

## Action plan - Brittany

### Introduction

#### Brittany's energy policy: general background

Climate change, energy and air quality are among the key challenges facing us in the 21st century. Today, our societies have to cope with the effects of dramatic climate change, diminishing fossil and fissile fuel energy reserves and the need to guarantee air quality.

The **Regional climate, air and energy program (SRCAE)** was adopted in 2013 to confront all these complex challenges and define regional objectives for the fight against climate change up to 2050. The SRCAE program, taking into account Brittany's specific situation, is the interface between the major international and national policies defining the general framework for the fight against climate change, and local operational policies.

Brittany's position as a peninsula located at the far end of the electricity network (and therefore potentially vulnerable to power shortages) have prompted the region's key players to turn this weakness into an asset. The Brittany Region has therefore used the climate, energy and air quality issues to engage the local economic players and kick-start its "green growth". Sea-related activities (ship building, fishing, marine energies, etc.) and agriculture are Brittany's two key economic sectors. They are therefore central to the **Regional Economic Development, Innovation and Internationalization Strategy (SRDEII)** and prompted the emergence of the "*Glaz economy*" concept ("glaz" meaning "green and blue" in Breton).

The *Glaz economy* concept, adopted on 13 December 2003, includes the so-called "**S3**" (**Smart Specialization Strategy**) approach. This was approved by the European Commission and aims specifically to support innovation in seven Strategic Innovation Areas, at the intersection of Brittany's key economic sectors. The SRCAE and the *Glaz economy* have, in particular, identified smart energy systems, combining digital systems and energy, as a solution that can enable Brittany to achieve its energy transition objectives, leading to the adoption of a **Smartgrid roadmap for Brittany** under the S3 strategy in 2014.

The Brittany Region has demonstrated its commitment to achieving its objectives *via* the **SMILE (Smart Ideas to Link Energies)** large-scale smartgrids project, that is jointly managed with the neighboring *Pays de la Loire* Region and monitored by the Economy and Environment Ministries. The North-West of France has therefore become the leading area for the deployment of such technologies and services. The two Regions co-chair the SMILE smartgrids association (which includes 220 public and private sector partners) and fund the service offer available to the industrial players, SMEs and start-ups who are members of the SMILE smartgrids association and to other project leaders.

The Brittany Region is the authority responsible for managing ERDF (European Regional Development Fund) funding and therefore implements this renewable energy development and use support strategy by deploying smart energy systems. This strategy aims to make **renewable energy production more efficient and robust**, in tune with the objectives of the ERDF Operational Program 2014-2020, and **to implement smart energy systems that will be able to secure electricity supply** alongside the traditional power stations.



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### [Brittany Action Plan contents in brief](#)

In order to meet the needs identified at the regional level and to implement its energy strategy, the Brittany Regional Council will implement and monitor the following actions:

**Action 1 - Launch and evaluation of a call for proposals for energy storage and conversion**

**Action 2 - Launch and evaluation of a call for proposals for collective self-consumption projects**

These calls for proposals are launched under several programs:

- The ERDF Operational Program 2014-2020, axis 3 “*Supporting the energy and environmental transition in Brittany*”, objective 3.1: “*Increasing renewable energy production in Brittany*”, action 3.1.1. “*Supporting the development of renewable energy production and distribution capacity in Brittany*”.
- The Electricity Pact for Brittany 2010-2020, which has enshrined Brittany’s commitment to achieving secure energy supplies via the SMILE smartgrids project and the large-scale deployment of smart energy systems.

The **interregional learning process undertaken within the SET-UP project** with the five other partner regions have confirmed the strategic directions identified by the Regional Council and helped to fine-tune the approaches and contents of these calls for proposals.

The project has provided an opportunity to confront different approaches, exchange experiences and share knowledge, thus broadening the perspectives and feeding into or accelerating the definition of

new regional initiatives. These exchanges have also provided a major source of information to help us better understand and better plan future energy needs in Europe, assess future prospects for the smart grid market and adjust the Region's economic and strategic policies accordingly. Finally, SET-UP has established a network of partners, facilitating access to further cooperation opportunities that will benefit the regional ecosystem as a whole.

**The SMILE association's expert groups**, which include all the regional energy players and acted as stakeholder groups in the SET-UP project (i.e. LETS), will be involved in the examination of applicants under the calls for proposals.

