



European Union
European Regional
Development Fund



DOSSIER

5th RESINDUSTRY MEETING

Badajoz, Spain

14 – 15 September 2021





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Introduction

RESINDUSTRY aims to increase the energy independency of the EU industry sector, by decreasing its energy intensity through a higher integration of RES. The long-term objective is to increase the industry competitiveness by decreasing its energy bill, rising their energy independency, thus uncoupling their energy costs from geopolitical externalities.

To achieve these long-term strategic objectives, the short-term objectives are to boost RES investment in industry by improving Ops with new policies for RES promotion.

MAIN OUTPUTS

- 7 Action Plans influencing 8,1 M€ of SF and 2,5 M€ non SF
- 90 participants with increased capacity
- 83 policy learning events
- 10 Best Practices for Policy Learning Platform
- 7 Regional Assessments, including the Strategic Analysis of RES Technologies for regional industry and KPIs reports.

PROJECT PARTNERS

- Czech Technical University in Prague, University Centre for Energy Efficient Buildings (CZ)
- LAB University of Applied Sciences (FI)
- Extremadura Energy Agency (ES)
- Tartu Regional Energy Agency (EE)
- Marshal Office of Świętokrzyskie Region (PL)
- Vorarlberg University of Applied Sciences (AT)
- Ministry for Gozo (MT)



5th Interregional Event Summary

On the 14 and 15 of September 2021, the Extremadura Energy Agency hosted the fifth RESINDUSTRY meeting, which brought together project partners, local, regional and national stakeholders, influential in the field renewable energy sources (RES). It was first face to face meeting since partners met at Dornbirn, Austria in beginning of March 2020. For five partners it was possible to arrive to Badajoz, as the two partners did not have the opportunity to travel, event was in hybrid format and participation in seminar was enabled over the web.

The first day of the meeting Interregional Workshop 5 took place with focus activities to support action plans. Interregional workshop started with welcome ceremony and continued with the lead partner presentation on the actual status of the project. Michal Tobias presented a overview of RESINDUSTRY project, current status of the project implementation and project goal. In session policy instruments in RESINDUSTRY overview and current status of all partners policy instrument in RESINDUSTRY was given. Second part of interregional workshop was group work on implementation of RES in the industrial sector.

On the following day, on 15th of September, the study visit to local industries took place.

RESINDUSTRY Meeting, Badajoz





Agenda Interregional Workshop 5

14th of September 2021

Venue: Hotel Center Badajoz. Av. Damián Téllez Lafuente 19, 06010 Badajoz, Spain

INTERREGIONAL WORKSHOP

9:00 – 9:30 REGISTRATION AND MORNING COFFEE 30 min

9:30 – 9:40 INTRODUCTION 10 min

**9:40 – 9:50 RESINDUSTRY PROJECT
10 min**

- Lead Partner of the RESINDUSTRY project, University Centre for Energy Efficient Buildings Czech Technical University in Prague

Overview of RESINDUSTRY project: goal, outcomes and expected results, stages and activities so far.

**9:50 – 11:30 POLICY INSTRUMENTS IN RESINDUSTRY
100 min**

- Presentations of RESINDUSTRY project partners (10-15 minutes per partner)

Regions background, overview of policy instruments selected for RESINDUSTRY. Improvement of policy instruments with action plan.

11:30– 11:45 COFFEE BREAK 15 min

11:45 – 12:45 IMPLEMENTATION OF RES IN THE INDUSTRIAL SECTOR 60 min

- Group work (40 minutes for group work, 20 minutes for presentations)

Working with highest potential renewables in partners regions based on regional assessments.

Motivation of industries, what tools or activities are needed to increase the use of renewables energy in industry.

12:45 – 13:00 CLOSING OF INTERREGIONAL WORKSHOP 15 min

Badajoz do-to. Instructions for the evening and study visit.

