

PANTERA REGIONAL VIRTUAL WORKSHOP

10th and 11th November 2020

Title of the event: Energy transition through optimal use of the rich Renewable Energy Resources of the Mediterranean basin

The virtual regional workshop of the PANTERA Horizon 2020 project on the 10th and 11th November 2020 was organised by FOSS of the University of Cyprus who is the coordinator of the project. Aiming to raise interest to the local stakeholders and policy makers, it was agreed with the organisers of the international MEDPOWER conference, to host the planned workshop during a plenary session and a parallel session of the conference. This agreement has given a lot of visibility to the planned workshop through the publicity raised by the organisers of the conference attracting more than 90 scientific papers approved to be presented over the 3-day conference (for more details visit the web page of the conference at <http://medpower2020.org/>).

The choice of joining the MEDPOWER2020 conference for the workshop of PANTERA was a wise decision. The conference ended on the 11th of November and exceeded expectations (considering the Covid-19 pandemic Health and safety Restrictions) with 136 participants-coming from different scientific and research backgrounds-registering for the conference. The approved 90 high level technical papers were presented in 17 technical sessions in addition to 4 project sessions that run in parallel, 2 plenary sessions, and 4 keynotes speeches.

The workshop covered different aspects that the Energy Transition needs to address in order to contribute to the Energy Targets of EU efficiently. The status of the smart grids regional evolution has been presented while use cases have been highlighted covering technologies -such as Energy storage, Demand Response, Renewables and Electric mobility-that are critical to the energy transition including the Energy Communities and the Operators' perspective. The workshop mainly hosted activities and content of the Horizon 2020 CSA project PANTERA complemented with the work / results of the NAVIGANT / SWECO contract and the Horizon 2020 project INTERPLAN.

Under this prism, the consortium **Navigant/SWECO** that has completed a study for the benefit of the European Commission on **offshore grid concepts for the Mediterranean Sea**, adding to the planned **offshore renewable energy agenda for the European Union** has **presented their results within Day1**. The study covered:



- Analysis of potential for offshore power generation at sea (offshore wind, wave, tidal) and on Energy communities of islands (PV and wind onshore)
- Development of energy production scenarios
- Comparative evaluation of offshore grid options
- Inventory of region-specific implementation challenges and barriers
- Key recommendations.


The **INTERPLAN Horizon 2020** project focuses on providing solutions and tools to the operators for managing the grid with high RES penetration by making effective utilization of emerging supportive technologies/systems such as Demand Response, storage and EVs. These raise interest by the non-interconnected islands of the Mediterranean who are already facing such challenges and they are welcoming such supportive solutions.

Each of the presentations in all sections has specifically referred to the pertaining challenges in resources, gaps in networking, regulation and/or finance for supporting R&I work in support of the energy transition. This is in line with the **PANTERA** identified R&I needs and barriers and its coordinated work to support the EU R&I community especially countries with low activity in the smart grid field to meet their expectations. These raised issues were analysed and discussed in a fully interactive way.

To facilitate this, each presentation was followed by a targeted Q&A/discussion with the active participation of the participants to the workshop. Below, we present details of the outcome of this interactive discussion.

Agenda to the workshop:

Time Zone: South Eastern Europe (CET +1)		
14:00	Day 1 of PANTERA– 10 November 2020	
14.00-14.20	Welcome and Setting the scene: Why PANTERA? Main objectives and building the PANTERA process	<i>Venizelos Efthymiou (FOSS)</i>
1. Energy Policy and R&D&I needs		
14.20	EC R&I policy and trends - the European dimension	<i>Mario Dionisio Proj. Officer-EC</i>
2. Status on grids and R&D&I in participating Member States: what is being done		
14.40-15.40	NAVIGANT - RES driving the energy transition: The potential of the Mediterranean Region	
15.40	Coffee break	
15.50	Opening Remarks for the Roundtable 1 and objectives	<i>Christina Papadimitriou (FOSS)</i>
15.55	Introducing the Glisser tool for on line voting	<i>Mohamed Shalaby (DERlab)</i>
16.00-16.50	Roundtable 1: Analysis with open discussion aimed at identifying areas of concern of the R&I community in the field of energy systems supporting the strategy for energy transition apart from financing mechanisms in fulfilling their research endeavours, gaps that exist, supporting actions required and next steps	<i>Coordinated by Luciano Martini (RSE-EERA JP for SG) and include Marcelo Barboni(JRC), Nestor Fylaktos (CYI) and Christina Papadimitriou (FOSS)</i>
16:50-17.00	Summary of findings and conclusions	<i>Andrei Morch (SINTEF)</i>
	Day 2 of PANTERA/INTERPLAN – 11 November 2020	

10:30-10:45	INTERPLAN project and the integrated network operation planning tool: A support for the operators to efficiently manage a network with high share of RES and other emerging technologies.	<i>Ata Khavari (DERlab)</i>
10:45-10:55	A showcase of INTERPLAN tool: Maintain frequency stability in low inertia systems through innovative inertia management and fast frequency restoration control functions.	<i>Christina Papadimitriou(FOSS)</i>
10:55-11:45	Roundtable 2: An interactive discussion on the Research questions that lie on the road to the energy transition triggered by the priorities set within NECPs (main objective to co-shape the most urgent Research questions to be addressed in the next 5 years) 	<i>Coordinator: Rad Stanev(TUS) Ivan Matejak (SUPEERA – 10 min on effective link of NECPs with SET Plan energy transition strategy), George Partasides (Ministry), Antonis Ioulianos (ID EK), Tasos Gregoriou (DSO)</i>
11:45	Coffee break (15 min)	
12:00-13:05	Roundtable 3: The PANTERA initiative in focus: Regional stakeholders discussing their expectations from PANTERA on how PANTERA can facilitate the active collaboration with Research and Innovation stakeholders?	<i>Coordinated by Anna Mutule Stakeholders Fanos Karantonis (OEB), Nicolas Jarraud (CYI) and Tasos Tsitsanis</i>

Welcome and setting the scene

Dr Venizelos Efthymiou (chairman, FOSS/UCY) opened the workshop and set the scene as to where the project PANTERA currently is and introduced the PANTERA process called RICAP (R&I status and Continuous gAP analysis) through which it is aimed to build appropriate tools that will facilitate the evaluation of projects for feeding in valuable information for identifying R&I needs through the process.



PANTERA CSA H2020 project in support of the energy transition



PANTERA WORKSHOP

"ENERGY TRANSITION THROUGH OPTIMAL USE OF THE RICH RENEWABLE ENERGY RESOURCES OF THE MEDITERRANEAN BASIN."

10&11 NOVEMBER VIRTUAL EVENT

FOR MORE INFORMATION VISIT
WWW.PANTERA-PLATFORM.EU

PANTERA
EIRIE

The workshop will cover different aspects that the Energy Transition needs to address in order to contribute to the Energy Targets of EU efficiently. In this workshop we will cover smart grids regional evolution with the active contribution of SUPEERA project, NAVIGANT / SWECO contract and the Horizon 2020 project INTERPLAN. Update on progress made with the emergence of the EIRIE platform in support of the R&I in the EU.

