

POWERTY

Guide of Good Practices

Renewable energies for vulnerable groups



INDEX

1	Introduction to the POWERTY project and this Good Practices Guide.....	5
2	Identification of Good Practices. Guidelines and Methodology.....	6
	Identification of good practices: Methodology.....	7
3	Good Practices Repository.....	9
3.1	Topic 1: Renewable energy technologies:.....	10
3.1.1	Energy improvement of 149 social houses using renewable energy.....	10
3.1.2	Solar neighborhood (Barrio solar).....	11
3.1.3	Solar cookers and ovens as a one more measure to overcome energy poverty.....	11
3.1.4	Innovative public purchase of industrialized social housing.....	11
3.1.5	Shared self-consumption and data management.....	12
3.1.6	Photovoltaic installation on a farm where people at risk of social exclusion work.....	12
3.1.7	The Grenoble area's district heating network: renewable energy, affordable for vulnerables groups.....	13
3.1.8	Sponsorship to enable residents of social housing to reduce their bills thanks to solar electricity	13
3.1.9	Facilitation of renewable energy solution for self-consumption in residential buildings	13
3.1.10	Home Exchange, a program to eliminate energy poverty in the region by building microhouses.....	13
3.1.11	Remote renewable energy power plants for prosumers.....	14
3.1.12	Renewable energy platform for prosumers.....	15
3.2	Topic 2: Financial mechanisms:.....	16
3.2.1	Subsidy programme for the energy development of Andalusia.....	16
3.2.2	Self-consumption and collective renewable energies.....	17
3.2.3	Crowdfunding financing for solar installation in local entity.....	18
3.2.4	Photovoltaic installation for self-production in a building for 19 families in vulnerable situations	18
3.2.5	QUANTICO rental. Financing model for solar self-consumption facilities.....	18
3.2.6	Production of renewable energies through collective investments of citizens in Voiron	19
3.2.7	Air-wood fund.....	19

3.2.8	Efficient heating systems for the vulnerable groups in Sofia Municipality for improved air quality	19
3.2.9	Municipalities against energy poverty - STOP SMOG program	20
3.2.10	Clean Air program to increase the use of renewable energy by people suffering from energy poverty	20
3.2.11	Energy Efficiency and Renewable Energy Source investment platform	20
3.2.12	Change of legislation to foster building renovation program which include vulnerable groups.	21
3.2.13	Subsiding investment for renewable energy and energy saving measures in vulnerable homes in Cyprus	21
3.2.14	Solar Savers Adelaide: Solar PVs for low income households	21
3.2.15	Free solar installations for social housing in Manchester	22
3.2.16	TRESOC – The shine project	22
3.3	Topic 3: Normative:	23
3.3.1	Guide to promote self-consumption for municipalities in Andalusia	23
3.3.2	Regulatory framework for self-consumption and renewable energies in Spain	24
3.3.3	National Strategy of Energy Poverty	24
3.3.4	Andalusia plan for the elderly	26
3.3.5	Regulatory framework for energy poverty for vulnerable groups	26
3.3.6	New mechanism (January 2020) to help investment in renewable energy and energy savings ‘Ma prime rénov’ managed by the ANAH, which supports households in their renovation projects	26
3.3.7	The zero-rated eco-loan scheme to encourage renewable energy (ECO-PTZ)	27
3.3.8	The energy voucher, an automatic aid for vulnerable households	28
3.3.9	Bonus Energy saving certificate	28
3.3.10	Habiter Mieux Sérénité	29
3.3.11	Programme LIFE	30
3.3.12	Bureaucratic nightmare solution for development of renewable energies	30
3.4	Topic 4: Empowering:	31
3.4.1	An installing solar panels insertion company whose employees are people at risk of exclusión	31
3.4.2	Social Germinator	32
3.4.3	Eléctrica de Cádiz and self-consumption	32
3.4.4	Energy Poverty Action Plan in Cádiz	33

3.4.5	No home without energy	33
3.4.6	Solmatch REPSOL	34
3.4.7	AEELA Program. Energy Saving Accelerator for the Housing of the low income farmers 34	
3.4.8	ABC demonstration	35
3.4.9	Sustainable reduction of energy consumption of low-income households through energy advice	35
3.4.10	WARM UP YOUR BUSINESS as an opportunity to find the RES technologies for vulnerable groups	36
3.4.11	Barcelona Energia	36
3.4.12	Regeneration in Paris: Clichy-Batignolles Eco-District	36
3.4.13	Heat Smart Orkney	36

1 Introduction to the POWERTY project and this Good Practices Guide

The decarbonisation of the energy system requires that all European citizens can make full use of renewable energies. However, there is a high percentage of citizens with many difficulties to have renewable energy facilities and equipment, in particular the vulnerable groups, including those affected by "**energy poverty**". These difficulties are motivated by economic and technological issues (renewable energy solutions are not adapted to vulnerable groups), but also by other factors of a social and cultural type, use and owners of housing, etc., which influence the types of solutions that should be used, as well as how to manage them.

The general objective of [POWERTY](#) is to **increase the use of renewable energies in vulnerable groups**. This way, thanks to the project, new renewable energy installations will be facilitated to provide safe and clean energy to vulnerable households. In addition, companies supplying renewable energies will be encouraged through the project to offer technological solutions that are adapted to vulnerable groups, activating their corporate social responsibility.

In this way, POWERTY will help to tackle energy poverty, promoting vulnerable households with adequate energy supplies, thanks to renewable energies. Given the exceptional conditions of these households, social innovation measures will be promoted, based on greater participation, integration and empowerment of vulnerable groups.

The project will develop a complete learning process to facilitate an effective knowledge flow among regions, counting on 6 partners with different complementary expertise and different levels of competences (regional/national) which enriches the transfer of knowledge. More than 50 best practices and almost 50 events involving 60 stakeholders will establish 5 Regional Action Plans covering a population of more than 25 million inhabitants.

The POWERTY project, approved by the European Commission in the framework of the **Interreg Europe programme**, from August 2019 to August 2023, with a budget of 1.227.226 euros.

The [good practices database](#) is the cornerstone of the project. For this reason, one of the main outputs delivered for the first semester is a **Guide of Good Practices**. This document is organised by topics and compiles and makes available to the general public the good practices detected among the consortium and identified and characterised by every consortium partner. Some of this good practices are incorporated into the Policy Learning Platforms as “success stories”.

During the POWERTY project, the fruitful interchange of ideas will enlarge and perfect this Guide. It is also expected that, following the periodical consortium meetings as dedicated interregional seminars and other project meetings, the planned study visits will be held, where additional information on the good practices will be provided. This way, visiting consortium regions could make an initial approach on how to adapt these good practices, the ultimate aim of this project.