13:00 – 14:00 LUNCH 60 min



Interregional Workshop 5 (IW5) - policy instruments in RESINDUSTRY

On the 14th of September 2021 partners and stakeholders participated in the Interregional Workshop that took place in Hotel Center Badajoz. During the event the main focus was on the selected policy instruments, effects of the EU 2021-2017 financial period and actions to improve RES in industry with action plans. In policy instruments in RESINDUSTRY session all partners selected policy instruments, regional backgrounds and RES potential were introduced. Overview of current status and upcoming plans with policy instrument and action plan was given. After each of the topic presented, all participants had the opportunity to engage into a discussion to meet the objectives of the workshop. First part of interregional workshop was needed introduction for second part, where the group work on implementation of RES in the industrial sector took place.

Overview of current status and upcoming plans with policy instrument and action plan:

Austria:



Final remarks

Renewable Energy Potentials in Austria

- Total potential of 231 TWh of renewable energies is available to cover the energy demand (of this, 119 TWh - electrical, 112 TWh – thermal energy)
- Deep decarbonization – Austria climate neutral by 2040
- European Commission's Impact Assessment – Emission reductions through **efficiency-enhancing measures** at conventional plants
 - ⇒ Industry to invest in climate-neutral key technologies (requires leapfrog innovations and break-through technologies)
 - ⇒ Demand for electrical and biogenic energy sources will continue to increase – may lead to competition for individual energy sources between sectors
 - ⇒ Cross sectoral policy improvements needed (transport, agriculture, private households, public services)

Final remarks

Recommendations for policy improvement

- Developing implementation plan for renewable energy across **all sectors**, clearly supporting the 2030 targets and the 2040 decarbonization goals
- Identifying synergies and avoidance of unintended consequences by using **integrated approach** when managing updates to the RES policies and electricity market regulations and other relevant instruments
- Promote the development of **sustainable energy related investments**, and **energy security** through renewable energy and energy efficiency
- **Capacity building, training and exchange of best-practices** for national and international actors
- **Market coupling** – necessary for optimal integration of RES into the electricity grid

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Final remarks

Action Plan Scheme

- **Structure:** Future RES systems – Governance, technology, trends, R&D activities, stakeholders, RES roadmap.
- **Policy instruments:** RES supporting schemes; National and regional targets and trajectories; Measures for achieving the targets.
- **Policy instrument focus:** Direct investments, feed -in tariffs, grants and subsidies, loans, taxes, green certificates, information and education, strategic planning, codes and standards, research, development and deployment and voluntary approaches.

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Final remarks



NEW program season OPTAK (2021 -2027)

Specific target – promotion of energy from renewable sources

The Policy Instrument similar to the previous.

Changes to the Policy Instrument proposed during the LSG meeting and **IIM in 2021.**

The Action plan in preparation, major barriers to be addressed:

- 1) Administrative complexity
- 2) Dissemination within the target groups
- 3) Conditions for granting a subsidy

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Final remarks I



- No specific measures to improve RES use in industries at that time and today. In RESINDSUTRY focusing possible measure that deals with industries and has possible RES component - **resource productivity measure.**

Changes:

- Resource productivity will continue in new period (measure will be slightly modified)
in 2021-2027 EU cohesion policy. PI under **policy objective 2: a greener, low-carbon transitioning towards a net zero carbon economy**
- New prognosis are that **measure can not continue before 2023** due structural funds discussions and agreement process between state and EU (EST circular economy draft OP to EC in beginning of 2022, EC processes for 6 months, etc).