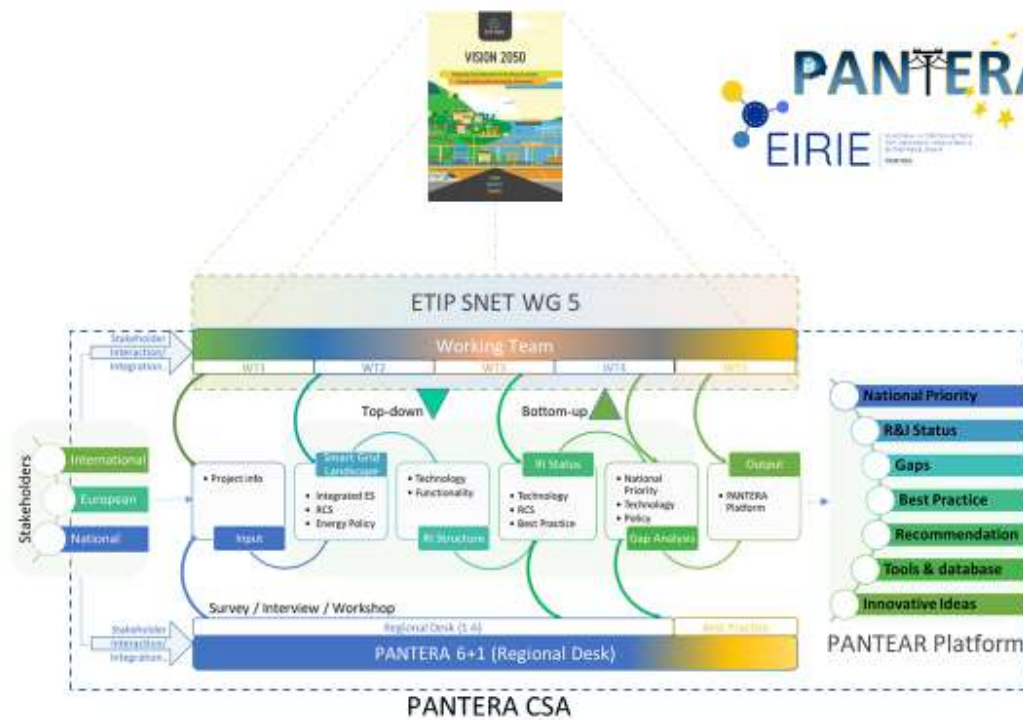


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PANTERA Platform: In support of the R&I community in EU

22/11/2020

He has indicated the importance of building the process in feeding in the multifunctional interactive EIRIE (European Interconnection for Research Innovation and Entrepreneurship) platform that is under development to serve the needs of the R&I community in Europe with emphasis on the low activity countries.

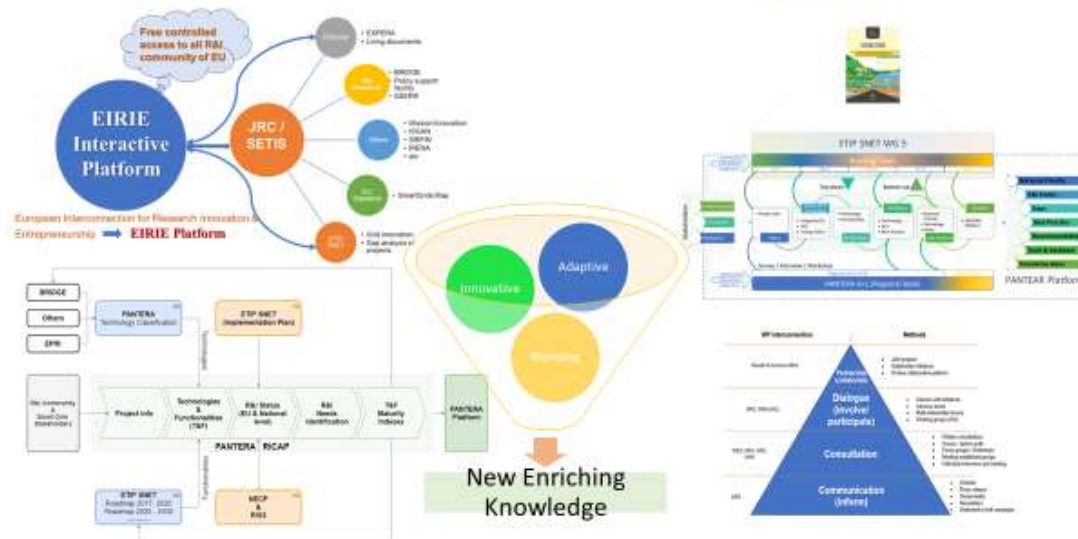


PANTERA RICAP (Administrative Process)

Through this introductory presentation, details were given of the architecture that has been put in place in building EIRIE and how this is intended to be linked with important sources of information that are already active in Europe: JRC, ETIP SNET, BRIDGE, Mission Innovation, DERlab, ERA NET SES (EXPERA)

It was evident from this opening session that the PANTERA project is substantially contributing to the needs of the R&I community in Europe aiming to deliver a point of reference that will strongly support the research endeavours in the field of smart grids, storage and local energy systems.

Eye bird view of the PANTERA Process / Objectives



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Energy policy Technology and innovation

Mr Mario Dionisio (DG ENER), the Project Officer of the project PANTERA in his intervention has given the inside of the current policies of the Commission that helped immensely the discussions that followed.



In his presentation he has given details of the six Commission priorities for 2019 to 2024 that form the basis of the current adapted policies.

Following that, he presented the strategy of EU for achieving Paris Agreement objectives and the targeted low carbon economy of 2050. As he has indicated, this includes the 7 building blocks for taking Europe there:

- Energy efficiency (central role: housing stock renovation and fuel switching, required: financial instruments,

