

S3 AND ENERGY

GOOD PRACTICE CASES

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IDENTIFICATION

Name of the good practice case

Arctic Smartness decentralised renewable energy solutions

Country	Region + NUTS code
Finland	Lapland, FI1D7

Level at which the good practice is implemented (select one dominant level)

National **Regional X** Local Interregional-international

Reference (website, documents)

<http://luotsi.lappi.fi/smart-rural1>

Organization in charge of the good practice case

Name: Arctic smart rural community cluster	Public authority <input type="checkbox"/> Economic and/or innovation agency <input type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary <input type="checkbox"/> Other X : Regional network
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Contact person: name, organization, email, telephone

Cluster manager Johannes Vallivaara, Arctic smart rural community cluster, Johannes.vallivaara@proagria.fi, +358 40 6845741

Energy topic (max. 3 choices)

Smart grids Sustainable Buildings Marine Renewable Energy **Bioenergy X** Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP)) Heating and cooling Wind power (onshore) Hydropower Geothermal energy Carbon Capture Storage and Use (CCS and CCU) Hydrogen & Fuel Cell Energy storage **Cogeneration / Combined Heat and Power (CHP) X** other Energy Efficiency (in Industry, Transport, Services...) Smart Cities **Other X : Self-sufficient farms/communities**

DESCRIPTION

Short summary of the good practice

The Arctic smart rural community cluster is actively working on decentralised bioenergy solutions in rural Lapland. The cluster is established as one implementation activity of the Arctic Smart Specialisation (S3) strategy. This strategy aims at sustainable utilisation of arctic natural resources. The goal of the cluster is to decrease dependency on fossil fuels and create local supply for sustainable production of biofuels, heating and electricity by refining the biomass from forest and non-food agriculture sources. With modern technology, an individual farm or a whole village can be transformed to become almost energy-independent with moderate investments.

Smart specialisation domain relevant for the good practice

Arctic Smart Rural Communities

Challenge addressed and targeted objective

The challenge is to increase the local biomass feedstock utilisation based on sustainable bioenergy production in the farms and villages of Lapland. Decentralised bioenergy production in rural area is framed within sustainable regional development and SME support activities; it aims at reaching self-sufficient energy production in communities (farmers, energy SMEs and public premises). This is seen as an efficient way to improve living conditions of members of rural communities. Local energy production creates a local market for biomass replacing

the consumption of fossil fuels, for which capital leakage from the communities is huge. Arctic smart rural community cluster supports a holistic model of circular economy including energy self-sufficiency and food production. Energy production consists of comprehensive utilisation of local resources and bio-based feedstock including forestry and farming residues. Higher value products are included in the value chain, but the biggest benefit (input-output ratio) for the community is achieved by producing biofuels, electricity and heating.

Innovation (max. 2 choices)

Technological Service Commercial **Managerial X** Public sector **Social X** System Other :.....

History: origin, definition phase, start and end

The cluster was initiated by ERDF project Arctic Smartness Portfolio in 2015 led by Regional Council of Lapland together with four other regional clusters. The coordination of clustering continued with Arctic Smartness Excellence ERDF project led by University of Lapland. Work started in Summer 2015 and in Summer 2016 the cluster earned the bronze label provided by European Secretariat for Cluster Analyses. Cluster development continues, and during 2017 the focus has been even more on enhancing the business interface. Integration and active participation of local SMEs has been successful and work continues during the second half of the year. The cluster aims at having new RES investments implemented in Lapland during the next couple of years.

Governance, stakeholders involvement and target groups

The cluster is led by a cluster manager Johannes Vallivaara. He holds years of experience in business development and financial consultation of rural business sectors in Lapland. He is supported by an expert from the Regional Council of Lapland, in charge of the regional development part and by another expert from the Applied Science University of Lapland, leading the knowledge development part. The cluster has a “decentralized energy” thematic group consisting of 26 members from business life, municipalities, educational organizations, and developers. The thematic group has created a Lapland’s decentralized energy program which is a strategic tool for development work in field of decentralized energy development. The cluster’s target groups are companies or people who are planning to establish a business in energy production or energy savings industry.

Stakeholders involved in implementation (multiple choices allowed)

Public authority X Economic and/or innovation agency Energy agency **Intermediary X** **Research actors X** Industry **SMEs X** NGO **Civil society X** Other :.....

Beneficiaries (multiple choices allowed)

Public authority X Economic and/or innovation agency Energy agency **Intermediary X** Research actors Industry **SMEs X** Start-ups NGO **Civil society X** Other :.....

Implementation

Cluster work is based on regional cooperation and strong coordination with all relevant stakeholders in the value chain, interested to develop the decentralized energy solutions. The cluster has solid operations on energy based regional programme of decentralised renewable energy solutions implementation. It also implements other initiatives such as the cooperation with the vocational institute Lappia in view of developing energy entrepreneurship in the environment of self-sufficient farm (biogas CHP, water treatment and plans for liquefied biogas refining process). In addition, communities’ understanding of the potential of decentralized renewable energy solution for the local economy has been increased. This has generated an interest to invest in new small production units.

Funding sources

The energy-related activities in the cluster are funded through local ERDF and EAFRD. In addition, energy-related initiatives have received funding from the Ministry of Agriculture and Forestry. Furthermore, each organization involved in implementing decentralized energy program has put own budget into the projects.

Public funding sources (multiple choices allowed)

ESIF To1 (research and innovation) X ESIF To4 (low carbon economy) X ESIF To7 (sustainable transport and network infrastructure) **ESIF other or ESF X** Interreg H2020 **National Funds X** Regional Funds Local Funds Other :.....

Results achieved

The cluster has achieved a status of trusted and successful partner in European cooperation. Wide interest around EU and wide recognition have led to a situation where strategic focusing plays a bigger role. Cluster had set clear standards for cooperation and the ultimate goal is to improve regional conditions and work with local SMEs in Lapland with European support. Local entities have been actively taking part to future planning and on-going activities like creating a decentralised renewable energy solutions programme for Lapland. Rural entrepreneurs in the communities and SMEs operating on bioenergy (heating mostly) have been interested in cooperation and the expectation is that this interest will be growing. Investment plans have been made for communities and financing potential has been mapped for several potential cases during the past two years.

Future perspectives

It is expected that rural communities will take ownership of their energy production to a larger extent than before thanks to this cluster cooperation model. Also, other parties outside of the cluster are interested to support the common goals of more self-sufficient Lapland in energy production.

HIGHLIGHTS

Most successful elements

Governance practices on regional level. Partners and stakeholders' willingness to cooperate comes naturally. Raw material availability and sustainability. Mapping data and knowledge has led to investments. SMEs network established and growing.

Most important difficulties

Sparse population causes long distances in Lapland. Lack of critical mass and skills to create mutual understanding and goals is challenging. With minimal resources need for focus and allocation is crucial but this can cause inefficiency and slow down the development due to varying opinions. Believing and understanding of real potential and attitude of taking ownership of development in the region has been a challenge for the communication around the rural communities.

Lessons learned

Cluster operations must be based on real needs of SMEs, especially needs of entrepreneurs who are capable of investing and growing their business based on arctic natural resources sustainably. Also, enterprises suffering from structural challenges, like limits of legislation when implementing decentralised RES, are in the focus of the cluster. Pilot investments have a crucial role. Leading the way as pioneer has to be taken account seriously in the region. Wide support for first investors of new business models. In practice, this means for instance securing the supply of biomass with regional cooperation activities and regional policy planning.

Ideas for transfer of good practice

Regional cooperation model for other rural and sparsely populated areas
 Governance of cluster and implementation for energy development
 Resource efficiency in existing pilot cases like Lappia vocational institute farm (CHP and water treatment etc.)

Type	Flagship project X Strategic programme <input type="checkbox"/> Funding programme <input type="checkbox"/> Infrastructure <input type="checkbox"/>
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	<p>Key actors Platform (for regional cooperation) X Interregional or International cooperation <input type="checkbox"/> Intelligence tool (measurement, analysis, foresight, evaluation...) <input type="checkbox"/> Awareness-raising <input type="checkbox"/> Other <input type="checkbox"/>:.....</p>
<p>Highlights</p>	<p>Relevance to national and/or regional energy strategy X Cross-domain interactions (R&D&I and energy) <input type="checkbox"/> Synergetic use of several funds X High impact potential X Civil society participation <input type="checkbox"/> Continuous Entrepreneurial Discovery Process <input type="checkbox"/> Inter-regional cooperation <input type="checkbox"/> Leading to private investments X Transferability of the practice X Monitoring system <input type="checkbox"/></p>

IDENTIFICATION

Name of the good practice case

Bidelek Sareak, Advanced smart grids

Country	Region + NUTS code
Spain	Basque Country

Level at which the good practice is implemented (select one dominant level)

National **Regional X** Local Interregional-international

Reference (website, documents)

<http://bidelek.com/en/>

Organization in charge of the good practice case

Name: Basque Energy Cluster	Public authority <input type="checkbox"/> Economic and/or innovation agency <input type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary X Other <input type="checkbox"/>
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Contact person: name, organization, email, telephone

José Ignacio Hormaeché. Basque Energy Cluster – Cluster de Energía del País Vasco.
jihormaeché@clusterenergia.com Tel +34 944 24 02 11

Energy topic (max. 3 choices)

Smart grids X Sustainable Buildings Marine Renewable Energy Bioenergy Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP)) Heating and cooling Wind power (onshore) Hydropower Geothermal energy Carbon Capture Storage and Use (CCS and CCU) Hydrogen & Fuel Cell Energy storage Cogeneration / Combined Heat and Power (CHP) other Energy Efficiency (in Industry, Transport, Services...) Smart Cities Other :.....

DESCRIPTION

Short summary of the good practice

Bidelek Sareak is a public-private partnership between the Basque Energy Agency (EVE) and the Spanish Distribution System Operator (DSO), Iberdrola Distribución Eléctrica, to improve the electric distribution grid and customer services by means of the development of advanced Smart Grid technologies and its deployment in both cities and towns. It is a real life project, complying with Smart Grids full functionalities, which is unique because of its scope, size, technical requirements and innovation.

Smart specialisation domain relevant for the good practice

Energy: 8+1 strategic areas (power electronics as key enabling technology) around 3 main value chains: offshore, smart grids and resource efficient manufacturing.

Challenge addressed and targeted objective

Electrical grids are increasingly complex systems that have to provide a service to a large number of consumers and need to absorb the production of distributed generation installations. Bidelek Sareak aims to deploy Smart Grids to increase the security and efficiency of the electric energy supply. In addition, this project has been a priority to position the Basque Country as one of the most advanced regions in the world in intelligent network infrastructures, both from the energy angle (savings and quality of service) and from the business point of view,

for its tractor role of the powerful Basque industrial sector which, with a high technological level, is competing in this area in international markets.

Innovation (max. 2 choices)

Technological Service Commercial Managerial Public sector Social System Other :.....

History: origin, definition phase, start and end

Bidelek Sareak has taken the EC Directive 2009/72/EC of the European Parliament, which states that 80 % of consumers shall be equipped with intelligent metering systems by 2020, as an opportunity to carry out a much more ambitious project to become an international reference Smart Grid project worldwide. To this end, a public-private collaborating scheme has been put in practice. The Basque Energy Cluster coordinated the Working Group with the DSO, electrical equipment manufacturers, research agents, engineering firms and service suppliers and the Basque Energy Agency (EVE) to set up a collaboration dynamics. The project was carried out between 2011 and 2016.

Governance, stakeholders involvement and target groups

The project stands on a public-private partnership between the Basque Energy Agency (EVE) and Iberdrola Distribución Eléctrica to develop advanced smart grid technologies. Iberdrola leads the Smart Grid Project from a technological perspective, to ensure that certain selected areas are recognized as reference areas on account of the quality and efficiency of their electricity grids, both on a national and international scale.

A Working Group of companies coordinated by the Basque Energy Cluster ensured the industry involvement in the project. Ariadna, Arteche, Elecnor, General Electric, Iberapa, Ingeteam, Mesa, Ormazabal, Pronutec, Schneider, Uriarte Safybox, ZIV and Tecnalía (Research Centre) have provided technological solutions to the project.

Stakeholders involved in implementation (multiple choices allowed)

Public authority **Economic and/or innovation agency** **Energy agency** **Intermediary** **Research actors** **Industry** **SMEs** NGO Civil society **Other** : **Distribution System Operator**

Beneficiaries (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary Research actors **Industry** **SMEs** Start-ups NGO **Civil society** **Other** : **Distribution System Operator**

Implementation

The following actions were carried out in order to deploy the smart power grid:

I. Smart meters. In the urban development area, the existing meters were replaced by new smart meters providing service to 410.000 inhabitants in the city of Bilbao and the nearby town of Portugalete.

