Nº 10

THE MOT GUIDES

The energy transition and cross-border cooperation

mot
mission transfrontier
opérationnelle operational
transfrontalière mission

Contents

Olivier Sichel, Director of the Banque des Territoires and Deputy Chief Executive Officer of the Caisse des Dépôts

Editorial

Set up in 2018, the Banque des Territoires is one of the Caisse des Dépôts' five business areas. It brings together the full range of expertise useful for the development of territories, to make them more connected, more attractive, more inclusive and more sustainable. It provides bespoke solutions of advice and financing in the form of loans and investment in order to meet the needs of local authorities, social housing organisations, local public enterprises and the legal professions.

Our support is accompanied by a desire to improve financing conditions for territorial authorities that wish to take initiatives regarding the production of renewable energy, the energy efficiency of buildings or sustainable mobility – with the common goal of promoting energy savings, reducing CO_2 emissions and encouraging the development of clean energies.

To this end, the Banque des Territoires is expanding its actions in support of the Paris Agreement, and reaffirming its ambition to be ever closer to the ecological and environmental concerns of local players.

As a founder member of the MOT, along with the General Commission for Territorial Equality, we have been able to observe the issues in cross-border settings that are the daily reality of thousands of French people, and have attempted to address them by supporting projects in these territories. This publication illustrates their dynamism in the area of the energy transition.

Cross-border territories – players in the energy transition

Neither the climate nor energy recognise national borders. However, public policies are implemented within national frameworks that vary between countries. Cross-border territories, which are laboratories for European integration, are the places where these differences come up against one another. In addition, as players in the energy transition, they can take full advantage of the opportunities for development that it offers.

The role of territorial authorities in the energy transition has been increasingly taken into account since their unprecedented mobilisation at COP21 in Paris. While these authorities have competences that can help achieve the energy transition objectives and are encouraged to do this by European policies, the potential for cross-border cooperation is not sufficiently recognised.

The energy transition involves controlling our energy consumption, and developing energy efficiency and renewable energies across all productive sectors. In the territories, it concerns not only the production of energy, but also transport, territorial development, and the management of natural areas and risks.

© iStock

As a cross-cutting issue, the energy transition can be usefully addressed in cross-border contexts. The objective is to develop a shared territory sustainably, to deal with common challenges together and to manage shared natural resources, taking the cross-border area as the level of action. This makes it possible to create networks of or to pool infrastructures, to share good practices, to coordinate actions taken or implement joint ones.

The European Union has put in place a framework of policies and tools (agencies, research and funding programmes) in order to position itself as the world leader in the energy transition. It has set itself concrete and ambitious goals with the aim of creating an Energy Union – a big European market interconnected by trans-European energy networks (TEN-E) that provides security of supply and energy at an affordable price. In addition, European policies aim to reduce greenhouse gas emissions, increase the share of renewable energies in overall consumption and improve energy efficiency. For these goals to be achieved, close cooperation between European territories is needed.

Cross-border territories are also players in the energy transition, as it offers development opportunities for them. They can, using different levers for action, initiate a variety of projects. European regulations encourage cross-border cooperation, notably via the "joint projects between Member States" mechanism. This mechanism, which was introduced by the 2009 Renewable Energy Directive,[1] fosters intergovernmental cooperation on all types of projects relating to energy production from renewable sources. The effects of this cooperation, which are evaluated in the different territories concerned, enable Member States to achieve their goals with respect to the energy transition more easily.

THE CROSS-BORDER DIMENSION PROVIDES "VALUE ADDED"

While the development of renewables and promotion of energy efficiency can yield economic and financial benefits over the medium and long term, over the short term they require costly investment.

The cost of this investment can be considerably reduced by border region players combining their efforts.

Cross-border cooperation can enable companies to join forces in adopting low-carbon technologies and controlling energy costs.

Neighbouring territorial authorities can work together:

By sharing good practices: examples of the **"Enertic" project (France-Spain) and "SEACS" (Sustainable Energy Across the Common Space) project** focused on sustainable energy use and the pooling of innovative solutions.

By formulating joint low-carbon strategies: the **"PlanETer" project (Espace Mont-Blanc)** aimed at exemplary management of consumption and energy supply in the territory. The Espace Mont-Blanc is fuelled by renewable energy from different sources, including the Emosson hydroelectric dam in the Canton of Valais and wind turbines in Martigny (see photo 1).

By jointly investing in energy production facilities: the **"Zusamme Solar Colmar" project to build photovoltaic power plants (France-Germany),** installing solar panels on the roofs of industrial buildings in Colmar (see photo 2).

To find out more about these examples and view other project factsheets, visit the MOT's website: http://www.espaces-transfrontaliers.org/en/resources/projects/ (topic "Energy")

1 **Espace Mont Blanc, Emosson hydroelectric dam –** constructed in 1973, the dam which is fed by French and Swiss waters, produces 870 GWh a year.
© Photo Andrea Alborno, photo reportage carried out within the framework of the Espace Mont-Blanc cross-border integrated plan (PIT) under the ALCOTRA programme 2007-2013.

2 **Zusamme Solar Colmar –** Four photovoltaic solar roofs have been fitted on industrial buildings in Colmar, thanks to cooperation between two citizen-led energy cooperatives, one French and one German.
© Zusamme Solar Colmar

1 Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32009L0028&from=EN

»»

The development of local production can benefit a cross-border territory that shares the same needs, in particular by overcoming supply difficulties in rural or isolated areas (e.g. islands, outermost regions).

Connecting up border region energy networks and the use of cross-border "smart grids" make it possible to better meet the population's energy needs without investing in additional production: **example of the Franco-German Smart Border Initiative project** (see page 14). Efforts in terms of research and development can also be shared, furthered/enhanced by the methods and advances in the neighbouring country; and above all the financial investment for this research can be pooled, as in the example of the research and development programme on marine renewable energies **"From Seanergies to Seanergy" on the Franco-Spanish border.**

Cooperation can contribute to the emergence, beyond different national cultures, of a European approach to the global common goods that are energy and climate.

