



European Union  
European Regional  
Development Fund



# DOSSIER

## 2<sup>nd</sup> RESINDUSTRY MEETING

### Dornbirn, Austria

03 – 04 March 2020





## Index

Introduction .....	3
2 <sup>nd</sup> Interregional Event Summary .....	4
Steering Committee + Market Analysis .....	5
Interregional Workshop 2 (IW2).....	7
Workshop Summary .....	8
BP + Circular economy and Industry 4.0 application to RES .....	8
Renewable Energy Sources in the context of Circular Economy .....	9
Industry 4.0 and RES .....	10
Interregional Workshop Visual Perspective.....	11
Study Visit 2 (SV2).....	13



## Introduction

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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)



## 2<sup>nd</sup> Interregional Event Summary

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On the 03 and 04 of March 2020, the Vorarlberg University of Applied Sciences hosted the second RESINDUSTRY meeting, which brought together project partners, local, regional and national stakeholders, influential in the field renewable energy sources (RES). The event gathered participants covering all four helices - industry, governments, academia and citizens.

The first day of the meeting started with FHV's welcome ceremony and continued with the lead partner presentation on the actual status of the project. Stepanka Holeckova presented the current status of the project implementation, subsequently followed by discussions on communication management and the current on-line ranking of the project. Further discussions encompassed market analysis for the Czech Republic, as well as the common understanding on identifying best practices and measuring their contribution to RES, both locally and in regional context of the project. Lastly, further activities were performed to introduce stakeholders to the local RES framework - challenges and opportunities that Vorarlberg government face in applying RES policies to industrial sector. In this regard, stakeholders were informed on the background of the workshop and the study visit that took place on the second day of the meeting.

On the following day, on Wednesday 4<sup>th</sup> March, an Interregional Workshop took place, covering the circular economy aspect of RES policies implementation perceived through international innovation ecosystem perspective, as well as Industry 4.0 RES frame of reference. In addition, both national and international partners and stakeholders learned about regional policy instruments applied in industrial sector and implemented through Digital Factory Vorarlberg.

In this regard, the study visit focused on showing physical area of the Digital Factory Vorarlberg, and representing how its performance supports and influences implementation of RES in the region. With this in line, partners and stakeholders had the opportunity to increase the understanding on how various aspects of green digital transformation and digitization in the production of goods support renewable energy sources by implementation of Industry 4.0 approaches – by increasing transparency in the energy system, providing demand flexibility and by increasing energy efficiency.



Study Visit





## Steering Committee + Market Analysis

Hosted by FH Vorarlberg, the second project meeting covered diverse areas of RES implementation in particular local and regional context of participating partners and stakeholders. During the first day, the main topics discussed covered the three main areas: Project and communication management discussions, Best practice framework application – both locally and in international context, and Market analysis of the Czech Republic.

After an overview of the project and communication management FHV introduced stakeholders with the state-of-art of RES application in Vorarlberg, and the policy instrument targeted to improve energy efficiency and the usage of RES in the region.

In the second part of the meeting Mr Pavlica, from the Ministry of Industry and Trade of the Czech Republic, initiated a discourse on comparison of partner policy instruments. He shared practices and impact of RES projects implemented on the basis of the OP “Enterprise and Innovation”, with a focus on “Effective energy management, development of the energy infrastructure and RES, support for introduction of new technologies in the area of using energy and secondary raw materials”.

In further dialogue, partners and stakeholders shared perspectives from implementation of local practices, compared the tools used to successfully implement these practices and continued discussions on possible.

### 2<sup>nd</sup> RESINDUSTRY Meeting, Vorarlberg, Day 1





## Agenda

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**Tuesday 03 March 2020**

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**Venue:** Fachhochschule Vorarlberg, Hochschulstraße 1, 6850 Dornbirn, Austria

### Steering Committee

09:00 – 09:30	<b>Registration</b>
09:30 – 10:45	<b>CTU: Steering Committee</b> Welcome from the FH Vorarlberg Project management
10:45 – 11:15	<b>Coffee break</b>
11:15 – 11:45	<b>Communications and Dissemination</b> Communications Strategy – AGENEX
11:45 – 12:30	<b>CTU: Questions, discussion and coffee</b> Best Practice: Overview, Discussion, Measures
13:00- 14:00	<b>Lunch, FHV Canteen</b>
14:00 – 15:00	<b>FHV: Introduction to Stakeholders</b> - FHV introduction - Introduction of the region, issues and challenges - Policy Instrument - Managing Authority role and responsibilities–
15:00 – 15:30	<b>Coffee Break</b>
15:30 – 16:30	<b>CTU: Market Analysis overview of the Czech Republic, including explanation of Best Practice Template</b>
16:30 – 17:30	<b>FHV – introduction Study Visit for the next day (Day 2)</b>
17:00	<b>End of the day</b>
19:00	<b>Consortium Dinner Bierlokal, Marktstraße 12, Dornbirn</b> - Consortium Dinner for all partners with their stakeholders