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Final remarks II

- **Local Stakeholder Group** meetings are also referred to bottlenecks/ given recommendation and improvement ideas for PI (**evaluation of projects**) including proposals how would be possible to motivate industries to increase use of renewables. e.g. RES related:
 - extra points for implementation of RES production
 - extra points for share of RES in the industry (max 100% RES)
 - make the assessment of renewable energy and waste heat potential a mandatory part of the audit.
- **Analysis** of opportunities what and how could be added into new call to increase the use of RES in companies.
- **Upcoming with PI development process:**
 - More detailed discussions of PI in beginning of 2022 (**initially planned in 2021 autumn**)
 - Information days for enterprises in II part of 2022.
 - Circular economy specialists' trainings not before II part of 2022

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Finland:

Final remarks

In conclusion, our new policy instrument addressed will be the new **Finland's Structural Fund programme - Sustainable growth and jobs 2021 -2027**

New funding to be available in November 2021 and we have been brainstorming on new projects inspired by RESINDUSTRY/interregional cooperation

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Final remarks - ACTION PLAN

Actions related to Policy Changes achieved, so far, all related to “other PIs”:

- Climate Action Roadmap (biogas potential study PR3)
- SaMaRa (Serial farm-size nutrient recycling plant concept, inspired by the biogas study, contributes to PH Circular Economy Roadmap – “Decentralised renewable energy solutions” - PR4)
- Wind potential study by RCPH - PR4 → possibly call/grants by Business Finland
- Expert Mission – energy storage Malfini GP

✓2	Sustainable growth and jobs 2014 – 2020, Finland's Structural Fund programme	Yes	Regional Council of Päijät-Häme	2-PP LAB University of Applied Sciences (until 31/12/2019 LAMK Lahti University of Applied Sciences Ltd) (FI)	N/A
✓2b	Päijät-Häme Regional Development Strategy and Plan 2018–2021	No	Regional Council of Päijät-Häme	2-PP LAB University of Applied Sciences (until 31/12/2019 LAMK Lahti University of Applied Sciences Ltd) (FI)	PR 3
✓2c	Nutrient recycling pilot program 2020 - 2022	No	Ministry of the Environment	2-PP LAB University of Applied Sciences (until 31/12/2019 LAMK Lahti University of Applied Sciences Ltd) (FI)	PR 4
✓2d	Grants for wind power planning	No	Ministry of the Environment	2-PP LAB University of Applied Sciences (until 31/12/2019 LAMK Lahti University of Applied Sciences Ltd) (FI)	PR 4

Malta:

Final remarks

- Malta experienced a significant reduction of approximately 50% in emissions from the energy sector due to the shift from heavy fuel oil to natural gas and as a result of interconnector with mainland Europe.
- Malta’s potential for renewable energy deployment is mainly affected by physical and spatial limitations with resource availability and cost of land being the predominant barriers for further deployment
- Malta’s only viable RES is solar energy. Hydro is not possible since the highest point is 253 m above sea level; There is no significant thermal gradient for Geothermal energy; Scarce agricultural land and fresh water makes biomass production not an option while wave energy production is still at research stage.

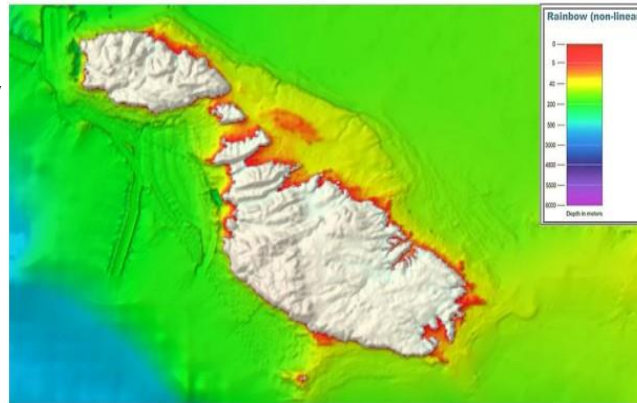
Last Heavy Fuel Oil turbine switched off, Delimara running entirely on natural gas



Final Remarks

- Wind speeds of less than 8m/s are typical of the Central Mediterranean, thus wind turbines would have a relatively low-capacity factor, negatively impacting their financial viability. Studies for offshore wind energy in the Mediterranean exclude the Central Mediterranean due to its deep bathymetry and limited wind resource availability.