Table-top energy game developed by the researcher Frank Pierie from Hanze University, Energy Transition Centre (EnTranCe), in Groningen, the Netherlands.

"LABORATORIES"

However, this cooperation faces numerous constraints. The cross-border dimension is a factor that adds to its complexity – as well as the usual technical, environmental and economic issues that territories have to address with respect to energy, in the cross-border context there are also specific regulatory, tax and legal issues.

While the European Union harmonises its energy policy by means of directives that set the same objective for its members but leave them the choice as to the means implemented to achieve it, national regulations differ and come up against one another in cross-border territories.

It is necessary to coordinate these regulations here in order to encourage and make possible cooperation between neighbouring territorial authorities in this area.

In their role as laboratories for new initiatives, cross-border territories must be at the forefront of projects to be disseminated Europe-wide.

TOOLS TO BE UTILISED

Cross-border projects can make use of different tools:

- Incentive schemes put in place by national policy (eco-neighbourhood label, "Positive Energy Territories")
- Governance tools (agreements, EGTCs, etc.) and technical assistance and/or financing tools (such as the Banque des Territoires and the Commissariat Général à l'Investissement at national level in France);
- European programmes: European Structural and Investment Funds (ESIF) and sectoral programmes
- The ECBM[1] proposed by the European Commission for the post-2020 period.

These tools are being expanded in order to respond to the obstacles encountered at local level, and because fighting climate change and creating jobs in the different sectors of the green economy are priorities on the political agenda.

Although setting up cross-border cooperation in the field of energy is complex, given the benefits it provides in terms of services, the economy and jobs, it merits to be taken into account in territorial energy planning and in the business policy of border region players.

DIFFERENT LEVELS OF STAKEHOLDERS:

- **At the local cross-border level:** territories on either side of a border invest in cross-border projects that contribute to combating climate change;
- **At the transnational level:** countries cooperate to connect up and develop a trans-European energy network (TEN-E), and support the expanded use of renewables (opening up national calls for tenders to neighbouring countries); the macro-regional level (example of EUSALP[2], or maritime basins such as the Atlantic or the Mediterranean) is relevant for this issue;
- **At the interregional level:** European territories share their good practices in the area of the energy transition.

1 Mechanism to resolve legal and administrative obstacles in a cross-border context.

2 EU-Strategy for the Alpine Region.

GOOD PRACTICES

Sharing experiences to develop appropriate solutions

For the energy transition to be successful in the cross-border context, it is necessary to combine the efforts of players on either side of the border. Coordinating their initiatives and sharing good practices contribute to the emergence of new solutions.

GOOD PRACTICE 1

TRION-Climate – an active network in the Upper Rhine

Set up after the success of an Interreg IV project aimed at making the cross-border region a model in terms of the energy transition, TRION-Climate is a trinational network dedicated to the cross-border exchange of knowledge, experience and good practices, in order to accelerate the energy transition and protect the climate in the Upper Rhine region.

TRION-Climate is a platform designed to enable coordination between players from the political, economic and scientific spheres and from civil society on either side of the Rhine, in order to build appropriate cross-border synergies.

PARTNERS

Seven territorial authorities launched the network in 2015:
– the Länder of Baden-Württemberg and Rhineland-Palatinate;
– the Grand Est Region and Bas-Rhin Department;
– the Cantons of Basel-City, Basel-Country and the Jura.

Since it was set up, the network has expanded to include many institutions, towns and companies. It now has over 80 members.

ACTIVITIES

– Organising events on the topics of energy and climate.[1]
– Publishing comparative studies; promoting projects and exemplary facilities.[2]
– Organising technical training and visits to sites such as eco-neighbourhoods and sites producing renewable energy.
– Participating in regional energy fairs.

Through its activities, the TRION-Climate network encourages cross-border exchanges aimed at sharing technical knowledge and promoting good practices, in order to accelerate the energy transition and protect the climate in the cross-border region and beyond.

More info:
www.trion-climate.net
info@trion-climate.net

1 Renewables, energy storage, geothermal projects, energy performance of buildings, green modes of transport, local protection of the climate and adapting to climate change, etc.

2 On a bilingual interactive map of good practices designed to be emulated across Europe.

The TRION-Climate stand at the "GETEC Construction-Energy" fair in Fribourg, in February 2017.

© TRION-Climate e.V.

GOOD PRACTICE 2

The PASSAGE project: European straits in transition

To accelerate the transition to a low-carbon economy, the PASSAGE[1] project was launched in May 2016, within the framework of the European programme "Interreg Europe". It grew out of a broader cooperation project – the European Straits Initiative.[2]

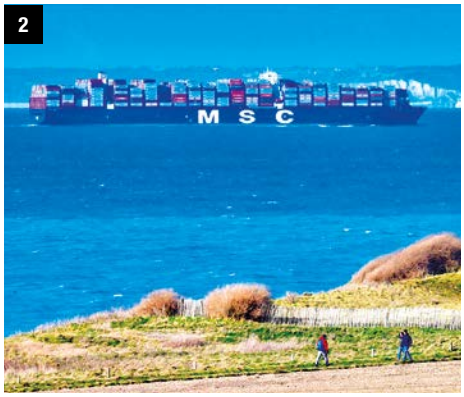
Its aim is to design and implement cross-border action plans to accelerate the low-carbon transition in five European straits. Eleven partners from eight European countries participate in this project.[3]

By virtue of their specific geography, European straits are spaces where many flows and economic activities take place (port and industrial economies, fishing, logistics, etc.) that generate considerable CO_2 emissions, with an impact on climate change.