## Interregional Workshop 2 (IW2)

On the 4th March 2020 partners and stakeholders participated in the Interregional Workshop that took place in the Fachhochschule Vorarlberg, Dornbirn. During the event, the three main topics were in the focus of the interregional workshop:

1. FHV Policy Instrument implementation solutions – RES and Digital Factory Vorarlberg
2. Synergies of RES policies and Circular Economy models in regional, national and international context
3. Interrelations of Industry 4.0 and RES for improved energy efficiency
4. Policy Instrument Comparison
5. Best Practice framework discussion

After each of the topics presented, all participants had the opportunity to engage into a discussion to meet the objectives of the workshop. Therefore, partners and stakeholders aimed to increase the understanding on how to meet the needs of diversified RES requirements, defined by specific local and industrial environment. Also, based on the policy instrument comparison and insights on best practice executed in different regional context, by synergic interaction and engagement in the execution of the workshop, participants gained insights on applying new methods for improving RES in their own regions.

Afterwards, all groups had the opportunity to evaluate the workshop, and suggest improvements to the subsequent workshop to be performed in the scope of the RESIINDUSTRY project.

### Interregional Workshop:

#### RES in context of digital transformation and circular economy efficiency





## Workshop Summary

Interregional Workshop (IW2)

Wednesday, 04 March 2020

### BP + Circular economy and Industry 4.0 application to RES

#### AUSTRIA Policy Instrument Review

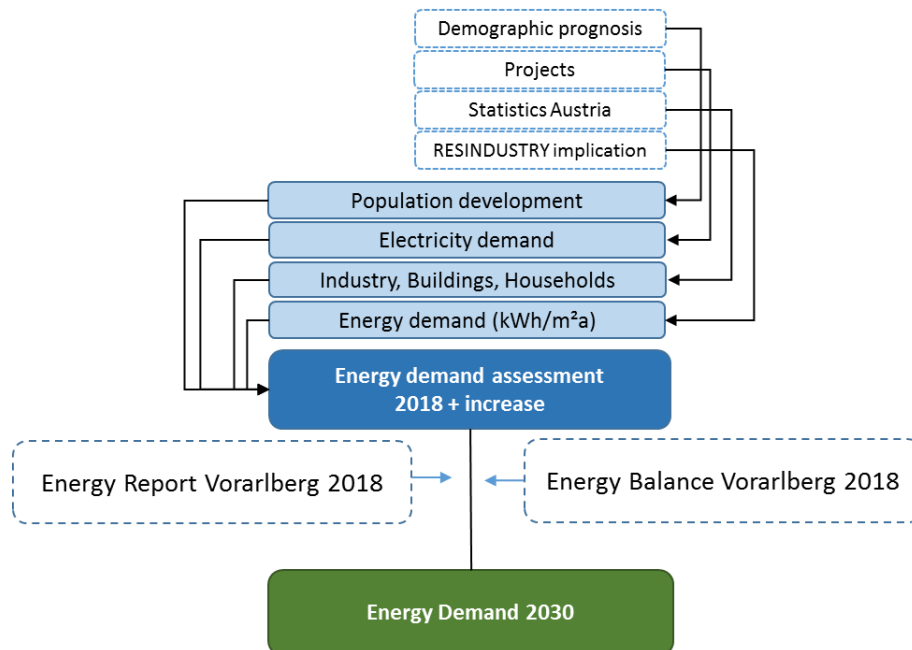
ERDF Programme Investing in Growth and Jobs Austria 2014-2020  
Funding priorities

- Increase the number of innovative SMEs
- Improve SMEs' competitiveness
- Increase energy and resource efficiency in SMEs
- Sustainable integrated urban development

#### **Vorarlberger Regional OP ERDF**

P1: Strengthening regional competitiveness through research, technological development and innovation  
Funds: 198.4 mil EUR

Energy Strategy Priorities: Security of energy supplies, Energy efficiency, Renewable energies.