Figure 3 - Bathymetric map of the Maltese Islands



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Final Remarks – Targets 2030

Table 2 - Malta's RES contribution between 2021-2030, %

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Malta's RES contribution	10.0%	10.3%	10.5%	10.9%	11.0%	11.2%	11.6%	11.5%	11.5%	11.5%
Indicative trajectory increase (as per Article 4(2) of Reg. 2018/1999)		18%			43%		65%			
Reflected in %-share		10.3%			10.7%		11.0%			
Actual RES trajectory	9.7%	10.1%	10.5%	10.9%	11.0%	11.2%	11.6%	11.5%	11.5%	11.5%

- An assessment of Malta's technical potential for solar PV indicates that, post-2020, there will be potential for further deployment of solar PV on rooftops and brownfield sites. The Government intends to extend its current policy framework to cover the period from 2021-2030 and adopt new measures with the goal of increasing the capacity of solar PV.
- As of 2020, a pilot scheme supporting the integration of battery storage with PV systems was launched.
- A new waste-to-energy thermal treatment plant is expected to be commissioned in 2024.

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COHESION POLICY - FINANCIAL PERSPECTIVE 2021 – 2027

POLICY OBJECTIVES

Policy Objective 1. A more competitive and smarter Europe

Policy Objective 2. A more environmentally friendly low - carbon Europe

Policy Objective 3. A better connected Europe

Policy Objective 4. A more socially oriented Europe

Policy Objective 5. A more citizens oriented Europe

Policy Objective 6. Relieving the effects of the transformation towards a climate neutral economy (JTF)

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Final remarks

Due to the completion of the previous funding perspective 2014 – 2020 there is a need to focus on the new financial perspective 2021 – 2027.

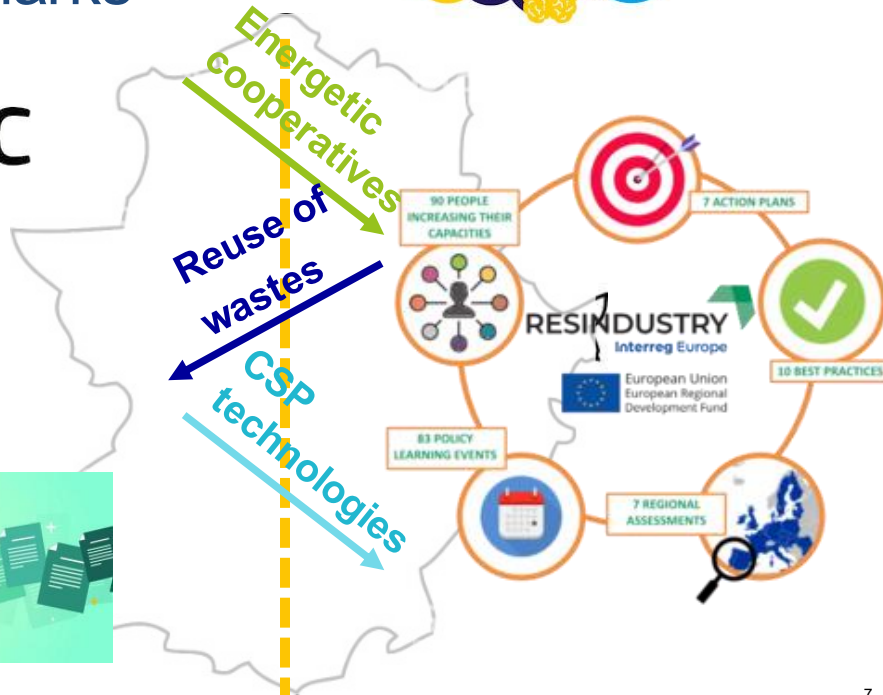
We are still waiting for the territorial contract to be signed and finally identify the right provisions that should be influenced.

