

#2/2021

Newsletter



Dear cross-border colleagues,

Dear friends of sustainability research in the Upper Rhine region,

In this fifth newsletter edition, we would like to present to you the main results of three work packages and share some news regarding the Fessenheim feasibility study, which we think may be of interest to you.

In this issue, we will also provide you with information about our upcoming activities, events and publications, as well as our longer-term plans.

We wish you happy reading!

The RES-TMO Coordination Team in Freiburg



Universität
Basel



1. Information about the project

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 energy 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 three WPs for the last two years. Detailed information on the project can be found on our website, where you can also find our previous newsletters.

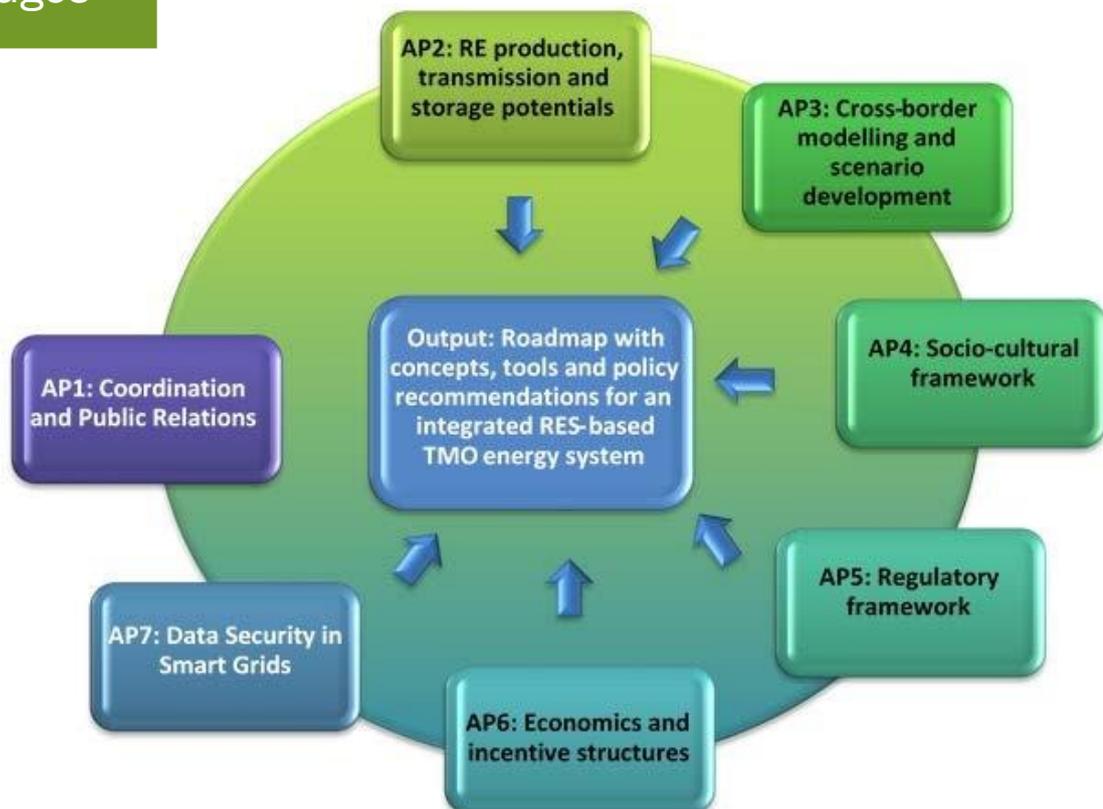
2. Feasibility Study, interview with Professor Barbara Koch (leader of the project)



1. Could you give us a brief overview of the Fessenheim feasibility study?

The French-German innovation region Fessenheim was initiated with the closure of the nuclear power plant and the Fessenheim territory project. In this context, the Upper Rhine Cluster for Sustainability Research (URCforSR) together with EUCOR – The European Campus, the network of the five Upper Rhine Universities, is currently conducting a feasibility study to identify concrete investment options towards green energy based and CO2 neutral pilot projects by the end of 2021.

