean Energy Transition Partnership ○ Widening Calls ***Spyridon Pantelis,** Project Manager, EERA*
11:30 - 12:20	**Panel discussion and Q&A** *Moderators: **Spyridon Pantelis** (SUPEERA, EERA) & **Rad Stanev** (PANTERA, TU Sofia)* **Education Economics Network - A H2020 twinning project** ***Daniel Horn**, Director, Institute of Economics - Centre for Economic and Regional Studies (KRTK)* **Supporting researchers in successful participation in Horizon Europe - Practice of the Budapest University of Technology and Economics** ***Borbála Schenk**, Chief European research funding advisor, Center for University-Industry Cooperation at Budapest University of Technology and Economics* **SME's experience in R&I ecosystem** **Chavdar Ivanov**, *Managing Director, gridDigIt*
12:20 - 13:45	**Lunch and networking**
13:45 - 14:15	**PANTERA and the EIRIE platform** The EIRIE platform in support of the R&I European ecosystem: Objectives and opportunities EIRIE's functionalities and tools facilitating the work of stakeholders: ➢ Active participating & contributing on the EIRIE platform ➢ The Hungarian corner and its role in bringing together the stakeholders that matter most for Hungary and its R&I community ***Mattia Cabiati**, PANTERA Project, RSE*
14:15 - 14:35	**Interactive session** ***Mattia Cabiati**, PANTERA Project, RSE*
14:35 - 15:05	**Outcomes of PANTERA interaction with the stakeholder: challenges and barriers for R&I activities in the Smart Grids domain** ***Andrei Morch**, PANTERA project, SINTEF*
15:05 - 15:35	**Open discussion and Q&A** *Moderator**: Andrei Morch** (PANTERA, SINTEF) & **Rad Stanev** (PANTERA, TU Sofia)*

15:35 - 15:45	**Wrap up and feedback** ***Ivan Matejak**, SUPEERA coordinator, EERA*
15:45 - 17:00	**Networking**

Opening the workshop: welcome address by the Vice-rector

The workshop was officially opened by János Levendovszky, Vice-Rector for Science and Innovation at the Budapest University of Technology and Economics. After his welcoming speech he stressed that projects such as SUPEERA and PANTERA are crucial catalysers for bringing together key EU stakeholders in the energy sector. He also highlighted the importance of developing new approaches to R&I to reach strategic autonomy considering the unfolding energy crisis. Finally, Dr. Levendovzsky pointed out that since Hungary has set ambitious goals towards a low-carbon economy (e.g., smart metering) there is a high need for cooperation among all the key stakeholders to transfer knowledge and participate in European calls.

Ivan Matejak: the SUPEERA project and the benefits of participating in the SET Plan

The first part of the workshop was introduced by **Ivan Matejak**, SUPEERA coordinator and Operations Director at the European Energy Research Alliance, who highlighted the importance of such events to align national and European priorities. In his presentation about EERA and the SET Plan, he emphasized the need for stepping up the energy transition in the current complex geopolitical context. He continued with an overview of Hungary's involvement in the SET Plan Implementation Working Groups (IWGs), underlining its high dependency on Russian fossil fuels. Regarding Hungary's performance in Horizon 2020 projects, he projected statistical data that indicates a rather low participation rate. He concluded by pointing out the main root causes of their low participation in Horizon 2020 projects, such as the lack of alignment between Hungarian and European priorities, limitations of the R&I systems, etc.

1st Panel discussion: R&I activities in Hungary

Peter Kaderjak, Director of Zero Carbon Hub (ZKK) at the Budapest University of Technology and Economics, presented the Hungarian mid-term and long-term climate targets for 2050. He pointed out that the green transition is a fundamental component of the Hungarian carbon neutrality target for 2050 and that 2030 objectives are under revision considering the Fit-for-55 package. He highlighted that additional 2.4 billion euros every year are needed to reach these targets and that Hungary would largely benefit from these investments in terms of its energy import bill. After a brief introduction of ZKK, he remarked that currently in the country there is an increasing commercial activity and interest in green technologies (e.g., batteries).

Orsolya Küttel, National Contact Point for the National Research and Innovation Office, presented Hungary's Horizon Europe performance in the field of energy (in particular, destinations 3 and 4 of Cluster 5). She highlighted that many project proposals in Hungary do not reach the funding stage, mentioning that only 12% of them with Hungarian partners have been granted, that is below the EU average of 18%. Finally, she outlined the National Contact Point's (NCP) strategy to support Hungarian stakeholders on increasing their engagement in Horizon Europe programme and their target as NCP to improve country's overall success rates in the coming years.

Ákos Horváth, Director General of the Centre for Energy Research in Hungary gave an overview of the role of the Hungarian nuclear energy R&D programme to achieve SET Plan objectives. He started his speech by underlining that nuclear energy is not often seen as a long-term solution for the future energy system by the EU policies. However, he also stressed the importance of existing EU schemes, such as the Sustainable Nuclear Energy Technology Platform (SNETP), established as R&D&I to support technological development for enhancing safe and competitive nuclear fission. The SNETP is made of three pillars: NUGENIA (Nuclear Generation Alliance), NC21 (Nuclear Cogeneration Industrial Initiative), and ESNII (European Sustainable Nuclear Industrial Initiative). In addition, he briefly discussed the state of the art in the field nuclear technologies, explaining that the existing generation of nuclear reactors is still acceptable for the next 100 years, but that more investment in research is needed to improve them. Finally, he presented some of the activities of the Energy Research Centre and stressed the importance of sustainability issues for nuclear energy.

Márton Pete, Senior Knowledge Management Expert at MVM, presented his company and its key role as a state-owned power company responsible for the production, distribution, and sale of electricity in Hungary. He highlighted that MVM is participating in 13 RDI projects; three of them under Horizon 2020/Europe and 10 at national level, and all of them focusing on low carbon technologies and infrastructures. He stressed that MVM is actively collaborating with the Budapest University of Technology and Economics in research projects, mainly testing new control and power generation innovations. Finally, their strong support to the innovation uptake of new technologies is materialised through the first energy-related start-up incubator in the country.

Panel discussion and Q&A

During the panel discussion that was moderated by **Ivan Matejak** and **Andrei Morch**. **Peter Kaderjak** highlighted that in Hungary is paramount to reduce natural gas dependency, where **district heating** (replacing natural gas with geothermal, biomass, solar), **system integration** (especially via energy storage), and **energy efficiency** will play a crucial role in this direction. He also stressed that R&I is essential to repurpose natural gas **infrastructure** to the current and future energy and storage needs.

Orsolya Küttel pointed out that **international cooperation** and **knowledge sharing** play a crucial role on changing and updating energy policies, and that Hungarian stakeholders should be keener to work together with partners from other countries in Europe. **Ákos Horvath**

mentioned that in the short term it is important to invest in **energy savings** and that small **modular nuclear reactors**, which now are more affordable, could be utilised to co-produce heat and electricity. However, he remarked that nuclear energy has a long-term outlook, while hydrogen might constitute a shorter-term solution. **Marton Pete** highlighted that from the point of view of innovation MVM group wants to move towards new markets and **beyond the meter services**.

As far as the low performance of Hungarian stakeholders in Horizon 2020/Europe projects, Ms Kuttel and Mr Kaderjak agreed that this is partly happening due to an abundance of domestic and cohesion funds available in the country, which are easier to access and less competitive compared to the European ones. Yet, Ms. Kuttel indicated that Horizon Europe calls are becoming more attractive to Hungarian stakeholders in periods when national funding is limited.