Six Commission priorities for 2019-24



➤ A European Green Deal



➤ A Europe fit for the digital age



➤ An economy that works for people



➤ A stronger Europe in the world

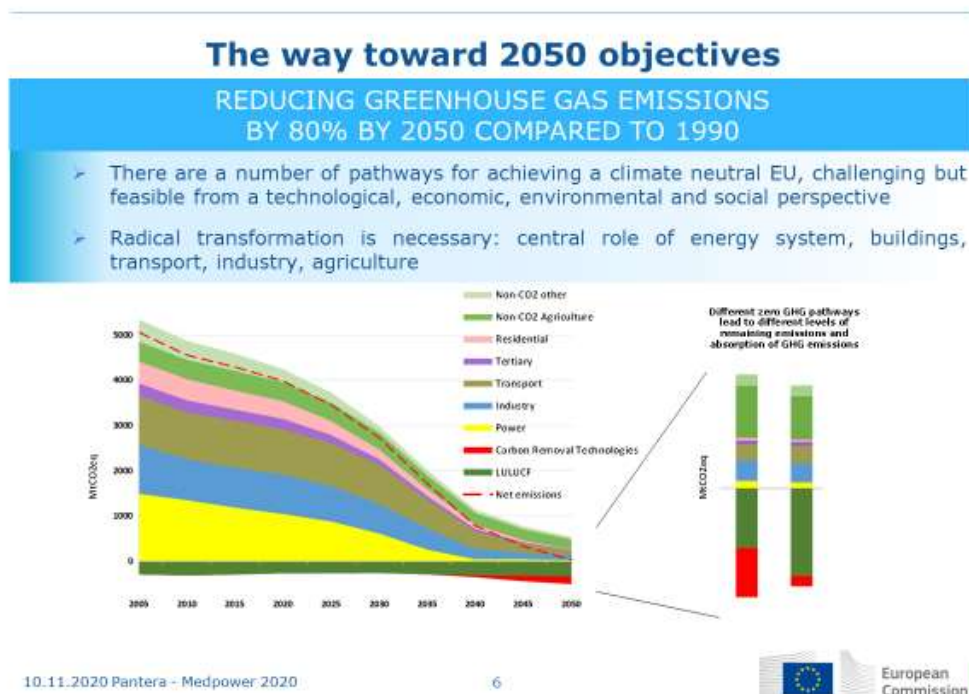


➤ Promoting our European way of life



➤ A new push for European democracy

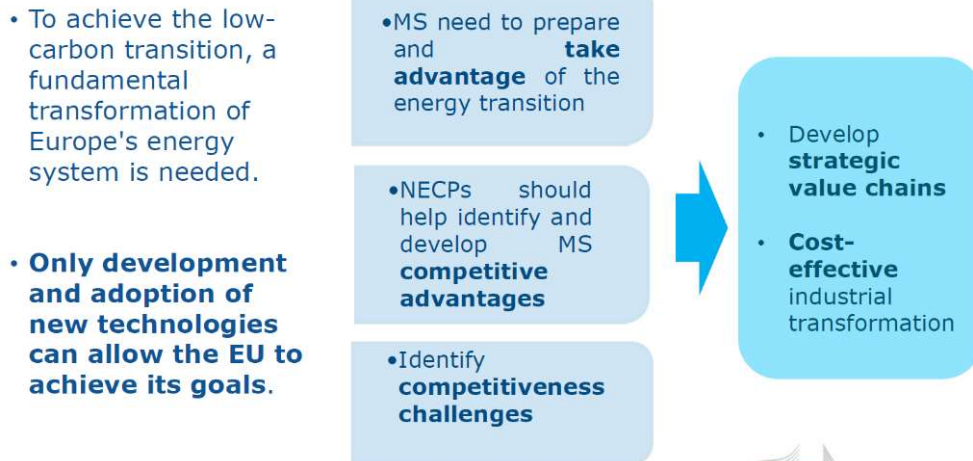
- consumer engagement and skilled workforce)
- Deployment of renewables (required: decentralized, smart and flexible power system, carbon free carriers such as hydrogen and e-fuels)
- Clean, safe and connected mobility (digitalization, data sharing and interoperable standards leading to more efficiency, smart cities, cheaper and efficient batteries)
- Competitive resource-efficient industry and circular economy (electrification, energy efficiency, hydrogen, biomass and renewable synthetic gas to reduce energy emissions in the production of industrial goods)
- Network infrastructure and inter-connections (smart electricity and data/information grids, hydrogen pipelines, smart charging stations)
- Bio-economy and natural carbon sinks
- Carbon capture and storage



As a follow up, the Project Officer stressed the importance of Research and Innovation that is a key dimension of the Energy Union:

- To achieve the low-carbon transition, a fundamental transformation of Europe's society is needed.
 - Only development and adoption of new technologies can allow the EU to achieve its goals.
- SET Plan and the Communication on Accelerating Clean Energy Innovation identified the strategic research and innovation priorities and actions needed at EU level.
 - The NECPs (National Energy and Climate Plans) are intended to set out which of these objectives are being pursued nationally.

Research and Innovation: a key dimension of the Energy Union



10.11.2020 Pantera - Medpower 2020

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Roundtable 1

Following the introductory presentations, the workshop continued with interactive round tables covering selected themes with the participation of important stakeholders representing the industry, EU and Cyprus stakeholders including policy makers of the ministry and the local funding agency.



Round table 1 – main topics

Analysis and open discussion about the **limits that the R&I community**, active in the energy systems field, is facing in performing R&I activities to support the **energy transition** (excluding financial mechanisms):

- Accessing reliable data and information
- Availability of a valuable research infrastructure
- Any kind of non financial limitation
- The EIRE platform and the PANTERA effort in support at best R&I efforts

The main objective of roundtable 1 was to address the following:

- Research endeavours to support the strategy for energy transition
- Existing limitations in the form of results achieved, generated data supporting R&I, degree of maturity in the evolution of technologies, research needs in meeting strategic objectives, testing facilities for undertaken research work, etc

- What actions are needed to tackle the above limitations
- What PANTERA process and platform can do to serve the above

Coordinated by **Dr Luciano Martini** (RSE-EERA JP for SG) who has introduced the session as above and continued to introduce the invited participants:



Round table 1:

Identifying areas of concern of the R&I community in the field of energy systems supporting the strategy for energy transition

Moderator:

Dr. Luciano Martini (RSE, Coordinator EERA JP Smart Grids)

Invited contributors:

Dr. **Marcelo Barboni** (JRC)

Dr. **Nestor Fylaktos** (CYI)

Dr. **Christina Papadimitriou** (FOSS)



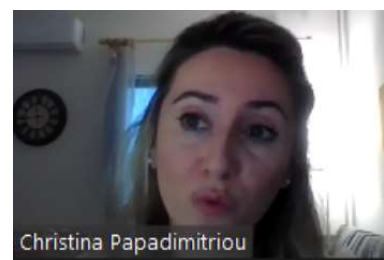
National Technical
University of Athens



Dr Marcelo Barboni finally couldn't make it though, since he felt sick and it was impossible to participate in the planned discussion.

Dr Christina Papadimitriou taking the floor covered the main areas of concern of the R&I community related energy transition focussing on issues related to the regional Desk 3 covering Cyprus and Malta. She addressed issues related to:

1. Climate action, decarbonizing the economy
2. Energy Efficiency
3. Energy security and interconnection
4. Integrated electricity market
5. R&D performance



Common R&I priorities of both countries

According to the NECPs

Decarbonization

- Wind energy resources utilization
- Solar Energy exploitation (**PV panels**)

Energy Efficiency

- Thermal insulation **building systems**
- Deployment of **PVs**

Internal Energy Market

- **Load profile management through demand response**

In her presentations she has given important information about Cyprus and Malta and the analysis done to identify areas of concern to dwell on. Based on these findings that are indicated in the slides below, the regional desk has put together the required actions to support the process. These will follow in the months ahead along the common R&I priorities of both countries indicated in the above table, enriching the R&I work done already in both countries.

Cyprus energy transition policies

- **Target of share of renewables** in gross final consumption of energy is **13%** by 2020 (9.9% in 2017).
- Cyprus promotes renewable electricity generation through a subsidy and a **net metering scheme/** net billing scheme for PV and Biomass/biogas.
- The penetration of renewable energy in **transport sector** in Cyprus according to Eurostat data in 2017 was **2.6%**. The target according to the first Renewable Directive (RED I) is 10%.
- At the moment, there is **no** support scheme **for RES-T** in Cyprus. Share of newly registered plug-in electric vehicles (PEV) in the 2017 was 0.78% (EU rank 12 of 28).
- The planned EuroAsia **interconnector** would end Cyprus' energy isolation.
- Cyprus intends to install **Advanced Metering Infrastructure (AMI)** and Smart Meters. The AMI includes the roll-out of 400 000 smart meters

Malta's energy transition policies

- Target of share of renewables in gross final consumption of energy is **10%** by 2020 (7.2%-2017).
- Electricity generated by PV installations in Malta is originally supported through a **feed-in tariff**
- Support for renewable energy sources (RES) used in the transport sector is provided through a **substitution obligation on importers and wholesalers of fossil fuels**.
- Share of newly registered plug-in electric vehicles (PEV) in the 2017 was **0.41%** (EU rank 18 of 28).
- The new interconnector between the electricity grid of Malta and Italy represents major improvement, increasing Malta's electricity interconnection level from 0% to over 24%

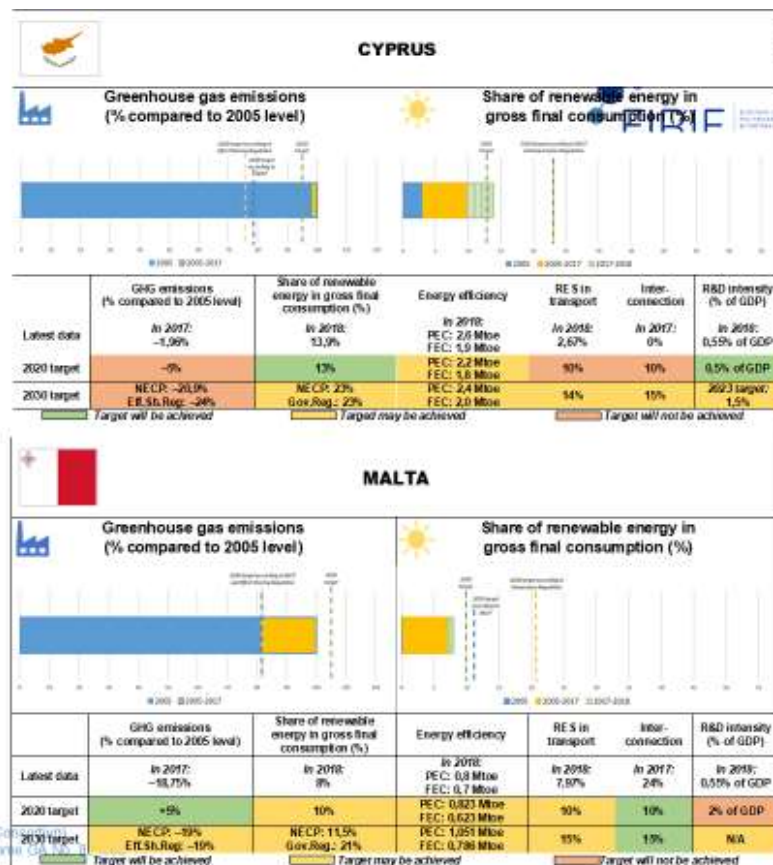
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[Title of the Meeting]