**The total budget allocated to these calls will be in the region of €4-6 million (ERDF).** It should be noted that this budget was originally earmarked for marine renewable energy (MRE) development projects. However, during the second half of 2017 a special regional fund was dedicated to MRE projects, and it was decided to redeploy the remaining ERDF budget to support smart grid development projects. This change affects the performance indicator defined in the application form, which has been reduced from the initial objective of 25 MW of additional renewable energy production capacity, to an expected objective of 6-10 MW.



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## Action Plan

### Part I – General information

Project: **SET-UP**  
 Partner organisation: **Regional Council of Brittany**  
 Other partner organisations involved: **Bretagne Development Innovation (Lead Partner)**  
 Country: **France**  
 NUTS2 region: **FRH0**  
 Contact person: **Maximilien Le Menn**

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- phone number: **+33 2 22 93 98 72**

### Part II – Policy context

The Action Plan aims to impact:

- **Investment for Growth and Jobs programme**
- European Territorial Cooperation programme
- Other regional development policy instrument

Name of the policy instrument addressed:  
***Investment for Growth and Jobs Programme ROP 20142020, Axis 3 Supporting ecologic and energy transition, Objective 3.1 Increase energy production in Brittany, Action 3.1.1 Improving RES production and distribution capabilities in Brittany***

### Part III – Details of the actions envisaged

#### **ACTION 1 - Launch and evaluation of a call for proposals for energy storage and conversion**

##### **1. Context**

The variable or intermittent nature of renewable energies (RE) currently represents one of the major drawbacks slowing down their development. One of the answers is **energy storage, which can provide an opportunity** to increase the economic potential of renewable energies by diversifying their markets and open up the possibility of 100 % renewable energy production.

This Call for Proposals (CfP) was originally designed to support the development of storage solutions in order to enable renewable energies to eventually replace traditional fossil fuel (gas or coal) or nuclear power plants. Discussions within the framework of the SET-UP project led to the scope of the CfP being widened to include the **diversification of renewable energy value creation channels** through mobility and industrial process uses (e.g. ultra fast electric vehicle charging systems, “power to gas” or renewable hydrogen systems).

This shift from smart *electricity* systems to smart *energy* systems was defined a) thanks to **access to actual cases of storage system use** in the SET-UP partner regions and b) **by increased visibility on the deployment prospects** for these solutions, based on project partner analysis.



As part of this interregional learning process, the bilateral meeting we had with our Advisory Partner Regen (in December 2017) demonstrated the full economic potential of various energy storage technologies such as batteries, hydrogen, etc. The process also enabled us to discover the main storage system innovation support schemes in place in the UK, for instance the *Electricity Network Innovation Competition*, *Innovate UK Innovation Competitions*, and the type of projects they support. Another case study was presented during the [Smart City Malaga](#) visit in February 2017, illustrating the deployment of infrastructure to make use of electric vehicle batteries to provide mobile storage capacity (via a *vehicle-to-grid* service).

The *parallel workshop* organized under the [Lithuania project meeting](#) in April 2018 also provided an opportunity to undertake a collective analysis of the issue and to understand the importance of defining usage-based solutions.

As a result of these exchanges, **a new technological requirement, i.e. energy conversion**, was added to the CfP project eligibility criteria. This additional requirement will extend the range of target technologies and allow proposals to explore new renewable energy value creation channels, while designing solutions that are best suited to regional needs and resources (as with the [Local Energy Loop](#) approach that Brittany has already adopted).

## 2. Action

### A. Launch of a call for proposals for energy storage and conversion

*Title:* Call for proposals for large-scale renewable electricity storage and conversion projects.

ERDF call for proposals aimed at businesses, project-based enterprises, semi-public companies or local authorities. The CfP will fund 3 to 4 projects with a total budget of €2-3 million covering 40 to 60% of the project costs.

*Type of projects expected:* industrial pilot projects for operational use. These projects will be based on original business models, focusing on large-scale renewable energy storage or release, and aiming for industrial-scale operational use.

### B. Impact assessment

*Expected impact* (at the regional and local level): In the medium-term, the supported projects will be expected to showcase the region's industrial know-how at the international level and the importance of exemplary public-private partnerships for regional and local development. The projects will highlight the validity of a business model in terms of dissemination and scalability, in order to meet the long-term objective of substituting renewable energies for fossil-fuel and nuclear energies.

*Methodology:* The following criteria will be taken into account when measuring regional and local impact: the project's potential for replication and structural dissemination at the regional level; the innovative nature of the project; its economic and technological fallout; its carbon footprint. The above criteria will be applied during the initial selection process. A final performance analysis will be applied to the process (to analyze the expected projects/actual implemented projects ratio) and to measure how it has met the economic and environmental challenges defined (RE production capacity, creation of new markets).