Data sources and workflow for the assessment of the regional energy demand in 2030





### Projects financed by ERDF: Dornbirn

Operation name	Name of Beneficiary	Operation Start Date	Operation End Date	Total eligible expenditure	Union co-financing rate
Ankauf Laser-Lithographie-System	Fachhochschule Vorarlberg GmbH	01.03.2017	31.05.2018	462,872.78	32.07 %
Anschaffung von Geräten	Fachhochschule Vorarlberg GmbH	01.01.2017	30.06.2018	431,600.00	32.07 %
Anschaffung von Geräten	Universität Innsbruck	01.07.2017	31.10.2018	532,147.88	32.07 %
Anschaffung von Gerätschaften für den Bereich Tribologie	V-Research GmbH	06.03.2017	15.01.2018	223,737.45	32.07 %
Betr. Energiesparmaßnahmen	Bäckerei Mangold GmbH	23.11.2017	30.11.2018	334,121.00	31.50 %
Betr. Energiesparmaßnahmen	Rudolf Ölz Meisterbäcker GmbH & Co KG	24.05.2018	30.06.2019	248,991.00	31.50 %
Betr. Energiesparmaßnahmen	Zumtobel Group AG	31.05.2018	30.08.2019	158,726.00	31.50 %
Digital Factory	Fachhochschule Vorarlberg GmbH	06.03.2017	31.07.2020	300,000.00	32.07 %
EFREtop EE: Entwicklung von Materialien, Techniken, Lichtlösungen und Services in der professionellen Beleuchtung	Zumtobel Lighting GmbH	08.05.2019	30.04.2020	1,624,665.00	32.07 %
EFREtop IF: Smartlighting 2.0	Zumtobel Lighting GmbH	01.06.2016	31.05.2017	990,154.00	32.07 %
Industrie der Zukunft	Fachhochschule Vorarlberg	26.09.2019	31.01.2023	450,000.00	32.07 %
Klimatisierung und Kühlung	Bäckerei Mangold GmbH	24.11.2017	30.11.2018	336,330.00	31.50 %
Modellfabrik Vorarlberg	Fachhochschule Vorarlberg GmbH	06.03.2017	31.12.2018	235,000.00	32.07 %
Modellfabrik Vorarlberg II	Fachhochschule Vorarlberg	26.09.2019	31.01.2021	275,000.00	32.07 %
Neugründung eines metallbearbeitenden Betriebes (3D-Lasern und Stanztechnik)	RS Rohrlaser Stanztec GmbH	27.07.2015	31.08.2017	2,275,304.73	17.62 %

## Renewable Energy Sources in the context of Circular Economy

### Parameters of CE policy framework:

- Circular production
- Circular industry
- Circular agriculture
- Reduce consumption
- Reduce emission
- Improve resource efficiency
- Promote green life
- 3R in Waste management
- Increase resource productivity
- Utilization of industrial solid waste

### Key themes emerging from analysis of energy efficiency cases:

- Operational efficiency
- Smart and green building developments
- Energy efficient products
- End to end energy strategy



## Industry 4.0 and RES

Different technologies emerging in the 4<sup>th</sup> industrial revolution and their dedications on sustainability require new solutions in managing such industrial processes, taking into account the impacts of smart manufacturing technologies on sustainable energy industry.

By involving Industry 4.0 in the sustainable energy industry, we get smart energy networks that avoid the development of new path dependency. The technology will enable decentralization, with energy coming from local solar photovoltaic or wind systems. This means that the users will be able to manage and control their energy use.

Energy management is one of the main pillars of Industry 4.0. The motivation comes from a combination of environmental aspects, cost pressure, and regulation as well as the proactiveness of organizations when it comes to efficient consumption of energy and utilities.

In addition, the integration of different sources of energy generation in an increasingly demanding and distributed market will require management technologies capable of recognizing, predicting and acting in a way to guarantee quality, sustainability, and efficiency, including costs, in energy consumption.

Modern energy and utilities management systems should be able to exploit a large volume of data collected by various types of meters on a number of variables of interest for a certain industrial operation. This could be feasible by assembling the above concepts – extensive monitoring, the Industrial Internet of Things, analyses of large volumes of data, and efficiency and sustainability – around a common, integrated, and robust objective.