R&I opportunities for collaboration and funding (HE, CETP, and Widening)

Spyridon Pantelis, Project Manager at EERA, outlined the Horizon Europe programme and the Clean Energy Transition Partnership (CETP), highlighting Pillar II and in particular Cluster 5 on Climate, Energy and Mobility, and the section on Widening Participation and Strengthening the European Research Area as the two most important funding pathways for EU-13 participants. He provided a list of selected upcoming calls within the two funding pathways, encouraging all participants to consider these calls for proposal submission.

After his presentation, **Orsolya Küttel** pointed out some difficulties in joining widening activities. For example, she noted that one critical barrier to increasing the participation of EU-13 countries lies in the lack of communication between the commission and the coordinators of the projects, as many widening calls are published without prenotification.

2nd panel: International research collaboration opportunities in Hungary

Daniel Horn, director of the Institute of Economics - Centre for Economic and Regional Studies (KRTK), presented the Education Economics Network H2020 funded project. The objective of the project was to stimulate and enhance the cooperation in education economics in three top ranked research in EU-15 countries and a promising new group in a widening country, Hungary. He pointed out that the project was successful as it managed to create a strong network (35-40 people), with some collaborations lasting up to today. He also noted that a critical factor for the success of the project was the **availability of good data** by the Institute of Economics that all the others EU partners could use.

Borbala Schenk, Chief European research funding advisor in the Center for University-Industry Cooperation at the Budapest University of Technology and Economics (BME), illustrated how this university supports their researchers' participation in Horizon Europe calls. She stressed that it is fundamental to redefine how success is measured in Horizon Europe (HE). In her point of view, it is important to realize that HE is not only about funding but also about participating in interesting R&I discussions. Furthermore, she emphasized the importance to be a credible partner to be invited in other cooperation projects. Finally, she presented the BME competence map of the BME university. She highlighted that although setting up and maintaining such a platform needs a huge effort it is a useful tool for boosting networking possibilities. **Dr. Schenk** later clarified that although the competence map currently provides information only about BME researchers, it is intended to also inform researchers from other universities.

Chavdar Ivanov, presented his consultancy company GriDigit (based in Budapest but their contracts are mostly around Europe) and their experience with R&D. He briefly talked about his positive experience in European schemes (for example, the EEGI, the European Electricity Grid Initiative) and encouraged other SMEs to participate in similar projects as it comes with multiple benefits for them. At the end of his presentation, he provided some recommendations and observations regarding European R&D projects. For example, he pointed out that large administrative efforts and long procedures are considerable obstacles for a small company such as GriDigit to engage in EU funded projects.

Panel discussion and Q&A

The Q&A session that followed revolved mainly around the importance of enhancing **competences**, creating **networks**, and lessons learnt from rejected proposals.

Mr. Horn first stressed that a fundamental outcome of the twinning project is the creation of personal connections. In addition to that, **Ms. Schenk** and **Mr. Horn** agreed that also unsuccessful projects can bring new collaborations, which is a fundamental objective of CSA projects. In particular, answering **Mr. Pantelis**' request to give more information about the competence map**, Ms. Schenk** pointed out that although the BME Competence map is new, they have already received positive feedback from innovative companies in Hungary who are using it as a tool to strengthen ties with the researchers. Also, she explained that a side effect of the map is to help the researchers know who is dealing with similar topics within the university. Finally, she confirmed that the model can be replicated in other countries if someone is willing to invest hard work in it and added that this year or the next one, they would like to extend the showcase of the competences to other participants as well.

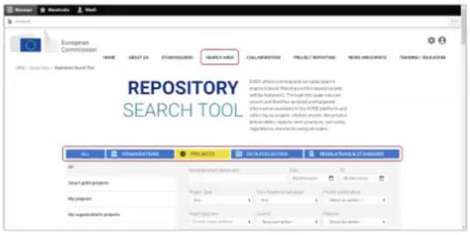
Dr. Ivanov clarified what are the most beneficial activities (not only in terms of money, but also networking and experience) for their company. For example, by participating in different projects the are able to build valuable knowledge that they can transfer to their partners. In fact, they help stakeholders take into consideration cross-cutting issues, which are crucial for the utilities that want to succeed in the energy transition. Mr. Ivanov also added that, as a consultant, he sees the added value to put tricky questions (that may not be seen from people working in the industry or research) on the table.

At the end of the discussion, **Mr. Horn** was asked if he has uptaken any of the discussions from the twinning project and established a new research-based project. Mr. Horn clarified that they tried to apply to new calls for R&D with some of the partners, but they were unsuccessful. Finally, he observed that the most active people are the Ph.D students because the project opened the scenery for them.

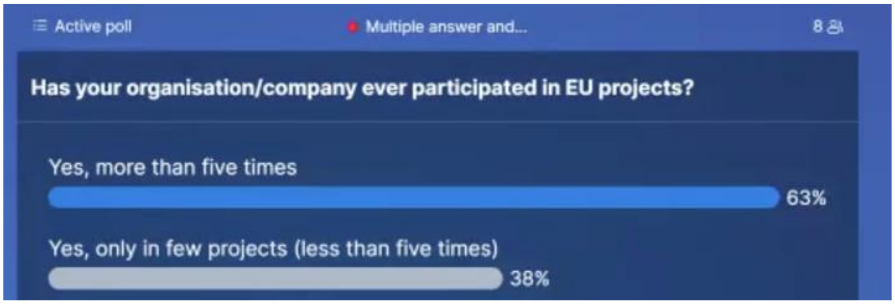
PANTERA and the EIRIE platform

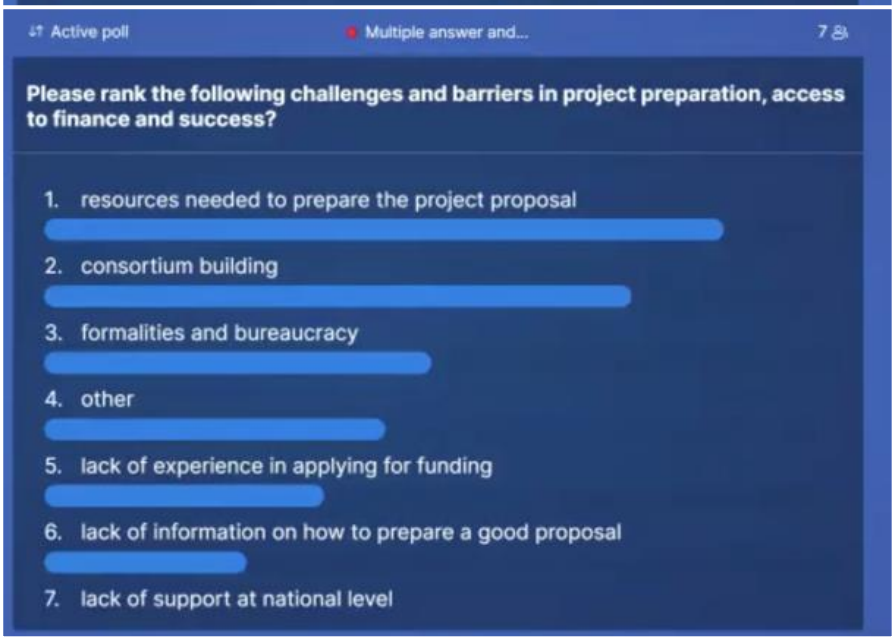
Mattia Cabiati, from RSE, presented in detail the PANTERA project and its main outcome - the EIRIE platform. He explained that the main objectives of PANTERA is to support R&I activities and bridge the gap in the energy and innovation field that exists between EU countries. Dr. Cabiati also presented the results of a survey carried out to assess the main barriers that limit the funding and development of R&I in the energy field. It was reported that according to the replies received the lack of responsive networking facilities, limited monetary & human resources, and limited national policy in support of R&I activity are the most relevant ones.