Work packages



A corresponding financing agreement for the study, endowed with 800,000 Euros, was signed by the French State, the Grand Est Region, the Federal Republic of Germany represented by the Federal Ministry of the Interior, Building and Community, and the Ministry of Science, Research and Arts of Baden-Württemberg.

The feasibility study promotes the development of ideas that take a systemic approach for a sustainable energy transformation. The pilot ideas focus on the development of cross-border projects tapping on complementary strengths and cross-border synergies. One great advantage is the coupling of scientific ideas with the competences and expertise of enterprises and industry in the area. Four German-French competence groups linked to interested Swiss groups are working together on the pilot ideas within the feasibility study. The three competence groups on the areas of circular economy (especially green batteries and battery recycling), hydrogen and intelligent electricity grids (so-called smart grids) are working on concrete pilot projects that could be located in the Fessenheim region in the future. A fourth competence group is dealing with the socio-economic, legal and ecological challenges associated with these pilot projects. In addition, Eucor - The European Campus and URCforSR are developing a roadmap for investments in innovation and employment based on the results of the four competence groups.

In the Aachen Treaty, France and Germany agreed on the joint further development of the area around the Fessenheim nuclear power plant after its decommissioning. They aim to jointly develop projects in the fields of cross-border mobility, energy transition and innovation within the framework of a Franco-German economic and innovation park. The Fessenheim nuclear power plant is located in France, directly on the Franco-German border and was shut down in 2020.

2. What are the linkages and possible synergies between the RES-TMO research work and the current Fessenheim feasibility study?

Both projects are embedded in the overall vision of a pilot region for the transformation towards a sustainable and zero emission innovation region. This vision consists of a mosaic of building blocks for innovation projects which in the longer term will be increasingly linked to a holistic system. RES-TMO is a pre-project to the Fessenheim feasibility study. It takes for the first time an interdisciplinary and transnational approach to the transformation towards a sustainable and resilient energy system based on regional renewable energy potentials within the Upper Rhine. The outcomes of RES-TMO support and complement the development of pilot ideas in the region. Moreover, the expert network built in the context of this project is of high utility for the feasibility study and follow-up projects.



3. How do both of these contribute to the development of a low-carbon and innovative Upper Rhine region?

Both studies investigate the needed framework conditions and innovation to close technological gaps, to overcome legal and economic barriers and achieve societal acceptance, participation and a just transition.

4. What are the key issues identified by the RES-TMO project that should be further examined?

RES-TMO will deliver first findings and ideas for technological, economic and societal developments to advance the transnational transformation towards energy sustainability in the cross-border region. However, pilot projects which provide a testing field for ideas are not within the scope of RES-TMO. This is the next step which shall be implemented together with enterprises in form of pilot ideas developed within the feasibility study. The holistic and systemic approach including the aspect of circular economy is also a further development within the feasibility study.

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

WP5: Analysis of the Regulatory Framework

In January and February 2021, WP5 (University of Strasbourg) took part in the following conferences, meetings and seminars: “Renewable Energy Laws”, “Multi-level governance of the renewable energy development plans” and “Financial support mechanisms for RES”. The WP additionally took part in a webinar on "Energy & Citizenship" at the University of Lyon III.

WP5 closely followed the EEG (Erneuerbare-Energien-Gesetz – Renewable Energy Law) revision process, as the revised EEG came into force on 1 January 2021. They updated two chapters of “Recht der Energiewirtschaft, 5. Auflage 2021“ (§ 23 of the Handbuch Recht der Energiewirtschaft) accordingly. A brochure in French and German "Comparative views on the regulation of RE in the trinational Upper Rhine region" is in preparation; it aims to provide a synthetic vision of RES regulation in the Upper Rhine region.

WP6: Economic Framework and Incentive Structures

WP6 prepared a report on the energy market in the Upper Rhine region: “Economic policy assessment, including an analysis of policy processes and procedures and normative recommendations to achieve increased energy security, autonomy and sustainability”. The report presents incentive structures and possible conflicts of interest for the different actors involved in the region’s energy sector. Building on a range of economic theories and models, it also reviews opportunities and barriers for the cross-border and sustainable energy market in the Upper Rhine region.