The aim of the PASSAGE project is to find cross-border solutions to reduce the carbon footprint of European straits and to stimulate new initiatives that support the energy transition.

In addition to reducing carbon emissions, the project aims to promote cross-border coordination along maritime borders:

- **An integrated approach to cross-border environmental issues** makes it possible to take advantage of the sea's potential in the low-carbon transition, as well as to encourage the emergence of innovative and competitive initiatives.
- **Sustainable development** helps to make straits attractive over the long term and to improve the quality of life of the local populations.
- **Understanding the mechanisms at work** at the level of a cross-border area enables it to speak with one voice to make the concerns of the territory heard.



ACTIVITIES

- **An initial phase** (from April 2016 to March 2018) focused on exchanging experiences in the course of nine seminars; carrying out assessments of the situation in each strait (study of carbon emissions across each strait); drawing up cross-border action plans that include concrete actions for the energy transition in each strait.
- **The second phase** (from April 2018 to March 2020) is focused on implementation of the action plans.

More info:
www.interregeurope.eu/passage
europe.partenariats@pasdecalais.fr

1 **The Port of Corfu,** Greece (Strait of Corfu).

2 **The Dover Strait,** between France and the United Kingdom.

© E. Desaunois

1 Public AuthoritieS Supporting low-cArbon Growth in European maritime border regions.

2 Initiative launched by the Pas-de-Calais Department and Kent County Council 2010, which now brings together 24 local authorities along 11 European straits, from the Baltic to the Mediterranean. To find out more: www.europeanstraits.eu

3 On the Dover Strait: the Pas-de-Calais Department (FR), lead partner, and Kent County Council (GB); on the Gulf of Finland: Helsinki-Uusimaa Regional Council (FI) and Harju County Council (EE); on the Fehmarn Belt: Fehmarn Development (DK); on the Corsica Channel: the Chambers of Commerce of Bastia, Haute Corse (FR) and Livorno (IT); and on the Otranto and Corfu Straits: Lecce Province (IT), the Vlora Region (AL), the Region of Ionian Islands and the association InnoPolis (GR).

GOOD PRACTICE 3

SEREH: a cross-border project of smart energy region at the German-Dutch border

Two border cities, Emmen in the Netherlands and Haren in Germany, decided to overcome the border in the domain of energy.
By the creation of Smart Energy Region Emmen Haren (SEREH),[1] both cities collaborate to implement energy transition in the cross-border region.

INCREASED INTEREST IN COOPERATING

Both cities have a very different energetic profile: while renewable resources cover 147% of the energy demand in Haren, the RES share of demand in much bigger Emmen is only about 10%. This significant gap offers a great opportunity for cooperation.
Construction of cross-border smart energy infrastructure using the medium voltage distribution grid might ensure that renewable energy produced in the region is distributed in an optimal way.

Since the locally produced energy is also used locally, the revenues remain in the region, boosting further investment and employment.

AMBITIONS

The ambitions of Emmen and Haren are high: **the two cities aim to make the cross-border region completely CO_2-neutral by 2050.** This can be achieved only through a multi-level cooperation, including city governments, companies and civil society. Besides a common transmission grid, installation of an innovative cross-border wind park is planned, contributing to sustainability of the "SEREH land".

More info:
https://emmengeeftenergie.nl/projecten/sereh/
energie@emmen.nl

1 "Smart Energy Region Emmen Haren" (Région de l'Énergie Intelligente Emmen Haren).

GOOD PRACTICE 4

PAMINA EURODISTRICT

The creation of a network of players in the territory of the PAMINA Eurodistrict led to the publication of a guide/brochure on the topic of renewable energies (see page 22).

In 2012, the Eurodistrict also coordinated a working group of the MOT's network on this topic (see page 23).

More info:
https://www.eurodistrict-pamina.eu/
patrice.harster@bas-rhin.fr

Vision of the future of the SEREH, including cross-border interconnection of energy networks.

© Gemeente Emmen

GOOD PRACTICES

An opportunity for economic development

The energy transition provides many opportunities for economic development in cross-border territories. The growth of innovative industries can be at the heart of cross-border regions' strategies for specialisation, creating economic activity and jobs on either side of the border.

GOOD PRACTICE 5

The Nouvelle Aquitaine-Euskadi-Navarra Euroregion's "specialisation strategy"

The Atlantic coast is characterised by its considerable exposure to ocean waves. **In the Nouvelle Aquitaine-Euskadi-Navarra Euroregion, the marine renewable energies (MRE) sector has great potential for development.**

It has even become a unifying project for the Euroregion, which wishes to take advantage of all of the possibilities for complementarities and cooperation in this area.

"BlueSare" project: creation of a Euroregional offer with respect to renewable marine energies.

Marine renewable energies are the key element of the Euroregion's innovation policy and one of the main components of its 2020 strategy.

STRATEGIC PROJECTS

Different partnerships aim to strengthen Euroregional cooperation in this area:

– An assessment of areas where there are marine wave energy resources was carried out as part of the **"WAKE" (Wake Energy Akitania-Euskadi) project,** led by the technology centre AZTI-Tecnalia and launched in 2013. This project has made it possible to explore the possible impacts and development opportunities of this sector.

– In order to create a network of the different players on either side of the border and to identify synergies, four workshops were organised as part of the **"From Seanergies to Seanergy" project.** These workshops prepared the "Seanergy 2016" conference in June

2016 in Biarritz, which provided an opportunity for businesses from the different regions to meet and for the sharing of experiences at a marine energy fair.

– The **"BlueSare" project** followed on from these projects from 2017. It aims to create a Euroregional offer with respect to renewable marine energies, and to position the Euroregion as the international benchmark in this sector, by developing the visibility of port infrastructure and technology platforms for local businesses.