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Spain:



Final remarks



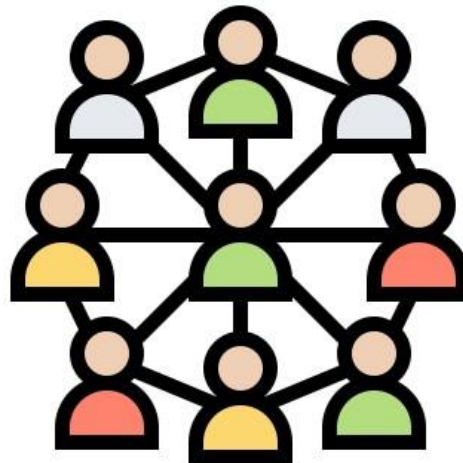
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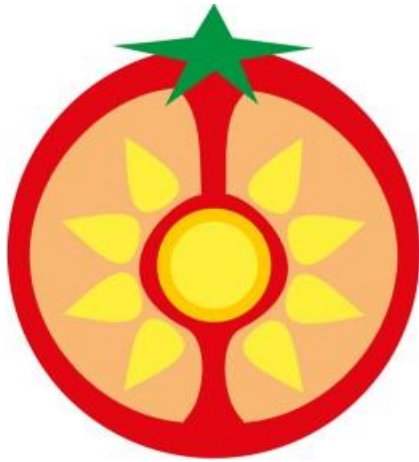
Final remarks

ENERGETIC COOPERATIVES.

The main idea is to establish “**One stop shop**” manage from each municipality, where either big or small companies can be advised to install RES.
 And introduce an **energy network** in the region.



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Reuse of wastes within the industry to produce energy.

Our industry produces 10% of the emissions in the region, due to the industry kind of energy consumed.

The **Tomato industry** is one of the main strength in our agri-food industry.

At the latest, in one year the government is going to introduce new taxes for GHG emissions, to this kind of industry.

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Application of CSP within the industry in Extremadura.

This kind of energy could be implemented in our industry, however, we need to know more about the different ranges of temperature needed.

A further study could be done to help improve our policies regarding CSP energy.

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Interregional Workshop 5 (IW5) - implementation of RES in the industrial sector

In second part of Interregional Workshop took place group work on implementation of RES in the industrial sector. Firstly the background for group work was given by expert Ülo Kask. For that purpose overview of Green Deal, which is why Europe should become the world's first climate neutral continent by 2050 was given.

The European Commission has launched the first tranche of its 'Fit for 55%' measures that will support Europe's climate policy framework and put the EU on track for a 55% reduction in carbon emissions by 2030, and net-zero emissions by 2050. The interconnected proposals cover areas of climate, land use, energy, transport and taxation to bring them into line with the targets agreed in the European Climate Law.

The package is comprised of thirteen proposals:

- 8 revisions to existing laws (incl.: Amendment of the Renewable Energy Directive)
- 5 new proposals.

Amendment of the Renewable Energy Directive

- Setting a new 2030 target of 40% (up from 32%) energy use from renewables by 2030
- Strengthening bioenergy sustainability criteria:
- The sub-target for the share of renewable energy in industries is 1.1 pp/a, of that 50% H2.
- Ambition to increase cooperation between MS (joint projects, joint offshore wind energy planning).
- Enable the conclusion of long-term direct purchase agreements for renewable energy between RES producers and consumers.
- Facilitate (simplify) the integration of renewable electricity into energy systems as a whole, including the implementation of certificates of origin.

It was reminded that by the Interreg Europe Programme manual improving policy instruments/ Structural Funds programmes can be done by three types of changes:

- **Type 1: Implementation of new projects.** *Type 1 implies that the policy instrument provides funding as is the case with Structural Funds programmes. Thanks to interregional cooperation, managing authorities and other relevant bodies can find inspiration in other regions and import new projects to be financed within their programmes. This type of impact requires the availability of funding in the programme.*
- **Type 2: Change in the management of the policy instrument (improved governance).** Interregional cooperation can also influence the way policy instruments are managed. New approaches can be adopted thanks to the lessons learnt in other regions. For instance, a new methodology for monitoring or evaluating a measure can be developed within the policy instrument. A managing authority or any other relevant body can also improve the way thematic calls are organised or the way projects are selected. The governance of the programme may also refer to the way environmental issues are integrated into the different measures of the operational programmes.
- **Type 3: Change in the strategic focus of the policy instrument (structural change).** *The third type is the most challenging since it requires a change in the operational programme. To integrate the lessons learnt from the cooperation, some managing authorities can modify existing measures or even create new measures in their programme.*

