



S3UNICA PROJECT

Smart Specialisation Univercity CampusS3UNICA

REGIONAL ACTION PLAN IN ANDALUSIA



Produced by each region, the **action plan** is a document providing details on **how** the lessons learnt from the cooperation will be exploited in order to improve the policy instrument tackled within that region. It specifies the nature of the actions to be implemented, their timeframe, the players involved, the costs (if any) and funding sources (if any). If the same policy instrument is addressed by several partners, only one action plan is required.

Part I – General information

Project: S3UNICA Smart Specialisation UNiversity Campus

Partner organisation: Andalusian Energy Agency, Regional Ministry of the Presidency, Public Administration, Regional Ministry of Finance and European Financing

Other partner organisations involved (if relevant): Andalusian Institute of Domestic and Energy Efficiency of the University of Malaga

Country: Spain

NUTS2 region: Andalusia

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Part II – Policy context

The Action Plan aims to impact:

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

Name of the policy instrument addressed:

Andalusian Energy Strategy 2030. Due to the time period where the Andalusian Action Plan is

addressed December 2021- 31st July 2023, and due to the ending of the programming period related to ERDF 2014-2020 the policy instrument as well as the incentive schemes have been closed referring to the priority actions lines to be financed and it is not possible to improve or change the policy instruments. Furthermore a new policy instrument will be addressed for the following period but not yet officially implemented through energy schemes (ERDF 2021-2027). PP5 Andalusian Energy Agency, Regional Ministry of Finance and European Funding, and PP6 University Institute of Domotics and Energy Efficiency of the University of Malaga propose a new policy instrument The Andalusian Energy Strategy 2030. We would like to mention that the Andalusian Energy Agency is in charge of drafting the Andalusian Energy Strategy 2030 for the Andalusian Government.

Justification:

1. Due to the time framework the initially foreseen European Regional Development Fund 2014-2020 is no longer available for improvement or changing this policy instrument. Nowadays the policy instrument incentive schemes are dealing with already presented application forms.
2. The Andalusian Energy Strategy 2030 is currently being discussed in public consultation and it is a key element for planning and financing Smart Specialisation Strategies within the region. The Andalusian Energy Strategy 2030 is an important policy instrument and gives a positive framework where the lessons learnt from the S3UNICA project are able to be applied as well as the Action Plan.
3. The Andalusian Energy Strategy 2030 has a structure that includes different Action Lines where the regional Action Plan is able to have a positive impact in terms of proposals to be made and financing.

The European Regional Development Fund 2014-2020 is ending and therefore the possibility for improvement or to change the policy instrument is very limited.

As there is no room to change of the policy instrument, we would like to inform you that currently we are implementing the Andalusian Energy Strategy 2020.

The next Andalusian Energy Strategy is the Andalusian Energy Strategy 2030 (not yet approved). This policy instrument is the one we propose to include as Policy Instrument under the S3UNICA project. The Andalusian Energy Strategy 2030 is a key factor for implementing energy efficiency in the region and is nowadays being drafted in a public consultation phase. The Andalusian Energy Agency is in charge of drafting this policy instrument as part of the Andalusian Regional Government. Policy improvement and change are able to be implemented during the S3UNICA implementation period. The participation of regional stakeholder members is a key element in this policy development.

Currently the Andalusian Energy Strategy 2020 is being implemented.

The new policy instrument will be the Andalusian Energy Strategy 2030 which is the new Energy

Part III – Details of the actions envisaged

INTRODUCTION:

The Andalusian Energy Agency, with the collaboration of the University Institute of Domotic and Energy Efficiency of the University of Malaga, is committed to the implementation of energy efficiency measures and renewable energy sources through the elaboration and implementation of the present Andalusian Regional Action Plan and counting on the collaboration of the Andalusian Regional Stakeholders.

The context is the current development of the Andalusian Energy Strategy 2020. The next Andalusian Energy Strategy 2030 will be influenced by the work developed with the S3UNICA Andalusian partners and the Andalusian S3UNICA Action Plan, in close collaboration with the Andalusian Regional Stakeholders Group. The regional action plan consists of the following two actions:



ACTION 1: INCLUSION OF UNIVERSITIES IN THE PPP SELF-CONSUMPTION ROUND TABLE.

The background (please describe the lessons learnt from the project that constitute the basis for the development of the present Action Plan)

From the methodological point of view, concerning the cooperative work, we have been inspired by

the public-private partnership and the Green-reality Network-public private partnership for low-carbon at the South Karelia region. From the Green reality Network (GRN) we learned the methodology of collaboration: what inspired us the most was the establishment of the public-private partnership of the initiative which was started as a city program and expanded to a regional level. Further information has been compiled thanks to the Exchange of Experience held online on 17th June 2020. The Green Reality Network (GRN) was originated by local companies working in the field of energy, bio and resource efficiency. The goal of the common activities is to serve as a platform to accelerate the development of new business and products and joint projects. At Andalusian level and in the Self-Consumption round Table there also exists companies and different actors.