The POWERTY project aims to ensure the real impact of the achievements in the long term, which will be achieved through new and innovative initiatives put in place and adapted to the local needs and expectations of society.

2 Identification of Good Practices. Guidelines and Methodology

For a successful good practices compilation exercise, a methodological framework was provided as “guidelines” available for every consortium partner to help to identify good practices in renewable energies and energy poverty in Europe, to be done at a regional level.

Identification of good practices: Methodology

According to the Interreg Europe Programme:

Good practices is defined as an initiative (e.g. project, process, technique) undertaken in one of the programme's priority axes which has proved to be successful in a region and which is of potential interest to other regions. Proved successful is where the good practice has already provided tangible and measurable results in achieving a specific objective. Although the Interreg Europe programme primarily refers to good practices, valuable learning also derives from bad practices where lessons learnt can be taken into consideration in the exchange of experience process.

In line with the project's objectives, in the frame of **POWERTY**, good practices shall be categorised into the following topics:

1. Identify **renewable energy technologies**, tools and methods;
2. Highlight new **financing mechanisms**;
3. Overcome barriers of a **normative** character;
4. **Empower** citizens and local authorities.

These guidelines will be used in the POWERTY project to assist the partners in selecting their good practices.

The methodology hereinafter proposed is oriented towards results being achieved. That is why these guidelines have been produced following the project deliverable structure, in order to ensure that all relevant aspects have been taken into account.

It should be reminded that the present document focuses only on the regional assessment stage of the project's third semester (from August 2019 to May 2021) and **expects to be enlarged together with the fruitful interchange of ideas among the consortium members.**

The guidelines also provided the partners with a template that contains the description and specific required information defining good practices. This template is attached as an annex.

There is no limit on the number of good practices to be collected among the consortium members. As a requisite, a **total minimum number of 50** shall be collected. For the POWERTY project purposes we will consider the above quoted definition for Good Practice as stated in the Interreg Europe Programme taking into account the key criteria suggested for the Good Practices selection:

- The action is finished or in progress, but in any case, with proven results.
- The action has a clear potential for replication in other territorial contexts.
- The action can be classified under one or more than one of the 4 topics defined in the Application Form (AF), namely:
 - Identify renewable energy technologies, tools and methods;
 - Highlight new financing mechanisms;
 - Overcome barriers of a normative character;
 - Empower citizens and local authorities.
- The action has already provided tangible and measurable results in achieving a specific objective. It is recommended (if possible) to be related to one or more of the **self-defined performance indicators** in the AF. This is direct impact estimation:
 - **Policy 1.** Additional capacity for renewable energy production for vulnerable groups (kW)
 - **Policy 2.** Number of residential housing that consume renewable energy (collective or individual projects) concerning vulnerable groups
 - **Policy 3.** Number of funded projects with energy poor households applicants
 - **Policy 4.** Number of homes/buildings that consume renewable energy belonging to vulnerable groups.
 - **Policy 5.** Number of households with increased energy efficiency addressed to vulnerable groups.

Any other features that may enhance the Good Practice potential will be welcome. In particular, impact on some success indicators might be collected, as:

- Total renewable energies associated to the practice
- Reduction of CO2 emissions
- Reduction of energy spending

- Perceptions by users by survey (comfort quality of life...)
- Research and patents output
- Total investment outcomes
- Number of jobs created
- Etc.

During the good practices collection, it was recommended to the consortium partners that the **good practices selected are meant to help other partners' to fully or partially cover their regional needs**, previously identified in their respective regional analysis (SWOT analysis). Also, partners need to meet the output performance indicators stated in the AF for each policy instrument as the project success depends partially on it. In consequence, special attention should be paid to the above when making the final selection of regional good practices.

3 Good Practices Repository

The good practices identified are listed as follows by 4 POWERTY topics below.

Some of this good practices were presented during the Interregional Thematic Seminars of POWERTY ([here the link with information about these presentations](#)).

3.1 Topic 1: Renewable energy technologies:

Spain	Energy improvement of 149 social houses using renewable energy
	Solar neighborhood
	Solar cookers and ovens as a one more measure to overcome energy poverty
	Innovative public purchase of industrialized social housing
	Shared self-consumption and data management
	Photovoltaic installation on a farm where people at risk of social exclusion work
France	The Grenoble area's district heating network : renewable energy, affordable for vulnerables groups
	Sponsorship to enable residents of social housing to reduce their bills thanks to solar electricity
Bulgaria	Facilitation of renewable energy solution for self-consumption in residential buildings
Poland	Home Exchange, a program to eliminate energy poverty in the region by building microhouses
Lithuania	Remote renewable energy power plants for prosumers
	Renewable energy platform for prosumers

The information about each good practice are explain as follow:

3.1.1 Energy improvement of 149 social houses using renewable energy

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *Improving efficiency of social housing is challenging due a number of different ownership models across Europe, and a lack of incentives for change. Inhabitants often either lack funds to invest in renewables, or lack incentives to invest in property which they do not own. As such, the public sector must often take the lead. This practice demonstrates the benefits of assigning responsibility to a single agency which can identify buildings for improvement, specialise in appropriate actions and implement them at scale. In this case, ERDF grant funding has been used – an option open to many European regions – but other models for financial instruments are emerging and will be essential for meeting the goals of the EU's climate policy and its Renovation Wave. More information on energy efficiency in social housing can be found in this webinar replay from the Policy Learning Platform: [here](#)*

3.1.2 Solar neighborhood (Barrio solar)

Summary: Barrio Solar is an initiative aimed at promoting shared self-consumption and solidarity in neighborhoods in urban and rural areas, through the installation of photovoltaic plants for shared self-consumption in community buildings in the neighborhood.

In Barrio Solar, both neighbors and businesses that are less than 500 meters from the installation can participate without having to make any investment or change energy market, only by paying a small monthly bill, with which they can benefit from savings of around 30% energy on your bills. Energy that they will now receive from the plates of the installation of their neighborhood.

Barrio Solar is an initiative that wants to reach all the people in the neighborhood where it is installed, therefore, a percentage of the energy it generates goes to families in the neighborhood who are in a situation of energy poverty without having to pay any monthly fee, simply benefiting from the savings in the bill that solar self-consumption generates. By not having to change electricity marketers, these vulnerable participants can maintain their contracts in PVPC with a social bonus.

The objective of Barrio Solar is not only to promote collective self-consumption in vulnerable households. The photovoltaic installation that is carried out should be the first stone of a community work project around the acquisition of awareness, commitment and habits aimed at contributing to the fight against the climate crisis and energy poverty.

For which, it will be launched in the neighborhood where the Barrio Solar Office is held. This office will be a reference space in terms of renewable energy, responsible consumption and sustainability in the neighborhood.

Stakeholder: ECODES

3.1.3 Solar cookers and ovens as a one more measure to overcome energy poverty

All details of the good practice: [here](#)

3.1.4 Innovative public purchase of industrialized social housing

We are developing this information.

