RES-TMO

Fonds européen de développement régional (FEDER)
Europäischer Fonds für regionale Entwicklung (EFRE)

#2/2021

Newsletter

Dear cross-border colleagues,

Dear friends of sustainability research in the Upper Rhine region,

In this sixth newsletter edition, we would like to present to you the main results of our work packages and provide you with information about the two stakeholder workshops that took place in May. In addition, we would like to introduce the topic of just transition and its connection with the project.

We wish you happy reading!

The RES-TMO Coordination Team in Freiburg

1. Project overview

RES-TMO is a three-year project funded by Interreg V Upper Rhine, and it was developed in the framework of the Upper Rhine Cluster for Sustainability Research (URCforSR). The project aims to accelerate the energy transition by uncovering synergies from complementary generation, demand and storage capacities, as well as cross-border energy initiatives in the trinational Upper Rhine metropolitan region. The work of the RES-TMO project is organized around seven work packages, or WPs in short. In this issue, we will give a short update on the work of WP2, WP3 and WP4. Detailed information on the project can be found on our website, where you can also find our previous newsletters.

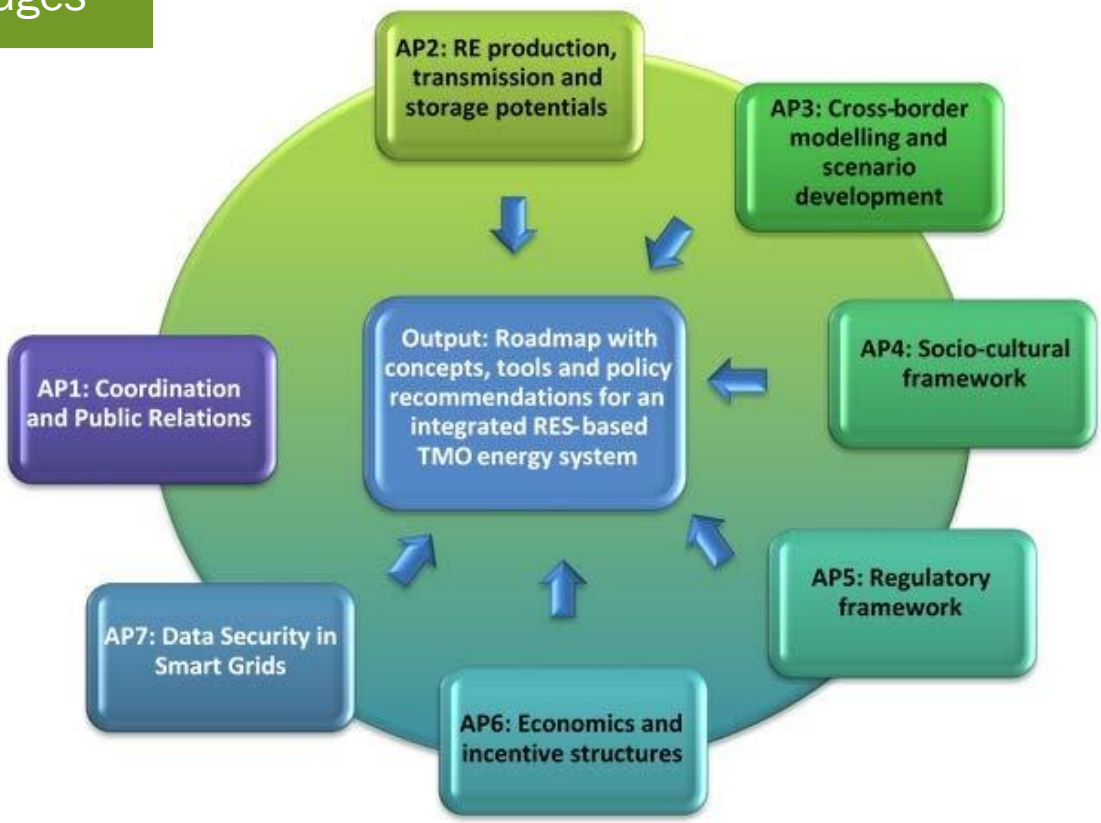
2. Stakeholder workshops

In May 2021, we held two online stakeholder workshops, which we had announced in our previous newsletters:

4th Stakeholder workshop

The fourth workshop organised on 4th of May had the goal of examining the role of smart grids in regional energy resilience. In the beginning of the workshop Professor Djaffar Ould Abdeslam and Ms. Bushra Canaan of the University of Haute-Alsace shared their work on smart grids and smart meters as part of WP7, elaborating on the idea that increasingly digitalised energy systems are vulnerable to cybersecurity threats, which can damage the data's integrity and confidentiality.