EIRIE: Search tool



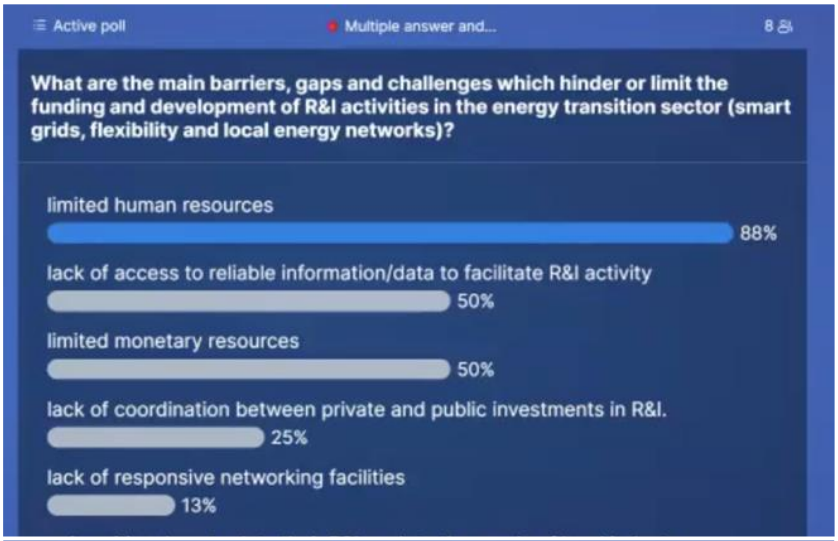
Then he explained how the PANTERA project is trying to address all these barriers, either by direct activities such as the organisation of workshops with the participation of local stakeholders, or through the EIRIE platform. Moreover, it was also remarked that thanks to the deep involvement of PANTERA partners in international initiatives, good collaboration has been established with international consortia (ISGAN, Mission Innovation, EERA) and explained how this could support networking activities of PANTERA stakeholders. Mr. Cabiati then presented the EIRIE platform, explaining its functionalities and importance for researchers, R&I organizations, and policy makers. The platform is an open tool for collaboration between researchers, R&I organizations, and policy makers, and a research database which aims to incentivize further investments in **Smart Grids**.

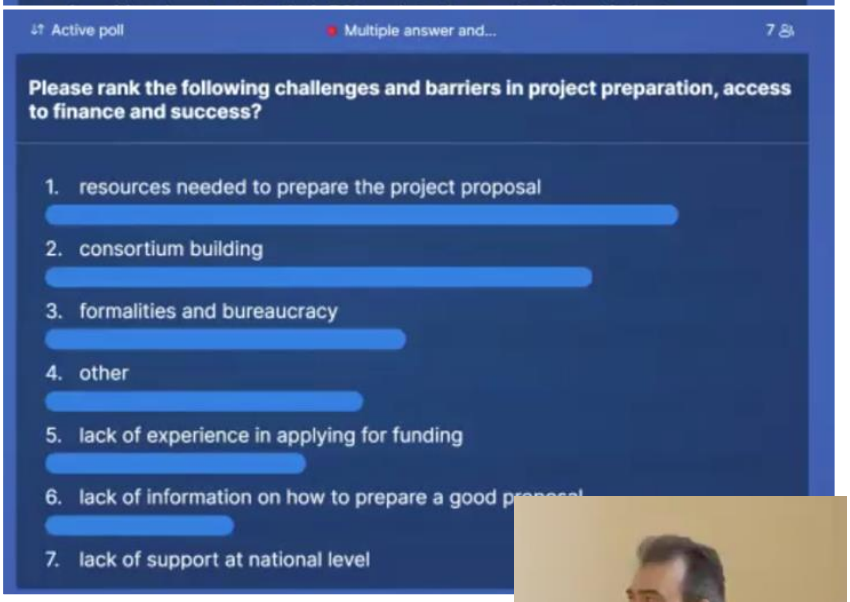




Before ending the session, Mattia Cabiati launched an interactive session where participants could express their opinion about regarding participation in EU projects and the challenges related to this process. The results of the consultation are reported in the following images.

Finally, some remarks were made by some of the participants. For example, **Borbala Schenk** pointed out that, given the complexity of Horizon Europe calls, there is a need for a mindset change to participate in consortia. This requires a step ahead from the researchers to lean not only on their traditional academic networks and put themselves in the marketplace and look for potential partners. **Pete Marton** highlighted there is a mismatch of objectives between industry and academia as companies want to make profits and universities aim to produce publications. However, he reported that in recent years this gap is closing.





The last presentation of the workshop was done by **Andrei Morch** from SINTEF**,** who presented the outcomes of PANTERA interactions with the stakeholders regarding the challenges and barriers for R&I activities in the domain of smart grids domain. During his presentation Andrei Morch emphasized how the implementation of Smart Grid technologies is not an ultimate goal in itself, but rather a tool to resolve certain challenges. Mr. Morch then presented the result of the interviews and surveys they carried out with the stakeholders, aiming to establish a dialogue and identify their needs. The outcome of this activity was later used as input for further studies in PANTERA. They found different challenges related to the implementation of smart grid technologies (e.g., high variability in the production electricity from renewables). In addition, the result of the interviews showed that stakeholders face many non-technical problems to implement smart grids such as lack of incentives for R&I activities,

obsolete market design, and high level of bureaucracy. Finally, Andrei Morch indicated some best practices to overcome these barriers, notably regional cooperation, and resource pooling.

Closing remarks

Ivan Matejak wrapped up the session by thanking all the participants for their contribution. He also invited the audience to participate in future SUPEERA/PANTERA workshops in EU-13 countries. Although Hungary has set high targets towards decarbonization, its participation in Horizon 2020/Europe calls and SET Plan IWGs remains rather low. By organizing such events, the aim is at raising awareness about the SET Plan and CET among research organisations and funding bodies from EU13 countries, while encouraging their mobilization towards their implementation. All materials related to this event can be found on the SUPEERA website.

ANNEX X Report on SUPEERA Widening Workshop in Romania

International research collaboration opportunities fostering EU Clean Energy transition in Romania

SUPEERA / PANTERA joint workshop

23rd March 2023 - 13:00 - 17:00 EET

Agenda of the workshop

13:00 - 13:15	Registration
13:15 - 13:25	Welcome address ***Ana-Maria Dumitrescu**, Professor, Faculty of Electrical Engineering, University Politehnica of Bucharest*
13:25 - 13:45	The SUPEERA project: Mobilization of EU-13 national public research resources in the Clean Energy Transition: challenges and opportunities ➢ SET Plan and CET - benefits and engagement possibilities ➢ Investment and reform measures for Romania for CET SUPEERA findings: engagement of Romania in H2020 or R&I ***Ivan Matejak**, SUPEERA coordinator, EERA*
13:45 - 14:15	PANTERA and the EIRIE platform The EIRIE platform in support of the R&I European ecosystem: Objectives and opportunities EIRIE's functionalities and tools facilitating the work of stakeholders: ➢ Active participating & contributing on the EIRIE platform ➢ The Romanian corner and its role in bringing together the stakeholders that matter most for Romania and its R&I community ***Rad Stanev**, PANTERA project, TU Sofia* ***Mattia Cabiati**, PANTERA Project, RSE*

Ivan Matejak, SUPEERA coordinator from EERA, presented the European Energy Research Alliance, the SET Plan and the benefits of being actively involved in it, and the SUPEERA project.

He highlighted the importance of aligning research and innovation (R&I) as a pillar of the SET Plan, and the disparities in engagement among different countries in the SET Plan and stated the importance that Romania's National Energy and Climate Plan addresses how to SET Plan objective policies are being translated to a national context. He also discussed Romania's energy sector, its energy mix and dependencies, as well as its participation in the SET Plan and the Clean Energy Transition (CET). He presented data showing the low engagement of Romanian entities in H2020 projects, along with the underlying reasons for this performance gap compared with EU14 countries. He rounded up listing the benefits of becoming an EERA member and the opportunities that Romanian entities can seize by increasing their participation to the SET Plan.[10].