23/11/2020

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Evaluation for achieving the
targets



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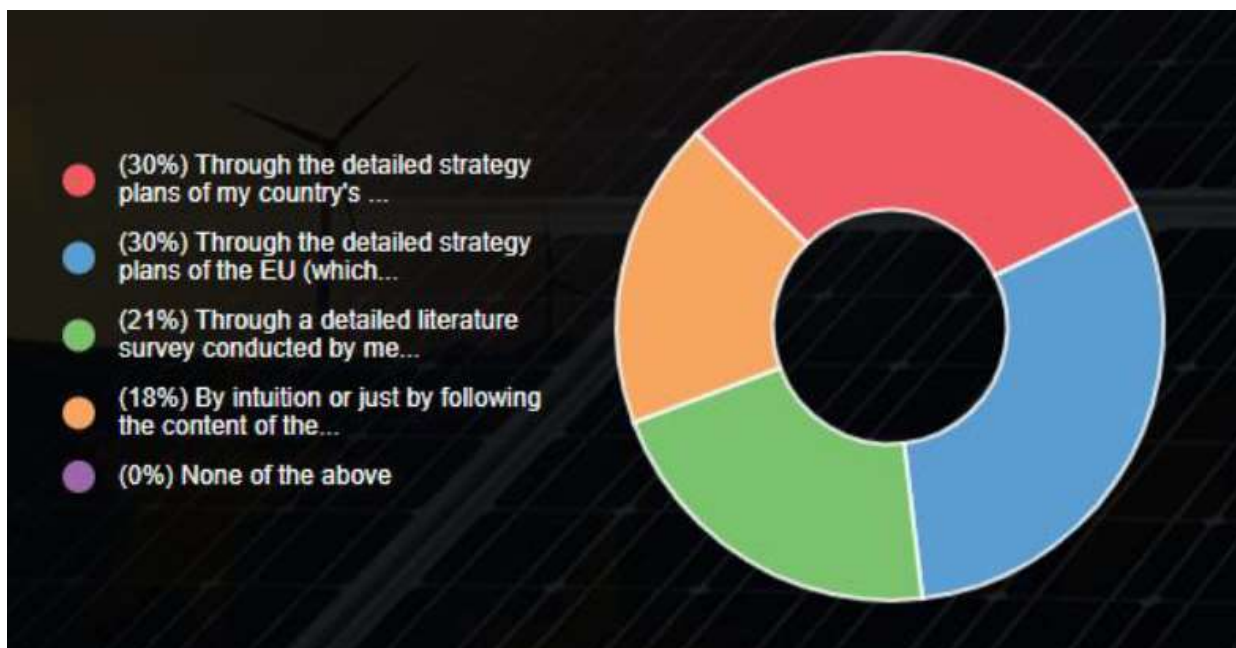
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One pioneering action that the PANTERA project has included in the agenda of the workshop, is using the Glisser tool to capture the views of all participants to the workshop through carefully selected questions. This has given to the workshop real interaction with the valuable reward of views and opinions of stakeholders on burning issues. Having the results tabulated and pictured gives direct feeling of the opinion of the participants that have helped the round table guests to comment and discuss. The achieved results are overwhelming. Altogether 8 detailed questions were asked for the contribution of the participants covering all the hot issues around R&I actions of low activity countries and more specifically the host country Cyprus.

Question 1 to the audience

How do you identify the R&I needs in support of the energy transition strategy of your country?

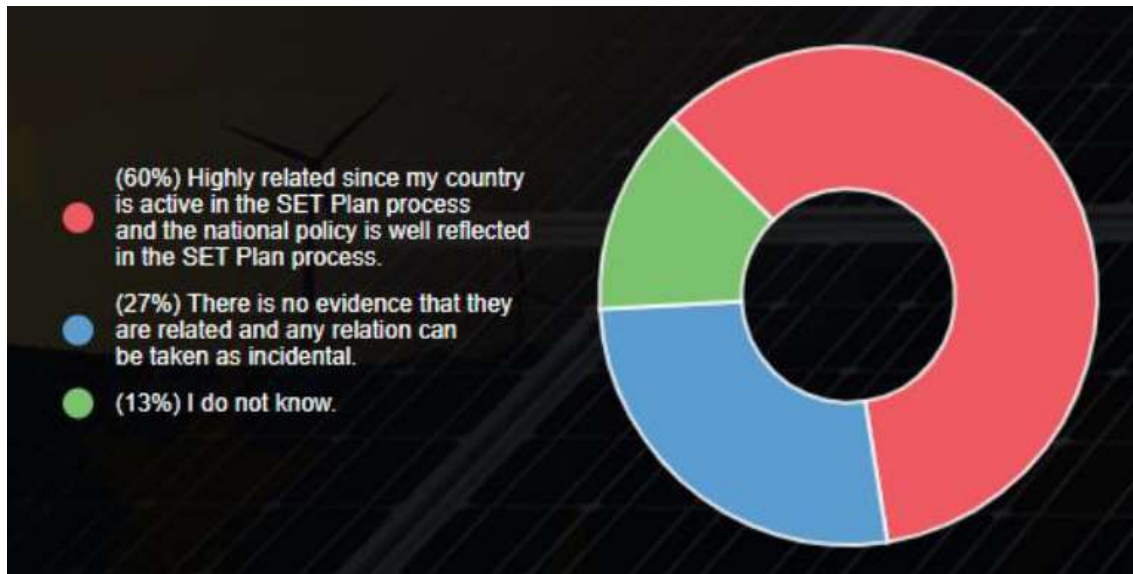
- Through the detailed strategy plans of the Government of my country published in the appropriate ministry.
- Through the detailed strategy plans of the EU (that by default do not reflect country specifics)
- Through a detailed literature survey conducted by me or my affiliates
- By intuition or by just following the content of the national or European R&I calls in the field.
- None of the above



Question 2 to the participants:

To what degree country R&I needs are related to the SET Plan process?

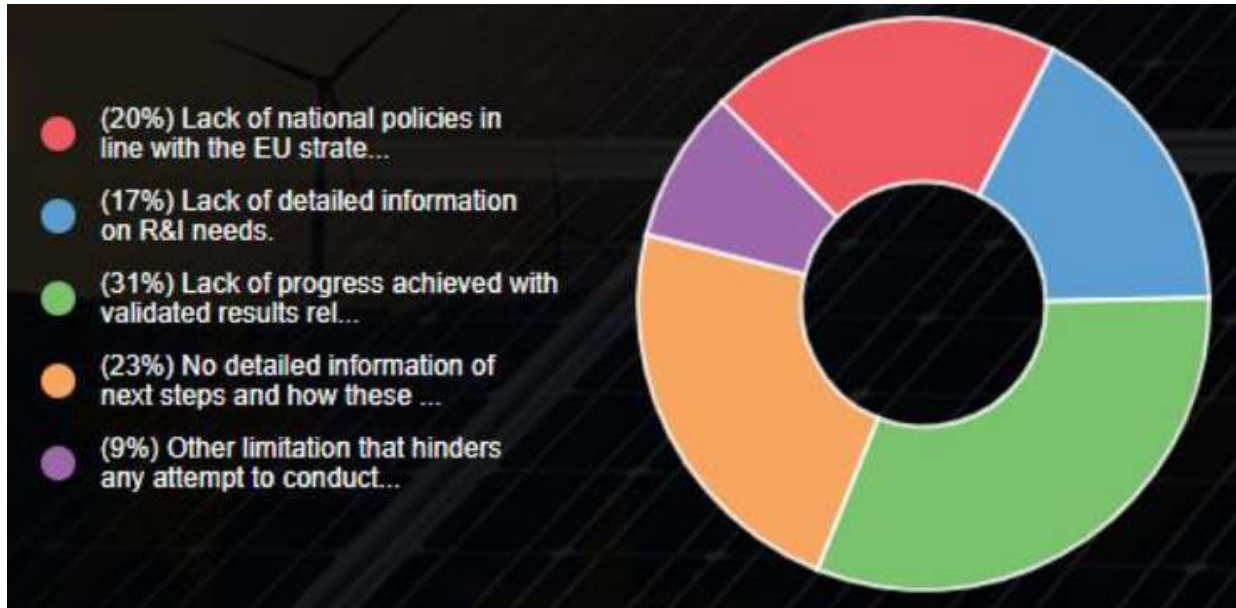
- Highly related since my country is active in the SET plan process and national policy is well reflected in the SET Plan process
- There is no evidence that the two are related and any relation can be taken as incidental.
- Simply I do not know.