## 3. Partners involved

The Regional Council of Brittany is the key player involved in this action. The Council benefits from the support of Bretagne Development Innovation, lead partner of SET-UP and coordinator of the

Smile project. The application assessment process may also involve the SMILE association's technical and scientific expert groups.

#### **4. Schedule**

Preparation of the CfP: April 2018 – October 2018; Presentation of the CfP to regional and local players: October-November 2018; Launch of the CfP: February 2019; CfP closing date: once the available budget has been entirely exhausted; deadline for the implementation of funded projects: 2023; Assessment: interim report: 2020; final report: 2023.

#### **5. Costs**

Total CfP budget: €2-3 million

% full-time position for preparation of the CfP (ERDF technical support)

#### **6. Funding source:**

FEDER – PO Axis 3.1 (subsidy)

## **ACTION 2 - Launch and evaluation of a call for proposals for collective self-consumption**

### **1. Context**

Developing local “self-consumption” loops is an alternative to the development of current renewable energy models, by using distributed networks, **sharing energy between different sites with complementary consumption profiles**. Such loops allow production to be more suitably adapted to consumption, and can also encourage consumers to be more responsible or even more engaged through their energy uses.

The aim of this call for proposals is therefore to support the development of PV solar production capacity through the implementation of models based on shared collective self-consumption between buildings.

Collective energy self-consumption is an emerging model. The West of France is considered to be in the vanguard with regard to this type of self-consumption, situated half way between individual autonomous self-consumption models and centralized national networks. However, as this is a relatively recent model, **the efficiency of the different economic models still needs to be assessed** according to the users taking part in the projects.

Against this background, SET-UP has offered an interregional setting which allowed the Managing Authority to discuss the issue with all the partners and confirm the solution chosen.

Brittany has **undertaken benchmarking** with other regions throughout the project, in order to better understand the state of the art, the legal framework and the way other regions have addressed this issue. This has been made easier by the analysis of all the various elements required to define a business model for energy self-consumption (based on the *business model canvas*), that took place during the [project meeting in Hungary](#) (July 2017) involving all the project partners.

Among the examples of **good practice**, the [Self-consumption legislation](#), presented by AREAL (PT) at the project meeting in Andalusia (Feb. 2017), illustrates a different approach based more on individual self-consumption, but confirms a new interest in the introduction of innovative solutions to favor decentralized energy production.

More generally, **two main trends** have emerged: a) the need for greater consumer engagement in the implementation of smart grid solutions in the region; and b) interest for supporting initiatives that encourage the development of local markets and networks.

These results have confirmed the Regional Council’s decision to support decentralized energy production means at the local level, in particular *via* this call for proposals.

### **2. Action**

#### A. Launch of a call for proposals for collective self-consumption

*Title:* Call for proposals for collective self-consumption projects

The ERDF call for proposals is aimed at project-based enterprises (i.e. Energy management companies and operators involving public and/or private bodies), semi-public companies or local authorities, companies, or publicly-funded agencies. The CFP will fund approximately 10 projects (according to the number of proposals) for a total budget of €2-3 million.

*Type of projects expected:* Industrial pilot projects for operational use. These projects will involve local cross-site energy sharing collective self-consumption loops (e.g. between residential buildings, offices and schools). The call for proposals will support investment projects (e.g. in dynamic management, sub-metering, REN production, or storage systems) and any technical and economic feasibility studies that might be required.

## B. Impact assessment

*Expected impact* (at the regional and local level): In the short term, supported projects will favor the rapid extension and deployment of PV panels (with the corresponding RE production) and alleviate the burden on the network; in the medium term, the projects will confirm the appropriate business model and the model for local community benefits and cooperation between all the players involved.

*Methodology*: The following criteria will be taken into account when measuring regional and local impact: the project's potential for replication and structural dissemination at the regional level; the innovative nature of the project; its economic and technological fallout; its carbon footprint. The above criteria will be applied during the initial selection process. A final performance analysis will be applied to the process (to analyze the expected projects/actual implemented projects ratio) and to measure how it has met the economic and environmental challenges defined (RE production capacity, creation of new markets).

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Total CfP budget: €2-3 million

% full-time position for preparation of the CfP (ERDF technical support)

### **6. Funding source**

ERDF – PO Axis 3.1 (subsidy)

**Date: 7<sup>th</sup> March 2019**