3.1.5 Shared self-consumption and data management

Summary: Local administrations are beginning to develop initiatives to help solve the emergency climate change and energy poverty, in particular, through collective and shared self-consumption facilities renewable energy.

The new technologies for obtaining, analyzing and managing energy data greatly facilitate the development of this type of facilities, since they allow you to choose higher precision size and features more adequate renewable energy facilities. From that way the waste of economic resources is avoided in oversized facilities. In addition, data technologies optimize energy distribution between all users that are associated with the plant self-consumption of renewable energies, thus maximizing the amount of self-consumed energy.

This good practice consists of a platform called PylonData, which performs an analysis and advanced data management.

The PylonData platform allows you to configure a distribution between all users of static type (each user is allocates a% of renewable electricity generated that does not varies) or dynamic (the assigned% varies hourly); although this second mode is more efficient, it is not allowed currently (December 2020) by Spanish regulation.

In addition, the PylonData platform allows assigning a greater % of electricity generation to vulnerable groups affected for energy poverty.

Stakeholder: PylonData

3.1.6 Photovoltaic installation on a farm where people at risk of social exclusion work

Summary: The project has consisted of a photovoltaic solar energy installation for an irrigation well on the agricultural property of the Bioalverde labour insertion company. Thanks to this new energy source, it has been possible to multiply by four the surface area of organic crops and, therefore, give opportunities to a greater number of people in need of employment and training.

Stakeholder: The entities participating in the project have been:

- Cáritas Diocesana of Seville, who has carried out the general coordination.
- Bioalverde. Non-profit and insertion company promoted by Cáritas Diocesana of Seville, to achieve social and labour insertion of people in situation or risk of social exclusion, as well as to raise awareness

and increase fair and sustainable consumption. Its main activity is the management and agricultural exploitation of an ecological plot of 20 hectares, in the province of Seville (municipality of Dos Hermanas).

- Endesa, financing the project.
- Energía Sin Fronteras (“Energy without Borders”) has coordinated the energy feasibility study of the project and has been responsible for the supply, implementation and assembly of the solar photovoltaic installation and accessories.

3.1.7 The Grenoble area's district heating network: renewable energy, affordable for vulnerables groups

All details of the good practice: [here](#)

3.1.8 Sponsorship to enable residents of social housing to reduce their bills thanks to solar electricity

All details of the good practice: [here](#)

3.1.9 Facilitation of renewable energy solution for self-consumption in residential buildings

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *Expanding residential battery storage in Europe is fundamental for reaping the full range of benefits stemming from a wider deployment of renewables, including the reduction of energy poverty. This good practice clearly shows the difference between installing PV only and installing PV together with battery energy storage systems (BESS). The latter case allows to maximise self-consumption of decentralized electricity produced from renewables by prosumers and energy communities. This replicable good practice may certainly inspire policymakers, especially in the many European regions where the uptake of BESS in residential buildings is still rather limited.*

3.1.10 Home Exchange, a program to eliminate energy poverty in the region by building microhouses

Summary: Some people who lives in a large house or apartment that are not adequately insulated and generate huge heat losses, can not afford to maintain the house and they are in an energy poverty situation.

Looking at the financial perspective, it turned out that in such houses to introduce renewable energy, the buildings must first be insulated and this requires large financial outlays, much larger than putting up a small house that fully uses renewable energy. So, this program consist in families, who owns a large house or apartment, can exchange it for microhouse, which is a modern modular house, fully equipped and fully use renewable energies.

Microhouse is offered by a developer, organization, local government or other entity.

The difference between the market price of an apartment and the price of a microhouse is an income for investor.

Modular houses are small and the costs of its maintenance are very low. Functional modularity (3mx3m) allowing for multiple systems and connections corresponding to the individual needs of the user, the ability to easily adjust the location conditions.

The smallest houses allow to minimize the costs of its production and use them in aid programs of communes for vulnerable groups.

Use new solutions for achieving high energy efficiency such as: Structural and material structure allowing for maximum heat extraction from the environment by means of external partitions, The new hybrid structure of external partitions is a thermal barrier to the heat kept inside the building, The heat accumulator is constructed in the form of a box filled with stone"located under the building".

Stakeholder: The Agglomeration Opole Trust (AOT).

3.1.11 Remote renewable energy power plants for prosumers

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe:
Decentralised energy generation will be essential for tackling our carbon emissions with widespread roll-out of renewable technologies at small scale and is being encouraged under the revised Renewable Energy Directive (RED II). National and regional governments will have to play an enabling roll to create frameworks to ensure rollout, and Lithuania's example is a strong one. This net-metering scheme enables decentralised generation where there is space and renewable resources, for consumption at another grid connected site at no-cost (except grid costs). It helps to overcome space limitations in cities, and particularly for blocks of flats where roof space is limited, and will undoubtedly also stimulate new business model development as companies rent/lease space and

technologies and take advantage of the new provisions. The increase in prosumer rates already achieved is impressive.

3.1.12 Renewable energy platform for prosumers

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *With the change in Lithuania's national law to enable net-metering and prosumerism, this practice represents an innovative business model coming from the new enabling framework, enabling individuals to invest in renewables even if they do not have the space at home to have their own installation. It is a very interesting model for stimulating investment and triggering uptake of renewables, overseen by a state company which is able to make use of scale to bring good deals to consumers. In particular, many people living in cities, including renters, are an untapped market for renewables investment as they do not have space, capacity, permission or inclination to have own projects. The very high interest demonstrates this potential and it will be interesting to watch further development as the plants are built. The practice goes hand-in-hand with the law presented in the practice, ['Remote renewable energy power plants for prosumers'](#).*

3.2 Topic 2: Financial mechanisms:

Spain	Subsidy programme for the energy development of Andalusia
	Self-consumption and collective renewable energies
	Crowdfunding financing for solar installation in local entity
	Photovoltaic installation for self-production in a building for 19 families in vulnerable situations
	QUANTICO rental. Financing model for solar self-consumption facilities
France	Production of renewable energies through collective investments of citizens in Voiron
	Air-wood fund
Bulgaria	Efficient heating systems for the vulnerable groups in Sofia Municipality for improved air quality
Poland	Municipalities against energy poverty - STOP SMOG program
	Clean Air program to increase the use of renewable energy by people suffering from energy poverty
Lithuania	Energy Efficiency and Renewable Energy Source investment platform
	Change of legislation to foster building renovation program which include vulnerable groups.
Other countries	Subsidising investment for renewable energy and energy saving measures in vulnerable homes in Cyprus
	"Solar Savers Adelaide" Program
	Free solar installations for social housing in Manchester
	TRESOC – The shine project

The information about each good practice are explain as follow:

3.2.1 Subsidy programme for the energy development of Andalusia

Summary: The Andalusian Regional Government, through the Andalusian Energy Agency, develops a subsidy programme to facilitate the use of renewable energies, among other energy improvement actions, offering a higher percentage of economic assistance to social housing. To facilitate the processing of these subsidies, this programme is developed in collaboration with the "collaborating entities", which are companies in the energy sector that help and represent the beneficiaries of the subsidies throughout the processing. These companies also carry out the material action that is the object of the subsidy (for example, assembly of a photovoltaic installation). Complementary to the subsidy programme for sustainable energy

development, the Andalusian Regional Government, through the Social Housing and Energy Rehabilitation Agency, offers financial assistance to people with low income to rehabilitate their homes, including renewable energy facilities.