II. Smart transformer stations. In the urban development area, transformer stations were configured with management, supervision and automation services.

III. New concept of transformer stations. In the rural development area, modular stations with a new concept were located in the towns of Aulesti and Lekeitio-Gardata and new smart grid services were deployed in existing substations in Ondarroa.

IV. Distributed generation. Medium voltage cogeneration plants and low voltage generation plants were integrated in the grid.

V. Development and implementation of new services and tools. These are deployed in order to allow an efficient performance of the grid and to provide information to the final user that allows to analyze the way they are

consuming their energy and how they can reduce their bills.

Funding sources

The total budget invested in this project is 60,000,000 euros, coming from private and public sources in the form of technology subsidies and loans. In addition to financial support, EVE contributed to the project with its vision and know-how on energy savings, energy efficiency and improvements in managing of energy demand for end users.

Public funding sources (multiple choices allowed)

ESIF To1 (research and innovation) x ESIF To4 (low carbon economy) ESIF To7 (sustainable transport and network infrastructure) ESIF other or ESF Interreg H2020 National Funds **Regional Funds x** Local Funds Other :.....

Results achieved

In short, this project has helped to boost the technological development of the Basque electrical industry and implement its technology in national and international markets.

The quantitative results are as follows:

- 407.179 smart meters were installed in the Basque Country to replace old ones
- 2.306 transformation centres with remote management, supervision and automation services were configured

132 electronic relays for overhead electric lines switchgear installed

- 3 fully automated high voltage rural substations were integrated.
- 500 secondary substations have been equipped with low voltage lines connectivity and advanced supervision systems.

Future perspectives

The next phase of Bidelek is currently being defined by a Basque Energy Cluster Working Group with the participation of Iberdrola, equipment manufacturers, research agents and public agencies in a 3 phases process:

- Mapping of products and services of the new Smart Grids value chain and analysis of global trends
- Identification of Challenges and Opportunities for the Smart Grids value chain in the Basque Country
- Definition of projects or actions to be developed within the framework of the Strategic Initiative Smart Grids .

HIGHLIGHTS

Most successful elements

From an economic and industrial point of view, this type of project has a very positive impact, not only because of the energy saving produced by better management of the networks, but also because it generates industrial activity and highly qualified employment. In this way, the Bidelek Sareak project is affecting the sector of power electronics in the Basque Country, a world leading sector, with numerous companies supplying the latest generation digital meters to the project and running the field work for the assembly of digital electrical systems. 95% of the project's investment has been contracted to supplying companies in the Basque Country.

Most important difficulties

Overcome by the public co-leadership:

- ❖ Vision of the Smart grids as a way towards Energy efficiency and demand response.
- ❖ Fostering the role of consumers and facilitating information about consumption.
- ❖ Financing of the Project and support to R&D projects.

Overcome by the private co-leadership:

- ❖ Technological leadership of the Project, setting the specifications, requirements and standards to comply with.

- ❖ Vision of the future electricity grids role and features.
- ❖ Fostering competition between suppliers, based on technical innovation and compliance with open standards and equipment interoperability.

Lessons learned

- The **leadership of the DSO** (Iberdrola) is a key factor in the deployment of the Smart grids: clear scope, technical requirements, financial and business case, execution planning.
- The Project has been oriented towards **innovative technologies** in collecting, monitoring and managing data for improving the quality of service and has focused on systems integration and **open standards**, to guarantee **interoperability** between different equipment and suppliers.
- **Private-Public partnership** has been important to foster consumer orientation (information and energy savings and efficiency) and for the financial contribution.
- The involvement of a **competitive supply chain** is key to guarantee the technological development of high level systems and equipment, the compliance with standards and open systems and the interoperability requirements.
- It is not only technology: the whole **Iberdrola Distribution** organization has embraced **the change**, and incorporated it to their daily work.

Ideas for transfer of good practice

Bidelek has benefited both consumers and electricity companies, as well as the sector's value chain in general. The grid's operation has improved and it has been modernised. The quality of the electricity supply has also improved thanks to the grid's ability to detect and isolate problems. It also enables consumers to manage their consumption and bills more efficiently. Bidelek has also promoted the integration of renewable energy, cogeneration and a charging network for electric vehicles on the grid. This initiative turns out to be an opportunity for the companies involved to reinforce their leadership in the field of technology and for the Basque Country to become a reference for Smart Grids solutions.

Type	Flagship project X Strategic programme X Funding programme <input type="checkbox"/> Infrastructure X Key actors Platform (for regional cooperation) X Interregional or International cooperation <input type="checkbox"/> Intelligence tool (measurement, analysis, foresight, evaluation...) <input type="checkbox"/> Awareness-raising <input type="checkbox"/> Other <input type="checkbox"/> :.....
Highlights	Relevance to national and/or regional energy strategy X Cross-domain interactions (R&D&I and energy) X Synergetic use of several funds <input type="checkbox"/> High impact potential X Civil society participation <input type="checkbox"/> Continuous Entrepreneurial Discovery Process <input type="checkbox"/> Inter-regional cooperation <input type="checkbox"/> Leading to private investments X Transferability of the practice <input type="checkbox"/> Monitoring system <input type="checkbox"/>

IDENTIFICATION

Name of the good practice case

BioBIP, Bioenergy and Business Incubator of Portalegre – Technology-based companies incubator in bioenergy

Country	Region + NUTS code
Portugal	Alentejo – PT186

Level at which the good practice is implemented (select one dominant level)

National <input type="checkbox"/>	Regional <input checked="" type="checkbox"/>	Local <input type="checkbox"/>	Interregional-international <input checked="" type="checkbox"/>
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Reference (website, documents)

www.biobip.pt (in Portuguese)
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Organization in charge of the good practice case

Name: Polytechnic Institute of Portalegre	Public authority <input checked="" type="checkbox"/> Economic and/or innovation agency <input type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary <input type="checkbox"/> Other <input checked="" type="checkbox"/> High Education
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Contact person: name, organization, email, telephone

Joaquim Mourato, Polytechnic Institute of Portalegre, amourato@ipportalegre.pt , (+351) 245 330 353

Energy topic (max. 3 choices)

Smart grids <input type="checkbox"/> Sustainable Buildings <input type="checkbox"/> Marine Renewable Energy <input type="checkbox"/> Bioenergy <input checked="" type="checkbox"/> Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP)) <input type="checkbox"/> Heating and cooling <input type="checkbox"/> Wind power (onshore) <input type="checkbox"/> Hydropower <input type="checkbox"/> Geothermal energy <input type="checkbox"/> Carbon Capture Storage and Use (CCS and CCU) <input type="checkbox"/> Hydrogen & Fuel Cell <input checked="" type="checkbox"/> Energy storage <input checked="" type="checkbox"/> Cogeneration / Combined Heat and Power (CHP) <input type="checkbox"/> other Energy Efficiency (in Industry, Transport, Services...) <input checked="" type="checkbox"/> Smart Cities <input type="checkbox"/> Other <input type="checkbox"/> :.....
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DESCRIPTION

Short summary of the good practice

The BioBIP – Bioenergy Business Incubator Portalegre is a structure dedicated to incubating technology-based companies and projects focused on the field of bio-energy, in particular, the development of 2 nd generation biofuels and energy recovery from wastes. The incubator has a high level of pilot scale demonstration facilities that allow incubating companies to develop new processes and projects.
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Smart specialisation domain relevant for the good practice

Critical Technologies, Energy and Smart Mobility
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Challenge addressed and targeted objective

The ultimate challenge addressed is to position the region as a producer of renewable energy technology. BioBip is a structure for the development of technology-based spin offs in the field of bioenergy in order to foster the formation of new companies in this area based on Research and Technological Development activities. BioBip is thus an incubator of technological companies, having, besides a corporate hosting structure, a set of equipment on a pre-industrial scale for demonstration of technology that allows the start-up of companies and the dimensioning of industrial production units at higher scales.

BioBip intends to contribute, with its material and human resources, to the development of economically viable technologies that allow the efficient conversion of biomass into solid, liquid or gaseous fuels, electric energy and thermal energy, with the final goal to develop efficient and sustainable environmental remediation methodologies.

Innovation (max. 2 choices)

Technological Service Commercial Managerial Public sector Social System Other :.....

History: origin, definition phase, start and end

This project arises from the need for strategic of development in the Alto Alentejo region seeking to capture productive investment: the ultimate goal is to generate wealth in the region. Since Alentejo is a region of the country where agriculture and agro-industry are one of the strategic areas for development, targeting R & D in bioenergy in this region and the installation of a reference infrastructure in this domain is an appropriate goal for sustainable development.

Governance, stakeholders involvement and target groups

In this context of strategic development of a region, the Polytechnic Institute of Portalegre takes the lead of the project. The Institute participates in projects in partnership with companies from within and outside the region, at national and international levels. Its mission is to develop biomass transformation technologies in solid, liquid or gaseous fuels, electric energy and thermal energy and to transfer these to the market. Its stakeholders are companies in need of receiving these technologies, researchers and start-ups that develop these technologies using the infrastructures.

Stakeholders involved in implementation (multiple choices allowed)

Public authority **Economic and/or innovation agency** **Energy agency** Intermediary **Research actors** **Industry** **SMEs** NGO Civil society Other :.....

Beneficiaries (multiple choices allowed)

Public authority **Economic and/or innovation agency** Energy agency Intermediary Research actors **Industry** **SMEs** **Start-ups** NGO Civil society Other :.....

Implementation

For the development of its activity, BioBIP provides technological infrastructures and equipment on a pre-industrial scale. The students of the Polytechnic Institute of Portalegre are encouraged to find technological development needs in the market and to develop research in these areas. It also carries out dissemination and communication activities in order to attract technological start-ups that need the infrastructures to develop innovative products and services in these areas. For the implementation of projects, physical infrastructure is offered, as well as various support services that allow the projects to be transformed into business or transferred to the market.

Funding sources

The operation of the entire infrastructure is supported by the Instituto Politécnico de Portalegre. In the case of business projects there is a payment for incubation and development services. The infrastructure and equipment were financed by Community funds and the institution's own revenue.

Public funding sources (multiple choices allowed)

ESIF To1 (research and innovation) ESIF To4 (low carbon economy) ESIF To7 (sustainable transport and network infrastructure) ESIF other or ESF Interreg H2020 National Funds Regional Funds Local Funds Other : FEDER – INALENTEJO + own funds

Results achieved

Several services have already been provided to companies in the region as well as support for research projects in the scope of doctoral, master's and bachelor's degrees. Practical examples are: a study of the granulometry of

materials for introduction in cement kilns, a study of the effluent from the Sousel slaughterhouse, a study for Portuguese Environment Agency on burning of residues, several works involving the gasification of residues, gasification works Biomass and other combustion.

Future perspectives

The great future prospect of this project is to act as an instrument for the development of innovative projects in the region and in the country in the bioenergy area. For this, the incubator is positioning itself in the capture of this type of investment based on campaigns with the companies that operate in the sector, both in terms of process development and in terms of the development of equipment. On the other hand, it is working with students of master and doctorate levels in national and international higher education institutions in order to foster the installation of spin-off and start-up projects.

HIGHLIGHTS

Most successful elements

The most successful element of BioBIP's activities is the thermal gasification and anaerobic biodigestion. Regarding business incubation, the latest data from 2016 show the presence of 24 business projects, 46 people at the service of business projects and an aggregate turnover of 1.5 million Euros.

Most important difficulties

The establishment of infrastructure capacity and of excellent conditions for the development of new projects has been one of the main difficulties experienced, but is also the area where some resources have been invested.

Lessons learned

The need to communicate more and reach specific audiences who need our support and who can develop their projects in the incubator should be one of the goals for the near future.

Ideas for transfer of good practice

The creation of technological poles in specific areas should be encouraged as it leads to the excellence of the results, as experienced with BioBIP.