Mr. Cabiati then gave an overview of the EIRIE functionalities and explained the potentialities for researchers, R&I organizations, and policy makers. In fact, the platform is an open tool for collaboration among all the stakeholder of the energy system innovation value chain. Moreover, collecting data directly from the database of the European commission, EIRIE can really support in finding key updated information about EU level outcomes, best practices and policies thus incentivizing further investments in smart grids and clean energy technologies.

Rad Stanev, PANTERA project (TU Sofia), concluded the presentation by emphasising the platform's collaboration opportunities and inviting participants to explore ongoing collaborations and research funding opportunities.

Mihai Paun, President of the Energy Security and Investments Commission and Member of the Supervisory Board of TRANSELECTRICA S.A. presented the strategies and priorities of the Romanian TSO (Transmission and System Operator). During his presentation, he emphasised the priority of integrating renewable energy, highlighting the key infrastructure, mid-term (10 years) development plan, and financing structure. He also mentioned the strategic priorities of Transelectrica, including the integration of renewables, energy system transformation and cooperation with other transmission and distribution system operators. Mr. Paun provided an

[10] EIRIE, developed by PANTERA, aims to provide a comprehensive overview of renewable energy projects and policies across Europe. The platform facilitates information sharing and networking among stakeholders in the renewable energy sector and supports the development of effective strategies for the transition to a cleaner, more sustainable energy system in Europe.

overview of the Romanian energy production mix, indicating that the country is well balanced in terms of technologies contributing to the mix, and the Romanian Transmission Grid Map. He concluded with some examples of European projects on renewable energy integration led by Transelectrica.

Daniela Diaconu, Scientific Deputy Director, Institute for Nuclear Research (RATEN ICN) started her presentation with RATEN's mission and values on nuclear research and underlined that her institute is very active in international cooperation on energy research. After giving an overview of the ambition plans for the next years, she discussed RATEN's participation in EU Platforms such as SNETP, EURAD, ENSII, and the SET Plan (Implementation Working Group – Nuclear), especially in the security and nuclear safety components. She also emphasised the importance of being a member of EERA to promote national priorities in European projects and drive forward the clean energy transition in Romania and throughout Europe.

Mihaela Albu, Professor, Polytechnic University of Bucharest, started her intervention by pinpointing the need to organise more workshops/project meetings as the one she was part of to keep on mobilising EU-13 countries towards the EU Clean Energy Transition, SET Plan and Horizon Europe. In her presentation, she underlined the correlation of national, European and International R&D efforts in the evolution of power systems. She also introduced the MicroDERLab and shared some successful results of research and innovation projects in Romania's emerging power system, also highlighting the gap between R&D efforts in Romania and in other countries. One major challenge she emphasised was the management of the power control system, especially in handling the large-scale data involved. She spoke about multi-scale data analytics for power profiles and advocated for funding schemes at all levels, from local to European. A second major challenge Professor Albu noted was the lack of collaboration among several disciplines. While acknowledging the launch of the National Research Development and Innovation Plan 2022-2027, she reminded the need for more funding in Romania.

Panel discussion and Q&A

During the panel discussion, Ms Diaconu from RATEN expressed her satisfaction with the SET Plan Steering Group, as a very useful and powerful collaboration network to show, promote and finance some of their projects / activities, and highlighted the importance of being member of EERA. Mr. Matejak asked Professor Albu about the balance of funding sources and the lack of collaboration between industry and research, which she attributed to the low national investment in R&I, missing collaboration among national entities and hence lack of strategy at national level. Ms. Albu suggested strengthening collaboration between entities and disciplines and identifying missing points to improve national level work. Further, Ms. Albu mentioned that at the national level, MicroDERLab is only running one national project; all other projects are international. This indicates a clear unbalance in resources and different sources of funding. She stressed that the national efforts to finance R&I in the past have been extremely low, and they have had to rely on international financing sources to promote research. Ms. Albu attributed this poor national R&I engagement to volatile collaboration, unfair competition, and lack of collaboration among national entities and local stakeholders, particularly, but not exclusively with the Ministry of Energy. According to her this is because limited resources led to a lack of time and understanding, and interests often clash, highlighting a structural problem. In her opinion it would be of added value to receive feedback from this Ministry on the current national energy challenges Romania faces in their view.

When asked about what could be done to increase the activity of Romanian players in the EU, Mr. Paun emphasised the need to enhance collaboration between universities and industries and to have a more understanding of the evaluation process for EU-funded projects. The lack of cooperation at national and international level was also attributed to limited resources and structural problems. Mr. Paun was also asked for the challenge Romania has and will continue having in accommodating all the new renewable energy, especially in the three regions with most renewable energy production capacity. He was certain that hydrogen will play a pivotal role in the future energy mix in Romania and will be truly part of the solution.

Spyridon Pantelis, Project Manager at EERA led the second session of discussions. He provided an overview of some of the available funding opportunities under Horizon Europe, elaborating on open calls under Cluster 5 of Pillar 2 and those on Widening. He underlined that this information together with application tips are available online.

Francesco Matteucci, Programme Manager from the European Innovation Council presented an overview of the funding available for Clean Tech, and the work of the European Innovation Council (EIC), including the EIC strategic approach and the Innovation fundings, such as the EIC fund and VC (venture capital) fund, which bridge the equity funding gap at an early stage and aims at crowding in other investors. He also introduced the main EIC Support Schemes for clean tech projects and invited the audience to watch the latest Info day organised by the EIC on the topic.

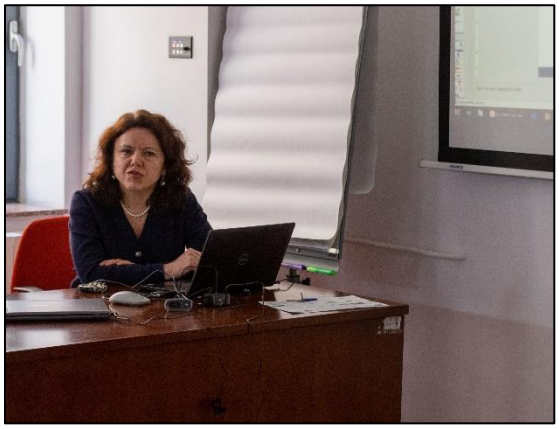
Berta Matas Güell, Senior Research Scientist at SINTEF introduced the EEA and Norway Grants, which work through funding tools periods, and showed the beneficiaries countries. The eligibility criteria for funding were also discussed, and two examples of projects in Romania funded through these funding mechanisms were presented. She focused on successful proposals, the importance of collaboration in European projects, and the quality of research work. Overall, she highlighted the various funding opportunities available for research and innovation in Europe, with a focus on clean technologies and the energy transition.

Marius Ienculescu-Popovici, President of GreenInitiative provided an overview of the Association which promotes sustainable living and green buildings. The association hosts workshops, events, and discussions related to climate change adaptation and renewable energy production. He presented two of their projects (i.e. Green Mogo and I-GReta), underlining that NGOs are natural drivers of innovation and they have an important role in R&I projects.

Chrysanthos Charalambous, Special Scientist at FOSS Research Centre for Sustainable Energy gave a presentation about the main research areas of the Centre, underlining the benefits of participating in EU-funded projects. Apart from the financial benefits, he also highlighted the opportunities for R&D projects and for identifying new business opportunities. Participation in EU-funded projects also provides participants access to international markets,

and the chance to collaborate with experts to solve industry competitiveness problems.