By regional assessments partner regions have most used RES types in industry as follows:

Partner region	CTU (Czechia)	LAB (Finland)	AGENEX (Spain)	TREA (Estonia)	MOSR (Poland)	FHV (Austria)	GOZO (Malta)
solar energy							
geothermal energy							
environmental energy							
biomass							
biogas							
wind energy							
hydropower							

That introduction lead group works teams to their group work, for what every team had 40 minutes. Group work task for teams was to discuss and answers based on their region for following questions:

- Can and how can the public sector (country / region) with EU funding best MOTIVATE the industrial sector to meet the objectives of the Renewable Energy Directive?**
- Would a Policy Instrument targeting the deployment of a specific RES source be more efficient for the state and more attractive to the business sector, or rather a broader and more integrated (e.g different RES sources + energy efficiency + resource efficiency, etc.) Policy Instrument? GIVE A SHORT JUSTIFICATION.**
- Which policy instrument would be more effective for the state and more attractive to the business sector, either a Policy instrument aimed at specific sectors of the manufacturing industry or a Policy instrument aimed at a wider target group (e.g the whole manufacturing industry + different business sectors). GIVE A SHORT JUSTIFICATION**
- Would the development of an appropriate Policy Instrument be necessary?**
 - change in the management of the policy instrument (improved governance)
 - change in the strategic focus of the policy instrument (structural change)
 - implementation of new projects

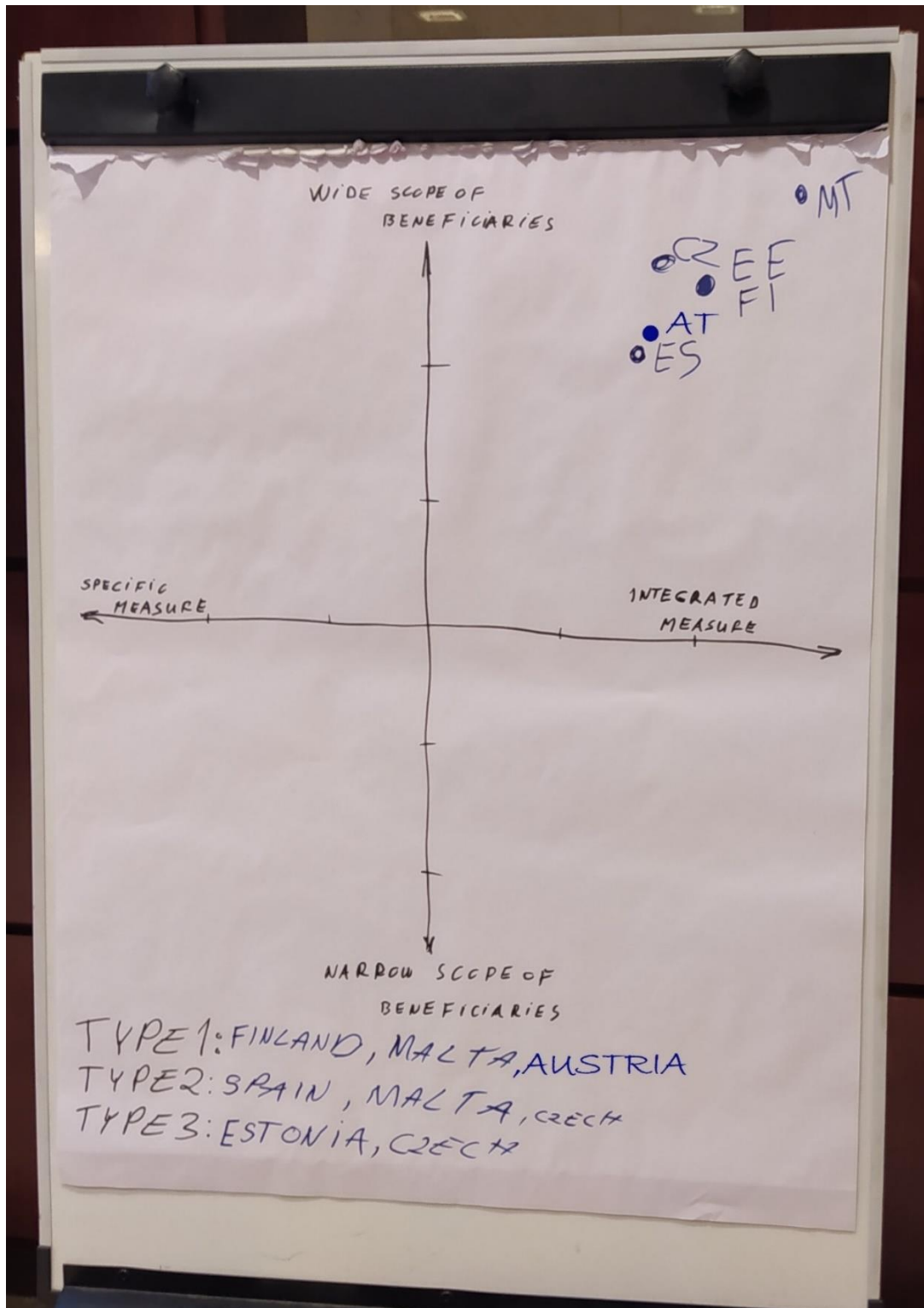
Each team had to present the results of the discussion. For second, third and fourth question in addition to the description, there was a need to respond visually to the board to get better overview of policy instruments approach. Partners and stakeholders aimed to increase the understanding on how to meet the needs of diversified RES requirements and increase RES usage in the industrial sector. Discussions in group, presentation of the results with insights of region experience, created synergies between regions via questions and engagement of all work groups and participants, participants of workshop gained insights on applying new methods for improving RES in their own regions.