Question 3 to the participants:

What are the limitations that you face in the available valid information to support your R&I endeavours in support of the Energy Transition? (Choose any of the following: from 0 to all)

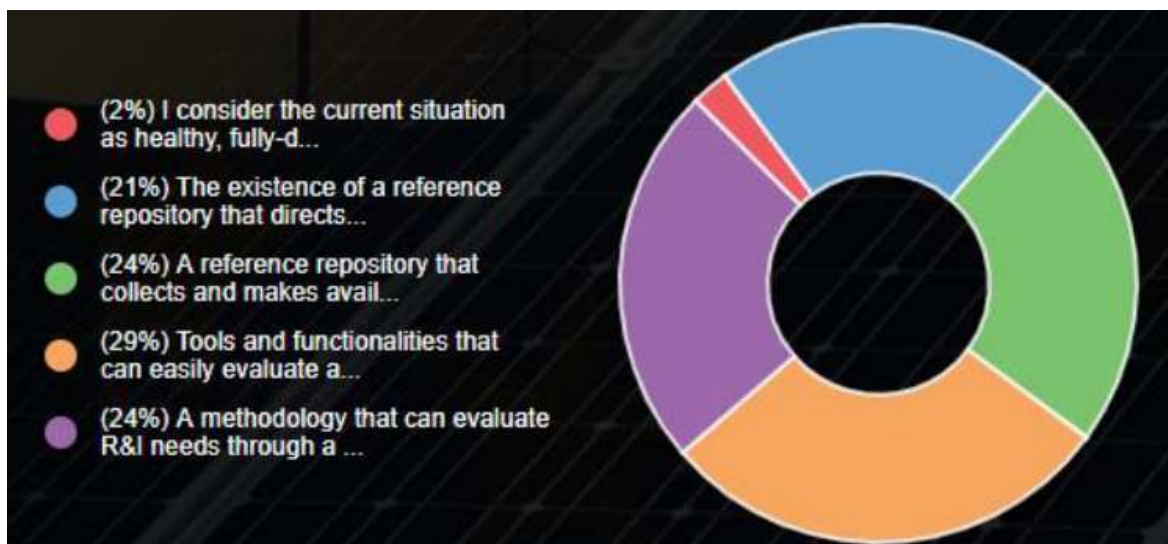
- Lack of national policies in line with EU strategy to achieve 2030 targets
- Lack of detailed information on R&I needs
- Lack of progress achieved with validated results related to technology maturity and use,
- No detailed qualification of next steps and how these are related to EU / country strategy
- Other that hinder any attempt to conduct worthwhile R&I activity in the field.



Question 4 to the participants:

How do you think this process can be supported? (Choose any of the following from 1 to all)

- I consider the current situation as healthy, fully documented and I do not phase any problems
- The existence of a reference repository that directs the user to the details of the EU and country strategies accessible to all
- A reference repository that collects and makes available to use all results achieved till today through R&I work in the field
- Tools and functionalities that can easily evaluate progress achieved in technology evolution easily accessible.
- A methodology that can evaluate R&I needs through a thorough use of progress achieved leading to required next steps



At this point of the proceedings the guest to the round table discussions Dr Nestor

Fylaktos representing the Cyprus Institute was asked of the role of the institute in supporting the R&I endeavours of Cyprus for the Energy Transition. Moreover, he was asked to inform the workshop to what degree these research needs are coordinated at national level and how the process can be improved and be assisted by a platform like EIRIE?



Dr Nestor Fylaktos has indicated in his response that the Cyprus Institute is quite active in R&I in support of the energy transition but very specific in the field of utilization of solar energy through CSP technologies and related technologies. Going further, Dr Nestor Fylaktos has indicated the rich activities of the institute in research complementing the role that it plays in mobilizing work within Cyprus but also representing this to European institutions. Taking into consideration the prevailing R&I status in Cyprus and the support offered through the activities of the Cypriot Authorities he has strongly indicated appreciation of the work done within the PANTERA project in developing EIRIE and the promised functionalities to serve the R&I community of Cyprus and Europe at large.

He positioned himself that he considered the responses of the participants to the questions as realistic and revealing the true situation in Cyprus. He considers that more is needed to be done in Cyprus aligning with the SET plan strategy through more coordinated work in the field. He has underlined the fact that R&I community of Cyprus is not supported enough and more coordination work in the field will improve the situation for the benefit of the whole economy.

He was particularly pleased with the work conducted within the Cyprus Institute and the working environment that is cultivated in support of R&I work. He noted that on November 9, 2020 The Cyprus Institute (Cyl) received the “[HR Excellence in Research](#)” award. This award was established by the European Commission to acknowledge academic and research organizations for their commitment to continuously improve their human resource policies in line with the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

Summary of findings and conclusions of day 1

Mr Andrei Morch (SINTEF) taking the floor at the end of roundtable 1 has expressed his admiration for the achieved results of the first day proceedings. Following a short reference to the opening presentations from Dr Venizelos Efthymiou and Mr Mario Dionisio he emphasised the importance of having the project of NAVIGANT / GUIDEHOUSE addressing the important project on “RES driving the energy transition: The potential of the Mediterranean Region” that they have conducted for the benefit of the Commission.



He gave emphasis through his comments to the findings of the first-round table discussion on identifying areas of concern of the R&I community in the field of energy systems:

- No consistent/unified methodology or approach on identifying the research needs and gaps.

Progress achieved in R&I is not visible.

- Lack of information on R&I needs and how these are related to the strategic objectives of Cyprus.

He then underlined the important contribution that is planned through the EIRIE platform in providing:

- A reference repository that directs the user to the details of the EU and country strategies,
- Provision of results achieved till today with support for effective utilization,
- Tools and functionalities that can help in evaluating progress achieved.
- A methodology that can evaluate R&I needs leading to required next steps.

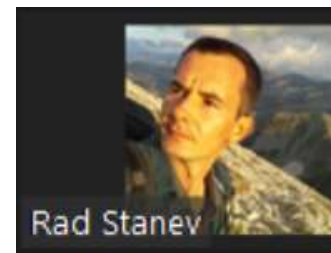
These were well reflected by the views of the participants to the workshop that were expressed through the online poll that was conducted during the session.

Roundtable 2

Title: An interactive discussion on the Research questions that lie on the road to the energy transition triggered by the priorities set within NECPs.

The main objective of this roundtable is to co-shape the most urgent Research questions to be addressed in the next 5 years

Open interaction with the participants through electronic voting; coordinated by **Dr Rad Stanev from Technical University of Sofia (TUS)** who is a partner in the PANTERA project and coordinator of the regional desk 2 that includes the countries Bulgaria, Romania and Greece.