The marine renewable energies sector is one of the main pillars of the Nouvelle Aquitaine-Euskadi-Navarra Euroregion's energy strategy.

The development of this Euroregional strategy was made possible by the coherence of the actions of institutions on either side of the border.

More info:
Nouvelle Aquitaine-Euskadi-Navarra Euroregion:
http://www.naen.eu/

GOOD PRACTICE 6

"Zero Emission Valley": a clean transport scheme for the whole region

Zero Emission Valley is a clean mobility scheme operating across the whole of the Auvergne-Rhône-Alpes territory. **Implemented by the Region and energy and transport majors,[1] it proposes to roll out simultaneously an infrastructure of production and hydrogen refuelling stations[2] and a fleet of 1000 light professional hydrogen-powered electric vehicles.**
The refuelling stations will be located in the main conurbations, to allow captive fleets to complete their journeys with the same autonomy as vehicles with an internal combustion engine.

A STRATEGIC AND AMBITIOUS ALLIANCE CREATING A NEW MARKET

Supported by the French Government (under the National Hydrogen Plan) and promoted by Europe within the framework of the European Interconnection Mechanism, this project gives concrete expression to the Region's political determination to develop a top-class hydrogen industry.

La Région
Auvergne-Rhône-Alpes

© Jean-Luc Rigaut

The Auvergne-Rhône-Alpes territory is home to most of France's hydrogen players, as well as key economic players in the transport and energy sectors. Thanks to its public-private governance with Michelin, Engie and Symbio, Zero Emission Valley is a true public service that encompasses the whole value chain needed for the creation of a sustainable, and profitable, mobility market. And this includes the setting up of the commercial structure, Hympulsion SAS, which operates the refuelling stations.

It is an ambitious scheme which is likely to attract other investors and which could be extended to include cross-border areas and additional categories such as heavy goods vehicles, and may give impetus to the energy transition in the Auvergne-Rhône-Alpes Region, and possibly beyond.

SIGNED BY:

Etienne Blanc
Vice-President in charge of finance, general administration, budgetary savings and cross-border policy, Auvergne-Rhône-Alpes Region

Eric Fournier
Vice-President in charge of the environment, sustainable development, energy and regional nature parks, Auvergne-Rhône-Alpes Region

More info:
Auvergne-Rhône-Alpes Region:
https://www.auvergnerhonealpes.fr/278-pour-une-filiere-hydrogene-d-excellence.htm

1 Engie, Michelin et Symbio - a subsidiary of the Michelin group.

2 20 hydrogen refuelling stations, 15 electrolysers.

GOOD PRACTICES

Planning the energy transition in the cross-border context

© Grand Genève

The France-Vaud-Geneva region, at the French-Swiss border.

Achieving the goals of the energy transition requires coherent planning that transcends the logic of national borders. Energy transition policies need to be based on functional cross-border areas and to bring together public, economic and civil society players in the territory concerned.

GOOD PRACTICE 7

Greater Geneva: "Cooperating to Succeed"

Greater Geneva constitutes a coherent cross-border territory, whose natural resources offer diverse potential sources of energy that need to be jointly explored, managed and promoted. Ensuring the success of the energy transition in Greater Geneva is naturally one of the objectives of the Greater Geneva Local Grouping of Cross-Border Cooperation (LGCC), a structure that brings together Vaudois, Genevan and French partners.

THE BEGINNINGS

The creation in 2015 of the "Communauté transfrontalière de l'énergie" (CT Energie – "Cross-Border Energy Community") enabled cooperation in order to gain a better understanding of the geothermal potential of Greater Geneva's subsoil: the organisation of joint prospecting campaigns and communication activities aimed at elected representatives and the local population. Another advance was a study commissioned by the CT Energie that explored the modalities for developing in France and Switzerland "village power stations" where photovoltaic solar energy would be produced, financed by citizens' savings. This contributed to the launch in November 2018 of the company "SAS CitoyENergie", which could become a cross-border undertaking.

AMBITIOUS PROJECTS

Air quality is also an issue of common concern for cross-border cooperation, and has been the subject of ambitious projects:

– **The "Grand Genève Air Modèle Emissions" (G²AME) project,** funded by the Interreg IV France-Switzerland programme, led to the design of an innovative tool to record and model air quality across the cross-border territory. It makes it possible to locate and quantify the sources and impacts of pollution; its cross-border dimension makes this initiative quite unprecedented.

– **The "PACT'Air" agreement signed in January 2018** sets out an action plan for air quality in Greater Geneva that focuses on three strategic areas: durably improving air quality; responding to peaks in pollution using common tools; and raising the awareness of the general public. The agreement contains 14 concrete actions, such as identifying and monitoring underperforming wood-burning heating systems, or the creation of a lane reserved for car-sharing at the border post in Thônex-Vallard. Funded by the Interreg V France-Switzerland programme, PACT'Air aims to meet the ambitious objectives set by the "France-Vaud-Geneva territorial project 2016-2030".

APPROPRIATION BY CITIZENS

Beyond the institutional momentum that has built up, the appropriation by citizens and participation of all of the players concerned remain a crucial prerequisite for the spread of the energy transition to the whole of the territory.
The Greater Geneva partners hosted the 19th edition of the European Energy Transition Conference in January 2018, with the theme "Cooperating to Succeed", presenting the example of a cross-border conurbation that is strongly mobilised to ensure cooperation between public authorities, economic players, the academic world and civil society.
This edition devoted a lot of space to actions aimed at raising the awareness of the local population: an "OFF" programme brought together over 4800 participants at nearly 90 events across the whole of the cross-border territory.

© Grand Genève

19th edition of the European Energy Transition Conference

This experience showed that, in order to develop an "energy transition culture" and for good habits to take root among citizens and in public policy, it is necessary to go beyond the usual framework of institutions and projects and to take better account of the dimension of users.
This energy transition culture must become a cross-border culture given that the issues in the shared territory naturally transcend the border.

