

Energy cross-border cooperation in the Upper Rhine Region: Best practice overview and perspectives for future projects



RES-TMO Stakeholder Workshop, 5 May 2021

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Gründungsmitglieder und/oder Finanzpartner | Membres fondateurs et/ou Partenaires financiers

1. Power plants with cross-border characteristics

- Hydroelectricity along the Rhine
- Deep geothermal energy
- Photovoltaic plants
- Biomass incineration plants

2. Interreg projects in the field of energy

3. Interreg-VI: Perspectives for future projects

- Timetable for the new programme
- Specific objectives for energy
- Classifying energy projects



Hydroelectricity along the Rhine FR-DE: Installations EDF+EnBW (Convention de Paris 1969)



Gamsheim in 1974

Iffezheim in 1977

Breisach in 2008

Kehl in 2009

98 MW, 4 turbines

146 MW, 4 turbines

3MW, EDF-CERGA

1,2MW, RKI GmbH

Hydroelectricity along the Rhine DE-CH with crossborder distribution of electricity



Augst Wyhlen in 1912/1994

Ryburg-Schwörstadt in 1926

Rheinfelden 2003-2010

40MW, 225.0000.000 kWh
yearly production

120MW, 4 turbines Kaplan

100MW, 600.0000.000 kWh
yearly production



German-Swiss
Company





Soultz-sous-Forêts

European research project (EDF, Electricité de Strasbourg, EnBW, Pfalzwerke, Steag, Bestec)

2008: First pilot installation

2016: Commercial use (ÉS + EnBW)

Power: 2,1 MWe



Wärmeverbund Riehen AG (2010)

erdwärmeriehen

Swiss power plant near Basel which supplies a heat network across the border into Germany.

Power: 6,5 MWth 8500 households supplied

Geo2riehen: 2nd geothermal well planned for 2026
4000 more households supplied



Next step:

Cross-border cooperation for lithium extraction
at 6 geothermal sites in the Upper Rhine Valley?



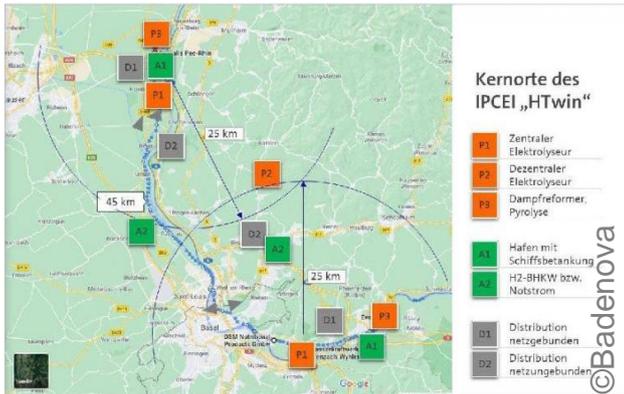
Zusamme Colmar (2015)

Joint investment between a french and german cooperative: Fesa Energie+Energies partagées
4 photovoltaic solar roofs on industrial buildings



Reguisheim near Fessenheim

Joint investment Badenova and Tryba Energy:
23 ha photovoltaic plant, capacity of 21 MWp
Estimated costs of 16 millions euros
Commissioning planned for 2022



Next step:

Cross-border cooperation for hydrogen production by using the solar energy in the Upper Rhine Valley?

HTWin-Project: Badenova + 16 industrial partners
Scientific support: Upper Rhine Cluster Sustainable Research

The project is part of the post-Fessenheim process.

Creation of a new french-swiss industrial entity

R-CUA & R-CUE

Joint investments between the energy companies:

primeo energie **R-GDS** Réseaux
Eco2Wackon
Strasbourg

- 12 heating networks on the territory of Strasbourg Eurométropole (4 in Strasbourg)
- 4 heating networks in the South of Alsace (2 in Rixheim, Saint Louis, Huningue)

Saint Louis (2014)

Power: 5,2 MW

88% Renewable energy

13km heating network

5900 households supplied



Eco2Wacken (2016)

Power: 5,2 MW

87% Renewable energy

6km heating network

4200 households supplied



Cross-border supply of biomass

Cross-border transport of biomass to power plants on both sides of the border.

Precise data to be collected (new project idea ?)

13 Cross-border projects in the field of energy financed by Interreg-IV and V (Budget +27.000.000€)

CALORIE Kehl : Industrial heat recovery at Badische Stahlwerke Kehl (01.01.2020 - 30.06.2023)

VEHICLE : Hybridisation of lithium-ion batteries with supercapacitor (01.10.2019 - 30.09.2022)

ACA-Modes : Advanced Control Algorithms for the Management of Decentralised Energy Systems (01.09.2019 - 31.08.2022)

Smart Meter Inclusif : Artificial intelligence for a proactive management of energy consumption (01.09.2019 - 31.08.2022)

RES-TMO : Regional concepts for integrated, efficient and sustainable energy supply and storage (01.02.2019 - 31.01.2022)

EBIPREP : Efficient use of biomass for sustainable energy production (01.05.2017 - 30.10.2020)

PROOF : Organic photovoltaic roof elements for commercial buildings (01.03.2017 - 29.02.2020)

BIOCOMBUST : Health aspects of energetic use of biomass (01.01.2013 - 31.05.2015)

OUI Biomasse : Innovations for sustainable biomass use (01.07.2012 - 30.06.2015)