<p>Type</p>	<p>Flagship project <input type="checkbox"/></p> <p>Strategic programme <input type="checkbox"/></p> <p>Funding programme <input type="checkbox"/></p> <p>Infrastructure X</p> <p>Key actors Platform (for regional cooperation) <input type="checkbox"/></p> <p>Interregional or International cooperation X</p> <p>Intelligence tool (measurement, analysis, foresight, evaluation...) <input type="checkbox"/></p> <p>Awareness-raising <input type="checkbox"/></p> <p>Other <input type="checkbox"/>:.....</p>
<p>Highlights</p>	<p>Relevance to national and/or regional energy strategy X</p> <p>Cross-domain interactions (R&D&I and energy) <input type="checkbox"/></p> <p>Synergetic use of several funds <input type="checkbox"/></p> <p>High impact potential <input type="checkbox"/></p> <p>Civil society participation <input type="checkbox"/></p> <p>Continuous Entrepreneurial Discovery Process <input type="checkbox"/></p> <p>Inter-regional cooperation X</p> <p>Leading to private investments X</p> <p>Transferability of the practice <input type="checkbox"/></p> <p>Monitoring system <input type="checkbox"/></p>

IDENTIFICATION

Name of the good practice case

Flexgrid, Smart grids industrialisation programme

Country	Region + NUTS code
France	Provence-Alpes-Côte d'Azur / NUTS 2

Level at which the good practice is implemented (select one dominant level)

National <input type="checkbox"/> Regional <input checked="" type="checkbox"/> Local <input type="checkbox"/> Interregional-international <input type="checkbox"/>
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Reference (website, documents)

http://www.flexgrid.fr/ (in French) http://www.capenergies.fr/wp-content/uploads/2017/09/Pr%C3%A9sentation-FLEXGRID_EN.pdf http://www.capenergies.fr/wp-content/uploads/2017/09/Projets-FlexGrid-2017.pdf http://www.capenergies.fr/en/new-rd-and-industry-projects/major-programmes/smart-grids/flexgrid-regional-applications/ http://www.capenergies.fr/wp-content/uploads/2017/05/Projet_CP_AMI_FLEXGRID_15-09-16_EN.pdf http://www.capenergies.fr/en/the-initial-results-of-the-flexgrid-call-for-expressions-of-interest-are-in-the-smart-region-is-up-and-running/
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Organization in charge of the good practice case

Name: Capenergies cluster, on behalf of the Provence-Alpes-Côte d'Azur Region	Public authority <input checked="" type="checkbox"/> Economic and/or innovation agency <input type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary <input type="checkbox"/> Other <input checked="" type="checkbox"/> : Energy cluster
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Contact person: name, organization, email, telephone

Aurélie Bringer, Capenergies cluster, aurelie.bringer@capenergies.fr (+33(0) 4 84 49 10 37) / Delphine Robart-Maugis, Provence-Alpes-Côte d'Azur Region, drobart-maugis@regionpaca.fr (+ 33 (0)4 88 73 78 73).
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Energy topic (max. 3 choices)

Smart grids <input checked="" type="checkbox"/> Sustainable Buildings <input type="checkbox"/> Marine Renewable Energy <input type="checkbox"/> Bioenergy <input type="checkbox"/> Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP)) <input type="checkbox"/> Heating and cooling <input type="checkbox"/> Wind power (onshore) <input type="checkbox"/> Hydropower <input type="checkbox"/> Geothermal energy <input type="checkbox"/> Carbon Capture Storage and Use (CCS and CCU) <input type="checkbox"/> Hydrogen & Fuel Cell <input type="checkbox"/> Energy storage <input type="checkbox"/> Cogeneration / Combined Heat and Power (CHP) <input type="checkbox"/> other Energy Efficiency (in Industry, Transport, Services...) <input type="checkbox"/> Smart Cities <input type="checkbox"/> Other <input type="checkbox"/> :.....
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DESCRIPTION

Short summary of the good practice

Flexgrid is a regional programme aimed at the large-scale deployment of smart grids on the territory of the Provence-Alpes-Côte d'Azur Region. With the objective to develop excellence in the smart grids sector at the regional level, in line with the smart specialisation strategy of Provence-Alpes-Côte d'Azur in the energy field, it contributes to fostering innovation, supporting economic activity and structuring the ecosystem.
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Smart specialisation domain relevant for the good practice

Energy transition - energy efficiency

Challenge addressed and targeted objective

The Flexgrid programme offers regional solutions to energy transition challenges through the development of smart grids technologies and services. It will allow to set-up of a large number of smart grids demonstrators throughout the territory, showcasing innovative solutions that could be replicated worldwide. Its objective is to consolidate the position of the Provence-Alpes-Côte d'Azur Region as a territory of excellence in the smart grids sector, providing new opportunities for local public and private actors and promoting regional innovation and economic growth in this field.

Innovation (max. 2 choices)

Technological Service Commercial Managerial Public sector Social **System** Other :.....

History: origin, definition phase, start and end

The Flexgrid programme was developed by local and regional authorities, clusters and industries in the Provence-Alpes-Côte d'Azur Region, in response to a national call for expression of interest for smart grids projects launched in April 2015 by the French government, in the framework of the national plan 'Nouvelle France industrielle'¹. It started in 2016 and is due to run over a five-year period, until the end of 2020.

Governance, stakeholders involvement and target groups

Flexgrid is a programme of the Provence-Alpes-Côte d'Azur Region, and is steered and coordinated by Capenergies – the regional energy cluster – on behalf of the regional authority. It involves a large number of local public authorities, clusters and industries (more than 300 companies, notably major industrial groups – including DSOs and TSOs – and innovative SMEs), research centres, universities and technology platforms. Flexgrid plays a significant role in consolidating and structuring the large smart grids ecosystem of the region, as it covers the entire value chain and gathers all types of regional smart grids stakeholders under one single programme.

Stakeholders involved in implementation (multiple choices allowed)

Public authority **Economic and/or innovation agency** Energy agency Intermediary **Research actors**
Industry **SMEs** NGO **Civil society** **Other** : **energy and ICT clusters**

Beneficiaries (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary **Research actors**
Industry **SMEs** **Start-ups** NGO **Civil society** Other :.....

Implementation

The programme is based on a portfolio of more than 50 projects focusing on a set of energy challenges throughout the whole region, with the aim to tackle a common issue: the need to improve energy flexibility in the region. Several committees have been put in place to implement and coordinate the Flexgrid programme at the regional level: a strategic committee, an operational committee, a coordination committee, and three local committees covering each of the main geographical areas of the region. In addition, a steering committee is established for each single project of the programme. They all report to the operational committee on a regular basis.

Funding sources

Flexgrid will mobilize more than €150 million of investment from public and private partners (68 % from local and regional investors) to carry out all the smart grids projects dedicated to energy transition and economic development. The funding sources come from private partners, local public authorities, European Structural and Investment Funds (ESIF TO1 for research and innovation and TO4 for network infrastructure with 8 M€ specifically dedicated to smart grids projects), or other national (ADEME, PIA) or European (Horizon 2020, Urban Innovative Actions, etc.) funding opportunities.

¹ <https://www.economie.gouv.fr/files/files/PDF/web-dp-indus-ang.pdf>

Public funding sources (multiple choices allowed)

ESIF To1 (research and innovation) X ESIF To4 (low carbon economy) X ESIF To7 (sustainable transport and network infrastructure) ESIF other or ESF Interreg **H2020 X National Funds X** Regional Funds
Local Funds X Other :.....

Results achieved

The results achieved so far are both organizational and strategic: calls for projects have been launched in order to identify local projects to be included in the Flexgrid programme, the set-up of various committees has contributed to an increased coordination and involvement among actors, and the provision of the initial budget has attracted additional public and private investors. All this has reinforced the positive dynamics around the Flexgrid programme. Each project targets specific objectives at local level, which will provide new solutions for increased energy supply security and flexibility: photovoltaic self-production and self-consumption, solutions for high energy consumption companies, synergies between renewable energies, charging and discharging management for electric vehicles, territorial energy optimization and territorial flexibilities. This will allow for the production of 1180 MW of renewable energy and 230 MW for heating and cooling networks. In addition, by supporting the development of the smart grids sector in the region, it should lead to the creation of approximately 6,200 jobs.

Future perspectives

Flexgrid will contribute to reaching the energy targets set out in the 2013 regional energy policy plan - 'Schéma Régional Air-Energie-Climat', which will be encompassed in the future 'Schéma Régional d'Aménagement, de Développement Durable et d'Egalité des Territoires' (late 2017).

HIGHLIGHTS

Most successful elements

The Flexgrid programme plays an instrumental role in structuring the smart grids sector and supporting regional innovative energy solutions, in accordance with the smart specialisation strategy of the Region. The launch of the programme has comforted the position of the smart grids / energy field as a strategic domain of specialisation in Provence-Alpes-Côte d'Azur while developing and exploiting the critical mass of knowledge and economic activity in the region in this field. The 'regional economic development, innovation and internationalisation strategy' (SRDEII), recently adopted, reflects this approach: the energy field, and more specifically the smart grids domain, is identified as a strategic sector for the Region.

Most important difficulties

One of the strengths of the Flexgrid programme rests in the fact that it comprises a large number of stakeholders, representing the entire value chain, and covers numerous projects at the local level. Identifying needs, selecting projects, securing funding, and coordinating the whole programme requires a complex implementation strategy.

Lessons learned

The regional dimension of the Flexgrid programme is a determining factor for bringing the whole ecosystem together and covering a wide range of local projects and challenges. It also provides greater visibility for the projects and demonstrators at the national and European levels.

Ideas for transfer of good practice

The S3 platform and the S3 Partnership on Smart Grids should be used to present Flexgrid to other European regions, and explain the preparatory process and implementation. Important efforts are made by Flexgrid stakeholders to share experience with foreign partners and attract interests from other EU and third countries (access to demonstrators, showrooms, participation in European events, organization of conferences (ie. "Innovative City" takes place annually in Nice), open-house days, etc...). In addition, the participation of regional actors in European-funded projects (Horizon 2020, ERDF, etc...) also offers good opportunities to share good practices with European partners and communicate/disseminate the results achieved in the framework of the Flexgrid programme.

<p>Type</p>	<p>Flagship project X Strategic programme X Funding programme <input type="checkbox"/> Infrastructure X Key actors Platform (for regional cooperation) X Interregional or International cooperation <input type="checkbox"/> Intelligence tool (measurement, analysis, foresight, evaluation...) <input type="checkbox"/> Awareness-raising <input type="checkbox"/> Other <input type="checkbox"/>:.....</p>
<p>Highlights</p>	<p>Relevance to national and/or regional energy strategy X Cross-domain interactions (R&D&I and energy) X Synergetic use of several funds X High impact potential X Civil society participation <input type="checkbox"/> Continuous Entrepreneurial Discovery Process <input type="checkbox"/> Inter-regional cooperation <input type="checkbox"/> Leading to private investments X Transferability of the practice <input type="checkbox"/> Monitoring system <input type="checkbox"/></p>

IDENTIFICATION

Name of the good practice case

Ilmastokatu, Climate Street

Country	Region + NUTS code
Finland	Helsinki-Uusimaa Region, NUTS 2

Level at which the good practice is implemented (select one dominant level)

National <input type="checkbox"/> Regional <input type="checkbox"/> Local <input checked="" type="checkbox"/> Interregional-international <input type="checkbox"/>

Reference (website, documents)

http://ilmastokatu.fi/en/

Organization in charge of the good practice case

Name: City of Helsinki Environment Centre (main partner) City of Vantaa Environment Centre, Green Building Council Finland, HSY Climate Info and Aalto University	Public authority <input checked="" type="checkbox"/> Economic and/or innovation agency <input type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary <input type="checkbox"/> Other <input type="checkbox"/> :.....
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Contact person: name, organization, email, telephone

Viliina Evokari, City of Helsinki, Viliina.evokari@hel.fi ; +358 40 519 7544
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Energy topic (max. 3 choices)

Smart grids <input type="checkbox"/> Sustainable Buildings <input checked="" type="checkbox"/> Marine Renewable Energy <input type="checkbox"/> Bioenergy <input type="checkbox"/> Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP) <input checked="" type="checkbox"/> Heating and cooling <input type="checkbox"/> Wind power (onshore) <input type="checkbox"/> Hydropower <input type="checkbox"/> Geothermal energy <input type="checkbox"/> Carbon Capture Storage and Use (CCS and CCU) <input type="checkbox"/> Hydrogen & Fuel Cell <input type="checkbox"/> Energy storage <input type="checkbox"/> Cogeneration / Combined Heat and Power (CHP) <input type="checkbox"/> other Energy Efficiency (in Industry, Transport, Services...) <input type="checkbox"/> Smart Cities <input checked="" type="checkbox"/> Other <input type="checkbox"/> :.....