Cooperation bodies, projects to improve air quality, events Europe-wide in their scope: Greater Geneva is constructing itself through the energy transition.

With the recent inauguration of its "cross-border greenway" and the forthcoming completion of the "Léman Express",[1] two major infrastructures that will transform the daily lives of its inhabitants, Greater Geneva serves as an example of cross-border planning of projects contributing to the transition to a low-carbon society.

More info:
http://www.grand-geneve.org

1 A cross-border regional rail service that will link Annemasse to Geneva and connect up the French and Swiss transport networks.

GOOD PRACTICE 8

The "mobility eco-bonus": towards a smart cross-border city

The intense use made of individual cars is the cause of traffic jams and high levels of pollution in cities. This is the case for many cross-border conurbations.

In order to reduce traffic on the most congested roads, the company EGIS has developed a new concept: the "mobility eco-bonus" or "positive toll".

© Grand Genève

THE "MOBILITY ECO-BONUS" APPLIED TO THE FRANCO-BELGIAN BORDER

The scheme is currently being developed in the Lille Franco-Belgian metropolis. The aim is to reduce congestion on the main route between Lille and Belgium by promoting individual responsibility: motorists who use this road every day will be encouraged, by a system of bonuses, not to use their cars at rush hour, opting instead for teleworking, public transport or car-sharing, or to delay their journey to a time when the traffic is less heavy.
The envisaged system of rewards for participating motorists can take different forms: vouchers, reductions in their monthly insurance premia or in the cost of maintaining their car, or travelcards for public transport.

A SCHEME TO BE EMULATED

The system was successfully tried out in Rotterdam in the Netherlands, and showed that after nine months of incentives, 40% of individuals who participate in the programme change their behaviour.
After the Lille European Metropolis, the scheme could be rolled out in other cross-border urban areas that have the same issue, such as the Franco-Luxembourg border or that between France and Monaco.

GOOD PRACTICES

Experimenting along borders

Along national borders, where energy systems meet one another, increased cooperation between operators is essential to join up Europe with interconnected networks and innovative projects that meet citizens' needs.

GOOD PRACTICE 9

The Smart Border Initiative: the "Smart Grids" solution

At the cross-border level, the transportation and distribution of electricity are becoming fields for cooperation and experimentation. It was in this spirit that the French and German governments decided to launch a joint initiative to identify and structure **cross-border cooperation in local energy optimisation:** the Smart Border Initiative (SBI).

The project concerns a cross-border area located between Lorraine (Grand Est Region) and Saarland. It covers a population of around 1 million inhabitants, including more than 100,000 cross-border workers.[1]

THE SBI PROJECT IS DIVIDED INTO THREE STRANDS:

1. **Studying technical solutions of the "smart grid" type** that can be implemented to contain the strengthening or development of distribution networks in cross-border settings, while at the same time facilitating an increase in the production of renewable energy. The study will make possible a cost/benefit analysis of this approach and the solutions that might be deployed.

ENEDIS
L'ELECTRICITE EN RESEAU

© Matthew Henry on Unsplash

2. **Developing a cross-border low-carbon mobility strategy,** taking account of the constraints of the electricity grid in order to determine the location of charging stations for electric vehicles. Electric vehicles should be regarded as sources of flexibility for the grid – vehicles' batteries can have the capacity to provide electricity to the grid when they are stationary, which is the case nearly 90% of the time.
3. **Determining the optimal uses of different energies,** particularly electricity and heat, to meet the objective of energy efficiency. The use of public electricity distribution networks needs to be optimised and the intermittent supply from renewable energies needs to be addressed.

The main partner on the French side is ENEDIS, the operator of the electricity distribution network across 95% of France's territory; the main German partner is INNOGY, a shareholder in Energis-Netzgesellschaft mbH, which is the distributor in the Land of Saarland.
It is primarily local authorities that are involved in the SBI project: the Sarreguemines Confluences Conurbation Community, the Saarbrücken Regional Community and the Grand Est Region. It is also a place of experimentation for many players from industry, such as Grid Solutions (a firm jointly owned by General Electric, Alstom and Siemens), as well as research institutes (EIFER, IZES gGmbH).

Because of its promising and innovative nature, the European Union has included the SBI project in the list of PCI projects (Projects of Common Interest). This status makes it eligible for European funding from the "Connecting Europe Facility".

SIGNED BY:

Michel Derdevet
Michel Derdevet, Secretary General and Member of Enedis's Executive Board

More info:
www.enedis.fr/smart-grids-reseaux-intelligents

1 Including Nancy-Metz-Thionville-Luxembourg in the project's scope.

DOSSIER

COOPERATING

IN THE AREA OF THE ENERGY TRANSITION: OBSTACLES AND SOLUTIONS AT THE LOCAL, NATIONAL AND EUROPEAN LEVELS

Contents

REMOVING OBSTACLES

« The obstacles specific to cross-border territories impede implementation of the energy transition. What kind of obstacles are there and how to overcome them?

LOCAL AND NATIONAL POLICY

« Legislative, regulatory and strategic documents at the national level propose many measures that apply to the cross-border context. How do the different levels of energy policy fit together in France?

FINANCING TOOLS

« The ecological and energy transition is a major area of intervention of the Banque des Territoires. Through its action, it helps to make territories more attractive, more inclusive, more connected and more sustainable.

THE EUROPEAN FRAMEWORK

« Cross-border initiatives are supported at the European level. What are the European Commission's political and financial instruments in the area of the energy transition?

Removing obstacles

The imperative of making societies transition towards low-carbon economies, sobriety, and resilience are facing many brakes. Specific additional obstacles emerge on cross-border territories. What kind of obstacles are there and how to overcome them?