Subsidy programme for the energy development of Andalusia: As described previously, the Andalusian Regional Government, through the Andalusian Energy Agency, develops a subsidy programme to facilitate the use of renewable energies, among other energy improvement actions, offering a higher percentage of economic assistance to social housing. To facilitate the processing of these subsidies, this programme is developed in collaboration with the "collaborating entities", which are companies in the energy sector that help and represent the beneficiaries of the subsidies throughout the processing. These companies also carry out the material action that is the object of the subsidy (for example, assembly of a photovoltaic installation).

Andalusian Housing and Rehabilitation Plan: Complementary to the subsidy programme for sustainable energy development, the Andalusian Regional Government, through the Social Housing and Energy Rehabilitation Agency, offers financial assistance to people with low income to rehabilitate their homes, including renewable energy facilities.

Stakeholder: Andalusian Energy Agency

3.2.2 Self-consumption and collective renewable energies

Summary: The non-profit company ECOOO promotes collective and social self-consumption through different lines of action and strategies, in order to make it easier for citizens to benefit, directly or indirectly, from renewable energies. Among its lines of action, the Solar Wave programme is highlighted, in which ECOOO installs and manages PV solar energy installations in different locations. In Andalusia, in the town of Lebrija (Province of Seville), pv installations have been installed on the roofs of 11 municipal buildings, ceded by the Town Hall (public schools, a senior centre, a fire station, a sports centre, etc.). The 11 facilities, with a collection area of 7,200 m², have a total peak power of 233 kW, with an annual production of 350,738 kWh, equivalent to the electricity consumption of 117 homes, which avoids the emission of 103 tonnes of CO₂ into the atmosphere each year, equivalent to the emissions from driving 665,000 km. Citizens have been able to participate in this project from a reduced investment of only 100 euros, as a "co-participant" of the installation. More than 150 people have participated. The profitability obtained has reached 6% after taxes. ECOOO wanted to make

visible the positive impact that the Lebrija Solar Wave installations has on the environment by sponsoring the plantation of cherry trees in Valle del Jerte (Cáceres). A total of 11 cherry trees have been planted, one for each photovoltaic installation in Lebrija, so that the citizens who participate in the Lebrija Solar Wave facilities, will collect the fruit from the cherry tree of which they will be co-owners.

Stakeholder: ECOOO

3.2.3 Crowdfunding financing for solar installation in local entity

All details of the good practice: [here](#)

3.2.4 Photovoltaic installation for self-production in a building for 19 families in vulnerable situations

Summary: Som Energia has financed its first photovoltaic project in Lleida aimed at alleviating the effects of energy poverty. The project, called "Llars del Seminari", has been developed in collaboration with the Enre Tots i per al Bé de Tothom foundation, in a building of 19 houses in Lleida. This project allows 19 families in a situation of social or economic vulnerability living in this building to save around 30% in energy costs each year.

The project has been promoted by the initiative of the Lleida Local Group of Som Energia as a result of a power optimisation study carried out in these homes (Llars). The financing has been possible thanks to the voluntary contributions that can be made through the electricity bill. For an average use of a family (approximately 200 kWh / month), this represents a contribution of 2 euros per month (0.01 euros / kWh).

Stakeholder: Som Energia

3.2.5 QUANTICO rental. Financing model for solar self-consumption facilities

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *A full energy transition means that all parts of society are taking part in it. This good practice recognises the reality that socially vulnerable groups cannot participate in the same way as more wealthy citizens. Self-consumption of RES for social housing tenants through a rental-model is an innovative way to address this problem. In Africa, the solar-rental model is much wider used than in Europe, and Andalusia is doing excellent work in introducing it in Spain.*

3.2.6 Production of renewable energies through collective investments of citizens in Voiron

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe:

Decentralised renewable energy installations will be essential for the low-carbon transition, and many innovative investment structures and business models are used across the continent to make the transition possible. This practice is a very interesting one for a number of aspects. 1) The investment being made by a group of citizens via a commonly owned limited company (SAS). The company itself represents a good practice for citizen investment. 2) The rental model in which roof space is rented by the SAS and use of the installed installation is rented by the real estate company, 3). That this model results in no additional costs for the inhabitants. The practice should be explored further by other community energy companies as the target audience is considerable.

Virtual study visit: [here](#)

3.2.7 Air-wood fund

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *Subsidies for technology uptake are well proven tools, widely used across a number of sectors, helping to overcome market imbalances and irregularities. Replacing heating systems may not be a top priority for home owners who do not recognise the benefits that come from new systems, do not consider the externalities of their actions (pollution, air particles), or simply do not have the resources available to them to invest in new equipment. Subsidies, with accompanying promotion schemes, can trigger investment by reducing perceived risks for investors in technologies that they may know little about. The additional focus on vulnerable households is an excellent feature, recognising where there is particular need for intervention.*

3.2.8 Efficient heating systems for the vulnerable groups in Sofia Municipality for improved air quality

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *Due to a lack of financial resources and incentives, vulnerable households are in need of support in upgrading and modernising homes, aggravated by the fact that much of Europe's social and affordable housing is old and deeply inefficient. As well as carbon emissions, the impact of air quality and health from old heating systems is significant. Use of public funds as in this practice can have a huge impact*

therefore, not only in reducing emissions, but in reducing healthcare costs and improving quality of life. Vulnerable groups are a particular target of the current Renovation Wave initiative so measures like this one can be taken as a benchmark of the kind of action needed, though use of funds through financial instruments rather than grants should represent the new norm.

3.2.9 Municipalities against energy poverty - STOP SMOG program

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: Domestic heating is a significant contributor to carbon emissions in Europe and one that is particularly difficult to change as it requires installing new, individual technologies in people's homes. In particular, Poland has struggled with the change, with many homes still using coal boilers, and many Polish cities have poor air quality as a result. This practice recognises the urgency of the transition, and also that poor households lack before the financial and knowledge resources to make that transition themselves. 100% subsidies are increasingly avoided in favour of a percentage of funding that could stimulate private investment, but the high costs can also result in very high impacts. Another good aspect is the minimisation of administrative burden for the homeowner, with the municipalities supporting these aspects.