Andrei Daniel Groșeanu, Management Consultant at Măgurele Science Park Association provided an overview of the association work in promoting innovation and entrepreneurship in science and technology. He discussed the association's approach to engaging SMEs in the green transition and the EU-funded project SME4Green. Finally, he emphasised that participating in EU-funded projects like SME4Green can provide a range of benefits for organisations, including access to funding, networking and collaboration opportunities, and the chance to contribute to important initiatives in areas such as sustainability and innovation.



Monica Florea, Head of Unit of European Projects at SIMAVI introduced the company and its activities, underlining its long-lasting experience with EU funded projects, having participated in more than 60 Horizon Europe and Horizon 2020 projects. She stressed that to secure EU funding opportunities, the company focuses on identifying relevant calls and developing strong project proposals that can eventually yield to strong partnerships. She rounded up by stressing the importance of effective project management that is key to successful outcomes of a project.

Panel discussion and Q&A

During the panel discussion, the participants highlighted the importance of collaboration for research and innovation.

Mr. Ienculescu-Popovic emphasised the challenges faced by NGOs engaged in research activities when it comes to forming partnerships. Initially, GreenInitiative focused on education and dissemination aspects within the projects rather than actively engaged in project research. As time went on, they were able to build collaborations with experts and stakeholders in the field, which increased their credibility and demonstrated their expertise. These collaborations provided also more opportunities for networking and active participation in project research. **Mr. Groșeanu** discussed how they provide training to SMEs to access funding and improve innovation management. He also mentioned that the bureaucratic processes in the country can be sometimes challenging for SMEs, which may hinder their participation in national funding projects. **Ms. Florea** added that collaboration is key to success in EU-funded projects, and that the most difficult element is to keep the collaboration active throughout the project implementation phase. Finally, **Mr. Charalambous** underlined the importance of collaboration among research centres, ministries, and local stakeholders in driving research and innovation forward, underlining that such collaborations in Cyprus have been proven crucial to their success; adding that this could be replicated in Romania. He concluded, stating that by working together, organisations can access resources, share knowledge, identify local needs, build networks, and address complex challenges, leading to more impactful research outcomes and a more innovative society.

Conclusion

In conclusion, the SUPEERA and PANTERA projects organised a workshop aimed at promoting knowledge exchange and best practices among Romanian entities active in Research and Innovation (R&I) activities. The workshop sought to increase Romanian stakeholders' participation in the Implementation Working Groups of the SET Plan and attract them to participate in EU funded R&I activities. During the workshop the EIRE platform, developed by the PANTERA project, was also presented. The platform has been developed to support a deeper

involvement at EU level of all the EU countries and functions as a reference point for R&I activities in the energy system. Speakers from various organisations discussed Romania's energy sector, its energy mix and dependencies, as well as its participation in the SET Plan and the Clean Energy Transition (CET), along with Romania's engagement in H2020. The panel discussion touched on the lack of collaboration between national entities, low national investment in R&I, and limited resources and a structural problem. The session on R&I opportunities for collaboration and funding highlighted the funding available for Clean Tech through the European Innovation Council (EIC) and their EIC strategic approach and the Innovation funding. The EEA and Norway Grants were also introduced, focusing on successful proposals, the importance of collaboration in European projects, and the quality of research work. Overall, the workshop was a step towards enhancing collaboration and promoting research and innovation in Romania.

ANNEX XI Report on SUPEERA Widening Workshop in Lithuania

International research collaboration opportunities: fostering EU Clean Energy transition in Lithuania

PANTERA / SUPEERA joint workshop

27th April 2023 - 09:00 - 17:00 EEST

On April 27th, the final workshop of the 10-series was held in Vilnius, jointly organised by SUPEERA and PANTERA EU funded projects. The event brought together experts from academia, industry, and government sectors in a hybrid format, with 26 participants onsite at the Lithuania Academy of Sciences and 19 participants joining online. The participants shared valuable insights and experiences, contributing to a fruitful exchange of knowledge.

Agenda of the workshop

9:00 - 9:30	Registration and coffee
09.30 - 09:45	**Welcome address** ***Gintautas Dzemyda*****,** Head of the Division of Technical Sciences, Lithuanian Academy of Sciences ***Ivan Matejak***, SUPEERA coordinator, EERA ***Venizelos Efthymiou*****,** PANTERA coordinator, FOSS Research Centre of University of Cyprus
09:45 - 10:05	**The SUPEERA project.** Mobilization of EU-13 national public research resources in the Clean Energy Transition: challenges and opportunities ➢ SET Plan and CET - benefits and engagement possibilities ➢ Investment and reform measures for Lithuania for CET SUPEERA findings: engagement of Lithuania in H2020 or R&I ***Ivan Matejak***, SUPEERA coordinator, EERA
10:05 - 11:10	**Panel discussion and Q&A** Moderators: Ivan Matejak (SUPEERA, EERA) & Andrei Morch (PANTERA, SINTEF)
	Research and innovation for the clean energy transition: political context in the EU ***Brigita Serafinavičiūtė***, Research Attaché,Permanent Representation of Lithuania to the EU (online) **Updates of the Energy Technology Policy** ***Daumantas Kerežis*****,** Adviser at the Innovation Group of the Ministry of Energy of the Republic of Lithuania

	The importance of the collaboration on the EU level ***Tadas Tumėnas***, Head of LINO Office (Lithuanian RDI liaison office in Brussels)
11:10 – 11:25	**Coffee break**
11:25 – 11:40	**R&I opportunities for collaboration and funding:** ➢ Horizon Europe ○ Cluster 5 ○ Widening Calls ➢ Norway/EEA Grants ***Spyridon Pantelis*****,** Project Manager, EERA ***Petter Støa*****,** Vice President Research at SINTEF **EIC funding opportunities for Clean-tech technologies** ***Francesco Matteucci***, Programme Manager, European Innovation Council (online)
11:40 - 12:30	**Panel discussion and Q&A** Moderator: ***Spyridon Pantelis*****,** Project Manager, EERA **Lithuanian incentive package to facilitate participation in Horizon Europe** ***Aistė Vilkanauskytė*****,** Adviser at Technology and Innovation Unit, Ministry of Science, Education and Sports **Challenges and opportunities for Widening countries' participation in Horizon Europe programme** ***Aurelija Povilaikė*****,** Head of NCP Unit and Coordinator, WIDERA NCP **Participation of Lithuanian Confederation of Industrialists in European Partnerships** ***Tomas Garuolis***, Department Director at Business, Environment and Economy, Lithuanian Confederation of Industrialists
12:30 - 13:45	**Lunch and networking**
13:45 - 14:00	**The PANTERA project.** ➢ Mission, vision, and approach ➢ PANTERA in support of networking: Overview of international and EU initiatives active on energy system's R&I activities (Mission Innovation, ISGAN, ETIP-SNET, EERA JP on Smart Grids, etc.) ➢ The way forward ***Mattia Cabiati***, International activities and EU projects, Ricerca sul Sistema Energetico
14:00 - 14:30	**The EIRIE platform in support of the R&I European ecosystem** Objectives and opportunities EIRIE's functionalities and tools facilitating the work of stakeholders: ➢ Active participation & contribution on the EIRIE platform ➢ The Lithuanian corner and its role in bringing its R&I community ➢ Sli.do questions ***Venizelos Efthymiou*****,** PANTERA coordinator, FOSS Research Centre of University of Cyprus