WP6 also completed an analysis of the political economy of an expansion of the Upper Rhine region’s energy market. They derived the normative implications of individual incentive structures from the French, German and Swiss national strategies, taking into account the difficulties faced in implementing reforms.

WP7: Data Security in Smart Grids

WP7 published reports on European rules for the security of energy data and on survey responses received from grid operators in the French, German and Swiss parts of the Upper Rhine region. They also made recommendations on trinational protection against cyber-attacks to enhance energy security.

In addition, they developed two predictive models of data security vulnerabilities, including an experimental platform aimed at demonstrating the impacts of cyber-attacks on a local microgrid. Aspects such as European regulation concerning grid code and grid-edge devices development are still being investigated.

4. Upcoming events

Fourth Stakeholder Workshop on regional energy resilience via distributed RES and the role of smart grids: 4 May 2021, 9:00 a.m – 12:00 p.m. Organizers: Coordination Office and UHA-IRIMAS. Online.

Fifth Stakeholder Workshop on regional energy transformation and resilience through increased cross-border cooperation: 5 May 2021, 1:30 – 4:00 p.m. Organizers: Unistra-SAGE and Coordination Office. Online.



5. Policy Updates

EU Green Deal

Since the EU Green Deal beginnings in 2019, the European Union has been accelerating its effort to decarbonize all of its sectors. In recent months, this has included the launch of the EU Climate Pact, an initiative “inviting people, communities and organisations to participate in climate action and build a greener Europe”¹, as well as the release of the EU Strategy on Offshore Renewable Energy which aims to increase offshore generation capacity from 12 GW to at least 60 GW by 2030 and to 300 GW by 2050.² The next months will also see a number of crucial developments for RES, as part of the so-called “Fit for 55” package – a reference to the EU’s plan to reduce its emissions by at least 55% by 2030. This includes, amongst others, revisions to the Energy Efficiency Directive and the Renewable Energy Directive. The latter is seen as a crucial opportunity to strengthen the share of renewables in final energy consumption to 38-40% by 2030.

Research & Innovation: Horizon Europe

In February 2021, the European Commission announced big investments in research and innovation programmes supporting the goals of the European Green Deal. On the launch of Horizon Europe 2021-2027, Commissioner Mariya Gabriel announced a 30% budget increase compared to the previous programme. One of the five mission areas of Horizon Europe is climate neutral and smart cities. Each mission will include a wide range of actions such as research projects, policy measures, and legislative initiatives.³ The missions will contribute to achieving measurable goals of the European Green Deal. Europe’s new Framework Programme for Research and Innovation includes three main calls for proposals. First work programmes are expected to be published by April 2021.⁴

The European Commission also announced an investment of €121 million for new integrated projects under the LIFE programme for Environment and Climate Action covering four areas: clean energy transition, circular economy and quality of life, climate change mitigation and adaptation as well as nature and biodiversity.⁵ This programme can be an important instrument in the implementation of the Green Deal measures by helping Germany and France to reach their green targets. The chosen projects, with a funding quota of 55%, will make use of other EU funding sources such as structural, regional, and national funds as well as private sector investment. An online information session for applicants will take place around June 2021.⁶



6. Publications

Aras, M., Territorial Governance of EU Cross-Border Renewable Energy Cooperation : A Soluble or Turbulent Model in the Current Framework ?, *Global Energy Law and Sustainability*, February 2021, Vol. 2, Issue 1, pp. 79-97

<https://doi.org/10.3366/gels.2021.0048>



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

University of Freiburg, Chair of Remote Sensing and Landscape Information Systems (FeLis)

Project lead: Prof. Dr. Barbara Koch

Project management: Ines Gavrilut

Contact: ines.gavrilut@felis.uni-freiburg.de

www.res-tmo.com

¹ https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2323

² https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2096

³ https://ec.europa.eu/commission/presscorner/detail/en/speech_21_405

⁴ https://ec.europa.eu/info/horizon-europe_en

⁵ https://ec.europa.eu/commission/presscorner/detail/en/ip_21_501

⁶ <https://www.cleanenergywire.org/news/germany-must-urgently-adapt-energy-targets-new-eu-climate-goals-experts>