3.2.10 Clean Air program to increase the use of renewable energy by people suffering from energy poverty

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: The heating system switch programme set up in Opole is a straightforward support for households to switch to a cleaner heating system. This type of scheme is of particular interest to those counties that still heavily rely on inefficient and high-emissions fossil fuel heating systems.

The link to energy poverty alleviation is less strong; single-family houses indicate a certain level of wealth, and the income level check was not fully explained.

It will be interesting to look at multi-family house heating systems, and also at multi-apartment-bloc buildings in the near future.

An excellent feature is the option to combine the heating switch with another energy savings measure. This should be made compulsory or strongly recommended especially when moving on to tackling multi-apartment-blocs.

3.2.11 Energy Efficiency and Renewable Energy Source investment platform

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *Investment platforms help to finance small projects and bundle together a number of funds and different finance sources. Energy investments are still not fully understood by the financial sector and often viewed as risky or small, requiring state intervention to de-risk and bundle. IPs direct finance to key national or regional priorities and can combine EU funds, national finance and private investment, to invest through loans guarantees and equity in a diversified portfolio to spread risk. VIPA's platform is a strong example, pooling national funding (from VIPA) with private investment and European Investment Bank support. Such platforms could be created in other European countries, and indeed, even at regional level with either public or private actors in the lead.*

3.2.12 Change of legislation to foster building renovation program which include vulnerable groups.

All details of the good practice: [here](#)

3.2.13 Subsidizing investment for renewable energy and energy saving measures in vulnerable homes in Cyprus

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *The question is: who pays the electricity bill for vulnerable groups. If it is the vulnerable consumer in a low-income household or on social welfare, the monthly electricity bill is a recurring burden. If the kWh electricity is on top as expensive as in Cyprus and the electricity needs a high due to a hot climate with need for airconditioning, the burden can easily become a deep financial drain. In such settings, the promotion of PV for self-consumption is an excellent strategy as a one-time support will result in a very long-term benefit. What remains not fully convincing is the requirement for vulnerable groups to put up part of the upfront investment costs, probably about 50% of CAPEX: this will in itself be a barrier to the general deployment of such systems for vulnerable groups who rarely have extra money to put on the table at once. It would be worth the while looking into options to pay back the own financing contribution in monthly instalments as such a payment method is more compatible with the financial situation of the target group. On top, the beneficiaries would experience savings from their usual electricity bill that would free every month the capital to pay part of the CAPEX.*

3.2.14 Solar Savers Adelaide: Solar PVs for low income households

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *Similar in context to [the Cyprus support scheme for PV in low-income homes](#), this good practice from Australia has on top the benefit of allowing the payback of the non-subsidised part of the CAPEX of new PV systems over a 10-year period in quarterly payments made by the low-income households which they can afford due to the savings compared to their electricity bill before the new PV systems were installed. This is a very plausible financing model in line with the capabilities of the target group. It is also financially sustainable funding from the municipality as it comes as a long-term loan that is eventually being repaid.*

3.2.15 Free solar installations for social housing in Manchester

All details of the good practice: [here](#)

3.2.16 TRESOC – The shine project

Summary: Project aimed at tackling rural energy poverty in Devon, UK, where levels are around the UK average of 11%, and the second highest average fuel poverty gap of the UK regions (money required to reach the threshold for fuel poverty). Contributors include a low-wage economy, lack of affordable housing, high percentage of rural households and growing elderly population.

Installation of 607 solar PV on 40 SDRHA households (which houses predominantly lower-income or vulnerable people, including those at risk of fuel poverty), a 25-bed care home and the SDRHA's HQ.

The installations benefited from the UK Government's feed in tariff which guaranteed a set income for each unit of electricity generated for 20 years, which pays for the panels, whilst tenants of the homes benefit from reduced energy costs. If people generate their own renewable electricity, they can apply for payments from their energy supplier for each kWh of electricity generated. Generators of electricity can sell half of their units back to the grid for 5.24p per unit.

TRESOC also provided tenants with information about the need for and benefits of clean energy.

Stakeholder: Totnes Renewable Energy Society (TRESOC) and the South Devon Rural Housing Association (SDRHA)

3.3 Topic 3: Normative:

Spain	Guide to promote self-consumption for municipalities in Andalusia
	Regulatory framework for self-consumption and renewable energies in Spain
	National Strategy of Energy Poverty
	Andalusia plan for the elderly
	Regulatory framework for energy poverty for vulnerable groups
France	New mechanism (January 2020) to help investment in renewable energy and energy savings 'Ma prime rénov' managed by the ANAH, which supports households in their renovation projects
	The zero-rated eco-loan scheme to encourage renewable energy (ECO-PTZ)
	The energy voucher, an automatic aid for vulnerable households
	Bonus Energy saving certificat
	Habiter Mieux Sérénité
Poland	Programme LIFE
Lithuania	Bureaucratic nightmare solution for development of renewable energies

The information about each good practice are explain as follow:

3.3.1 Guide to promote self-consumption for municipalities in Andalusia

Summary: Given the lack of knowledge on the part of municipal entities about the developments in self-consumption regulations, the opportunities offered by self-consumption and the ways that a local entity has to participate and promote self-consumption in their municipalities, the Andalusian Agency of Public Energy and disseminates a digital guide detailing: updated regulations, types of renewable self-consumption (highlighting solar photovoltaic), administrative and technical procedure to follow, in order to promote demonstrative and exemplary installations, examples already carried out and recommendations such as the simplification of the technical and administrative procedure and municipal tax credits.

In addition to making self-consumption known, normalizing it as a measure to be adopted by municipal entities, this model guide of specifications for the bidding of both the Project and the material execution of the self-consumption installation is provided, facilitating the overcoming of the obstacle of bureaucratic procedures for the contracting of this type of facilities in public buildings.

The guide has been distributed among all the members of the “Table for Self-Consumption in Andalusia” that groups together all the agents involved. The Andalusian Federation of Municipalities and Provinces (FAMP) has incorporated this guide as material in its training courses on self-consumption aimed at local administration agents

Stakeholder: The Andalusian Energy Agency (AEA)

3.3.2 Regulatory framework for self-consumption and renewable energies in Spain

We are developing this information.

3.3.3 National Strategy of Energy Poverty

Summary: In 2019, the final prices of energy suffered very significant increases as a result of the high prices of raw materials in international markets and the increase in the price of CO2 emission rights as a result and advance of the decisions adopted in the EU.

In order to ensure that in the face of high and sustained final price expectations, consumers have information and instruments to manage their demand, optimize their consumption and reduce their energy bill, RDL 15/2018 on urgent measures for the transition energy towards a new paradigm characterized by decarbonization and consumer protection established the approval, by the Spanish Government, of a National Strategy against Energy Poverty.