	Anna Mutule**,** Head of Smart Grid Research Centre, Institute of Physical Energetics, Latvia
14:30 - 14:45	**Sharing experience and best practice in R&I collaborative projects** ***Mečislovas Kaulakis***, Innovation Project Manager, Litgrid
14.45 - 15.00	**Outcomes of PANTERA interaction with the stakeholder: challenges and barriers for R&I activities in the Smart Grids domain"** ***Andrei Morch***, Research Scientist, SINTEF Energy Research Energy Systems, Norway
15:00 - 15:35	**Panel discussion: Opportunities to increase participation in joint R&I activities** Moderator**:** ***Andrei Morch***, Research Scientist, SINTEF Energy Research Energy Systems, Norway
	Mečislovas Kaulakis, Innovation Project Manager, Litgrid ***Rolandas Urbonas*****,** Senior Research Associate, Lithuanian Energy Institute ***Vytenis Barkauskas*****,** Head of Energy Security and Innovations at Lithuanian Energy Agency
15:35 - 15:45	**Wrap up and feedback** ***Ivan Matejak***, SUPEERA coordinator, EERA
15:45 - 17:00	**Networking**

Welcome address

Gintautas Dzemyda, Head of the Division of Technical Sciences at the Lithuanian Academy of Sciences, extended a warm welcome to the workshop participants**.**

Ivan Matejak, the coordinator of the SUPEERA project, expressed his satisfaction in successfully concluding the workshops' series in the Baltic countries and highlighted their significance for facilitating valuable networking opportunities**.**

Venizelos Efthymiou, coordinator of the PANTERA project from the FOSS Research Centre of the University of Cyprus, emphasised the advantages of research and innovation collaboration for countries with lower research and innovation capacities, known as "Widening countries". He further stressed the importance of being in Vilnius close to the stakeholders of the country aiming to build the will to connect with the EIRIE platform and work closely with us for stronger presence of the local stakeholders in Brussels through the services that EIRIE offers. For these we will hear a lot more during the day.

The SUPEERA project. Mobilization of EU-13 national public research resources in the Clean Energy Transition: challenges and opportunities

Ivan Matejak presented the SUPEERA project, with a focus on bringing the research communities of the EU-13 countries[11] closer together and fostering collaboration among them. He addressed a range of challenges and opportunities, including specific challenges faced by Lithuanian actors. The limited participation in the SET Plan Implementation Working Groups was also highlighted. Consequently, he discussed the lack of coherence between national and European priorities as a major concern and emphasised the importance of aligning Lithuania's National Energy and Climate Plan with the respective European policies. Furthermore,

[11] Cyprus, Czechia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovenia and Slovakia, Bulgaria and Romania, Croatia.

he underscored the benefits of enhanced collaboration between industry and research sectors and encouraged the active participation of Lithuanian actors in the SET Plan and the European Energy Research Alliance.

Brigita Serafinavičiūtė, the research Attaché, Permanent Representation of Lithuania delivered a presentation on "Research and Innovation for Clean Energy Transition: Political Context in the EU". As representative of the European Council she provided an overview of the legislative landscape emphasising the energy topic as a central one in the Green Deal. She highlighted the Fit for 55 package and she drew attention to the Net Zero Industry Act, EURATOM and Small Modular Reactors as significant elements within the strategy for a clean energy transition. She underlined the importance of the Partnership for Clean Hydrogen as well as EU Chips Act, explaining that Net Zero Industry Act has pervasive energy-related components. Finally, she presented a Report[12] from the European Commission underscoring the existence of energy public support as well as the importance of public opinion in the energy sector.

Daumantas Kerežis representing the Lithuanian Ministry of Energy, delivered a presentation on the Strategy of Lithuania on Energy Technology He highlighted Europe's heavy reliance on imports for the deployment of net-zero energy technologies, particularly from China. Daumantas emphasised the significance of the SET Plan as the technological cornerstone of the EU's energy and climate policy that aims to align national priorities on research and innovation projects by incorporating call themes and projects. He concluded by encouraging both industrial and academic stakeholders to get involved in the SET Plan.

[12] *Source:* European Commission (2023), *Synopsis Report - Looking into the R&I future priorities 2025-2027*, Directorate-General for Research and Innovation, Publications Office of the European Union, 2023.

Tadas Tumėnas, representing the LINO office, explore the importance for Lithuania to collaborate with others EU stakeholders, emphasising the need for unity and collective action rather than individual efforts. He therefore introduced some networking platforms and organisations actively engaged in this collaborative endeavour. Providing an overview of LINO, as informal association of research and innovation (R&I) and member of IGLO (Informal Group of RTD Liaison Offices) he emphasised the immense value of the network.

Panel discussion and Q&A

During the panel discussion, **Tadas Tumėnas** highlighted the value of informal networking like IGLO. Through the IGLO network, Lino Office and the other stakeholders established Working Groups (WGs) which play a pivotal role in achieving objectives like information sharing and event organisation. Additionally, Tumėnas suggested that it would be useful to conduct an analysis of Lithuania's EU project performances before and after LINO office involvement in IGLO. This analysis would reveal the tangible benefits of being part of an informal network.

Brigita Serafinavičiūtė also acknowledged that programs like Horizon Europe can be extremely complicated. This can make it hard for individuals to participate. That's why being part of larger networks is helpful. Given that, Brigita concluded by stating that it's also important to connect with neighbouring countries for the benefit of the country and the region.

Venizelos Efthymiou and **Daumantas Kerežis** engaged in the discussion acknowledging the benefits of the EIRE platform to strengthen collaboration. He suggested that countries with less involvement should concentrate their efforts in areas where they have a competitive advantage. **Daumantas Kerežis** shared his perspective on Lithuania's strong points. The conversation also

delved into the revision of the NECP and the role of community involvement in refining NECP objectives and discussing the suitability of bottom-up approaches**.**

Tadas Tumenas underlined the benefits of physical meetings for making impactful changes, noting that his position in Brussels enables a better connection between national actors. **Brigita Serafinavičiūtė** acknowledged the perception of the Baltic countries as a strong and homogeneous region but reminded the existence of different national priorities in the energy sector. She stressed the need for increased collaboration among the Baltic countries; a slow process that nevertheless they have managed to coordinate and progress. **Tadas Tumėnas** remarked that addressing issues solely at LINO office in Brussels differs from addressing them collectively with other countries, highlighting also the unique perspective brought by Nordic collaboration at the EU level.

R&I opportunities for collaboration and funding

The second part of the discussion started with **Francesco Matteucci** who presented the European Innovation Council (EIC), emphasising its equity approach. The EIC Fund was established to bridge the funding gap, attracts private capital and co-invests alongside private investors. Matteucci discussed the EIC Cleantech Thematic portfolios, the EIC challenges (Pathfinder, Transition, Accelerator) and the content-wise approach in different funding schemes. He concluded by inviting the audience to watch the webinar of EIC 2023 info day.

Petter Støa, Vice President Research at SINTEF, started his presentation by discussing the EEA and Norway Grants program and its contribution to the Green Deal. To illustrate the impact of the grants, he provides examples of specific projects and initiatives funded by the EEA and Norway Grants in Lithuania. These examples showcase how the grants have been utilised to support various initiatives related to environmental sustainability, climate action, and green innovation.

Aiste Vilkanauskytė, Adviser at Technology and Innovation Unit, Ministry of Science, Education and Sports, delivered her presentation on "Lithuanian incentive package to facilitate participation in Horizon Europe" to showcase the role of the Ministry in supporting Lithuanian research and industry to participate in Horizon Europe calls. She outlined that Lithuania's Ministry of Energy and the Ministry of Education, Science, and Sport have representatives serving in the SET Plan Steering Group. She presented how the Ministry provides incentives for participating in Horizon Europe. Aiste's presentation touched on similar themes and concepts discussed previously with Francesco Matteucci and Tadas Tumenas, highlighting the interconnectedness of the topics being addressed during the event and showing the funding opportunities for Lithuania.

Aurelija Povilaikė, Head of NCP Unit and Coordinator, WIDERA NCP**,** discussed the challenges and opportunities for widening countries' participation in the Horizon Europe program. She mentioned the program's focus on achieving scientific and technological impact through policy actions. She also emphasised the importance of the program and its horizontal pillar with funding opportunities to support EU 13 countries. This pillar addresses research and innovation disparities resulting from lower capacities, limited funding access, and brain drain. She noted that Horizon Europe presents Lithuania with a significant opportunity to enhance its scientific and technological landscape and drive innovation in Europe.