We would like to add universities, since they act as living lab implementing self-consumption, having close contact with companies and also with the public sector in charge of the administrative implementation of the projects. The GRN has been explained to the Andalusian regional stakeholder group, adapting it to the importance that self-consumption has in the Mediterranean countries, and specifically in Spain.

The Green Reality Network, as an example of public private partnership, has been successful in - promoting the green business visibility within the region, nationally and internationally; - has served as a platform for launching large, multi-stakeholder projects; - has given the industry a platform to a continuous dialogue with academia and public service around "green transition" themes. We also need a strong and large public-private partnership to face the challenge of self-consumption in Andalusia.

PP5 AEA and PP6 UIDEE also learnt from the Aton multi-energy system developed by the University of Udine (now implemented). This complex project is also an example of the importance of properly choosing the right legal instruments, such as a Public Private Partnership for the development of innovative energy transition projects, in a quadruple helix perspective and with the involvement of all local stakeholders. We also learnt more details on the project during the 3rd Exchange of Experience on 24-25th June 2021.

1. Action (please list and describe the actions to be implemented)

Implementing a new Specific Working Group named REDEJA that is the Andalusian Energy Management Network of the Andalusian Regional Government addressed to public buildings and including as a novelty the public universities.

As part of REDEJA, the universities will join the existing Andalusian Self-Consumption Round Table to promote photovoltaic and renewable installations aiming to NZEB in public buildings.

The Andalusian Regional Government (Junta de Andalucía) has set up the Round Table for Self-consumption that is a measure under the Andalusian Energy Strategy 2030 in Andalusia in order to

establish actions that promote the development of self-consumption in our region.

The new action 10 of the Andalusian Energy Strategy 2030 will be intended to enhance the use of renewable energies and the sustainable development of the energy grid.

The main objectives are:

- Improve the self-consumption development framework;
- Disseminate among potential users the reality of the viability of self-consumption facilities;
- Facilitate the change from consumer to electricity prosumer in Andalusia (from passive electricity consumer to consumer-producer);
- Improve the knowledge of the business sector associated with this activity

The Activities of this action are the following:

- a) Proposal to incorporate the Universities as a new actor that will contribute to boost self-consumption under the new measure line 10 on Impulse to the Self-Consumption , informally as an initiative of the S3UNICA project. Universities attend the first Round Table.
- b) We launched this ~~informal~~ proposal to the stakeholders, and we have their approval.
- c) We presented the proposal to the Andalusian Energy Strategy drafting team.
- d) Approval of REDEJA Self-Consumption Round Table including the universities under the Andalusian Energy Strategy 2030.

Concerning the Policy Instrument:

The S3UNICA partners PP5 and PP6 will improve the new Andalusian Energy Strategy 2030 by proposing a change in the management of the policy instrument (improved governance). The goal is to integrate universities into the Self-consumption Round Table provided for in future “Action Line 10 Impulse the use of renewable energies and the sustainable development of electricity networks (or as finally to be named)” of the Andalusian Energy Strategy 2030 to facilitate the development of renewable energy projects in universities, as through this public-private partnership.

To this end, various meetings have been held with the Andalusian Energy Strategy2030 drafting team and with the stakeholders for the final draft and approval is expected before the end of phase 1. The results from this work are expected to be integrated in the future action line 10 of the Andalusian Energy Strategy 2030.

2. Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role)

Action led by the Andalusian Energy Agency, Regional Ministry of the Presidency, Public Administration and Interior, Ministry of Finance and European Financing. The main actors that took part in this action is the REDEJA network, a network of 4,500 buildings and their energy managers, including the public Andalusian Energy managers of university campus. Energy managers of the REDEJA network are the main stakeholders of this Working Group, providing information on real

implementation in public buildings.

Institute of Domotic and Energy Efficiency, advisor on Domotic, Energy Efficiency and Renewable Energy Sources.

The 10 public universities in Andalusia. Member of the Stakeholder Group, providing information on real implementation and possible burdens to renewable self-consumption deployment. Universities with a special interest in photovoltaic self-consumption and creating NZEB in universities are of strategic importance. Some universities, as University of Jaén, University of Seville and the University, Pablo de Olavide in Seville have already been invited to the First Meeting of the Self-Consumption Group held last 15th of December 2021.