Through this Strategy, a diagnosis and characterization of the problem is carried out, official measurement indicators are designed, objectives for reducing energy poverty are established in a medium and long-term horizon and concrete measures are proposed to achieve these objectives, as well as its financing channels. This Strategy takes into account the income thresholds and the situation of vulnerability of the affected groups.

The Strategy was developed with the Autonomous Communities and Local Entities, consumer associations, representatives of the third sector and energy companies.

This instrument, divided into four lines of action and 19 measures, offers for the first time an official definition of energy poverty, establishes indicators for its monitoring - which determine that, at present, there are between 8.1 and 3.5 million people meeting some of the criteria - and targets for their reduction by 2025: a 50% goal and at least a 25% decrease.

Energy poverty is defined as the situation in which a household finds itself in which the basic needs of energy supplies cannot be satisfied as a result of an insufficient level of income and which, where appropriate, may be aggravated by having access to an energy inefficient home ”.

The 4 official primary indicators of the European Observatory against energy poverty are used:

1. Disproportionate expenditure (2M): percentage of households whose energy expenditure in relation to their income is more than double the national median.
2. Hidden energy poverty (HEP): percentage of households whose absolute energy expenditure is less than half the national median.
3. Inability to keep the home at an adequate temperature: percentage of the population that cannot keep their home at an adequate temperature.
4. Delay in paying bills: percentage of the population that has delays in paying bills for household supplies.

Classify the 9 action measures into 4 axes:

- Improve knowledge of energy poverty
- Improve the response to the current situation of energy poverty
- Create a structural change to reduce energy poverty
- Measures to protect consumers and social awareness

For each of the indicators, the Strategy establishes a minimum reduction objective of 25% in 2025 and sets the goal of achieving a 50% reduction.

Two types of evaluations are established: Intermediate monitoring and execution of the Strategy and the operational plans that are prepared and final evaluation of the Strategy once its total period of validity ends.

Stakeholder: Ministry for Ecological Transition

3.3.4 Andalusia plan for the elderly

All details of the good practice: [here](#)

3.3.5 Regulatory framework for energy poverty for vulnerable groups

Summary: In 2017, it was detected in Spain that 9% of the population had arrears in the payment of their energy supplies and 10% could not keep their homes at an adequate temperature. Approximately 4.5 million people would be at risk of energy poverty.

The Government of Spain developed RDL 7/2016 in which the figure of vulnerable consumer in a situation of energy poverty was defined, 3 categories of the same, and a measure of reduction in the electricity bill through the so-called social bonus.

The vulnerable consumer is defined based on certain income thresholds (IPREM Indicator), based on the number of members that make up the family unit. These thresholds may be increased if the concurrence of one of the members of the family unit of certain special circumstances is proven.

3 categories of vulnerable consumer are established based on the income thresholds:

- Vulnerable consumer.
- Severe vulnerable consumer.
- Vulnerable consumer at risk of social exclusion. This consumer must also be being cared for by social services.

The beneficiaries will be all those who meet the definition of vulnerable consumer.

Stakeholder: Spanish Government

3.3.6 New mechanism (January 2020) to help investment in renewable energy and energy savings 'Ma prime rénov' managed by the ANAH, which supports households in their renovation projects

Summary: Launched on 1 January 2020, MaPrimeRénov' is the result of a merger between the tax credit for energy transition and the Anah's "Habiter Mieux Agilité" aid. Since 1 January 2021, MaPrimeRénov' has been extended to: All owner-occupiers; Landlords who rent out their home as their main residence (since 11 January); All co-owners' associations (since 11 January). Work undertaken on the basis of estimates signed since 1 October 2020 is eligible, even if it has been completed and paid for, provided that it meets the criteria for access to MaPrimeRénov'.

MyRenovPremium' provides for the granting of a Thermal Passage bonus when the work enables the dwelling to be taken out of the state of a thermal sieve (energy label F or G). For ambitious renovations, MaPrimeRénov' can also be combined with three additional schemes: the Bâtiment Basse Consommation bonus for ambitious renovations that achieve energy label B or A; an exceptional bonus ("coup de pouce") for energy saving certificates in the case of ambitious renovations (see Sheet 11. Coup de pouce bonuses); for households on intermediate or higher incomes, an additional MaPrimeRénov' global renovation package, provided that the work achieves an energy gain of over 55%. Households on modest and very modest incomes remain eligible for the Anah's Habiter Mieux scheme in the case of comprehensive renovation. MaPrimeRénov' can be combined with other energy renovation aid such as the Energy Saving Certificates (CEE), the Eco-PTZ (Zero Rate Loan) or aid offered by local authorities. However, it cannot be combined with the "Habiter Mieux Sérénité" aid from the Anah (see Sheet 9. Habiter Mieux, Anah). If several aids are used, the amount of MaPrimeRénov' will be capped so that: The amount, cumulated with the other aids, does not exceed 90% of the eligible expenditure for very low-income households, 75% for low-income households, 60% for intermediate households and 40% for the most affluent households; The amount cumulated with all the public and private aids mobilised does not exceed 100% of the eligible expenditure

Stakeholder: National Housing Agency (Anah)

3.3.7 The zero-rated eco-loan scheme to encourage renewable energy (ECO-PTZ)

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: Rolling out the low-carbon transition will require rapid mobilisation of finance, including movement by financial institutions and investors who often see energy efficiency as a risky investment as they do not always understand the market or potential return on investment. Correcting such market failures is a typical goal for state involvement in setting up financial instruments such as preferential loans (as in the ECO-PTZ). This loan incentivises homeowners to invest by reducing the cost of the loan (to zero) and also incentivises banks to loan by placing conditions on what technologies can be used, installed only by accredited installers, to ensure the soundness of projects. Enabling collective applications by co-owners of property is a very interesting approach not widely seen in similar instruments.

Further information (in French) is available [here](#).

3.3.8 The energy voucher, an automatic aid for vulnerable households

All details of the good practice: [here](#)

3.3.9 Bonus Energy saving certificate

Summary: The energy saving certificates (CEE) scheme, created in 2005, is one of the main instruments for controlling energy demand. Indeed, this system is based on a three-year obligation to make energy savings in CEE (1 CEE = 1 kWh of final energy) imposed by the public authorities on energy suppliers (the "obliged"). These suppliers are thus encouraged to actively promote energy efficiency among energy consumers: households, local authorities or professionals.

CEEs are allocated, under certain conditions, by the services of the Ministry of Energy, to eligible actors (obliged parties but also other legal entities not obliged) carrying out energy saving operations. These actions can be carried out in all sectors of activity (residential, tertiary, industrial, agricultural, transport, etc.), on the property of eligible parties or with third parties that they have encouraged to make energy savings.