DESCRIPTION

Short summary of the good practice

Investing into solar power (PV) was made as easy as possible for property owners: solar surveys were offered to the housing companies and other properties. Solar surveys are used to find out the profitability of a solar panel investment and support decision-making: survey reports include installation suggestions, dimensioning, economic calculations and a ready-made form for tendering. Property owners were also given energy efficiency guidance. A housing company Chairpersons' Club is a successful cooperation model and serves as a good communication channel with housing companies. Gadgets that measure or reduce energy consumption were tested and presented to the public in the Smart Gadgets event. Inhabitants reduced their carbon footprint with a personal climate trainer.

Smart specialisation domain relevant for the good practice

The climate street project implements the “urban cleantech” priority in Helsinki smart specialisation strategy.

Challenge addressed and targeted objective

The cities of Helsinki and Vantaa aim to be carbon neutral by 2050. The cities can't achieve this only by themselves, participation of citizens and businesses is needed as well to create and use new, economically sustainable modes of operation. The project has aimed to reduce the region's greenhouse gas emissions in a way that will benefit both the local residents, businesses and other stakeholders.
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In urban cleantech priority the aim is to solve environmental challenges in cities by developing and piloting new solutions, technologies and service models e.g. for renewable energy, energy efficiency and low carbon emissions. Piloting solar power in a housing company and piloting means for reducing energy consumption together with residents as done in this project are good examples of grassroots implementation of the strategy. It improves the energy efficiency and at the same time helps SMEs to bring their solutions to market.

Innovation (max. 2 choices)

Technological **Service** Commercial Managerial Public sector Social System Other :.....

History: origin, definition phase, start and end

Between 2015 and 2017 Climate Street operated at grass root level together with local residents, property owners and businesses. The idea for the project came from “The best energy efficiency practices” report in which Climate Street from Amsterdam Utrechtsestraat was presented as a case. Inspired by the Utrechtsestraat, two Climate Streets were developed as open innovation platforms: one is Iso Roobertinkatu in the City of Helsinki and the other is Tikkuraitti-Asematie in the City of Vantaa.

Governance, stakeholders involvement and target groups

City of Helsinki Environment Centre was the main partner in the Climate Street project. Other partners were City of Vantaa Environment Centre, Green Building Council Finland, HSY Climate Info and Aalto University. Target groups were local residents, property owners, businesses and other stakeholders. Stakeholders were involved in the project through several workshops, meetings, training and events.

Stakeholders involved in implementation (multiple choices allowed)

Public authority **Economic and/or innovation agency** **Energy agency** **Intermediary** **Research actors**
 Industry **SMEs** **NGO** **Civil society** Other :.....

Beneficiaries (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary Research actors
 Industry **SMEs** Start-ups **NGO** **Civil society** Other :.....

Implementation

The project was implemented through the following actions: developing climate smart business with local entrepreneurs in workshops, gadgets that measure or reduce energy consumption tested and presented to the public in the Smart Gadgets event, energy efficiency planning and measures in the properties, developing a cooperation model with the actors in the area, Energy efficient terrace competition and piloting, visualisation of energy consumption, solar surveys as decision making tools to establish profitability of investments, agile experiments, carbon footprint measurement, personal climate trainers.

Funding sources

Sustainable growth and jobs 2014 - 2020 - Finland's structural funds programme, ESIF
 Policy: 2. Production and utilisation of latest knowledge and expertise

Public funding sources (multiple choices allowed)

ESIF T01 (research and innovation) ESIF T04 (low carbon economy) ESIF T07 (sustainable transport and network infrastructure) ESIF other or ESF Interreg H2020 National Funds Regional Funds
Local Funds Other :.....

Results achieved

Energy consumption and GHG-emissions of the project areas were reduced: carbon footprint was calculated in 12 properties of the Climate Street in the beginning and the middle of the project. At that point carbon footprint was reduced by 12 % in commercial properties. Carbon footprint is expected to reduce more within near future when the

properties implement the energy efficiency plans executed during the project. The first PV panels with an annual production capacity of 6 500 kWh were implemented by a housing company in the city centre of Helsinki, there were fully operational in the summer of 2016. Ten businesses tested their smart&clean solutions in Climate Streets. About 10 local businesses developed climate smart services and products. 10 businesses and 17 housing companies were given energy efficiency guidance. At least 10 properties have implemented energy efficiency measures. Gadgets that measure or reduce energy consumption were tested and developed further. The awareness of energy consumption has grown.

Future perspectives

Climate Streets will be utilised as open innovative platforms and as testbeds for smart&clean solutions. New sustainable modes of operation developed in the project will be used in other areas of the involved cities also. Lessons learned and best practices are compiled in the Climate Street tool kit for anyone's use.

HIGHLIGHTS

Most successful elements

User-orientated approach was highly successful. The needs of the actors were considered when planning how to reduce the region's greenhouse gas emissions in a way that will benefit both the local residents, businesses and other stakeholders. Especially SME's with little resources need easy turnkey solutions. Most successful measures were solar surveys, agile pilots, energy efficient terrace competition and the Smart Gadgets event.

Most important difficulties

The decision making process in the housing companies is relatively slow which means that many energy efficiency investments will be implemented after the two-year-project.

Lessons learned

Peer support and experiences motivate more than expert statements. Connect with local businesses and property owners face to face. Listen to the stakeholders and find solutions that match their needs. Bring actors of the area together as often as possible to speed up cooperation between the actors. Make climate actions of the businesses and properties seen with communications, i.e. window stickers. Offer support in implementation. Carry out agile pilots for quick results.

Ideas for transfer of good practice

Lessons learned and best practices are presented in the Climate Street Tool Kit available on the project's website (www.ilmastokatu.fi/en/toolkit). In addition, Aalto University has produced the project's evaluation report (available on the same web page, in Finnish).

Type	Flagship project X Strategic programme <input type="checkbox"/> Funding programme <input type="checkbox"/> Infrastructure <input type="checkbox"/> Key actors Platform (for regional cooperation) X Interregional or International cooperation X Intelligence tool (measurement, analysis, foresight, evaluation...) X Awareness-raising X Other <input type="checkbox"/> :.....
Highlights	Relevance to national and/or regional energy strategy X Cross-domain interactions (R&D&I and energy) <input type="checkbox"/> Synergetic use of several funds <input type="checkbox"/> High impact potential X

	<p>Civil society participation X</p> <p>Continuous Entrepreneurial Discovery Process <input type="checkbox"/></p> <p>Inter-regional cooperation X</p> <p>Leading to private investments X</p> <p>Transferability of the practice X</p> <p>Monitoring system <input type="checkbox"/></p>
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IDENTIFICATION

Name of the good practice case

Joint Purchase of Solar Power for 41 Private Properties

Country	Region + NUTS code
Finland	North Karelia, FI1D3

Level at which the good practice is implemented (select one dominant level)

National <input type="checkbox"/> Regional <input checked="" type="checkbox"/> Local <input type="checkbox"/> Interregional-international <input type="checkbox"/>
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Reference (website, documents)

North Karelia Towards Oil-Free and Low-Carbon Area – Project: http://pohjois-karjala.fi/web/hinku (in Finnish only)

Organization in charge of the good practice case

Name: Regional Council of North Karelia	Public authority <input checked="" type="checkbox"/> Economic and/or innovation agency <input type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary <input type="checkbox"/> Other <input type="checkbox"/> :.....
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Contact person: name, organization, email, telephone

Anniina Kontiokorpi, Regional Council of North Karelia, anniina.kontiokorpi@pohjois-karjala.fi , +358 50 414 4816

Energy topic (max. 3 choices)

Smart grids <input type="checkbox"/> Sustainable Buildings <input type="checkbox"/> Marine Renewable Energy <input type="checkbox"/> Bioenergy <input type="checkbox"/> Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP) <input checked="" type="checkbox"/> Heating and cooling <input type="checkbox"/> Wind power (onshore) <input type="checkbox"/> Hydropower <input type="checkbox"/> Geothermal energy <input type="checkbox"/> Carbon Capture Storage and Use (CCS and CCU) <input type="checkbox"/> Hydrogen & Fuel Cell <input type="checkbox"/> Energy storage <input type="checkbox"/> Cogeneration / Combined Heat and Power (CHP) <input type="checkbox"/> other Energy Efficiency (in Industry, Transport, Services...) <input type="checkbox"/> Smart Cities <input type="checkbox"/> Other <input type="checkbox"/>
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DESCRIPTION

Short summary of the good practice

Joint purchase of solar power for private buildings was organized as a part of North Karelia Towards Oil-Free and Low-Carbon Area project. 250 interested private persons were contacted during this process and in the end 41 solar power systems were installed with a total power capacity of 142,4 kWp. Regional Council of North Karelia requested tenders for 2,5, 4,5 and 7 kWp units and compared the offers. Prices were approximately 30 % lower than average market price.

Smart specialisation domain relevant for the good practice

Forest based bioeconomy (and renewable energies)
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Challenge addressed and targeted objective

The objective of North Karelia Towards Oil-Free and Low-Carbon Area project is to increase the share of renewable energy in the region. The project is looking for and testing new kind of methods for developing markets for cleantech solutions and products. Joint procurements and purchases are one of the tested methods.

Innovation (max. 2 choices)

Technological <input type="checkbox"/> Service <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Managerial <input checked="" type="checkbox"/> Public sector <input checked="" type="checkbox"/> Social <input checked="" type="checkbox"/> System <input type="checkbox"/> Other <input type="checkbox"/> :.....

History: origin, definition phase, start and end

The Regional Council of North Karelia and the Finnish Environment Institute together with the Carbon Neutral Municipalities (HINKU) network planned and organized joint purchase for solar power units which was addressed to residents of North Karelian HINKU-municipalities and to private companies. Responsible parties organized five info-events in different municipalities, advertised in and communicated through local and regional newspapers, social media etc. More than 250 persons were contacted during this process. Planning of the purchase took place in July-August 2016, events were organized in September 2016, registration in October-November 2016, invitation to tender in December 2016, comparison of the offers in January 2017, and installations of 41 solar power units in April-June 2017.

Governance, stakeholders involvement and target groups

Joint purchase was a part of North Karelia Towards Oil-Free and Low-Carbon Area strategy. Main organizer was the Regional Council of North Karelia and expertise help was received from the Finnish Environment Institute. Regional HINKU-municipalities participated in the process by offering venues for events and by promoting joint purchase for residents. Target groups were residents of the North Karelian HINKU-municipalities and private companies.

Stakeholders involved in implementation (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary **Research actors**
Industry SMEs NGO **Civil society** Other :.....

Beneficiaries (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary Research actors
Industry SMEs Start-ups NGO **Civil society** Other :.....

Implementation

Promoting, request for tenders, comparison of the tenders were implemented through North Karelia Towards Oil-Free and Low-Carbon Area strategy. Joint Purchase was made together with Finnish Environment Institute which is a sectoral research institute. They were not investigating technological novelties but are developing and investigating methods for joint purchases. Contractor and participators made bilateral turnkey contracts. The last of the 41 solar power plants had been installed in June 2017.

Funding sources

European regional development fund, Future Fund (regional)

Public funding sources (multiple choices allowed)

ESIF To1 (research and innovation) **ESIF To4 (low carbon economy)** ESIF To7 (sustainable transport and network infrastructure) ESIF other or ESF Interreg H2020 National Funds Regional Funds
Local Funds Other :.....

Results achieved

41 new solar power plants for private buildings were installed in North Karelia with a total power capacity of 142,4 kWp. The price for the purchase was approximately 30 % lower than average market price because of the amount of participants. New distributed energy production units were produced.

Future perspectives

Solar power is increasingly seen as a cost-effective way of producing energy also in Finland. Joint purchases have offered an easy way for purchasing solar power. The method has been tested now for couple of times and it is easy to spread to other areas.

HIGHLIGHTS

Most successful elements

Joint purchase of solar power in North Karelia for private buildings is so far the biggest joint purchase organized with this kind of method.

Most important difficulties

Convincing participants that joint purchase method really works.

Lessons learned

Timing of the joint purchase especially in the case of solar power is an important factor. People are more interested in solar power when the sun is shining. For this reason, late spring was chosen as the suitable timing for installations and communication with participants.

Ideas for transfer of good practice

Joint purchase is easy to transfer to other areas. It would be very interesting to hear how this method works in other EU-countries.