3. Timeframe

From 15th December 2021-until 31st July 2023

For the implementation of Action 1 these are following phases:

- a) Proposal to incorporate the Universities in the future line of action 10, informally as an initiative of the S3UNICA project by 15th December 2021.
- b) We launched this informal proposal to the stakeholders, and we received their approval 17th December 2021.
- c) We have started presenting the proposal to the Andalusian Energy Strategy drafting team from December to June 2022.
- d) Approval of the Andalusian Energy Strategy 2030 including universities as an important part of REDEJA Working Group envisaged June-September 2022.–
- e) Monitoring through the Action Plans and Monitoring Programs planned to be developed within the framework of the Andalusian Energy Strategy September 2022-July 2023

4. Costs (if relevant) We are working on this part

For the development of this action the cost foreseen is 40,000 euros We have envisaged a Staff cost from the Andalusian Energy Agency of 20,000 euros and UIDEE of 20,000 euros.

Institute of Domotics and Energy Efficiency will contribute with 20,000 euros (2 staff working at 20%, and 4 people working at 15% during 12 months)

Andalusian Energy Agency will contribute with 20,000 euros (3 staff working 10 months working at 20%)

5. Funding sources (if relevant):

Staff cost from own funding of participating entities.

Andalusian Energy Agency own funding 20,000 euros

UIDEE own funding 20,000 euros



ACTION 2

THE INTRODUCTION OF SMART READINESS INDICATORS SRI AND SELF ASSESSMENT TOOLS TO PROMOTE INNOVATION UNDER PI

The background (please describe the lessons learnt from the project that constitute the basis for the development of the present Action Plan)

We got inspiration from an innovative project, considering the Virtual Power Plant from the City of Lappeenranta, South Karelia and additional information from the 1st Exchange of Experience in Finland on the 17th of June 2020. Additionally, the Andalusian Energy Agency with the collaboration of the Andalusian Institute of Domestic and Energy Efficiency organised an on-line Bilateral meeting with the City of Lappeenranta and the Lappeenranta University of Technology LUT on 19th November 2021 in order to further explore and learn about the innovation of virtual power plant and the implementation into university campuses. The initiative was inspiring as an example of possible innovative projects to replicate and promote under the New Andalusian Energy Strategy 2030, and the collaboration with the city, benchmarking and adaptation to the situation of the university campuses and their situation in Andalusia, was also very interesting.

We have learnt from the Good Practice of HVACR integrated Control System with weather compensation and Solar Thermal input from the University of Targoviste, Romania, an innovative integrated project using solar systems for heating and cooling and further information regarding the 4th Exchange of Experience in Romania last 27th October 2021.

The Aton project of the University of Udine from Friuli Venezia Giulia has influenced the UIDEE Parcemasas project (public partnership), corresponding to the Malaga cemetery. The main knowledge learnt has been how the project has made the link within the territory and the way they encouraged cooperation and synergies between different public and private stakeholders towards common energy saving objectives starting from the valorisation and specificity of the territories

while reducing primary energy consumption and emissions in the municipality of Udine.

Application of SRI Smart Readiness Indicators in integrated projects and buildings.

A Self-assessment tool and the Smart Readiness Indicators methodology learnt and applied during the project will be included as an additional criteria under the Energy Strategy of Andalusia and the Program of Actions under this strategy.

Concerning the improvement of energy manager's knowledge we have learnt from the Good Practice "Launching of a course for Renewable Energy Equipment and Systems Technicians" from Slaskie Polska, Poland and regarding the "Creation of a modern research centre stimulating research and development in the field of energy" from AGH University of Science and Technology, Maloposkie, Poland. Further to this interest, the Andalusian Energy Agency in collaboration with the Institute of Domotic and Energy Efficiency, organised an on-line Bilateral meeting on 19th November 2021 in order to further investigate the vocational training themes and contents. We have been inspired by the extended themes of knowledge to be included as learning material for energy managers in universities campus and include it at Action Plans will be developed under the Andalusian Energy Strategy annually and Monitoring of the Andalusian Energy Strategy is also foreseen as part of the follow-up and implementation of the Andalusian Energy Strategy 2030.

1. Actions (please list and describe the actions to be implemented)

As a result of the work developed under the S3UNICA project we propose an improvement of the Andalusian Energy Strategy AES 2030 to specifically include measures for the promotion of innovation in university campuses, the preparation of the AES to improve energy efficiency in buildings and infrastructures of Andalusian university campuses promoting the development of innovative solutions along the associated value chain: energy saving (including energy efficiency and renewable energy) and the development of smart grids.

The main objectives are:

- Promotion of innovative pilot projects
- Dissemination among energy managers of university campuses the viability of innovative project solutions.
- Evaluation and Monitoring

The application of innovative projects includes the following energy fields:

- smart grids
- Mobility
- energy management
- renewable energy sources
- energy efficiency

It is proposed that the Regional Stakeholder Group could become a Permanent Group of Experts (Advisory Group). This S3UNICA group of experts will meet and the experiences of the S3UNICA will be included in the future line 11 to support decarbonized energy management on entities and public service under the Andalusian Energy Strategy 2030. This change will be part of the measures included in the AES 2030.