Standardised operation sheets, defined by decree, are drawn up to facilitate the setting up of energy saving actions.

Specific "fuel poverty" obligation

In mid-2015, the law on the energy transition for green growth (LTECV) created, within the framework of the energy saving certificate scheme, a new energy saving obligation for households in fuel poverty.

This new obligation, which results from Article L. 211-1-1 of the Energy Code, is in addition to the energy savings targets defined for the third period and takes effect from 1 January 2016.

A specific "fuel poverty" obligation was introduced in 2016, in application of the law of 17 August 2015 on the energy transition for green growth (LTECV). This is an obligation to make energy savings for households in fuel poverty. The "energy poverty" EWCs have a higher market value than "conventional" EWCs, and the "energy savings incentive" premiums, which came into force at the beginning of 2017, complement the "energy poverty" EWC scheme. Since January 2019, they have been strengthened (in terms of amounts, conditional on household resources) and have been divided into "Coup de

pouce Chauffage" and "Coup de pouce Isolation" premiums, at least until the end of 2021. Since October 2020, a bonus can be obtained for ambitious renovations, the "Coup de pouce rénovation globale" premium.

Stakeholder: Ministry of Energy

3.3.10 Habiter Mieux Sérénité

Summary: "Habiter Mieux sérénité" is a program led by the ANAH which provides advice and financial assistance to support households with modest resources in their overall energy renovation project of their home. "Habiter Mieux sérénité" concerns all the works allowing an energy gain of at least 35%. The financing is proportional to the amount of your work.

The amount of your Habiter Mieux sérénité aid depends to household resources":

- **For very modest resources" category:**
 - 50% of the total amount of the work before tax. The Habiter Mieux sérénité aid is 15 000 € maximum.
 - + the Habiter Mieux bonus: 10% of the total amount of work excluding taxes, up to a maximum of €3,000.
- **For the "modest resources" category:**
 - 35% of the total amount of work excluding tax. The Habiter Mieux sérénité aid is 10 500 € maximum.
 - + the Habiter Mieux bonus: 10% of the total amount of work excluding taxes, up to a limit of 2 000 €.

You can also benefit from two cumulative bonuses:

- A bonus of 1,500 € for the most energy-intensive housing whose energy label before work is F or G, and whose label after work is E or better.
- A BBC bonus of €1,500 in addition for homes whose energy label after work is A or B.

The consultant-operator accompanying your work will be able to inform the household about the eligibility to this bonus of the aid

Stakeholder: National Housing Agency (Anah)

3.3.11 Programme LIFE

Summary: Before the need to increase public awareness of air quality issues by increasing the involvement of local governments, society, non-governmental organizations and local entities in taking remedial actions to support activities in the field of Air Protection Program (POP).

A methodology is created to implement a uniform management system supporting the implementation of POP of local governments of Opolskie Voivodeship, at all its levels (municipality, powiat, voivodeship):

- 1) Preparation and maintenance of a partner cooperation platform.
 - Main coordinating beneficiary: Opole Voivodeship
 - Associated beneficiaries: 42 municipalities,
 - Associated beneficiary: Opole University of Technology.
- 2) Preparation and implementation of an air quality management system.
- 3) Preparation of a regional air quality diagnostic system.
- 4) Database with inventory of low-emission sources.
- 5) IT system for monitoring, reporting and updating of POP.
- 6) Educational campaign.
- 7) Postgraduate studies.

Stakeholder: The Agglomeration Opole Trust (AOT)

3.3.12 Bureaucratic nightmare solution for development of renewable energies

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *The transition to low-carbon energy will require not only new large-scale installations such as wind farms but also many small, decentralised contributions. However, most small-scale investors looking to own and operate their own installations do not have the full expertise required to navigate complex permitting requirements. Often requirements are outdated, lacking modern definitions and not reflecting advancements in technologies. Legislatures can work with stakeholders to identify these unnecessary bottle necks and barriers and propose suitable simplification processes, as, indeed, is encouraged by the revised Renewable Energy Directive (RED II) to enable decentralised energy generation. The specific measure taken here can be seen as good practice: clear definition of prosumers, faster approvals, and widening the definition of included technologies.*

3.4 Topic 4: Empowering:

Spain	An installing solar panels insertion company whose employees are people at risk of exclusion
	Social Germinator
	Eléctrica de Cádiz and self-consumption
	Energy Poverty Action Plan in Cádiz
	No home without energy
	Solmatch REPSOL
France	AEELA Program. Energy Saving Accelerator for the Housing of the low income farmers
	ABC demonstration
Bulgaria	Sustainable reduction of energy consumption of low-income households through energy advice
Poland	WARM UP YOUR BUSINESS as an opportunity to find the RES technologies for vulnerable groups
Other countries	Barcelona Energia
	Regeneration in Paris: Clichy-Batignolles Eco-District
	Heat Smart Orkney

The information about each good practice are explain as follow:

3.4.1 An installing solar panels insertion company whose employees are people at risk of exclusión

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *Skill development for the energy transition should be a topic of high importance to regions as it results in employment creation in support of structural change to a renewable, decentralised energy system.*

Renewables have a higher employment creation potential than fossil fuels, and the jobs are decentralised in the sense that every territory must have qualified installers, energy auditors, etc. The range of jobs includes both academic and blue collar jobs - with the majority of jobs at the level of technician and installer, specialised plumber, electrician, etc. for the different renewable energy forms. This is also the level that is suitable for the insertion of vulnerable groups into the employment market. This good practice should inspire regional policy makers in search of re-skilling programmes.

Webinar where it was presented this good practice: [here](#)

3.4.2 Social Germinator

Summary: The Social Germinator is a competition promoted by Som Energia and Coop57 whose objective is to stimulate the creation of new projects that generate innovative models of social initiatives, renewable energy and energy efficiency within the framework of the social and solidarity economy, and which aim to achieve energy transition. This competition is open to initiatives within Spain that are recently created (less than 3 years old) and to those that already exist and are starting a new line of activity.

Three calls have already been held. In the last call, a special award was created in the field of energy poverty, rewarding projects that aim to mitigate the causes and consequences, structural and contextual, of energy poverty.

The awards consist of a non-refundable contribution to be distributed among the winning projects. This amount comes from the resources received through the voluntary donation of the electricity contracts of the members of the Som Energía cooperative. In addition, if a loan is granted by Coop57, it will have a 50% reduction in the associated financial cost during the first two years.

Stakeholder: Som Energia and Coop57

3.4.3 Eléctrica de Cádiz and self-consumption

Summary: The public energy company, Electrica de Cadiz, develops a line of activity that facilitates households to have self-consumption installations. This public company offers turnkey projects, with financing tailored to its clients, from the design to the installation, legalisation and all the administrative procedures required.