These obstacles may be:

- **political:** States have sovereignty over their energy mix, as well as diverging visions on energy sources and on grid organization which collide at the border
- **legal:** normative systems come to confrontation in cross-border areas, despite a European framework which allows to harmonize many measures; asymmetrical institutional organizations on either sides of the border can complexify cooperation
- **economic:** diverging renewables support systems, and technical difficulties related to the border-crossing by grid operators create uncertainty among investors and delays for the projects.

© iStock

POLITICAL OBSTACLES

Energy is a shared competence between the European Union and its Member States, and according to article 194 of the Treaty on the functioning of the European Union, Member States retain sovereignty over their energy mix, and the European directives in this field have to be transposed at national level. This subsidiarity gives States a degree of flexibility to adapt the strategic framework and the objectives agreed at European level in their national energy culture.

© European Union 2015

Interconnection of European grids in a large energy market imposes a certain **concertation on energy policies** conducted by each State, because these have a direct consequence in terms of flows in grids and therefore side effects.

For example, the high production of electricity of renewable source in Germany, based on the level of production of the States (variable energy) and the market situation, enters mandatorily onto the grids (fatal energy) and must be exported in the neighbor country like France or Poland. The surplus electricity sent by Germany on the Polish and Danish grid thus created diplomatic tensions.[1]

That is why cooperation is essential between the grids regulators, carriers and national distributors of electricity and gas at European level and in the context of integrated regional markets (Baltic, Nordic market, Iberian market, etc.).

The European framework proposes a trajectory to low-carbon energy systems and a dense trans-European grid, **but States have different visions about the sources of energy** to favor (renewable, nuclear, gas,...) **and the grid organization** (centralized in France, decentralized in Germany).

For example, the mining regions (North Rhine-Westphalia in Germany, Silesia in Poland...) will have to be assisted in their coal phasing-out - the European platform for coal regions has been implemented for this purpose.

The European political narrative could also promote economic opportunities in the energy transition more, and encourage cooperation in research and innovation, as well as the formation of clusters of small and medium-sized enterprises in the areas of energy and the green economy, including cross-border cooperation.

LEGAL OBSTACLES

Legal obstacles are many in cross-border cooperation. **Member States adopt laws and regulations within a national framework, without necessarily taking into account the cross-border context.** In addition, the European directives provide a framework for a convergence of energy policies, but States remain sovereign in the transposition of these directives: new legal discrepancies are thus born.

– **To enable neighboring local authorities to cooperate on joint projects,** it is necessary to ensure a better transposition of the directives, but also to push Member States to change the law or to address legal discrepancies.
– **Cross-border territories can be pioneers in the harmonization of regulations** between the Member States of the EU, contributing to a better functioning of the internal market.

ECONOMIC OBSTACLES

Different support systems and technical difficulties at the border-crossing by grid operators create uncertainty among investors.

The innovative dimension of some cross-border projects and the related political or legal difficulties sometimes create delays, which make these projects less competitive in terms of costs.

For example, the **BIOGAS 2020** project has been undertaken as part of a Dano-Swedish-Norwegian research and development cluster on biogas and bio-methane for the transport sector: building infrastructure and developing vehicles is costly, and the existence of different systems of support to the development of this source of renewable energy in each State complicates administrative procedures and creates uncertainty for the investors.

Another example is the **SEREH** project (see page 9) of interconnection of the Emmen (NL) and Haren cities (DE) via a cross-border smart grid - interconnection costs and taxes are high. Furthermore, the crossing of the border by the electricity distribution operator - responsible for smart grids - is not possible, since it is the responsibility of the transport operator.

– **To remove these obstacles to cross-border investment,** fiscal differences or differences between the support systems could be harmonized or balanced. Project leaders can in the short-term initiate a dialogue with decision-makers in order to find solutions.
– **Cross-border territories must also be places of experimentation.** Technology is changing fast, but not the normative framework, and it is sometimes heavy and complex to make the whole national law evolve to open a possibility particular to cross-border contexts. This is the meaning of the Energy Governance Regulation in the Winter Package and the creation of a status of cross-border Projects of Common Interest in the field of energy.

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This article summarizes conclusions of the "Enhancing cooperation for renewables" project lead by the EU Office of the Heinrich Böll Foundation since 2016. These analysis and policy recommendations were addressed to the European institutions in a series of policy debates.

THE AMBITIOUS "UNION OF ENERGY"

The Union of energy, i.e. the large European energy market, is already very real with a trans-European electricity and gas grid that relies on interconnections on the borders - current or planned, because **the Juncker Investment Plan for Europe** has allowed the financing of many new interconnectors; but also with an ambitious political positioning of the European Union for the energy transition and the fight against climate change, relying on several packages of directives - package on climate and energy for 2020 ("package 2020"), climate and energy framework for 2030 and more recently a legislative package "Clean energy for all Europeans" (also known under the name of "Winter package"). See page 21.

1 https://www.zeit.de/wirtschaft/2011-11/stromnetz-ringfluesse/seite-3

Local and national policy – the French framework

At the national level, legislative, regulatory and strategic documents set out goals, action plans and tools dedicated to energy transition projects. Many measures apply to the cross-border context, although the neighbouring countries have their own documents drawn up in a national context or to transpose European objectives.

France wished to go further than the European framework. Since the adoption of the Energy Transition for Green Growth Act[1] in 2015, it has sought to pursue this dynamic in order to uphold the spirit of the Paris Agreement.

The new 2018 "Multiannual Energy Programme" (see box) is a strategic document that transposes the main political goals set forth in the Act – reducing the consumption of fossil fuels and ensuring a clear, fair and sustainable transition for all French people – into a ten-year action plan with milestones and dedicated tools.