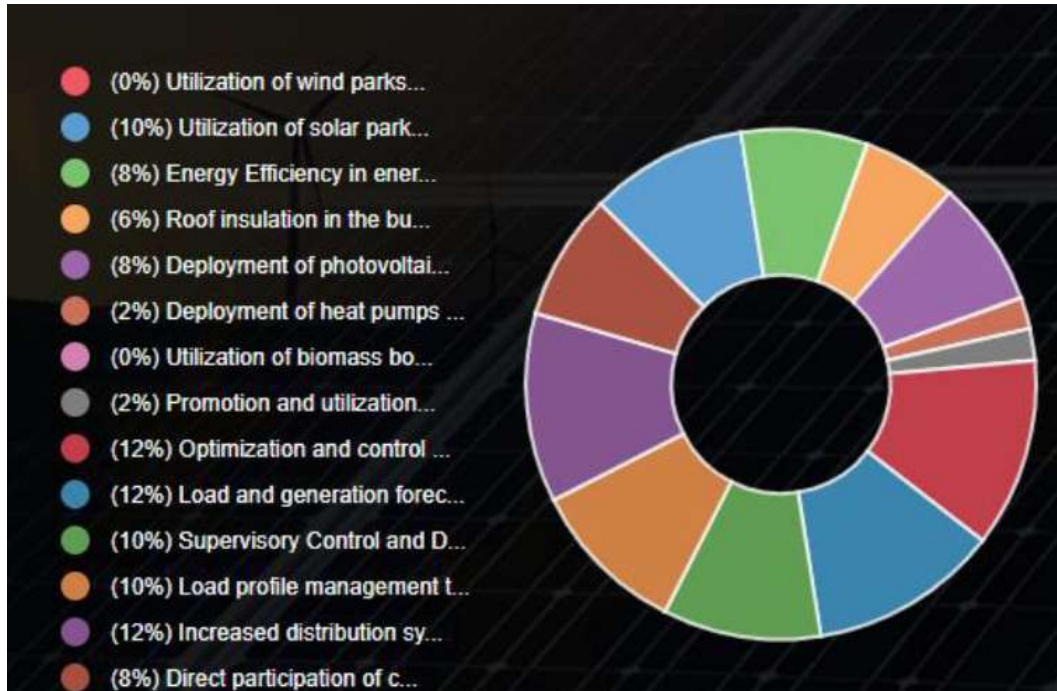


Participants to the round table: **Ivan Matejak (SUPEERA)**, **George Partasides (Ministry)**, **Antonis Ioulianos (ΙΑΕΚ)**, **Tasos Gregoriou (DSO)**

Dr Rad Stanev opened the roundtable with welcoming words for the guests to the panel and the participants and initiated the process of questions to set the scene for discussion.

Question 5 to the audience:

What do you think are the most important strategy goals of Cyprus from those listed in the national NECP? (2 min to the question/8 min discussion of the outcome-10 min in total) (up to three options)



- Utilization of wind parks in operation
- Utilization of photovoltaic parks in operation
- Energy Efficiency
- Roof insulation in the building stock
- Deployment of photovoltaic panels
- Deployment of heat pumps for heating
- Utilization of biomass boilers
- Promotion and utilization of high efficiency air conditioning units Energy Security
- Optimization and control of the distribution system
- Load and generation forecasting
- Supervisory Control and Data Acquisition of PV systems Internal Energy Market
- Load profile management through demand response
- Increased distribution system observability
- Direct participation of customers in all market stages, through aggregation

Ivan Matejak (SUPEERA) talking on the need to enrich the R&I work in support of the SET Plan process underlined this need and explained how the project SUPEERA can deliver this closely working with the PANTERA consortium.

Extending on this need, he underlined the need of each Member State aligning its NECPs with the SET Plan strategy and working closely together to deliver to support national and EU economy.



Hence, working on the SET-Plan process countries should align to act as follows:

- To deliver on key objective of the Energy Union, by understanding that the SET-Plan helps to promote cooperation among EU countries, companies and research institutions
- SET-Plan as a strategy for all energy research and innovation in Europe supported the changing of the EU energy system; but more ambitious goals (climate neutral society by 2050) and new set of policies call for its “revision”
- The redefinition of the SET-Plan priorities in the wider context of the green recovery and the Clean Energy Transition should also seize the opportunity for better integrating the multidisciplinary aspects of the transition



Support to the coordination of national research and innovation programmes in areas of activity of the European Energy Research Alliance

2

► SUPEERA supports the SET-Plan and the Clean Energy Transition

We...

- Facilitate the coordination of the research community
- Accelerate innovation and uptake by industry
- Provide recommendations on policy
- Promote the SET-Plan and the Clean Energy Transition

We connect the dots.



Support to the coordination of national research and innovation programmes in areas of activity of the European Energy Research Alliance

5

► Context: National Energy and Climate Plans

- EU countries have recently released their **National Energy & Climate Plans (NECPs)**, with strategy, objectives and activities to meet the EU's energy and climate targets for 2030
- The plans include different **dimensions** (*decarbonisation; energy efficiency; energy security; internal energy market; research, innovation & competitiveness*) and address an array of **technologies**
- The final **NECPs constitute** a strong basis to design climate and energy-related aspects of the national **Recovery and Resilience Plans**
 - For each Member State EC assessments outlines three key areas from respective NECPs to be reflected in the national Recovery and Resilience Plans



To this effect he identified that

- **National and regional R&D funding** programs are the main public funding resource for SET-Plan activities
- The final **NECPs fail to pay sufficient attention to R&I needs** for delivering on climate and energy objectives
- There is an overall **decrease in national budgets** devoted to R&I in clean energy technologies and a severe lack of national objectives and funding targets that show concrete and relevant pathways to 2030 and 2050
- Most or **Member States don't specify** how national funds and/or activities are allocated under the Implementation Plans in which they are involved and how the **SET-Plan and their NECPs are linked**

Mr George Partasides representing the Ministry of Energy of Cyprus was asked to comment on the results of the question to the participants and to justify the selected priorities and where do we stand in Cyprus with the adoption of the required policies? Moreover, how far is Cyprus from achieving the new enabling policies that will allow the set out strategies within the NECP to materialise and what are the main barriers?

Mr George Partasides indicated that he represents the Ministry of Energy of Cyprus and from this role he was active in developing the NECP for Cyprus and he finds the responses to the questions as very realistic giving evidence that all identified themes indicated in question 5 as much needed for Cyprus. The emphasis given on optimal operation of the distribution system and forecasting are well justified since they play an important role in the evolution towards the zero-emission economy.

RES are going to grow fast and for this reason we need the system with improved utilization of storage to play an important role in facilitating this transition. They do understand the fundamental need to be in line with the EU strategy expressed through the SET Plan but local national needs are a priority for them and they do give emphasis in their development and utilization.

They are also well aware of the implications of this technology evolution and they are working with experts to develop the systems that will help to implement the right policies for attracting the deployment and utilization of these emerging technologies in support of the shift towards low carbon solutions and meet the strategic objectives of Cyprus.

Panelist Dr Antonis Ioulianos was brought at this point in the discussion to shed some light on the activities of the funding agency of Cyprus the Research & Innovation Foundation. To this effect he was asked on the main difficulties regarding the national funding of R&I in Cyprus as a process, from initiation through the process to final outreach? Comment also on the outcome of Question 1.

Taking the floor, Dr Antonis Ioulianos has given a few details on the Research and Innovation Foundation (RIF) that he works for, informing the participants that it is the national authority in charge of supporting and promoting research, technological development and innovation in Cyprus.

The RIF was established in 1996, following an initiative by the Government of the Republic of Cyprus, with the initial name of **Research Promotion Foundation (RPF)**. The RIF is a private legal entity structured as a non-profit organization, and is registered as an Institution, under the Societies and Institutions Laws. The significant role of scientific research in modern socio-economic development, as well as the vital need to enhance research activities and infrastructures in Cyprus, were determining factors for the founding of the RIF.

Since its establishment, the Foundation has developed widespread activities at the National, European and International levels, with a strong focus on the development of national research programs, as well as the representation of Cyprus in European and International programs and organizations. Its current structure was the result of the decision by the Council of Ministers in October 2018, for the overall restructuring of the sector and took over the role of the executive arm of this System.