Any citizen, whether or not they are a client of the public marketing company, and with a home anywhere in Spain, can opt for this service. Customers who contract this service will benefit from compensation for their surplus production, which will vary between 18% and 41% depending on whether the facilities are shared or contracted individually.

Stakeholder: The public energy company, Electrica de Cadiz

3.4.4 Energy Poverty Action Plan in Cádiz

Summary: The objective of the Cadiz City Hall's Energy Poverty Action Plan is to help families in a situation of vulnerability in the city to manage energy properly, solve energy problems and make their contracts cheaper. As part of this plan, training workshops have been held, in which more than 2,000 families have been trained in electricity billing and energy saving. In addition, energy advice has been given to more than 200 homes and domestic maintenance activities have been carried out (general and electrical).

This plan received the recognition of the association of energy agencies in Spain, EnerAgen, and was awarded the best performance in 2019 in the area of awareness and dissemination of renewable energy and energy efficiency.

Stakeholder: Cadiz City Hall

3.4.5 No home without energy

Summary: "No home without energy" (www.niunhogarsinenergia.org) is the ECODES' programme to promote energy efficiency among citizens (ODS 7), fight energy poverty (ODS 1) and contribute to climate action (ODS 13). This initiative offers information and tools to understand and reduce energy supply bills, learn responsible energy consumption habits and learn about energy efficiency measures to be implemented in their homes, as well as financial assistance or programmes to finance them provided by national, regional and local public administrations. The information is transmitted to the population, and especially to the most vulnerable people, through different channels: web, on-line energy management tools, workshops, service points, home visits, publicity and dissemination, corporate and citizen volunteer programmes.

From its website, citizens can fill in the "I want to save" questionnaire with which they will receive recommendations on efficient energy consumption habits, energy efficiency and optimisation measures of their contract to reduce energy bills. All of this is done in a personalised way with respect to their family, work and economic situation and the state of their homes, equipment and private energy consumption. In addition, it allows them to know if they can benefit from (or not) the electrical social bond from the parameters stipulated in the legislation. If you do not have the bond, instructions are provided in order to obtain it, as well as the form from your reference marketer. In this sense, the "No home without energy" project has developed an online tool for the management of energy poverty (ENERSOC)

with the objective of facilitating the diagnosis and attention to vulnerable people by social NGOs, city councils, consumer organisations and corporate volunteer programmes. Moreover, it allows the technicians to know additional information about the particular situation of the user that allows an exponential improvement in the treatment of other situations of vulnerability, either physical or material. This tool has received the support and collaboration of different companies, public administrations and non-governmental organisations.

"No home without energy" has been conceded the award as the Best Spanish Project of Social Innovation to Tackle Energy Poverty in the second edition of the Programme for Social Entrepreneurs "Social Innovation to Tackle Fuel Poverty" of Schneider Electric Foundation and Ashoka Foundation.

Stakeholder: ECODES

3.4.6 Solmatch REPSOL

Summary: Repsol Solmatch, the first large solar community in Spain.

As main benefits for society and consumers, the creation of the first large solar community in Spain will allow easy access to solar energy to users without investments and with tangible savings, improving the customer experience through digital tools and a vision of omnichannel user. Some indicators as of August 31: 35 Solar Communities, 2,800 homes with the possibility of connecting to the communities, 720 Tn of CO₂ avoided each year, more than 1,300 potential Roofer requests.

Repsol's "Repsol Solmatch, the first large solar community in Spain" project was awarded in the 8th edition of the enerTIC Awards in the "Renewable Energy" category.

Stakeholder: REPSOL

3.4.7 AEELA Program. Energy Saving Accelerator for the Housing of the low income farmers

All details of the good practice: [here](#)

Expert opinion of Polity Learning Platform of Interreg Europe: *This is an excellent practice, in many ways, for engaging with a low-income group to improve energy performance. It has a number of particularly strong aspects within its design, including using a trusted intermediary group to connect with the target audience, wide communication and in-depth territorial analysis. Identifying*

those in need is one of the major challenges in tackling energy poverty and the project's territorial analysis is an approach that could be replicated. The other good aspect is that no public money was needed. To explain Energy Savings Certificates further (as not all countries use them): all energy suppliers are obliged to make energy savings related to their share of supply and either implement efficiency projects or purchase certificates from others in order to meet their obligations. Effectively, they create a market mechanism for energy savings – similar systems have been set up in Italy, Denmark and the UK.

3.4.8 ABC demonstration

Summary: The ABC - "Autonomous Building for Citizens" - sustainable housing demonstration building, built by Linkcity and Bouygues Construction, was born in 2011 from an R&D project. "Bouygues Construction imagined a prototype building that would be autonomous in terms of energy and resource consumption. The group approached the city of Grenoble, a pioneer in environmental issues, which welcomed the project. We were very pleased with the project," says Eric Bard, managing director of Grenoble Habitat, the residence's owner and landlord. This pilot building aims to achieve 70% annual energy autonomy (collective self-consumption from the photovoltaic farm on the roofs of the building, operated by GEG ENeR), a 2/3 reduction in water consumption from the city network and a 40% reduction in the volume of household waste. To achieve these objectives, the building produces and stores the energy and water needed by its inhabitants. In addition to the photovoltaic panels, grey water is recycled and reused for toilets, common areas and the vegetable garden. Rainwater is collected, purified and used for housing. Delivered at the beginning of September 2020 after 24 months of work, the building has 42 intermediate rental units and 20 social rental units.

Stakeholder: Grenoble Habitat

3.4.9 Sustainable reduction of energy consumption of low-income households through energy advice

All details of the good practice: [here](#)

3.4.10 WARM UP YOUR BUSINESS as an opportunity to find the RES technologies for vulnerable groups

All details of the good practice: [here](#)

3.4.11 Barcelona Energia

Summary: Started in 2018, Barcelona Energia is a publicly owned energy provider, using energy generated by municipally-owned solar panels. It demonstrates a holistic approach, harmonising local legislation regarding disconnection protection for vulnerable consumers, promoting prosumerism and engaging citizens in the production and management of the generated energy. In addition, it supports residents by providing valuable energy advice while also endorsing energy efficiency projects and a “smart energy culture”.

Stakeholder: Barcelona Energia (BE)

3.4.12 Regeneration in Paris: Clichy-Batignolles Eco-District

Summary: Redevelopment of an urban quarter in Paris, the Clichy-Batignolles district on the site of a former railway depot, with a focus on social housing provision (50% of new homes) and renewable energy generation (geothermal and solar for heating and hot water, and electricity for lighting). Tackles two prongs of energy poverty – inefficient and poor-quality housing stock and the high cost of energy.

Low-income, vulnerable households who occupy the social housing provision will benefit from the clean, renewable energy in the same way as all other households.

Stakeholder: Paris Metropole

3.4.13 Heat Smart Orkney

All details of the good practice: [here](#)