PLAN-EE : GIS-based planning tool for renewable energies (01.07.2012 - 30.06.2015)

RHINE-SOLAR : Cluster of Excellence for Organic Solar Cells (01.01.2012 - 31.12.2014)

TRION 2: Accelerating the energy transition together (01.04.2013 – 30.06.2015)

TRION 1: Creation of a trinational energy network (01.11.2009 – 31.03.2013)

Interreg Rhin Supérieur
Interreg Oberrhein



Calendrier | Zeitplan Timetable



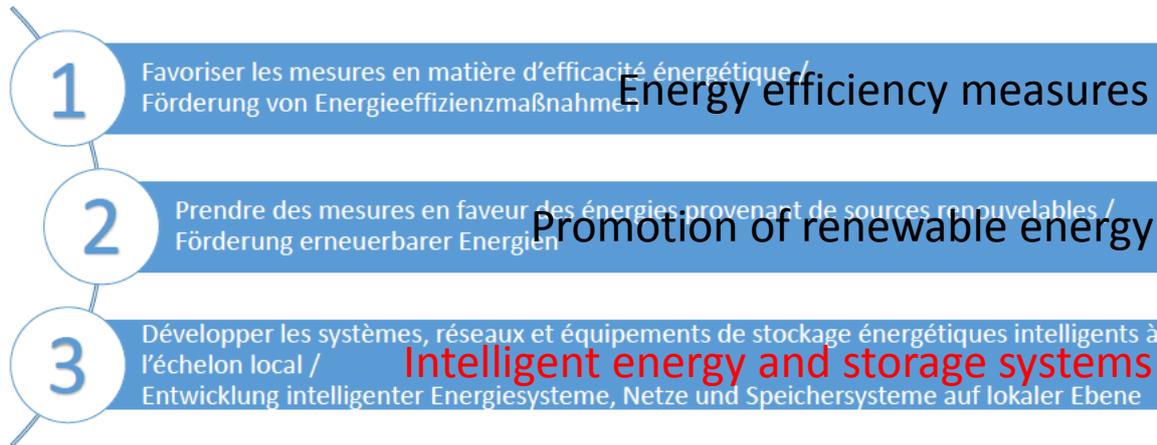
Fonds européen de développement régional (FEDER)
Europäischer Fonds für regionale Entwicklung (EFRE)

Source: Interreg Secretariat

Interreg Rhin Supérieur
Interreg Oberrhein

2021
2027

Proposition de la Commission européenne
Vorschlag der EU-Kommission



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

Source: Interreg Secretariat

Priorité / Priorität A

OP / PZ 2

OS / SZ A.1 :

Changement climatique et risques

Klimawandel und Risiken

OS / SZ A.2 :

Systèmes énergétiques et stockage d'énergie

Energiesysteme und Energiespeicherung

OS / SZ A.3 :

Biodiversité

Biologische Vielfalt

The EU Commission has proposed three specific objectives on energy. Of these, only one objective was kept for the operational programm.

Why?

- Few project ideas in the areas of renewable energy and energy efficiency.
- Difficult to classify projects on energy systems in other specific objectives.
- Cross-border character of energy projects is often insufficient (not eligible for funding).
- A lot of energy projects could be accommodated under the “energy systems” theme.

Prise en compte de l'efficacité énergétique dans la logique d'intervention Berücksichtigung der Energieeffizienz in der Interventionslogik

| Priorité / Priorität A | Priorité / Priorität B | Priorité / Priorität C | Priorité / Priorität D | Priorité / Priorität E |
|---|---|--|---|--|
| OP / PZ 2 | OP / PZ 3 | OP / PZ 4 | OP / PZ 1 | OSI / ISZ 1 |
| OS / SZ A.1 : Changement climatique et risques Klimawandel und Risiken OS / SZ A.2 : Systèmes énergétiques et stockage d'énergie Energiesysteme und Energiespeicherung OS / SZ A.3 : Biodiversité Biologische Vielfalt | OS / SZ B.1 : Mobilité transfrontalière Grenzüberschreitende Mobilität OS / SZ B.2 : RTE-T TEN-V | OS / SZ C.1 : Emploi transfrontalier Grenzüberschreitende Beschäftigung OS / SZ C.2 : Education et formation Bildung OS / SZ C.3 : Santé Gesundheit | OS / SZ D.1 : Recherche et innovation Forschung und Innovation OS / SZ D.2 : Compétitivité et croissance des PME Wettbewerbsfähigkeit und Wachstum der KMU | OS / SZ E.1 : Efficacité administrative et juridique Effizienz auf den Gebieten Verwaltung und Recht OS / SZ E.2 : Actions « people-to-people » „People-to-People“-Projekte |

Source: Interreg Secretariat

Energy efficiency measures :

- Climate change and risks
- Cross-border mobility
- Education and training
- Research and innovation
- Competitiveness and growth
- Administrative efficiency
- Actions „People-to-People“

Prise en compte des énergies renouvelables dans la logique d'intervention Berücksichtigung der erneuerbaren Energien in der Interventionslogik

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Source: Interreg Secretariat

Promotion of renewable energy :

- Climate change and risks
- Intelligent energy systems
- Cross-border mobility
- Cross-border employment
- Education and training
- Research and innovation
- Competitiveness and growth
- Administrative efficiency
- Actions „People-to-People“



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Good luck for your projects!
TRION-climate could be your partner.

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