<p>Type</p>	<p>Flagship project <input type="checkbox"/></p> <p>Strategic programme <input type="checkbox"/></p> <p>Funding programme <input type="checkbox"/></p> <p>Infrastructure <input checked="" type="checkbox"/></p> <p>Key actors Platform (for regional cooperation) X</p> <p>Interregional or International cooperation <input type="checkbox"/></p> <p>Intelligence tool (measurement, analysis, foresight, evaluation...) <input type="checkbox"/></p> <p>Awareness-raising X</p> <p>Other <input type="checkbox"/>:.....</p>
<p>Highlights</p>	<p>Relevance to national and/or regional energy strategy X</p> <p>Cross-domain interactions (R&D&I and energy) <input type="checkbox"/></p> <p>Synergetic use of several funds <input type="checkbox"/></p> <p>High impact potential X</p> <p>Civil society participation X</p> <p>Continuous Entrepreneurial Discovery Process <input type="checkbox"/></p> <p>Inter-regional cooperation <input type="checkbox"/></p> <p>Leading to private investments <input type="checkbox"/></p> <p>Transferability of the practice X</p> <p>Monitoring system <input type="checkbox"/></p>

IDENTIFICATION

Name of the good practice case

Marine Renewable Energies Roadmap

Country	Region + NUTS code
France	Brittany FR52

Level at which the good practice is implemented (select one dominant level)

National **Regional** Local Interregional-international

Reference (website, documents)

Presentations: <http://www.bdi.fr/ressources/les-energies-marines-renouvelables>

Regional roadmap: http://www.bretagne.bzh/upload/docs/application/pdf/2016-07/session_juin_2016_emr.pdf

Organization in charge of the good practice case

Regional Council of Brittany; Bretagne Développement Innovation (regional agency for economic development and innovation).	Public authority <input checked="" type="checkbox"/> Economic and/or innovation agency <input checked="" type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary <input type="checkbox"/> Other <input type="checkbox"/> :
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Contact person: name, organization, email, telephone

Jean Michel LOPEZ, Directeur de la coordination Energie Marine : jean-michel.lopez@bretagne.bzh / (+33) (0)2 99 27 12 01

Energy topic (max. 3 choices)

Smart grids Sustainable Buildings **Marine Renewable Energy** Bioenergy Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP)) Heating and cooling Wind power (onshore) Hydropower Geothermal energy Carbon Capture Storage and Use (CCS and CCU) Hydrogen & Fuel Cell **Energy storage** Cogeneration / Combined Heat and Power (CHP) other Energy Efficiency (in Industry, Transport, Services...) Smart Cities Other :.....

DESCRIPTION

Short summary of the good practice

The Marine Renewable Energy (MRE) roadmap was adopted by the Bretagne Region Council in April 2016. This broad-based regional government policy has a twofold aim: promote the energy transition to bring down the region's energy dependence while establishing an industrial showcase which is highly visible on the international scene. The roadmap sets the very ambitious goal to cover more than one third of Brittany's electricity consumption in 2030. This highly proactive policy promoting MRE is characterized by a consultative emphasis that brings together all the stakeholders in the industry.

Smart specialisation domain relevant for the good practice

Marine renewable energy is one of the "industries of the future" featuring in the Region's Smart Specialisation Strategy: Strategic Innovation Action 3- Maritime activities for blue growth – 3B Marine Renewable Energies

Challenge addressed and targeted objective

The roadmap addresses five key issues:

- Organising MRE coordination and planning for energy and maritime affairs
- Supporting projects off the coast of Brittany

- Supporting the sector's economic and industrial dynamic
- Investing in the infrastructure required to cater for MRE, particularly creation of an MRE terminal in the port of Brest
- Raising the international profile of the region's MRE offering.

The roadmap sets a very ambitious goal: planning and installing 2 GW of additional capacity by 2030, thus covering more than 33 % of Brittany's electricity consumption in 2030. This will be achieved through:

- **3 floating wind farms** by 2030 (1.5 GW) with 3 GW of exploitable potential, to be developed in 2 large geographical zones off the northwest and southwest coasts of Brittany (consultation ongoing)
- **2 tidal stream parks** (0.6 GW) with 2.2 GW of exploitable potential, to be developed in 2 zones off the west and north coasts of Brittany (consultation ongoing)
- **2 offshore wind farms** (one of which is under construction - 0.5 GW) in northeast Brittany.

Such ambitious goals in terms of energy production from renewable resources represent a major challenge when it comes to anticipating injection into the electricity system and balance management. The development of an additional capacity of several GW by 2020-2030 involves anticipating how intermittent energy integration solutions can be incorporated into power grids, including large-capacity storage and accurate production forecasting solutions. Therefore, the development of smart grids is another key challenge.

Innovation (max. 2 choices)

Technological Service Commercial Managerial Public sector Social **System** Other :.....

History: origin, definition phase, start and end

Ever since it signed up to the Breton Electricity Pact in 2010, Brittany Regional Council has been at the forefront of a highly proactive policy promoting Marine Renewable Energy (MRE). Thanks to its strong ocean waves, currents, and winds, Brittany is a region with a high potential for harnessing marine renewable energy. It also enjoys a strong skills base in the maritime industry, which is crucial for growing this emergent sector along with the new technology required. The MRE roadmap was adopted in April 2016 and set objectives for 2030.

Governance, stakeholders involvement and target groups

Shared governance and collective planning are the key words for the implementation of the MRE roadmap. The Regional Sea and Coast Conference (Conférence régionale de la mer et du littoral, CRML) and the Regional Energy Transition Conference play a key role in ensuring the involvement of all key stakeholders under the coordination of the Regional Council of Brittany. In-depth coordination with economic stakeholders allows the Region to assist local firms in identifying outlets in major infrastructure projects, within Brittany and beyond, building momentum for international expansion. National authorities, financial institutions, economic and industrial stakeholders, research and academia, local governments, professional organizations for fishing, aquaculture, port activities, shipbuilding and repair, farming, and tourism as well as non-profit associations devoted to the protection of nature and heritage, local residents are all involved at different stages of the decision-making process.

Stakeholders involved in implementation (multiple choices allowed)

Public authority **Economic and/or innovation agency** **Energy agency** **Intermediary** **Research actors**
Industry **SMEs** **NGO** **Civil society** Other

Beneficiaries (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary **Research actors**
Industry **SMEs** **Start-ups** **NGO** **Civil society** **Other** : **associations**

Implementation

The following projects are being planned or have been implemented under the MRE roadmap: industrial tidal pilot projects, offshore wind turbine industrial park, offshore floating wind turbine pilot array farm, new transmitted and distributed smartgrid national planification, a MRE terminal in the port of Brest.

Funding sources

- ESIF
- Regional Marine Renewable Energy funds
- Other Regional funds and national funds

Public funding sources (multiple choices allowed)

- ESIF To1 (research and innovation) **ESIF To4 (low carbon economy)** ESIF To7 (sustainable transport and network infrastructure) ESIF other or ESF **Interreg** H2020 **National Funds** **Regional Funds** **Local Funds** Other :.....

Results achieved

- 2 connected industrial tidal pilot projects (world premiere)
- 1 offshore wind turbine industrial park in progress (site studies and permit procedure completed)
- 1 offshore floating wind turbine pilot array farm (4 devices) in progress (site studies and permit procedure completed)
- 1 project of new transmitted and distributed smart grid national planning (in progress experimented within the framework of the SMILE smart grids project)
- Work on the future MRE terminal in the port of Brest started in January 2017
- 1 national call launched for new industrial parks (floating and tidal)

Future perspectives

- Selection of five broad sites in which future arrays could be located (consultation process underway)
- 1st island to be powered by MRE and connected to the grids thanks to the use of smart grids (Ushant-Ouessant island, 2018-2020)
- 1st smart grids global system for MRE at transmitted grid scale (2019-2020 SMILE project and 2020-2030 in full scale)

HIGHLIGHTS

Most successful elements

The involvement of all the relevant socio-economic stakeholders and the capacity to retain local SMEs and help them overcome market related difficulties are the two most successful elements so far. In this regard, March 3, 2017 marked a major milestone, with the validation by the Regional Sea and Coast Conference of three favourable sites for tidal stream generators and 2 macro-zones for floating wind power.

Most important difficulties & Lessons learned

The biggest challenges when developing such strategies and roadmaps is to anticipate the development of the market, which is still not ready, at least for ocean energy technologies, and to set the targets accordingly. In the implementation phase, the main difficulty is to help industrials bridge the “valley of death” between R&D/prototype and demonstration and pre-commercial phases. In fact, uncertainties on production levels and maintenance requirements for farms and larger plants remain. These uncertainties imply higher financial risk, preventing access to commercial bank loans and call for investment support from the public sector.

Lessons learned

In order to overcome such difficulties, it is important to work closely with the industry. Such an ambitious strategy also calls for the involvement of all the stakeholders, especially the socio-economic ones. The whole value chain needs to be organised in order to push the market demand and be ready to answer to this demand once the market is ready. The support agencies and clusters should play a key role alongside the region in promoting the emergence of R&D, pilot and demonstration projects involving the research, the enterprises (large and SMEs) and the financial institutions.

<p>Type</p>	<p>Flagship project <input type="checkbox"/></p> <p>Strategic programme X</p> <p>Funding programme <input type="checkbox"/></p> <p>Infrastructure X</p> <p>Key actors Platform (for regional cooperation) X</p> <p>Interregional or International cooperation <input type="checkbox"/></p> <p>Intelligence tool (measurement, analysis, foresight, evaluation...) <input type="checkbox"/></p> <p>Awareness-raising <input type="checkbox"/></p> <p>Other <input type="checkbox"/>:.....</p>
<p>Highlights</p>	<p>Relevance to national and/or regional energy strategy X</p> <p>Cross-domain interactions (R&D&I and energy) <input type="checkbox"/></p> <p>Synergetic use of several funds X</p> <p>High impact potential X</p> <p>Civil society participation <input type="checkbox"/></p> <p>Continuous Entrepreneurial Discovery Process X</p> <p>Inter-regional cooperation <input type="checkbox"/></p> <p>Leading to private investments X</p> <p>Transferability of the practice <input type="checkbox"/></p> <p>Monitoring system <input type="checkbox"/></p>

PICSA, Sustainable Construction Programme in Andalusia

Country	Region + NUTS code
Spain	Andalusia NUTS 2

Level at which the good practice is implemented (select one dominant level)

National **Regional X** Local Interregional-international

Reference (website, documents)

Development Plan for the Sustainable Construction and Rehabilitation of Andalusia, Horizon 2020 (online - Spanish):
https://www.agenciaandaluzadelaenergia.es/sites/default/files/Documentos/plan_integral_fomento_construccionrehabilitacion_sostenible_horizonte202.pdf
 Information on results of the programme:
<https://www.agenciaandaluzadelaenergia.es/guiainteractivaPICS/DATOS/secciones.php>

Videos related to the programme/service:
 Video 1: <http://youtu.be/Ng9qlf8cqGQ>
 Video 2: http://ec.europa.eu/regional_policy/videos/movie/regiostars2015/picsa_short_en.mp4
 Video 3 (Spanish): <https://www.agenciaandaluzadelaenergia.es/documentacion/galeria-multimedia/la-agencia-en-los-medios/video-realizado-ce-proyecto-ganador-regiostars-2015>

Other videos (Spanish):
 Video 4 (Spanish): PROGRAMA DE IMPULSO A LA CONSTRUCCIÓN SOSTENIBLE
 Video 5 (Spanish): REHABILITACIÓN DE EDIFICIOS
 Video 6 (Spanish): EFICIENCIA ENERGÉTICA CONSTRUCCIÓN SOSTENIBLE
 Video 7 (Spanish): EMPLEO CONSTRUCCIÓN SOSTENIBLE

Twitter account: Agenciaandaener

Links PICSA to REGIOSTAR 2015 Awards: http://ec.europa.eu/regional_policy/en/projects/spain/making-andalusias-construction-sector-more-sustainable

Other links:

- o New scheme (2017-2020): www.agenciaandaluzadelaenergia.es/financiacion/incentivos-2017-2020/programa-desarrollo-energetico-sostenible/construccion-sostenible;
- o BUILD2LC: www.interregeurope.eu/build2lc/
- o Partnership: s3platform.jrc.ec.europa.eu/sustainable-buildings

Organization in charge of the good practice case

Name: Andalusian Energy Agency	Public authority <input type="checkbox"/> Economic and/or innovation agency <input type="checkbox"/> Energy agency X Intermediary <input type="checkbox"/> Other <input type="checkbox"/> :.....
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Contact person: name, organization, email, telephone

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 Andalusian Energy Agency joaquin.villar@juntadeandalucia.es +34 95 478 63 35 / +34 697 954 563

Energy topic (max. 3 choices)

Smart grids **Sustainable Buildings X** Marine Renewable Energy Bioenergy Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP)) Heating and cooling Wind power (onshore) Hydropower Geothermal energy Carbon Capture Storage and Use (CCS and CCU) Hydrogen & Fuel Cell Energy storage Cogeneration / Combined Heat and Power (CHP) other Energy Efficiency (in Industry, Transport, Services...) Smart Cities Other :.....