Work packages



After this there was a series of private sector expert presentations by:

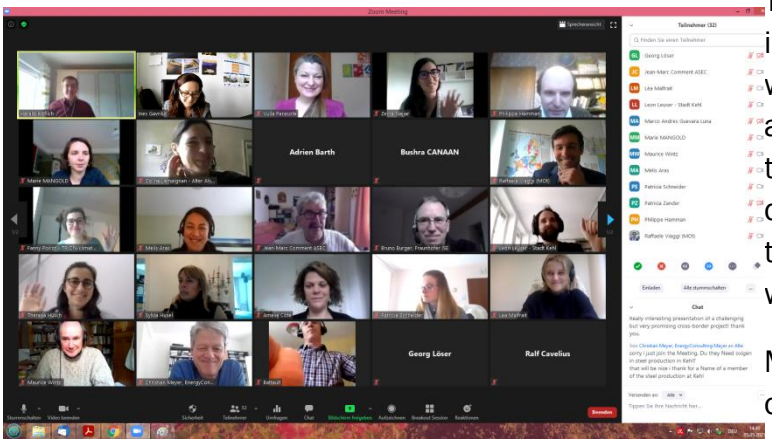
1. Mr. Mohamed Hamdani from ENEDIS, the French distribution system operator (DSO). ENEDIS actually manages 95% of the public electricity distribution network in France. Mr. Hamdani explained how smart grids opened up new possibilities for DSOs and their clients because of the large-scale rollout of smart meters across France.

2. Ms. Carmen Exner from Netze BW GmbH, a German DSO operating in the federal state of Baden-Württemberg. She coordinates the flexQgrid project, which aims to efficiently integrate decentralized generation into the distribution grid.

3. Mr. Daniel Blättler from Primeo Energie, a Swiss energy provider. Mr. Blättler focused on the data security of smart metering systems. He elaborated on three key issues – confidentiality, integrity and accessibility – which are comprehensively regulated by national and international standards.

Each of three presentations were followed by a number of questions which resulted in a series of engaging discussions with the three guest presenters.

More information about this event can be found on our website.



5th Stakeholder workshop

The 5th workshop organised online on 5th of May addressed the challenges and opportunities of the regional energy transformation through increased cross-border cooperation. In the introduction, Dr. Marie Mangold and Prof. Philippe Hamman presented the work package 4 (WP4), “Analysis of Socio-Cultural Framework Conditions and Integration of Stakeholder Perspectives”.

Three expert presentations were given by guest speakers:

1. Ms. Vulla Parasote, the General Director of TRION-climate, gave the first expert presentation focusing on “Energy cross-border cooperation in the Upper Rhine Region: Best practice overview and perspectives for future projects”.

2. Mr. Harald Höflich from the Ministry of the Environment, Climate and Energy of Baden-Württemberg gave the second expert presentation titled “CALORIE Kehl–Strasbourg -Cross-border use of waste heat from a steelwork”.

3. Ms. Coline Lemaignan from Alter Alsace Énergies gave the third presentation titled “Citizen energy cooperatives: which opportunities for cross border development”.

The three presentations were followed by an interactive session where the workshop participants were divided into two groups with the aim of fostering a rich dialogue on the workshop topics. In the end, the findings that resulted from the two groups’ discussions were summarized and presented to all the participants by a designated speaker and the workshop was concluded.

More information about this event can be found on our website.

3. Updates on the work in different areas of the project

WP2: Analysis of renewable energy generation and storage potentials

At this stage of the project, WP2 is working on calculating and mapping the rest of the renewable energy potentials in the TMO region and producing a report, which includes maps of the renewable energy potentials of different sources, definitions, expert opinions, and the detailed methodology used to calculate each of the potentials. So far, from previous stages of the project, the wind potential and rooftop solar PV potential were calculated.

The first task of this stage was calculating the ground mounted (GM)-PV potential and the Agro-PV potential of the region. The differentiation between the two solar PV potentials was made possible by literature on the subject, case studies, and land use datasets that accurately map the terrain. Next, the biomass potential was calculated, based on the results obtained by the project Oui-Biomasse, a comprehensive interdisciplinary project that was conducted over the same study region. Finally, hydropower potential of the region was researched as well.

WP3: Modelling and scenario development of TMO energy system

This work package is preparing a report that details the demographic statistics of the TMO region, assesses the 'distribution' of distribution grid operators in the TMO region, and puts forward a scenario for the development of electricity demand in the TMO region until 2050, based on demographics and the EU reference scenarios.

WP3 is also developing two scenarios for the expansion of transnational electricity transmission capacities. As part of this, they are preparing a methodology to delineate the TMO region as a separate market zone in the used EU electricity system model. To achieve this, they identified all of the transmission grid lines connecting the region with neigbouring countries and made assumptions on the available capacity for exchange. The two scenarios will take into account projects that are planned or are under consideration within the next ten years.

They also conducted a literature review of the theoretical underpinnings of market zone allocation. From this standpoint, market zones should reflect grid congestion in a way that congestion occurs at market zone borders. Grid modeling suggests that the TMO region is not an optimal candidate for a seperate market zone, as its borders do not show any signs of congestion. Further arguments against a separate market zone include long-term investment security, as a change of the zonal configuration may have strong effects on market prices. Another common issue is market power: small market areas bear the risk of reducing market participants. In addition, a comparison with the ENTSO-E bidding zone review reveals that the TSOs do not consider the region suitable or realistic as a market split.