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REDUCING THE SHARE OF NUCLEAR ENERGY TO 50% BY 2035

In France, 14 nuclear reactors will be shut down by 2035, notably the two in Fessenheim.

Many of France's nuclear power stations are in border areas: Fessenheim on the Franco-German border, Cattenom on the Franco-Luxembourg border, and Le Bugey on the Franco-Swiss border.

France's neighbours feel that this issue affects them, and the economic redevelopment of these territories should be looked at in a cross-border context, in order to create new, especially cross-border, dynamics. This is already being discussed for Fessenheim (see page 20).

40% OF RENEWABLE AND COMPETITIVE ELECTRICITY BY 2040

By 2030, it is planned in France to:
- increase photovoltaic power five-fold;
- treble onshore wind power;
- develop a new offshore wind power sector.

To do this, €71 billion will be mobilised over ten years to support renewable energies. These funds can be used for cross-border onshore wind power projects and photovoltaic projects (Zusamme Solar), but will be even greater for major offshore wind farm projects.
Cross-border cooperation in terms of connecting wind turbines to islands or the mainland will help to cut costs: supporting cooperation between network operators will reduce the number of undersea cables that need to be laid.

1 Act No. 2015-992 of 17 August 2015.

THE "MULTIANNUAL ENERGY PROGRAMME"

The "Multiannual Energy Programme", like the "National Low-Carbon Strategy" and the "National Plan for Adapting to Climate Change", which were formulated at the national level in France, lays down strategic guidelines with respect to energy and climate. Territorial authorities have to take account of these when implementing actions at different levels:
- that of "Regional Planning, Sustainable Development and Territorial Equality Plans", which can have a cross-border component;
- and that of "Territorial Climate Air Energy Plans", which are obligatory for conurbations of more than 20,000 inhabitants, but which are sometimes drawn up by authorities – or groupings of authorities – on a voluntary basis, as in the case of the Pyrenees-Mediterranean Euroregion.
This coordination is carried out by the DREAL[1], decentralised departments of the Ministry for Ecological and Inclusive Transition, and the decentralised network of the ADEME[2].

CROSS-BORDER TERRITORIES' ADAPTATION TO CLIMATE CHANGE

While it is obvious that the energy transition is necessary to reduce the effects of climate change, the idea that it requires taking adaptive measures to make territories more resilient to the risks associated with climate change, is less so.

Managing energy consumption, developing lower-carbon energies and increasing energy efficiency constitute the three major strands of the energy transition. However, this new energy model will only be resilient over the long term if it takes account of the impacts of climate change.

It is in this perspective that France's National Low-Carbon Strategy and National Plan for Adapting to Climate Change are currently being revised.

The impacts of climate change do not recognise borders and one country's situation can affect that of its neighbours. This means that systems of observation and knowledge management need to be strengthened in order to identify cross-border vulnerabilities, as well as to increase territories' capacity for adaptation.

That is why, under the future National Plan for Adapting to Climate Change[3], measures include:
—developing and improving knowledge about the impacts on and vulnerability of cross-border areas and their data observation, collection and management capacities;
—and promoting convergence between neighbouring countries regarding their strategies, climate plans and national and regional legal and technical legislation and regulations.

Cross-border cooperation projects in the area of adapting to climate change are already emerging:

The **GoApply** project[4], launched in 2016, is emblematic. Funded by the Interreg Alpine Space programme, it brings together 18 observers in six countries (including France) around common challenges with respect to multidimensional governance of adaptation: implementation of adaptation projects at different territorial levels; incorporation of adaptation into sectoral policies; increasing the involvement of local, regional and civil society players.

This article was written after the announcement of the Multiannual Energy Programme; it may therefore be subject to modification following public debate.

Text written with the participation of the National Observatory on the Effects of Climate Change and the Ministry for Ecological and Inclusive Transition.

1 Directions régionales de l'environnement, de l'aménagement et du logement (Regional Directorates for the Environment, Planning and Housing).

2 Agence de l'Environnement et de la Maîtrise de l'Energie (France's Environment and Energy Management Agency

3 2017 Annual Report of the National Observatory on the Effects of Climate Change, *Vers un 2e plan d'adaptation au changement climatique pour la France, Enjeux et recommandations* (Towards a second plan for adapting to climate change in France – issues and recommendations). Available at: https://www.ecologique-solidaire.gouv.fr/sites/default/files/ONERC_Rapport_2017_vers_PNACC-2_Web.pdf

4 Projet GoApply, *Interreg Alpine Space*. See: http://www.alpine-space.eu/projects/goapply/en/home

Solar panels in Courmayeur (Italy), Espace Mont-Blanc.

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Financing tools

THE BANQUE DES TERRITOIRES: TECHNICAL AND FINANCIAL TOOLS FOR SUSTAINABLE TERRITORIES

In order to tackle territorial divisions, la Banque des Territoires (BDT) aims, through its action, to help make territories more attractive, more inclusive, more connected and more sustainable.

To do this, it supports local players through three combined approaches:
– **Advising:** the BDT offers its own technical assistance and/or technical assistance loans in order to support them in the formalisation and structuring of their projects
– **Financing:** the Caisse des Dépôts/BDT provides tailored financing to local projects, whether in the form of loans, equity investment or banking services
– **Operating:** the BDT acts on its own behalf and on behalf of the French Government within the framework of certain mechanisms under France's "Future Investment Programme"

The issues of the environment, energy, mobility and urban planning are at the heart of territorial development, and the ecological and energy transition are in effect a major area of the Banque des Territoires' intervention.

Its activities take place within the framework of France's "Grand Investment Plan", for which it mobilises innovative mechanisms from its own resources (intracting, energy performance partnership market) and a specific loan known as "AmBRE".