DESCRIPTION

Short summary of the good practice

The Sustainable Construction Programme in Andalusia (PICSA) is a combination of economic measures and other actions such as regulatory, training and fiscal, that seek, through energy saving and renewable energy generation or integration, to promote the energy rehabilitation of buildings and the urban rehabilitation, to improve the competitiveness of companies of the construction sector, to create skilled employment and reduce energy poverty.

Smart specialisation domain relevant for the good practice

The sustainable construction sector is one of the priorities of RIS3 of Andalusia.

Challenge addressed and targeted objective

The construction sector in Andalusia has evolved from representing 14.4% of the regional GDP in 2007 to 7.6% currently, has reduced from 15.2% to 5.2% its weight in employment and suffers from a high unemployment rate. In energy terms, this sector represents one of the main consumers of Andalusia with almost two million buildings in Andalusia in need of substantial improvements. The improvement of the competitiveness, the promotion of innovation, the generation of specialised and quality employment, and the society's change of culture towards more efficient practices, are the main challenges of PICSA programme to achieve the energy and environmental objectives.

Innovation (max. 2 choices)

Technological X Service Commercial **Managerial X** Public sector Social System Other :.....

History: origin, definition phase, start and end

The PICSA programme started in 2014 consisting of three main actions:

1. An **incentive scheme** for sustainable construction
2. A **financing line** through revolving funds for companies
3. A **Development Plan for the Sustainable Construction and Rehabilitation of Andalusia**, Horizon 2020.

PICSA, which was awarded the REGIOSTARS 2015, has been improved and extended in its main actions during 2016 with its internationalisation at European Level through the **S3 Partnership on Sustainable Buildings²**, an initiative supported by the European Commission defined as a strategic alliance between European regions and Member States to take advantage of regional opportunities for smart specialisation in sustainable buildings.

The strategy in this field includes the redefinition of sustainable construction in terms of energy rehabilitation of buildings, the physical, social, economic and environmental recovery of urban environments and the rehabilitation of cities. The opportunities are based on the development of new materials and sustainable processes.

Governance, stakeholders involvement and target groups 100

Stakeholders play a very important role in all parts of the PICSA. Regarding the design of the **incentive scheme**, the principle of governance was incorporated, opening the dialogue process to market actors, from both the supply and the demand side.

Thus, the incentive scheme has been developed with the participation of companies liaising with the Agency in the

² <http://s3platform.jrc.ec.europa.eu/sustainable-buildings>

management and processing of incentives, which facilitates the administrative procedures for final users. Most of them were SMEs, which contributes to generating economic activity.
Also, for the elaboration of the Development Plan, a **Round Table** was formed with more than 70 experts.

Stakeholders involved in implementation (multiple choices allowed)

Public authority **Economic and/or innovation agency** **Energy agency** **Intermediary** **Research actors**
Industry **SMEs** **NGO** **Civil society** Other :.....

Beneficiaries (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary Research actors
Industry **SMEs** Start-ups NGO **Civil society** Other :.....

Implementation

From 2014 to 2015:

- 1) Design and implementation of an incentive scheme of 164 million euros and 48 possible actions. The minimum investment was very low, only 400 euros, so everybody could apply for an incentive.
- 2) Design and Implementation of a revolving fund with a budget of 50 million euros from the JEREMIE initiative³, aimed at the companies liaising with the Agency in the management of incentives.
- 3) Organisation of a Round Table with the objective to elaborate a Development Plan for the Sustainable Construction and Rehabilitation of Andalusia.

From 2016, based on the lessons learned, a new incentive scheme and new financial lines were launched. Also, the implementation of most of the 90 action lines included in the **Development Plan** started, as well as the creation of the S3 European Partnership on Sustainable Buildings. The implementation of the first interregional projects is expected before the end of 2017.

Funding sources

For the incentives scheme, 164 million euros from ESIF To4 and Regional Funds. In addition, the Development Plan is provided with 529 million euros until 2020, with budgets available from the European Union and the Andalusian Regional Government.

Public funding sources (multiple choices allowed)

ESIF To1 (research and innovation) **ESIF To4 (low carbon economy)** ESIF To7 (sustainable transport and network infrastructure) ESIF other or ESF Interreg H2020 National Funds **Regional Funds**
Local Funds Other :.....

Results achieved

³ http://ec.europa.eu/regional_policy/en/funding/special-support-instruments/jeremie/

Quantitatively, the results from the incentive scheme have been the following:

- **Boost economic recovery of the construction sector**
 - 36,419 actions
 - 242 M€ investment
 - 8,247 collaborating partner companies
- **Generation and maintenance of employment**
 - 20,000 direct jobs in the implementation and management of the actions
 - More than 60% of the companies have generated new job positions
 - 22% of the collaborating companies formed working relationships with other companies participating in PICSA
 - 43% of the collaborating companies carry out other types of actions different to those included in PICSA.
- **Use of efficient energy**
 - 36,322 toe/year of energy saved and 85,964 tons of CO₂ avoided.
- **Reduction of the energy bill**
 - Economic saving of more than 280 million euros in companies, citizens, neighbourhood and other entities.
- **Vulnerable groups – energy poverty**
 - Almost 23% of the incentives have been used to improve the housing quality of over 7,000 low-income families.

Future perspectives

The impacts of the new incentive scheme launched in 2016 are expected to be higher than the previous ones, due to the improvements implemented in the new incentive scheme as a result of the evaluation process and a greater participation of private finance:

- 50.860 actions
- 1,425 millions of economic saving
- 23.500 new jobs.

In addition to these above-mentioned impacts of the incentive schemes, there are other actions included in the Development Plan which will have an even more positive impact on the construction sector and buildings (80.000 new jobs in the next 5 years).

HIGHLIGHTS

Most successful elements

The most successful element with results already achieved is the design and management of the incentive scheme. To highlight, the participation of more than 8.000 collaborating companies in the management of incentives. They also played an active role in the publicity and dissemination among potential beneficiaries. Other elements that ensured the success of this scheme were: the design of a catalogue of energy improvement measures which allowed potential beneficiaries to know from the start what actions could be carried out to save energy; and the design of a very simplified 100% computerised procedure.

Most important difficulties

One of the main challenges was to facilitate the accessibility of the incentives to society through simplification. In this sense, the incentive aimed to achieve:

- A single and simpler procedure
- Fewer documentary obligations.
- A new clearer and more complete classification of actions.

Another challenge was to achieve a better energy culture:

- New technical conditions for greater energy savings and satisfying needs.
- Possibility of opting for more sustainable, energetic and environmentally friendly solutions.

Finally, it was necessary to offer the maximum guarantee to beneficiaries by improving business development and the competitiveness of the collaborating companies.

Lessons learned

At the end of the incentive scheme in 2015, an evaluation process was carried out. From this evaluation, a series of lessons learned were drawn that have been taken into account in the design of the new incentive scheme launched in 2016. To highlight:

- Improve the training of collaborating companies relating to the documentation requirements for the justification of expenditure.
- Carry out a pre and post analysis of the energy impact of the action undertaken implemented through the requirement of a previous and post certificate.
- Facilitate complementary financing tools.
- And progress in the improvement of the justification, facilitating the verification process of expenditure.

Ideas for transfer of good practice

Good practices are currently being transferred in the framework of the BUILD2LC project, led by the Andalusian Energy Agency. The overall objective of BUILD2LC, developed under the Interreg Europe programme 2014-2020, is to increase energy rehabilitation of buildings to reduce energy consumption and enhance policies to favour the creation of a market specialised companies in the sector. The project, financed by the European Commission, began in 2016, and involves a consortium of participating regions from 7 European countries that exchange good practices in this sector in the area of financing, competitiveness, activation of the demand and innovation. <https://www.interregeurope.eu/build2lc/>. In the framework of this project, the transfer of the good practice has been carried out through various interregional seminars (in which the good practice “PICSA” has been presented in detail), through the development of bilateral meetings with partner regions interested in its implementation and through the support of the Andalusian Energy Agency in the adaptation of the good practice to the particularities of each region. In addition to BUILD2LC, delegations from countries such as Greece, Italy, Germany or Bosnia and Herzegovina have held meetings with the Andalusian Energy Agency, interested in learning more about the good practice.

Type	Flagship project X Strategic programme X Funding programme X Infrastructure <input type="checkbox"/> Key actors Platform (for regional cooperation) X Interregional or International cooperation X Intelligence tool (measurement, analysis, foresight, evaluation...) X Awareness-raising <input type="checkbox"/> Other <input type="checkbox"/> :.....
Highlights	Relevance to national and/or regional energy strategy X Cross-domain interactions (R&D&I and energy) <input type="checkbox"/> Synergetic use of several funds <input type="checkbox"/> High impact potential X Civil society participation <input type="checkbox"/> Continuous Entrepreneurial Discovery Process <input type="checkbox"/> Inter-regional cooperation <input type="checkbox"/>

	<p>Leading to private investments X Transferability of the practice X Monitoring system <input type="checkbox"/></p>
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IDENTIFICATION

Name of the good practice case

Roadmap Towards Oil-Free and Low-Carbon North Karelia 2040

Country	Region + NUTS code
Finland	North Karelia, FI1D3

Level at which the good practice is implemented (select one dominant level)

National <input type="checkbox"/> Regional <input checked="" type="checkbox"/> Local <input type="checkbox"/> Interregional-international <input type="checkbox"/>

Reference (website, documents)

Climate and energy programme of North Karelia 2020: http://bit.ly/2up1w3g Roadmap Towards Oil-Free and Low-Carbon North Karelia 2040 – DRAFT (in Finnish): http://bit.ly/2t15DL North Karelia Towards Oil-Free and Low-Carbon Area – Project: http://pohjois-karjala.fi/web/hinku/tiekartta Bio4Eco - Sustainable regional bioenergy policies: a game changer - Project : https://www.interregeurope.eu/bio4eco/
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Organization in charge of the good practice case

Name: Regional Council of North Karelia	Public authority <input checked="" type="checkbox"/> Economic and/or innovation agency <input type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary <input type="checkbox"/> Other <input type="checkbox"/> :.....
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Contact person: name, organization, email, telephone

Anniina Kontiokorpi, Regional Council of North Karelia, anniina.kontiokorpi@pohjois-karjala.fi , +358 50 414 4816 Laura Mäki, Regional Council of North Karelia, laura.maki@pohjois-karjala.fi , +358 50 302 3914

Energy topic (max. 3 choices)

Smart grids <input type="checkbox"/> Sustainable Buildings <input checked="" type="checkbox"/> Marine Renewable Energy <input type="checkbox"/> Bioenergy <input type="checkbox"/> Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP)) <input type="checkbox"/> Heating and cooling <input type="checkbox"/> Wind power (onshore) <input type="checkbox"/> Hydropower <input type="checkbox"/> Geothermal energy <input type="checkbox"/> Carbon Capture Storage and Use (CCS and CCU) <input type="checkbox"/> Hydrogen & Fuel Cell <input type="checkbox"/> Energy storage <input type="checkbox"/> Cogeneration / Combined Heat and Power (CHP) <input type="checkbox"/> other Energy Efficiency (in Industry, Transport, Services...) <input checked="" type="checkbox"/> Smart Cities <input type="checkbox"/> Other <input checked="" type="checkbox"/> Renewable energy, energy efficiency (buildings, transport)
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DESCRIPTION

Short summary of the good practice

Roadmap Towards Oil-Free and Low-Carbon Area 2040 is based on Energy and Climate Programme of North Karelia 2020. Main sectors for the roadmap are: Energy, Transport, Land-Use, Natural resources and bioeconomy, Circular economy, Innovations and know-how. Work was conducted in several workshops involving several stakeholders.
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Smart specialisation domain relevant for the good practice

Forest based bioeconomy (and renewable energies)
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Challenge addressed and targeted objective

North Karelia is applying a membership in Carbon Neutral Municipalities Network: HINKU municipalities ⁴ aim to

⁴ <http://www.hinku-foorumi.fi/en-US>

reduce greenhouse gas emissions by 80 % from 2007 level until 2030 inside the municipality's borders. Fossil oil used for heating will be replaced with renewable energy by 2020 and in transport by 2030.

Innovation (max. 2 choices)

Technological Service Commercial **Managerial X** **Public sector X** Social System Other :.....