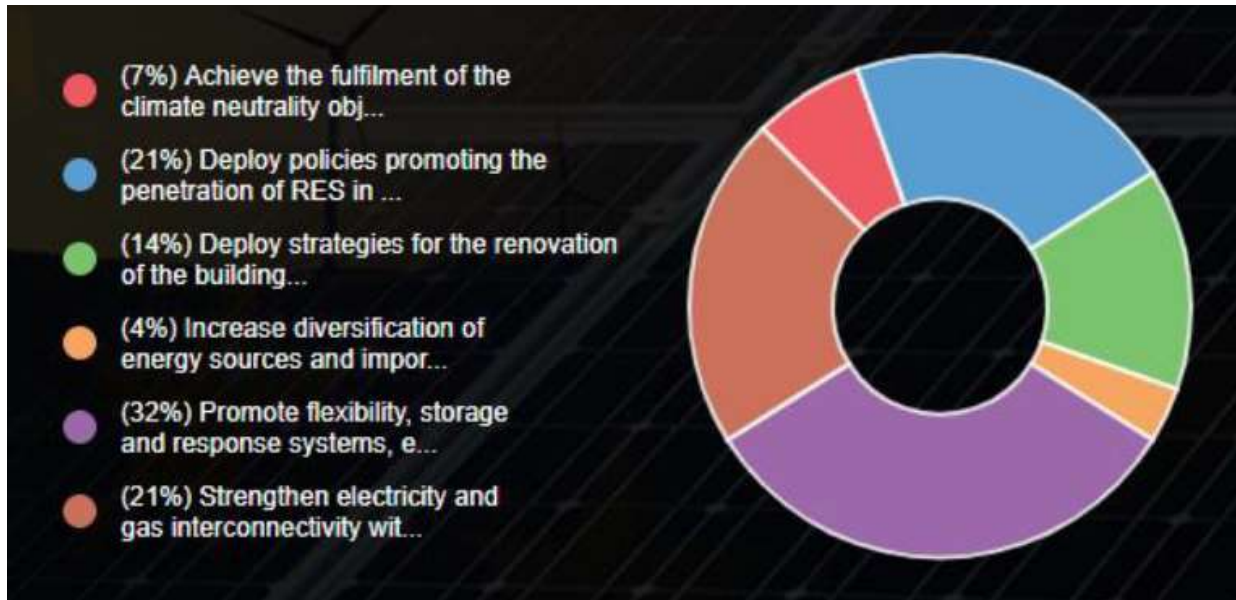
Dr Antonis Ioulianos has given substantial evidence of the current activities of RIF and the effort exercised in giving to the R&I community of Cyprus the support required for contributing to the wider needs of the Cyprus and European economy in the field of energy. He has confessed that gaps in this effort do exist and coordination with policy plans for meeting the 2030 targets of Cyprus can improve. He finds the response of the participants to the relevant question quite fair reflecting the priorities that do exist in achieving the objectives set out. They do realise their responsibilities in filling these identified gaps and they have the will to respond in close cooperation with the other arms of the Cyprus government.

Question 6 to the audience

What do you think are the most required regulatory/ legislation steps that Cyprus should undertake, in order to fulfil and accomplish the NECP priorities? (2 min to the question/8 min discussion of the outcome-**10 min in total**) (up to three options)

- Achieve the fulfilment of the climate neutrality objective, maintaining the consistency with all relevant EU and national policies
- Deploy policies promoting the penetration of RES in electricity generation, in heating, cooling and in transport
- Deploy strategies for the renovation of the building stock (both residential and governmental)
- Increase diversification of energy sources and import routes
- Promote flexibility, storage and response systems, ensuring Cyprus's power adequacy

- Strengthen electricity and gas interconnectivity with neighbouring countries and upgrade the existing ones



The DSO director of Cyprus Mr Tasos Gregoriou taking the floor and responding to the question:

How we accelerate innovation and implementation of the required technologies by the industry? Do you think we have a satisfactory pace in Cyprus? What are the main barriers?

He commented that DSO's are the key players in the new era of energy transition. The era of decarbonisation of the energy as by 2050 we have to be carbon neutral, the era of decentralisation of the energy as by 2050 all electricity power has to be produced by distributed RES Units, and digitilisation of the energy as the system itself and services provided by DSO's have to go digital. The era of:

- Distributed RES integration
- Dynamic tariffs
- Flexibility
- Active customers
- Big Data
- Disruption and emerging technologies (ET):



Integration of ET



SYSTEM OPERATORS MUST ENSURE THAT ET WILL NOT CREATE ANY VIOLATION UNDER ANY POSSIBLE OPERATION STRATEGY



ET MUST BE INTEGRATED WITH A PROPERLY EQUIPPED SYSTEM OPERATED WITH ADVANCED OBSERVABILITY AND HEALING ACTIONS



THIS REQUIRES EFFECTIVE COLLABORATION BETWEEN ET OWNERS AND DSO, AS WELL AS DSO-TSO AT REAL-TIME OPERATIONS

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Going further the DSO of Cyprus stressed the importance of flexibility on the road to carbon neutral economy:

Local Flexibility Markets

- In order for DSOs to be able to utilize the huge advantages of ET, either
 - Dedicated local flexibility markets have to be created or
 - Electricity market to integrate ancillary services market with not frequency related and localized products.
- In such markets DSOs can procure local flexibility in order to alleviate predicted violations of the system
- Regulation and Legislation needs to provide that adequate services from emerging technologies are available upon call and upon location of the DSO requirements.
Flexibility is only useful to DSOs if it is localized!
- Currently, the Electricity Market Rules do not provide for such services. The new Law Regulating the Electricity Market, harmonizing Regulation 943/2019/EU and Directive 944/2019/EU, provides for such services and the DSO expects clear incentives to include energy from ETs in the mid- to long-term planning.

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Roundtable 3

Title: The PANTERA initiative in focus: Regional stakeholders discussing their expectations from PANTERA on how PANTERA can facilitate the active collaboration with Research and Innovation stakeholders.

Round table discussion with the active participation of the participants through electronic voting – Coordinated by **Dr Anna Mutule (IPE)**



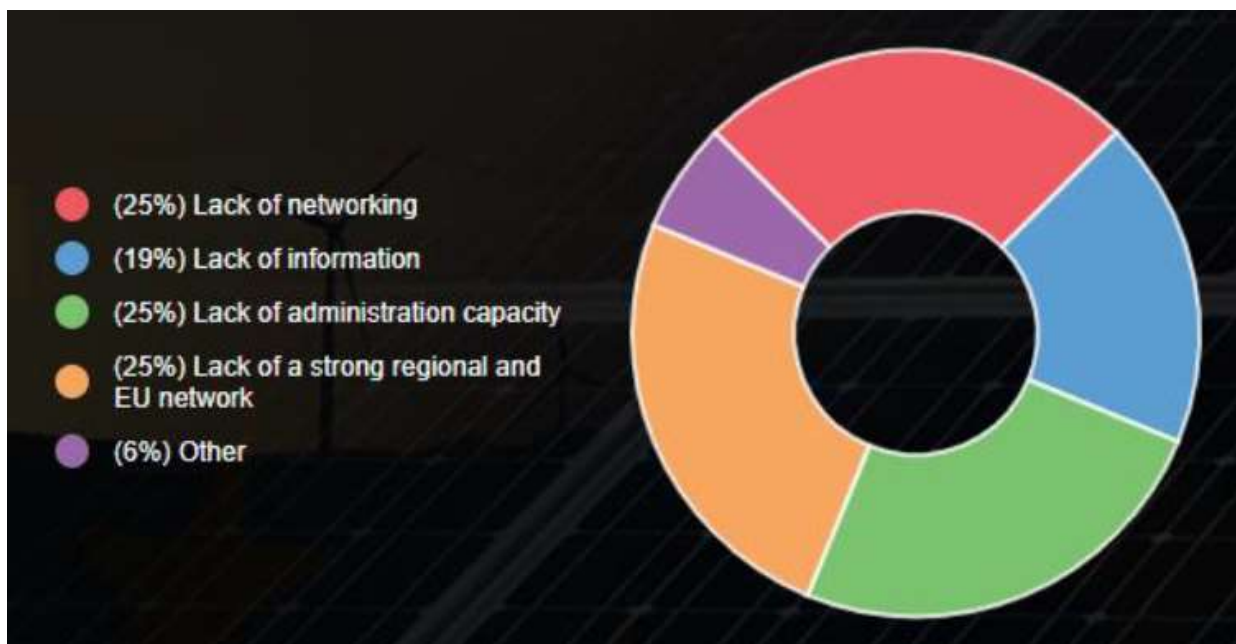
Participant stakeholders in the round table discussion: Fanos Karantonis (OEB), Nicolas Jarraud (CYI) and Tasos Tsitsanis (Suite5)