Tomas Garuolis Department Director at Business, Environment and Economy, Lithuanian Confederation of Industrialists (LPK), provided a presentation on LPK Participation in European Partnerships. He discussed the partnership between the European Commission and other associations within the INTERINO project, which focuses on providing business advice for joining international value chains and finding R&D&I partners (Interreg). Tomas Garuolis also mentioned the Process4Planet partnership and provided an overview of its strategic research and innovation agenda. He concluded by underlining the benefits of being part of European Partnerships mentioning their involvement in EFFRA, CCAM, and ASPIRE.

Panel discussion and Q&A

During the panel discussion, **Tomas Garuolis** emphasised the crucial role of LPK in representing Lithuania's industry and creating opportunities for research centres to apply for funding. He highlighted the importance of involving Lithuanian research organisations early in consortia formation for specific funding calls, ensuring effective collaboration and integration into European initiatives**. Aiste Vilkanauskytė** explained the distinction between co-funded EU projects and 100% EU funded projects. Co-funded EU projects involve contributions from various entities or EU funding programs, while 100% EU funded projects rely solely on financial support from the EU. Funding for EU projects is typically awarded through competitive grant programs to facilitate research, innovation, and development activities. **Aurelija Povilaikė** explained the importance of increasing Lithuania's participation in Horizon Europe. She also highlights the importance of WIDERA, which offers expert guidance, program rule navigation, partner search support, and proposal quality enhancement. **Aiste Vilkanauskytė** provided additional insights regarding the significance of a package approach in the Horizon program and how to build capacity for successful participation. By adopting a package approach, researchers and organisations can effectively align their goals, resources, and activities to maximise the impact and outcomes of their Horizon projects**. Tomas Garuolis** and **Spyridon Pantelis** also highlighted the ETIPs (European Technology and Innovation Platforms) as an example where working groups enable the collaboration of experts from various organisations, both industry and academia.

The PANTERA project

Mattia Cabiati from Ricerca sul Sistema Energetico (RSE-Italy) provided an overview of the PANTERA project, which aims to create a European forum for stakeholders in smart grids, storage, and local energy systems. The project facilitates interactions between stakeholders from different countries through regional desks, the so-called “PANTERA 6+1 approach” which aims to organise and synchronise efforts of different actors to strengthen national participation rate in smart grid R&I activities and investment. Mattia also emphasised the importance of connecting to international initiatives active at global level like MISSION INNOVATION and ISGAN as well as to European ones like the EERA JP Smart Grids. Being involved in such activities allows to get updated information about the most relevant topics in the R&I domain as well as it allows to bring at higher levels specific country’s needs. Moreover DERLab, an association of EU research laboratories active in the energy field could support R&I actors in their needs of finding and

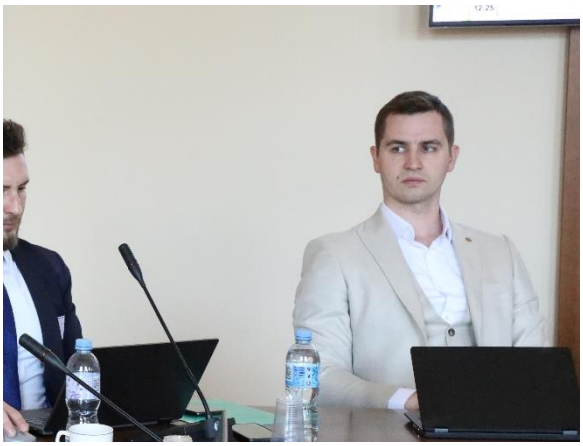
collaborating with research infrastructures, often indicated as a key point in being successful in getting R&I Eu funding.

Venizelos Efthymiou PANTERA coordinator, FOSS Research Centre of University of Cyprus, presented the EIRIE platform in support of the R&I European ecosystem, which serves as a multi-functional collaborative platform for knowledge and data related to R&I activities in Europe. It brings together various entities such as JRC/SETIS, DERLab, DG Research, IEC Standards, and ETIP SNET. Venizelos discussed the pyramid structure and design principles of the platform and invited participants to join and access its resources. He underlined that the EIRIE platform is at the beginning of its journey, open to welcoming everyone and eager to foster collaboration and innovation. The presentation conveyed a sense of enthusiasm for the project's progress while expressing anticipation for future development and growth.

Anna Mutule, the Head of the Smart Grid Research Centre at the Institute of Physical Energetics in Latvia, shared examples of the Best Practice Desk results. She mentioned also Confluence**,** a team workspace tool that fosters knowledge sharing and collaboration by providing a central location for creating, collaborating, and organising information. Anna Mutule encouraged participants to visit the relevant pages and access the links provided. She finally invited participants to participate in the survey and engage in Q&A sessions through the slido.com platform.

According to the Slido results, the primary reasons for low R&I activity in smart grids, storage, and local energy systems are **inadequate funding** and **low policy priority**. Regarding Horizon Europe, 60% believed it to be too competitive and favoring more advanced countries, while the lack of access to matchmaking platforms was not seen as a significant factor. Finally, it is widely agreed among the audience that national institutions and agencies should address shortcomings in the existing support services, as highlighted by the score of 3.4.

Mečislovas Kaulakis, Innovation Project Manager, Litgrid started the presentation with an introduction to Litgrid, the Lithuanian electricity transmission system operator, highlighting its activities in RES integration, synchronisation to CEN, and R&D. He also emphasised the importance of collaboration, noting that it benefits all parties involved by facilitating knowledge exchange, sharing risks, reducing administrative expenses, and creating new business opportunities for growth. As an example of collaboration, it was mentioned that Litgrid actively participates in the ENTSO-E task force "Demonstration & Innovation Coordination" (TF DIC), which aims to foster collaboration among transmission system operators.



Andrei Morch Research Scientist from SINTEF Energy Research presented the outcomes of the PANTERA project, highlighting the technical priorities for addressing future challenges. He emphasised the importance of Smart Grid Technologies, including Advanced Metering Infrastructure, observability and controllability functions for DSOs, and flexibility and Big Data technologies. He also mentioned concerns about standardisation, potential lack of technical expertise, and the need for technology-neutral markets. The role of National Contact Points and the mission of the EIRE platform were briefly discussed.

Panel discussion: opportunities to increase participation in joint R&I activities

The second panel discussion brought together **Mečislovas Kaulakis**; **Rolandas Urbonas**, Senior Research Associate at the Lithuanian Energy Institute; **Vytenis Barkauskas**, the Head of Energy Security and Innovations at the Lithuanian Energy Agency. By sharing their perspectives, they delved into the opportunities for international research collaboration that can contribute to advancing the clean energy transition in Lithuania. The session was moderated by **Andrei Morch**, Research Scientist at SINTEF Energy Research Energy.

Mečislovas Kaulakis emphasised the benefits of a strong Baltic region and the importance of agreement on energy security issues for collective strength. **Rolandas Urbonas**, Senior

Research Associate, Lithuanian Energy Institute stressed the need for more extensive discussions to enhance understanding and accelerate goal achievement at a lower cost. **Vytenis Barkauskas**, Head of Energy Security and Innovations at Lithuanian Energy, acknowledged that the energy transformation is underway but emphasised that its full magnitude has not been fully grasped yet. He anticipated numerous innovations and exciting developments leading up to 2030. **Mečislovas Kaulakis** shares about the lack of collaboration between neighbouring countries and reiterates the importance of regional, national, and international cooperation to achieve common goals. **Andrei Morch** also highlighted the value of regional coordination and proximity in developing technical aspects, emphasising the significance of replicability, and drawing inspiration from neighbouring countries.