The energy transition is at the heart of the projects developed or supported by the BDT, notably in the form of equity investment, technical assistance and deposits.
Examples of upstream technical assistance for projects are:

The BDT assisted with the structuring of the post-Fessenheim territorial project, two of whose major components are the transition to a new energy era and the development of an innovation model for the industries of the future, in collaboration with the neighbouring German territories.

Territoires Conseil, the BDT's free advisory service, supported the Basse Zorn Community of Municipalities in the Bas-Rhin Department in promoting short local supply chains in the consumption and sustainable purchasing sectors, developing a secure network of finely landscaped cycle paths, and reducing waste at events organised in the territory.

Through this approach, the BDT notably supports the production of renewable energies, the setting up of energy production and storage networks, the energy efficiency of public buildings and sustainable mobility.

In terms of its equity investments, the BDT provides support to the TRION-Climate network in the Upper Rhine – an exemplary network with respect to the energy transition (see page 7).

In terms of financing, Croissance Verte ("green growth") loans were granted for cross-border projects: financing of €9 million for the extension of line D of the tramline from Strasbourg to Kehl; financing of €6 million for the extension of line 3 of the Basel tram system to Saint-Louis railway station.

More info:
https://www.banquedesterritoires.fr

© Basel Trinational Eurodistrict

Financially supported by the Caisse des Dépôts/BDT, the extension of the Basel tram system to Saint-Louis railway station on the French side of the border was inaugurated in December 2017.

The European framework

The European framework is favourable to cooperation. What are the European Commission's political and financial instruments that support cross-border initiatives in the area of the energy transition?

POLICY INSTRUMENTS

- **"Cooperation mechanisms"** were introduced by the *Directive 2009/28/EC on the promotion of the use of energy from renewable sources*[1]. It gives a framework for statistical transfers, joint projects and support schemes between Member States[2].
- **2020 Climate and Energy Package and 2030 Climate and Energy Framework** represent a set of binding climate and energy targets to be met by 2020 and 2030 by all Member States.
- **Macro-regional strategies** propose a policy framework to build sustainable development strategies, e.g. for the Alpine Region or the Danube Region
- **"High level groups in the area of infrastructures"** constitute a useful framework to enhance regional cooperation and facilitate realization of cross-regional infrastructure projects[3].
- **"Projects of Common Interest"** are cross-border infrastructure projects linking the energy systems of different Member States. The objective is to simplify procedures of permitting and financing through the TEN-E regulation[4].
- **"Clean Energy for All Europeans" Package and Governance Regulation propose** the logic of "local energy communities" that can be applied to cross-border smart grids.

FINANCIAL INSTRUMENTS

The EU provides several financial mechanisms to facilitate cross-border projects:

- **ERDF programme for cross-border cooperation (Interreg)** can finance cross-border projects in the domain of energy transition.
- **Sectorial programmes and specific measures of financing,** such as Horizon 2020 for research and innovation, Connecting Europe Facility for promoting growth through financing frameworks for investment in transport (Trans-European Transport Networks, TEN-T) and energy (Trans-European Energy Networks, TEN-E), or "European Energy Efficiency Fund" (eeef), facilitating partnerships and investment for small scale renewable energy projects.
- **Investment Plan for Europe ("Juncker Plan")** provides funding for projects contributing to European objectives of smart, sustainable and inclusive growth.

More info:
https://ec.europa.eu/energy/en/home

1 They were strengthened by the recast of the *Renewable Energy Directive* agreed on 2018

2 E.g. cross-border PV-auctions between Germany and Denmark

3 E.g. Central and South Eastern Europe Energy Connectivity (CESEC) or Baltic Energy Market Interconnection Plan (BEMIP)

4 E.g. Northern Seas Offshore Grid.

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8 Cross-border issues.

The MOT's Activities

IN THE AREA OF THE ENERGY TRANSITION

— 2019:

Facilitation of a workshop on cross-border cooperation at the 20th European Energy Transition Conference in Dunkirk.

— 2018:

Participation in the Franco-German-Polish European platform for reflection on a fair energy transition: case studies on the energy transition in regions that are economically dependent on coal in Poland, the automotive industry in Germany and nuclear power in France.

— 2018:

Facilitation of a workshop on cross-border cooperation for adapting to climate change in West Africa, at the 19th European Energy Transition Conference in Geneva.

— 2017-2018:

Production of a study for the OECD on cross-border projects on adapting to climate change in West Africa.

— SINCE 2017:

Participation in the steering committee for the European Energy Transition Conference.

— 2016-2017:

Participation in the "International Action" working group led by the National Observatory on the Effects of Climate Change and the European and International Affairs Directorate of the Ministry for Ecological and Inclusive Transition (France); drafting of recommendations for the "Second National Plan for Adapting to Climate Change" ("Action" factsheet on cross-border territories).

— 2016-2017:

Participation in the project "Driving regional cooperation for renewables" in partnership with the Europe Office of the Heinrich Böll Foundation: a series of conferences, a study tour to the North Sea region and the sharing of experiences helped to formulate political recommendations to facilitate cross-border projects in the area of the energy transition, and to submit them to the European Commission.

— 2012-2014:

Coordination of an "Energy" working group of the MOT's network, in partnership with the PAMINA Eurodistrict.

www.cross-border-territories.eu

THE REFERENCE WEBSITE ON CROSS-BORDER COOPERATION

The resource centre:

- 180 border and territory factsheets
- 32 cooperation topics
- 750 project factsheets
- 170 maps
- news and events
- reserved for members – press articles (12,500 articles currently in French), a legal repository and a documentary repository comprising over 4,300 documents.

Resources on energy just a click away:

The "Energy" section of the website gives access to all of the resources indexed on this topic (project factsheets, maps, topical articles, press articles, etc.).

More info:
http://www.espaces-transfrontaliers.org/en/ressources/themes/themes/theme/show/energies/

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