To summarize outcomes of groupwork it can be said that for first question different solutions were offered, including:

- Different existing support/grants/feed-in tariffs should be continued, combination of grants;
- Communication of RES added value to enterprises, extra points incentives in application for RES;
- Simplification of application rules for grants (easier and clearer application for grants), shorter processing time of applications, process digitalization;

- Government tax policy in favor of renewable energy sources (environmental fees);
- Awareness rising (better communication) of enterprises on RES and energy efficiency - technological possibilities, experiences/best practices introduction, seminars;
- Capacity building of enterprises – education, development of consultancy market (external energy expert/consultant) for energy and resource audits as well to help enterprises to apply for grants (especially needed by smaller enterprises who lack of knowledge and have fewer resources);
- Most feasible RES by region should be found out (survey);

Visual outcomes for questions 2,3 and 4 on



All partners placed their pinpoints to same sector as all see that more integrated and wider scope of beneficiaries are needed for both parties – state and enterprises. Enterprises are interested for more tailor-made and integrated solutions, which would have a wider impact. Also the wider scope for of beneficiaries, larger and smaller enterprise as well more supported sectors/field of activities/NACE codes (eg. in addition to industrial sector for construction, business, service etc sectors), are seen as important from the perspective of both the state and enterprises – more equality for enterprises and more effective for state.

Interregional Workshop Visual Perspective





Study Visit 5 (SV5)

BA GLASS

CAVE SAN JOSÉ

Agenda

15 of September 2021

STUDY VISIT

10:30 – 11:30	Bus trip to Villafranca de los Barros. Venue: Hotel Center	60 min
11:30 – 13:30	BA GLASS	120 min
14:00 – 15:00	LUNCH IN BODEGAS MARTINEZ PAIVA (Almendralejo)	60 min
15:30– 17:30	CAVE SAN JOSÉ	120 min
17:30 – 18:30	Bus trip to Badajoz Airport	60 min
18:30 – 19:00	Bus trip to Hotel Center	30 min



Villafranca de los Barros, Badajoz (Extremadura)



STUDY VISIT 1_ BA GLASS



1st Picture- Opening of the factory in 1998



Detail information.