Closing remarks

In conclusion, **Ivan Matejak** thanked the participants and reflected on the need for a major push from the European Commission to provide more structure and foster collaborative regions, as the benefits of EU membership have not been fully realised by all countries.

ANNEX XII Report on EERA Annual Strategy meeting 2023

SUPEERA FINAL EVENT

Session: Engaging EU13 Countries in the execution of the SET Plan

14th June 2023 - 16:00 - 16:45 CEST

The SUPEERA final event marked the culmination of the SUPEERA project, a significant undertaking that has been at the core of the European Energy Research Alliance (EERA)'s activities for the past three years. The event was held on Wednesday, 14th June 2023, at the University Carlos III of Madrid, Puerta de Toledo. With representatives from the European Commission and the Spanish government, it brought together participants from around Europe, both physically (53) and virtually (72), to discuss the key outcomes of SUPEERA and shed light on the EERA's role in executing the Strategic Energy Technology Plan (SET Plan).

Agenda of the SUPEERA final event

SUPEERA Final Event		
14:00 – 14:05	Welcome to SUPEERA final event	**Adel El Gammal** *Secretary General, EERA*
14:05 – 14:20	Official opening by European Commission	**Hélène Chraye** *Head of Unit, Clean Planet, DG RTD, European Commission*
14:20 – 14:55	Opening speeches by Spanish Government representatives	**Teresa Riesgo,** *Secretary General, Innovation, Ministry of Science and Innovation* **Gonzalo Arevalo,** *Director General, Research Planning, Secretary General for Research, Ministry of Science and Innovation*
14:55 - 15:10	Key outcomes of SUPEERA	**Ivan Matejak,** *SUPEERA Coordinator, EERA*
EERA role in the execution of the revised SET Plan		
15:10 – 16:00	Bringing R&I and industry together for innovation uptake	**Francesco Matteucci,** *Programme Manager, European Innovation Council*

	(Moderator: Berta Guell Matas, SINTEF)	**Ricardo Sánchez,** *Concentrated Solar Power Joint Programme Coordinator, EERA and PSA* **Michael Geyer,** *Managing Director, Malta Inc.*
Coffee break 15		
16:15 – 17:00	Engaging EU13 Countries in the execution of the SET Plan (Moderator: Spyridon Pantelis, EERA)	**Venizelos Efthymiou,** *PANTERA coordinator, FOSS, University of Cyprus* **Aurelija Povilaikė** ,*Head of Lithuanian National Contact Point group* **Mariya Trifonova,** *Assistant Professor, Department of Industrial Economics and Management, University of Sofia*
17:00 – 17:45	R&I and policymaking: aligning priorities on Net Zero Industry Act (Moderator: Maria Oksa, VTT)	**Cecilia Serrano-Piedecasas** , *Policy officer, DG Grow, European Commission* **Àngels Orduña,** *Executive Director, A.SPIRE* **Pieter Vingerhoets,** *Expert Energy & Climate Strategy, EnergyVille VITO*
17:45 – 18:00	**Concluding remarks**	**Ivan Matejak,** *SUPEERA Coordinator, EERA*
18:00	**End of SUPEERA event**	

Welcome to SUPEERA final event

Adel El Gammal *Secretary General, EERA* emphasised the significance of SUPEERA project in producing relevant deliverables for the revamping of the SET Plan and acted as a link between the research and the European policies priorities. He also expressed his gratitude for the presence of key dignitaries, including Hélène Chraye, Head of Unit, Clean Planet, DG RTD, European Commission, Teresa Riesgo, Secretary General, Innovation, Ministry of Science and Innovation, and Gonzalo Arevalo, Director General, Research Planning, Secretary General for Research, Ministry of Science and Innovation. With these introductory remarks, the stage was set for engaging discussions and knowledge exchange.

Hélène Chraye *Head of Unit, Clean Planet, DG RTD, European Commission* reflected on the past and future achievements of SUPEERA. She commended EERA for its role in coordinating

clean energy research efforts across the EU. Hélène specifically highlighted that SUPEERA played a crucial role in: 1) Establishing a collaboration framework to provide analytical support and strategic advice for shaping policies in the climate and energy sector; 2) Showcasing the importance of collaborative research and innovation; 3) Mobilising the EU-13 Member States, helping them understand the value and impact of the SET Plan and research and innovation in the energy sector; 4) Accelerating the uptake of innovations and technologies by the industry, exemplified by the organisation of workshops aligned with Green Deal policies.

Reflecting on the path ahead, she explained that DG RDT is currently in the process of finalising the communication regarding the revamping of the SET Plan. To revamp the SET Plan, the next steps will be 1) Aligning the SET Plan objectives and targets with the new political priorities. 2) Introducing tools that bolster its political visibility, leading to increased funding and impact. 3) Addressing cross-cutting domains and adopting a holistic approach (that encompasses sustainability, circularity, market access, and skills development, crucial considerations for the revamp.). Below, it is reported only the relevant to EU13 panel discussion.

Engaging EU13 Countries in the execution of the SET Plan

The second session focused on engaging EU13 Countries in the execution of the SET Plan. The main topics discussed were the gasps faced by the EU13 countries in relation to the SET Plan ecosystem.

Spyridon Pantelis, *Project Manager at EERA*, specifically highlighted the limited participation of EU13 countries in the SET Plan's Implementation Working Groups (IWGs). He presented the areas of EU13 involvement included nuclear safety, batteries, energy efficiency in industry and Power-to-X, Electrofuels, and Synthetic Fuels (PED). The impact of Horizon 2020 program was examined as well as the recommendations for improving their participation in Horizon Europe. Additionally, the policy paper on the Efficiency of Widening Measures, presented by Alliance4Life, was referenced as a valuable resource.

Venizelos Efthymiou *PANTERA coordinator, FOSS, University of Cyprus* underscored the significance of effective communication with local policymakers to align the national priorities with the European agenda. In fact, active engagement and alignment with the SET Plan, IWGs, and EU policies are pivotal for EU13 countries to shape the future of energy research, innovation, and deployment. Venizelos highlighted the importance of partnerships, including collaborations with industries, horizontal partnerships, and vertical partnerships. The EIRE platform plays a vital role in facilitating such collaborative progress. Additionally, he suggested that joining consortia with larger countries, combining local elements, and leveraging the competitive advantages of the EU-13 countries, would foster increased engagement and participation.

Aurelija Povilaikė *Head of Lithuanian National Contact Point group*, shared insights from Lithuania's experience. Lithuania was noted for its active support for EU-funded project applicants

and highlighted the role of networking and capacity building in facilitating engagement. Povilaikė emphasized the importance of learning from other countries' experiences, investing in creating transparency, and providing clear structures for stakeholders' involvement.

Mariya Trifonova, *Assistant Professor, Department of Industrial Economics and Management, University of Sofia,* presented the obstacles faced by Sofia University in the context of industry decarbonization and energy transition. These obstacles included mismatched national research priorities with EU funding objectives, limited project development knowledge, difficulties in work package coordination, and limited representation of Bulgarian academic institutions in consortium building. Trifonova shared strategies implemented by Sofia University, such as appointing administrative officials responsible for project coordination, establishing project screening processes, creating databases for proposal submissions, and fostering collaborations with industry.

Panel discussion

During the discussion, all the panelists agree that the connection between the representatives of the Steering Group and the SET Plan is essential. However, it is important to keep in mind that what emerges from the involvement of the EU13 countries in the SET Plan does not always align with the actual on-the-ground efforts, especially in the field of research. Overall, the SUPEERA final event provided a comprehensive overview of the challenges, opportunities, and best practices for engaging EU13 countries in the execution of the SET Plan. The insights shared during the session can guide efforts to enhance the participation and contribution.