WP4: Analysis of socio-cultural framework conditions and integration of stakeholder perspectives

5 stakeholder workshops involving a total of 145 participants were organized for the RES-TMO project together with the coordination office and in collaboration with numerous partners (TRION-climate, WP2, WP3, WP5 and WP7).

The two phases of fieldwork are nearly done. In France, they include 23 expert interviews. 15 expert interviews have been done in Switzerland and 26 in Germany (through a collaboration between SAGE and the SoCoLab for 8 interviews in German language in 2020). A German-speaking intern will conduct the last interviews in Switzerland by June 2021.

The fieldwork and state of the art / literature review are done. Regarding the two in-depth fieldworks, they include 19 interviews with members of *Centrales Villageoises de Saverne* and 14 interviews with members of *Zusamme Solar Colmar*. The collective book led by WP4 is in progress and the manuscript will be submitted to the editor (Routledge) at the end of May.

4. Publications

- Philippe Hamman. "Une priorité des universités du Rhin supérieur", Revue Savoir(s), n° 40, 2020, pp. 32-33.

5. Policy insights: Just Transition Mechanism

General Background

The topic of social justice in the context of sustainability transformation processes is a key area of the transition governance, however one that has not been receiving the needed attention in research and policy-making alike. It has been shown that socio-economic (income and non-income) inequality comes with a plethora of negative effects including reduced prosperity, weakened democracy, and lowered support for environmental protection. When public policies are not perceived as fair, they can face strong public opposition, such as the *Gilets Jaunes'* protests in France. Moreover, environmental and socio-economic issues are closely intertwined, with the former often exacerbating the latter but also the other way around. For instance, unsustainable forestry, agriculture or fishing patterns will affect livelihoods of local populations and thus increase inequalities. Inequality has also been linked to increased status competition driving consumerism, while more equal societies have been found to foster stronger social cohesion and willingness to act on environmental issues. Tackling socio-economic inequalities requires inclusive multi-stakeholder approaches and multidimensional policies (technological, economic, social, education related) including digital solutions. Also, there is a need to address both socio-economic and digital inequality (the digital divide) because the former reinforces the latter. Last but not least, advancing social justice, addressing poverty and other socio-economic issues, and ensuring equal access (e.g. to affordable and clean energy) are all part of the UN Sustainable Development Goals (SDGs) which should guide any sustainability transformation process at the local, regional and national level.

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The Just Transition Mechanism

The Just Transition Mechanism (JTM) of the European Union is the key EU tool addressing the socio-economic impacts of the transition to sustainability and ensuring that the regions, industries and workers facing the greatest challenges are not being left behind. Over the period 2021-2027, the JTM aims to mobilise €65-75 billion in the most affected regions. These are notably the most carbon-intensive EU regions that are still relying on fossil fuel industries.

The JTM consists of three pillars:

- **A new Just Transition Fund** of €17.5 billion (€19.3 billion in current prices) expected to mobilise investments of up to €30 billion;
- **InvestEU "Just Transition" Scheme** expected to mobilise €10-15 billion in mainly private sector investments, while also providing a budgetary guarantee and an InvestEU Advisory Hub;
- **A new Public Sector Loan Facility** based on €1.5 billion of grants from the EU budget and €10 billion of loans from the European Investment Bank (EIB) which combined are expected to mobilise public investments of €25-30 billion.

The EU Just Transition Fund aims to facilitate the transition to climate neutrality by enabling "regions and people to address the social, economic and environmental impacts of the transition towards a climate-neutral economy". An important feature of the EU Just Transition Fund is the requirement to develop local-level strategies specific to the NUTS 3 level, in order to access the fund. The Territorial Just Transition Plans (TJTPs) identify the most affected regions and set out measures to address social, economic and environmental challenges for the period up to 2030. JTM protection measures for the most vulnerable include: facilitating re-skilling and employment opportunities in new (transitioning) sectors, enabling energy-efficient housing, improving access to clean, affordable and secure energy (for citizens); supporting climate-resilient investments and jobs; creating attractive investment conditions and improving access to financial support/loans, supporting SMEs, start-ups and R&D activities (for companies and sectors); and investing in RES and sustainable transport, providing technical assistance, affordable loans to public authorities, and improving energy infrastructure (for Member States and regions).

Sources:

European Commission (2021). The Just Transition Mechanism: making sure no one is left behind. https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism_en#introduction

Irina Velicu & Stefania Barca (2020). The Just Transition and its work of inequality, Sustainability: Science, Practice and Policy, 16:1, 263-273, DOI: 10.1080/15487733.2020.1814585

Wilkinson, R., UNDESA (2020). Addressing inequality: in the context of Sustainable Development Goals "How greater equality aids the transition to sustainability". https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/UNDESA-Wilkinson.pdf

WWF-European Policy Office (2021). Toolkit for assessing effective Territorial Just Transition Plans. https://just-transitions-plan.wwf.eu/en

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Concepts for an Integrated, Efficient and Sustainable Energy Supply and Storage in the Upper Rhine Region

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