History: origin, definition phase, start and end

North Karelia's Climate and Energy Programme was adopted in 2012. It laid out the targets for reducing GHG emissions and raising awareness about climate change, sustainable growth of bioeconomy sector and increasing the share of renewable energy. The purpose of the roadmap is to collect and suggest tangible steps that are to be taken to reach the set targets. The roadmap is part of implementation of Fossil Oil Free North Karelia –project and contributes to a Regional Action plan that is being drafted in the Interreg Europe BIO4ECO project. The workshops were organised between March 2016 and May 2017.

Governance, stakeholders involvement and target groups

Six projects (North Karelia Towards Oil Free and Low Carbon Area, Secure NPA, BIO4ECO, Ten-Tacle, CIRCWASTE, Power from biomass) are run by three different organisations (Regional Council of North Karelia, Finnish Environment Institute, Karelia University of Applied Sciences). The Fossil Oil Free North Karelia project coordinated the work of more sectoral-oriented projects. Altogether, representatives of 54 different organisations – among them SMEs; public and local authorities; research centres; cooperatives; NGOs; municipalities and industries – attended the six workshops that were organised. The goal was to involve a wide range of stakeholders who will play an important role in putting the plans into action.

Stakeholders involved in implementation (multiple choices allowed)

Public authority X **Economic and/or innovation agency X** Energy agency Intermediary **Research actors X**
Industry X **SMEs X** **NGO X** **Civil society X** Other :.....

Beneficiaries (multiple choices allowed)

Public authority X **Economic and/or innovation agency X** Energy agency Intermediary **Research actors X**
Industry X **SMEs X** Start-ups **NGO X** **Civil society X** Other :.....

Implementation

Six thematic workshops were organised in order to collect ideas about actions that should be taken. The workshops dealt with identifying the regional strengths, energy, bio- and circular economy and transportation (replacement of fossil fuels and network of filling stations). In addition, the regional goals and guidelines were reviewed and opened for discussion for anyone interested in the roadmap. Comments came mostly from organizations that were involved during the whole process of elaboration of the roadmap. A separate workshop was organised for schoolchildren, who were asked about their views of sustainable future. A draft of the roadmap is currently publicly available for comments by any interested party.

Funding sources

European regional development fund, Interreg Europe, Interreg Northern Periphery and Arctic (NPA), Future Fund (regional), national funding (Ministry for economy and employment)

Public funding sources (multiple choices allowed)

ESIF To1 (research and innovation) **ESIF To4 (low carbon economy) X** ESIF To7 (sustainable transport and network infrastructure) ESIF other or ESF Interreg **X** H2020 **National Funds X** **Regional Funds X**
Local Funds **Other X: NPA.....**

Results achieved

Roadmap works as an implementation plan for the Climate and Energy Programme of North Karelia 2020. It is a new kind of regional policy with more concrete actions. Most important stakeholders in the area were involved in the process and they will be the main actors with implementation of these actions.

Future perspectives

2-3 nationally and internationally interesting references will be designed and later on implemented through a new kind of financing and implementation model between public and private sector.

HIGHLIGHTS

Most successful elements

The workshops reached a large number of people from different organisations, and the process itself was a successful case of cooperation across sectoral borders.

Most important difficulties

In the course of the workshops it turned out to be challenging to focus the discussion from general to more concrete level, and name actors who could and should take initiative for advancing the proposed actions. In some cases it seemed that the instruments for influencing incentives (e.g. energy policies) were out of the reach of regional and local actors.

Lessons learned

A fully inclusive process was needed for organizing roadmap work. This took place through five different projects, a project group for roadmap consisting of experts from three different organizations, and several workshops with stakeholders from more than 50 organizations.

Ideas for transfer of good practice

The roadmap included regional targets concerning climate and energy actions and expanded perspective for developing economic activities in the area for example within bioeconomy and circular economy. Inclusive process with several workshops engages stakeholders for new actions needed for achieving targets.

Type	Flagship project <input type="checkbox"/> Strategic programme X Funding programme <input type="checkbox"/> Infrastructure <input type="checkbox"/> Key actors Platform (for regional cooperation) X Interregional or International cooperation X Intelligence tool (measurement, analysis, foresight, evaluation...) <input type="checkbox"/> Awareness-raising <input type="checkbox"/> Other <input type="checkbox"/> :.....
Highlights	Relevance to national and/or regional energy strategy X Cross-domain interactions (R&D&I and energy) X Synergetic use of several funds X High impact potential X Civil society participation X Continuous Entrepreneurial Discovery Process X Inter-regional cooperation <input type="checkbox"/> X Leading to private investments <input type="checkbox"/> Transferability of the practice <input type="checkbox"/> Monitoring system <input type="checkbox"/>

IDENTIFICATION

Name of the good practice case

SMILE (Smart Ideas to Link Energies), large scale experiment of smartgrid models from mature technologies

Country	Region + NUTS code
France	Brittany FR52

Level at which the good practice is implemented (select one dominant level)

National **Regional** Local Interregional-international

Reference (website, documents)

SMILE page on the institutional website of the Brittany Region :
http://www.bretagne.bzh/jcms/prod_325881/fr/projet-smile-vers-les-nouveaux-reseaux-electriques-intelligents-de-l-ouest
 Presentation from the ENEDIS website (DSO): <http://www.enedis.fr/smile>
 Official website : <http://smile-smartgrids.fr/>
 Website of the Regulatory Commission of Energy (CRE): <http://www.smartgrids-cre.fr/index.php?p=smile-bretagne>
 SMILE page on the institution website of Pays de la Loire Region:
http://www.paysdelaloire.fr/no_cache/actualites/actu-detaillee/n/la-region-des-pays-de-la-loire-et-la-region-bretagne-laureates-de-lappel-a-projets-national-s/
 Presentation from RTE's website (TSO) :
<http://lemag.rte-et-vous.com/actualites/accompagner-le-deploiement-des-reseaux-electriques-intelligents-de-demain>

Organization in charge of the good practice case

Name: Regional Council of Brittany Bretagne Développement Innovation (BDI) – Regional agency for economic development and innovation	Public authority <input checked="" type="checkbox"/> Economic and/or innovation agency <input checked="" type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary <input type="checkbox"/> Other <input type="checkbox"/> :
--	--

Contact person: name, organization, email, telephone

Françoise Restif , SMILE project manager : f.restif@bdi.fr (+33) (0)2 99 67 42 08 / (0)6 74 09 05 86

Energy topic (max. 3 choices)

Smart grids Sustainable Buildings Marine Renewable Energy Bioenergy Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP)) Heating and cooling Wind power (onshore) Hydropower Geothermal energy Carbon Capture Storage and Use (CCS and CCU) Hydrogen & Fuel Cell **Energy storage** Cogeneration / Combined Heat and Power (CHP) **other Energy Efficiency (in Industry, Transport, Services...)** Smart Cities Other :.....

DESCRIPTION

Short summary of the good practice

The SMILE project aims to act as an industrial catalyst for energy transition and network upgrading thereby fulfilling multiple goals: combating climate change, improving local energy solidarity, spurring innovation, and fuelling community engagement. Thanks to the development of a series of pilot projects deploying and testing innovative

smart grids technologies over a large and densely populated area (27 133 km² – 3,4 M population), SMILE will provide concrete examples of innovative market solutions, validation of business models, regulatory innovations, awareness raising and mobilization of prosumers in the field of smart grids.

Smart specialisation domain relevant for the good practice

Smart grids are one of the Strategic Innovation Areas featured in the Region's Smart Specialisation Strategy: SIA 7 - Observation, and energy and ecological engineering, 7B- Smart grids.

Challenge addressed and targeted objective

Strategic objectives :

- Develop an integrated and exportable model that can be deployed at national level;
- Create a showcase for regional and national industrial excellence in smart grid technologies for international markets.

Targets :

- 10.000 jobs
- Development of an international industrial dynamic
- 1000 smart charging stations for electric vehicles
- >50 MWh storage
- 1000 positive energy buildings
- 2000 intelligent lighting systems
- 1 open community energy platform for awareness raising and stakeholder engagement at local level.

Innovation (max. 2 choices)

Technological Service **Commercial** Managerial Public sector Social **System** Other :.....

History: origin, definition phase, start and end

This ambitious project takes into account the very fragile energy situation of Brittany, mainly due to a very low domestic production of electricity and a great fragility of the supplying network with the risk of a total blackout during severe winter weather. The Breton Electricity Pact, adopted in 2011, targets a threefold decrease in demand growth by 2020 and a fourfold increase in the production of renewables, as well as short-term and long-term measures designed to secure electricity supplies. A regional roadmap for the development of smart grids, seen as a key element to a successful energy transition, was developed and integrated to the Breton Electricity Pact in 2014.

The project was officially launched in April 2016 after a year-long preparation phase that involved Brittany's neighbour region Pays de la Loire as well as the whole industrial and economic ecosystem. The group dynamic draws on tried and tested cooperation between the two regions, benefits from the complementary characteristics and assets of its diversified territory, and is aided by a vibrant industrial ecosystem centred around smart grids.

Governance, stakeholders involvement and target groups

To ensure adequate project governance and be more flexible and responsive, a non-profit umbrella structure was set up: « SMILE Smartgrids », composed of 160 members from both public and private organizations. The association is co-chaired by the French Regions of Bretagne and Pays de la Loire and vice-chaired by the Metropolises of Rennes and Nantes as well as by the 4 utility boards (of which the DSO and TSO for gas and electricity are shareholders).

Governance is also supported by the Chambers of Commerce of both regions, 2 competitiveness clusters (Images & Réseaux and S2E2), representatives of local authorities, representatives of both large companies and SMEs, universities and financial institutions.

The SMILE Smartgrids association can count on the support of 3 groups of experts: a technical and scientific group composed of leading research centres, a second group working on financial instruments and a third one composed of representatives from different social and economic stakeholders as well as civil society (development agencies,

consumer associations...).

Stakeholders involved in implementation (multiple choices allowed)

Public authority✓ **Economic and/or innovation agency**✓ **Energy agency** ✓ **Intermediary**✓ **Research actors**✓
Industry✓ **SMEs**✓ **NGO**✓ **Civil society**✓ **Other**✓: associations

Beneficiaries (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary **Research actors**✓
Industry✓ **SMEs**✓ **Start-ups**✓ **NGO** **Civil society** **Other**✓: associations

Implementation

The project was launched in April 2016. The first year has been devoted to the definition of pilot projects, building the right commercial consortia and matching projects with adequate funding and financial resources. The first 4 pilot projects have been launched in July (see below for more information).

Funding sources

- ESIF and other regional funding (25 M€ from each Region)
 - Regional Marine Renewable Energy funds
 - Patrimonial Regional investment for self-owner building (smartgrid referencial for ports / airports / highschoools / Trains)
 - Interreg Franche Manche (Intelligent Community Energy) ICE project
 - Interreg Europe SET-UP project

Public funding sources (multiple choices allowed)

ESIF T01 (research and innovation) **ESIF T04 (low carbon economy)**✓ ESIF T07 (sustainable transport and network infrastructure) ESIF other or ESF Interreg✓ H2020 **National Funds**✓ **Regional Funds**✓
Local Funds✓ Other:.....

Results achieved

So far:

- 4 sub-projects approved for funding in July 2017 (i.e. responding to the criteria established under the SMILE project: partnership-based; responding to challenges of demonstrating mature technologies; involved into energy data exchanges; with viable economic model and with sound legal, technical, financial and territorial components)
 - PRIDE: cybersecured BiG Energy Data platform
 - RennesGrids: large scale “collective self-consumption” project
 - ATL-EN-TIC : smart factories tools
 - Ouessant : Smart island 100 % supplied by tidal energy
- 3 TSO and DSO projects launched : GRTGaz and GRDFsmartgaz project / RTE TSO grid project/ ENEDIS DSO grid project
- 12 local authorities involved (urban / peri-urban / rural)

Future perspectives

- 15 others projects to be approved in November 2017 (large virtual power plants / multifluid management systems for buildings / smart-ports / large scale electric vehicles smart charging stations / ...)
- 15 others projects to be approved in March 2018
- 12 more local governments to be involved (urban / suburban / rural)
- Environmental and socio-economic analysis to be carried out and shared among stakeholders and at national level

HIGHLIGHTS

Most successful elements

The successful element of the SMILE project is the involvement of all stakeholders, especially consumers, which is the key to solve acceptability issues related to data management and privacy which are at the core of smart grids development. Without acceptability, already existing technological solutions cannot be validated and go through a process of market uptake.