The Portuguese company BA GLASS (Barbosa&Almeida BA) has one of their biggest factories in Villafranca de los Barros (Badajoz). Thanks to their great location, it has great communication and access between the north and south of Spain.

The factory opened in 1998 with a production rate of 825 Tn/day increasing to 1075 Tn/day in 2019, after their expansion.

Due to this reason, BA decided to install PV panels that took up 85.000 m² of the factory's roof. This improvement made it one of the biggest self-consumption energy producers in Spain, decreasing the carbon footprint and reducing the CO₂ emission in 5.000 Tn.

BA is the energy benchmark factory in Extremadura, installing 300 kW with PV panels in 2011. This ground breaking idea that the factory had, uses 50% of recycling glass in the bottle production.

Furthermore, in 2018 the factory decided to improve this number by 8 MW, extending to 80% of the roof with 21.560 PV panels producing 375 Wp each one.

It is important to mention that the 80% of the energy consumed by the factory comes from gas, while the other 20% from electricity.

The energy production of the factory consists of:

- Boiler space (2 ovens).
- Connection with a gas pipeline.
- Two diesel deposits. 2.000 l each one + 50 Tn store.
- 50 m³, to store propane.
- 3 refrigeration towers.

This factory wanted to appeal to a PV grant. However, the misinformation about it, and the long-term waiting period, made them to abandon the idea.



STUDY VISIT 2_ CAVE SAN JOSÉ winery.



Cavé San José was established in 1963, thanks 15 entrepreneur from Villafranca de los Barros. Currently, the winery has 1100 partners, with an area of 20.000 m² and a capacity production of 40 million kilos of grapes.

The cellar is situated in one of the main hubs of connection between north and south of the region named “Vía de la Plata”, allowing to spread the market through all the country.

The winery uses a groundbreaking system “Thermovinification” used in France and Germany, this method is used mainly with red wine. It has several benefits in comparison to the traditional way:

1st Allows red wine to ferment as a white wine (which has the easiest system) without losing alcohol properties.

2nd Increase the wine output. As was mention above, this winery is a cooperative where partners bring their grapes to produce wine. Hence, this system allows spreading the winery to more partners due to the increased capacity.

This method consists of an interchange of heat, the pulp of the grapes run through the pipelines (with seeds and skin, which are the main responsible for the colour), interchanging temperature with water pipelines, achieving the grape juice a temperature of 65 degrees. The main boiler is biomass (Nominal power 2100 kW), with the support of a diesel boiler.

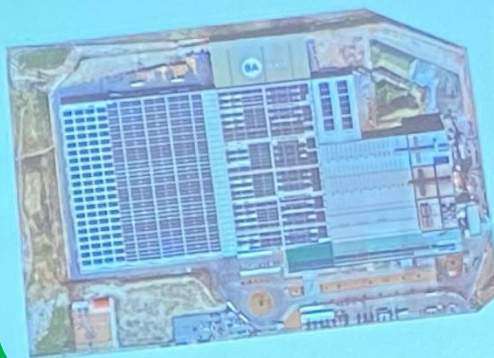
Furthermore, thanks to the success achieved with the biomass boiler, the cellar decided to invest in other renewable energy,

Installing 100 kW of photovoltaic for self-consumption.

BA GLASS



Project description



- Installed Power: 8,1 MWp
- Installation of anti-dumping system (Self-consumption without surpluses)
- Inverters number: 44 units of 180 Kw each one
- AC Power: 7.350 KVA
- Number of Transformation centers: 3 TC of 2500 KVA
- Total panels number: 21.668 units.
- Total area available for solar panels 85.000 m2
- Covered area: 43.735 m2

CAVE SAN JOSÉ