Main points to apply and consider in managing Industry 4.0 and RES:

- Virtual power plants change people's approach to energy use
- Manufacturing is becoming more sustainable
- Energy use is getting more intelligent

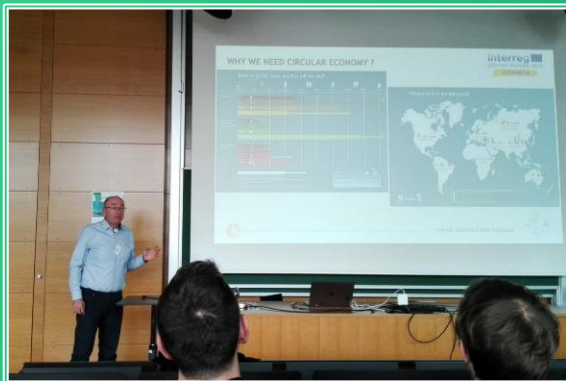
In energy and utilities management, the data available can give rise to, for example:

- Prediction models for energy consumption (or energy generation) of operations, starting from planned production levels or other contextual variables;
- Models for learning and establishing the ideal modes of operation, which permit effective levels of energy consumption;
- Models for analysing the energy efficiency of processes, starting from the capture of entry and exit variables and knowledge of the transformation phenomena involved.



## Interregional Workshop Visual Perspective

IW2



Circular Economy with a focus on RES

### Industry 4.0 and RES efficiency



Policy Instrument Comparison



Workshop  
Evaluation



## Agenda

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**Wednesday 04 March 2020**

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**Venue: IW2** – Fachhochschule Vorarlberg, Hochschulstraße 1, 6850 Dornbirn, Austria

**SV2** – Digital Factory Vorarlberg, Hochschulstraße 1, 6850 Dornbirn, Austria

### Interregional Workshop + Study Visit

09:00 – 09:30	<b>Registration</b> 2 staff per partner + 2 Stakeholders per partner + Full local stakeholder group for FHV (20 stakeholders)
09:30 – 11:00	<b>FHV: Vorarlberg Experience</b> Renewable Energy Sources in the context of Circular Economy Industry 4.0 interrelations with RES
11:00 – 11:30	<b>Coffee break</b>
11:30 – 12:30	<b>CTU: Partner Policy Instrument Comparison</b>
13:00 – 14:00	<b>Lunch with stakeholders, FHV Canteen</b>
14:00 – 17:00	<b>Study Visit, FHV</b> Digital Factory
17:00	<b>End of the Day</b>
19:00	<b>Karen Panorama Restaurant stakeholders, Gütlestraße 6, Dornbirn</b>



## Interreg Europe RESINDUSTRY

“Policies for Renewable Energy Sources in industry “

INTERREG EUROPE - PGI06158

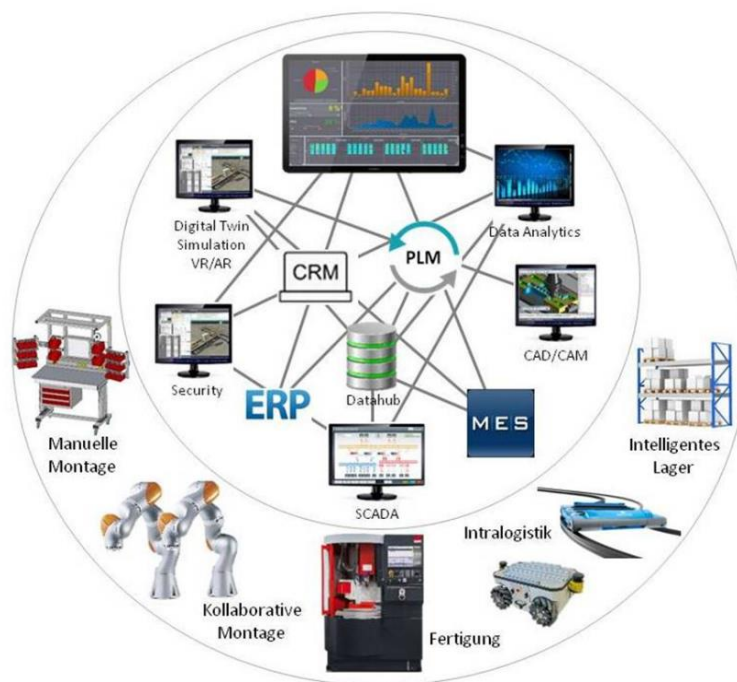
### Study Visit 2 (SV2)

#### DIGITAL FACTORY VORARLBERG

<https://www.fhv.at/en/research/digital-factory-vorarlberg/>

Influences RES through three major areas in the future industry's potentials:

- Increasing transparency in the energy system,
- Providing demand flexibility and
- Increasing energy efficiency



Digital Factory Vorarlberg

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## DIGITAL FACTORY VORARLBERG



**Guide:**  
**Ralph Hoch**  
**DFV| Research Assistant**