Most important difficulties

The biggest challenge is related to the democratization and decentralisation of the energy systems. These processes imply great changes at many levels, from the regulatory framework to the market as well as the acceptability by the final users. It also implies the involvement of different policy and decision making levels, including the local level. Each of these actors is key and need to understand the interest and advantages (both social and economic) of smart grids.

Ideas for transfer of good practice

The main objective of the SMILE project is to create an integrated showcase for regional and national industrial excellence in smart grid technologies, characterised by exportable integrated solutions. The deployment zone, centred around the cities of Rennes and Nantes, is representative of the wide variety of energy situations encountered across Europe. The pilot projects can therefore be easily replicated in the EU. The methodology, meaning aggregating all relevant stakeholders following the quadruple helix approach, can also be transferred to other European regions and territories.

<p>Type</p>	<p>Flagship project X Strategic programme X Funding programme <input type="checkbox"/> Infrastructure <input type="checkbox"/> Key actors Platform (for regional cooperation) X Interregional or International cooperation X Intelligence tool (measurement, analysis, foresight, evaluation...) <input type="checkbox"/> Awareness-raising X Other <input type="checkbox"/>:.....</p>
<p>Highlights</p>	<p>Relevance to national and/or regional energy strategy X Cross-domain interactions (R&D&I and energy) <input type="checkbox"/> Synergetic use of several funds X High impact potential X Civil society participation X Continuous Entrepreneurial Discovery Process <input type="checkbox"/> Inter-regional cooperation X Leading to private investments X Transferability of the practice X Monitoring system <input type="checkbox"/></p>

IDENTIFICATION

Name of the good practice case

Support instruments synergies for S3 and Energy in the Northern Netherlands

Country	Region + NUTS code
Netherlands	Northern Netherlands (NL1)

Level at which the good practice is implemented (select one dominant level)

National **Regional** Local Interregional-international

Reference (website, documents)

The references below exist only in Dutch (with the exception of the OP, see last reference)
 General website: www.snn.eu.

Tender Valorisation

- General information: <http://www.snn.eu/subsidies/subsidies-ondernemers-kennisinstellingen/innovatie-tender-valorisatie-2017-mkb/>
- Policy framework: <http://www.snn.eu/subsidies/subsidies-ondernemers-kennisinstellingen/innovatie-tender-valorisatie-2017-mkb/regeling-en-toelichting/>

Call Living Labs

- General information: <http://www.snn.eu/subsidies/subsidies-ondernemers-kennisinstellingen/innovatie-proeftuinen-ronde-2/>
- Policy framework: <http://www.snn.eu/subsidies/subsidies-ondernemers-kennisinstellingen/innovatie-proeftuinen-ronde-2/regeling-toelichting/>

English (summary of) the OP: <http://www.snn.eu/en/subsidies/operational-programme-european-regional-development-fund-2014-2020/>.

Organization in charge of the good practice case

Name: Northern Netherlands Alliance (SNN)	Public authority <input checked="" type="checkbox"/> Economic and/or innovation agency <input type="checkbox"/> Energy agency <input type="checkbox"/> Intermediary <input type="checkbox"/> Other <input type="checkbox"/>
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Contact person: name, organization, email, telephone

Luc Hulsman (SNN) hulsman@snn.eu +31(0)50 5224 945

Energy topic (max. 3 choices)

Smart grids Sustainable Buildings Marine Renewable Energy **Bioenergy** Solar energy (Photovoltaics (PV) and Concentrated solar power (CSP)) Heating and cooling **Wind power (onshore)** Hydropower Geothermal energy Carbon Capture Storage and Use (CCS and CCU) Hydrogen & Fuel Cell Energy storage Cogeneration / Combined Heat and Power (CHP) **other Energy Efficiency (in Industry, Transport, Services...)** Smart Cities Other :.....

DESCRIPTION

Short summary of the good practice

Northern Netherlands Alliance (SNN) is the Managing Authority (MA) of the OP ERDF for the Northern Netherlands. SNN is also responsible for the RIS3, in which energy plays a prominent role. This is reflected in the OP ERDF, the

main innovation support instrument and implementation instrument of the RIS3, which focuses on TO1 (innovation) and TO4 (CO2 reduction) and on creating synergies between both objectives.

Smart specialisation domain relevant for the good practice

Instead of indicating specific S3 domains, the Northern Netherlands has designated four societal challenges as a starting point for their RIS3. One of those is Reliable, Clean and Efficient Energy, to which the good practice directly contributes. It however also directly or indirectly contributes to the other challenges, which are outlined in the next section.

Challenge addressed and targeted objective

Instead of prioritizing (sub-)sectors, the Northern Netherlands designates four societal challenges as a starting point of its RIS3: (1) Health, Demography and Welfare, (2) Food Security, Sustainable Agriculture and Bio-based Economy, (3) Reliable, Clean and Efficient Energy and (4) Clean, Safe Water. The regional opportunities regarding innovation and sustainability contribute to tackling these societal challenges. The OP therefore not only focuses on stimulating innovations in general terms (TO1), but also links this to innovations in low-carbon technologies (TO4). This led to the creation of instruments that are dedicated to both objectives.

Innovation (max. 2 choices)

Technological **Service** Commercial Managerial Public sector Social System Other :.....

History: origin, definition phase, start and end

The Northern Netherlands made an early start creating its RIS3. In 2012, a quadruple helix (Q4) Task Force drafted a position paper which stressed the pioneering role the region endeavours to assume within Europe. Through consultations with stakeholders, the RIS3 was completed the same year. The strategy became operationalized into the Northern Innovation Agenda (NIA), issued in 2014. The RIS3 and NIA formed the basis of the OP ERDF 2014-2020. The OP ERDF is thus based upon the societal challenges. They are guiding the way the Northern Netherlands stimulates innovations in CO2 reduction – and contributes to a smart, sustainable and inclusive EU in 2020.

Governance, stakeholders involvement and target groups

Governance of the best practice case is a full quadruple helix affair. In the design, implementation and monitoring of the Northern Netherlands RIS3, **stakeholder involvement** is key. Recently, the Northern Innovation Board (NIB) was formed, consisting of stakeholders from the Q4, tasked with the encouragement and overseeing of the implementation of the RIS3 in the Northern Netherlands. The ERDF Expert Committee and the ERDF Supervisory Committee consist of Q4 stakeholders as well. This best practice case is designed to tackle societal challenges, thus **targeting** the whole (Q4) society.

Stakeholders involved in implementation (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary **Research actors**
Industry **SMEs** NGO **Civil society** Other :.....

Beneficiaries (multiple choices allowed)

Public authority Economic and/or innovation agency Energy agency Intermediary **Research actors**
Industry **SMEs** Start-ups NGO **Civil society** Other :.....

Implementation

The Northern Netherlands OP ERDF underlines the importance of creating synergies between innovation (TO1) and CO2-reduction (TO4). This results in an integrated approach. Projects and initiatives applying for ERDF instruments can cover both objectives: contributing to enhancing the innovation capacities of SMEs as well as reducing the CO2-footprint. SNN then assigns one of the objectives as the main objective. Two instruments with such an integrated approach are (1) Tender Valorisation (on basis of GBER 651/2014 art. 25, 28 and/or 29) and (2) Call Living Labs (on basis of GBER 651/2014 art. 27).

Funding sources

The main instrument to implement RIS3 is the ERDF. The Northern Netherlands Operational Programme ERDF is focused on TO1 and TO4, which are translated into two priority axes: (1) human capital, knowledge and innovation and (2) a low carbon economy. The budget for SNN's OP ERDF for 2014-2020 is €103,5 million, supplemented with an additional €18.5 million of the Dutch government, totalling €122 million.

Public funding sources (multiple choices allowed)

ESIF To1 (research and innovation)
 ESIF To4 (low carbon economy)
 ESIF To7 (sustainable transport and network infrastructure)
 ESIF other or ESF
 Interreg
 H2020
 National Funds
 Regional Funds
 Local Funds
 Other :.....

Results achieved

The integrated approach merging R&D with CO₂-reduction within the OP ERDF results in ERDF instruments that are amenable for projects under both TO1 and TO4. These instruments, such as the Tender Valorisation and the Call Living Labs, are therefore directed at bringing together knowledge institutions and businesses, and preferably end-users, in order for them to work together. This leads to interesting projects combining innovation and sustainability, while also focused on strengthening SMEs. The number of projects selected and/or funded is 49 and total € invested: € 18,6m. One example is the showcases 'MegaWindForce Windturbine' (ERDF tender Valorisation) in which a completely new type of wind turbine has been designed – a design which has been confirmed by several research institutes. This wind turbine is lighter, stronger and lower in maintenance, which makes wind energy better able to compete with other forms of energy. Another example is 'Energysense' (ERDF call Living Labs), which set up a Living Lab of over 3000 households to test new energy services and products in a real-life environment; the aim is to make these households at the disposal of SMEs and to develop the corresponding services for SMEs. These types of cooperation lead to new ideas and even new innovations – all contributing to tackling the societal challenges linked to a better use of sustainable energy.

Future perspectives

For the future, the Northern Netherlands aims to further develop the synergies between both objectives and enhance the number of projects making use of the dedicated ERDF instruments. Also, we would like the projects to incorporate multiple actors and to include businesses and knowledge institutions, which cooperate in a creative environment and together develop new innovations in the field of clean energy – with the aim of making the Northern Netherlands a frontrunner in S3 and energy.

HIGHLIGHTS

Most successful elements

This approach of finding synergies between innovation and CO₂-reduction can be seen as a way to kill two birds with one stone: contributing to both TO1 and TO4 at the same time. The ERDF instruments Valorisation and Living Labs are quite successful in this regard. By encouraging various actors to cooperate in developing promising niches, new ideas arise that can grow out to become innovations – and ultimately, regional economic strengths, benefitting society as a whole. This has led to the Northern Netherlands becoming a region known for its strength in energy transition through innovation.

Most important difficulties

Even though there are some very good examples of projects combining innovation with CO₂ reduction through their ERDF funding, the number of these best practices could be enhanced. The most important difficulty hindering a larger amount of applications for innovation support is a lack of knowledge regarding the specific instruments, as well as the idea that funding applications are long, difficult and bureaucratic processes. Lessening the fragmentation between innovation support instruments and optimizing the coordination between different policy levels might help creating a more overseeable landscape of innovation measures. Efficient communication and information actions are crucial in this regard.

Lessons learned

With regard to difficulties, the first lesson is to develop an effective communication plan, which highlights the specific activities to undertake in order to realize a wider knowledge of the availability of innovation support instruments, leading to more and better applications. Another lesson is to facilitate rather than limit innovative and promising initiatives by widening the executive- or implementation frameworks of innovation support measures. SNN has developed a pilot ERDF instrument 'Open Innovation', which primarily aims at projects contributing to tackling the societal challenges of the RIS3 and contributing to the OP's synergetic thematic objectives.

Ideas for transfer of good practice

The good practice as presented in the Northern Netherlands might be disseminated across Europe by several dedicated communication activities. First of all, through the European Commission and the S3 platform itself, on their websites, newsletters, publications, etc. Secondly, SNN communicates these good practices on their communication channels and the website 'Europa om de Hoek' (<https://www.europaomdehoek.nl>). It might also be an idea to construct a (European) database of exemplary projects, which are showcased to inspire other regions. Project visits as part of interregional cooperation projects (H2020, Interreg) and bilateral study visits might also be a good way to exhibit the good practice.

<p>Type</p>	<p>Flagship project <input type="checkbox"/></p> <p>Strategic programme X</p> <p>Funding programme <input type="checkbox"/></p> <p>Infrastructure <input type="checkbox"/></p> <p>Key actors Platform (for regional cooperation) X</p> <p>Interregional or International cooperation <input type="checkbox"/></p> <p>Intelligence tool (measurement, analysis, foresight, evaluation...) <input type="checkbox"/></p> <p>Awareness-raising <input type="checkbox"/></p> <p>Other <input type="checkbox"/>:.....</p>
<p>Highlights</p>	<p>Relevance to national and/or regional energy strategy X</p> <p>Cross-domain interactions (R&D&I and energy) X</p> <p>Synergetic use of several funds X</p> <p>High impact potential <input type="checkbox"/></p> <p>Civil society participation <input type="checkbox"/></p> <p>Continuous Entrepreneurial Discovery Process X</p> <p>Inter-regional cooperation <input type="checkbox"/></p> <p>Leading to private investments <input type="checkbox"/></p> <p>Transferability of the practice <input type="checkbox"/></p> <p>Monitoring system <input type="checkbox"/></p>

IDENTIFICATION

Name of the good practice case