Anna Mutule taking the floor introduced her role in the PANTERA project and indicated that the **main objective** of this round table is to engage stakeholders to the Regional Desk 3 and agree on further cooperation with PANTERA process

Question 7 to audience:

What do you think are the main barriers for a regional stakeholder to find funding for their research? (2 min to the question/8 min discussion of the outcome-10 min in total) (up to two choices),

- Lack of networking
- Lack of information
- Lack of administration capacity
- Lack of a strong regional and EU network
- Other



Mr Tasos Tsitsanis was called in by the coordinator of the session to comment on the outcome of question 1 as an active stakeholder in Regional Desk 3 and what steps did he go through to overcome the barriers that he has faced?

Mr Tasos Tsitsanis taking the floor has given some inside for the company he works for which is Suite5. The company is an Information Technology Solutions and Services SME with the mission to deliver innovative data-driven intelligence solutions through state-of-the art technologies. Combining strong technology know-how and hands-on approach in managing and implementing projects commissioned by the public and the



private sector, Suite5 provides research-inspired solutions and practical support for its clients. The research and innovation activities of Suite5 span over a wide spectrum of innovative areas, including Big Data Analytics, Machine Learning, Trusted Data Sharing, Semantics & Data Interoperability, Data Management, while exploring new application domains for high-end IT data-driven solutions.

This expertise knowledge has helped the company to address early difficulties and has successfully gone through a development process that was highly self-controlled with little support from Cyprus or Greece where they are active. For this reason they do find a lot of value in what PANTERA is doing through the regional desks complemented with the supporting functionalities of the EIRIE platform. Seeing the details of the planned solutions through the EIRIE platform they see important benefits that can be gained and be of real support and value to the R&I community.

In general they do agree with the opinion of the participants to the workshop expressed through the conducted poll. All identified points through the poll are of fundamental importance to companies like Suite5.

Question 8 to Audience:

What do you think is the most important support that the PANTERA regional activities can give to the stakeholders? (up to 3 choices)



Mr Fanos Karantonis following closely the presentations and discussion was asked to take into consideration the replies to question 8, and inform the participants on how he foresees the role of OEB in strengthening the national stakeholders' network? Moreover, what joint activities he considers appropriate that can be shared with Regional Desk 3 of PANTERA?



Mr Fanos Karantonis taking the floor informed the participants about the Cyprus Employers & Industrialists Federation (OEB) and the importance that is giving to:

- Provide information and update of OEB members on the developments in the field of energy and environment at national, European, and international level.
- Technical and administrative support to members and joined Professional Associations.
- Collection, processing and publication of statistical data in the field.
- Organizing training seminars, events, lectures, thematic days related to energy and the environment.
- Provision of technical advisory support to the sector related issues.
- Develop national and other European co-funded projects on the fields of energy and the environment.
- Promotion of the cooperation of academia and the industry in the field of energy and environment and the development of research and innovation. Cooperation with liaison offices of public and private academic institutions.
- Promotion of the development of new standards and their implementation.

He stressed that as can be appreciated all these activities are central to OEB and OEB would greatly appreciate the initiatives of PANTERA to strengthen this process with other regions through Desk 3. Looking at the responses of the participants in question 8 he indicated that he is aligned with the outcome and he gives a lot of value to the work that is targeted through the work of the project PANTERA and the planned functionalities on the EIRIE platform. As OEB they will be happy to cooperate with PANTERA in this direction and they are ready to build closer links and contribute where required.

Dr Nicolas Jarraud working for the Cyprus Institute was lastly asked to take into consideration the replies to question 8 and indicate how he foresees the role of CYI in strengthening the national stakeholders' network? Moreover, what joint activities he feels is worth sharing with the Regional Desk 3 of PANTERA?



After a short introduction in his role in Cyprus Institute he has stressed the importance of R&I in the economy of knowledge and especially for Cyprus in strengthening the areas where matters most. To do this he underlined the important need of building regional cooperation along the lines that PANTERA consortium is working on with central focus on

the regional strengths to bring them in focus and collectively work for their progress. Through this work that he considers is central also to the Cyprus Institute, the interests of Cyprus can be promoted and reach European status for capitalizing the much wanted benefits. As an example he has indicated the very good work that is currently being done in the area of Concentrated Solar Power (CSP) through the coordinated work of the Cyprus Institute with the support of the Ministry of Energy and other affiliations in Cyprus. Through this good work, access to the corresponding European institutions has been quite fruitful and rewarding.

Dr Anna Mutule in wrapping up the session asked the panelists as to how happy they are with their regional and EU network?

The panelists Tasos, Fanos and Nicolas all converged to characterizing the current situation as weak as compared to the real needs of Cyprus. We do not have strong national representation at national level and at European level. We are doing the minimum in representing Cyprus in the various fora that play a role in strengthening the R&I capacity of Cyprus in the fields that matter most. All have indicated that they enjoy good success in their personal endeavours but these are highly dependent on their own actions and contacts and not on coordinated work from the Cypriot Authorities. To be fair to all, the authorities in Cyprus are trying and currently showed signs of improvement in both regional and European dimension. However, the work undertaken by the PANTERA project is moving into the correct direction and through EIRIE, opportunities will be enriched and all panelists confirmed that they very much look forward for closer cooperation for mutual benefit.

Summary of Findings and conclusions of the PANTERA workshop hosted by FOSS, Cyprus

Dr Venizelos Efthymiou on behalf of the consortium of the PANTERA project has taken the floor at the end of the third-round table to sum up the two-day proceedings of the PANTERA workshop. He went through step by step of the agenda of the second day and building on the findings of the first day that was summed up by the partner Andrei Morch has stressed the following:

- The INTERPLAN project was correctly linked to the PANTERA workshop since partners of the consortium of PANTERA are partners to the INTERPLAN project as well and presenting the strengths of the project that were excellently presented by Ata Khavari and Christina Papadimitriou to the operators and other policy and utility stakeholders that were attending the workshop is of utmost importance. The real benefit of this is related to the issue of revealing the strengths of R&I work in areas that are so real to the day to day operation of the system offering tangible solutions that will make a difference to the quality of work of the system. Hence, the R&I work in solving day to day needs of the industry and the economy receive a boost through such actions and hence stir real interest in policy makers to take more positive action.
- Discussing the country NECPs with the direct stakeholders with the active contribution of EU initiatives gives a dimension of direct contribution to maturing further the needs of the country and taking up sensitive issues for further elaboration. This discussion brings into the open the strengths of R&I in addressing

the needs of countries in the most optimal way. Hearing the views of the participants through the glisser tool has helped the discussion and made it much more real and direct with positive benefits in all directions.

- The regional work of the PANTERA project that is further supported through the planned visualization and facilitation of the EIRIE platform has raised noticeable interest among the stakeholders and policy makers. The discussion that was conducted using the results of the corresponding poll as evidence, has given the very positive message that the PANTERA project is moving in the correct direction and there is evident hope that the interest of the stakeholders will be transformed into real contribution for improved results.