Applying the Self-assessment tool developed under the S3UNICA project to include the practical application of Smart Readiness Indicators, as well as other actions to be considered by University Campuses, as Promotion of Awards in the field of innovation, Promotion of energy communities on university campuses and other dissemination tools. Adding Smart Readiness Indicators criteria will be included in the Andalusian Energy Strategy 2030.

Application examples include promotion of innovative projects from universities and projects from universities in relation with cities. As a reference we are including the following pilot projects:

- Inclusion of new innovative projects developed on university campuses as for instance Parcemasa project.
- The Andalusian Institute of Domotic also proposes as an example a project addressed to public secondary schools where a system of photovoltaic panels of 15 KW will be installed to supply a system for monitoring the electricity generated and consumed. The intention is to install it as a pilot project in 500 schools, and after the duration of the S3UNICA project it would be later extended to all the 5400 Andalusian schools under the control of the Andalusian Regional Government.
- An innovative pilot project will be tested by UIDEE, testing the Smart Readiness Indicators and new technologies in official buildings, and developed energy projects.

The Activities of this action are the following:

It will propose a change in the management of the policy instrument (improvement of the governance) by the creation of a Permanent Group of Experts (Advisory Group) for participation of university experts in the improvement of the Andalusian Energy Strategy 2030 and also in the Program of Actions that before did not have this type of actions addressed to universities. The following actions will be implemented by the Permanent Group of Experts:

- a) Proposal to add and modify the future line 11 to incorporate innovation in university centres and presentation to stakeholders for approval
- b) Proposal to the drafting team of the Strategy
- c) Approval of the strategy and definition of its program of actions 2021-2022 (not yet approved)
- d) Once approved, the development of future line 11 will begin, including:

- I. Creation of a network of experts among the energy managers of university buildings.
- II. Organisation of seminars, on-line meetings, site-visits and personal information provided by regional partners PP5 Andalusia Energy Agency and PP6 Institute of Domestic and Energy Efficiency addressed to the exchange of information and increasing the knowledge of energy managers of university buildings concerning technology offers, energy management and financial opportunities for the deployment of innovative projects at universities.
- III. Promotion of a living-labs network in Andalusia. During this action the universities will offer their campuses as laboratories and at the same time improving the financing instruments for universities either through pilot projects, or through improved management. Dissemination of living-lab among business companies and citizens.

Concerning the Policy Instrument

Currently there is the implementation of the Andalusian Energy Strategy 2020.

The new policy instrument will be the Andalusian Energy Strategy 2030, which is the new Energy Planning Instrument within the region.

The S3UNICA partners PP5 and PP6 will improve the new Andalusian Energy Strategy 2030 by proposing a change in the management of the policy instrument improved governance, future "Action Line 11. Support energy and decarbonized management in public entities and services (or as finally name)" of the Andalusian Energy Strategy 2030 to facilitate the development of innovation projects in universities, as through a Permanent Advisory Board that will participate and facilitate innovative projects among the value chain addressed specifically to universities.

To this end, various meetings have been held with the Strategy drafting team and with the stakeholders for the final draft and final approval is expected before the end of phase 1. The results from this work will be integrated at the action line 11 of the Andalusian Energy Strategy 2030.

3. Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role

Andalusian Energy Agency in charge of proposing contents

Andalusian Regional Authority as main entity in charge of approval of the improvement

Institute of Domestic and Energy Efficiency in charge of testing SRI.

Andalusian Education Energy responsible of the structure financing.

Universities providing information on amelioration of management of incentives, barriers and proposing innovative projects.

Technological Corporation of Andalusia, Andalusian Agency for Innovation and Development providing information on technology on public-private financing.

Andalusian Knowledge Agency, providing updated information on financing.

National Institute of Aerospace Technology INTA El Arenosillo in charge of providing information on innovative projects, including microgrid

Andalusian Association of Consumers and Users giving the point of view of final users.

4. Timeframe

Duration: 19 months

Start and end date: December 2021 – July 2023

- a) Measure to be developed under the AES 2030 will include the Smart Readiness Indicators, the Self-Assessment Tool and the Permanent Group of Experts are tools to improve governance and to modify future line 11 to help to incorporate innovation in university centres
- b) Creation of the Permanent Group and Meetings from December 2021 to June 2022
- c) Approval of the Andalusian Energy Strategy 2030 envisaged June-September 2022
- d) Monitoring through the Action Plans and Monitoring Programs planned to be developed within the framework of the Andalusian Energy Strategy. September 2022-July 2023

5. Costs (if relevant)

For the development of this action, the cost foreseen is 60,000 euros. We have envisaged a Staff cost from the Andalusian Energy Agency of 30,000 and UIDEE of 30,000 euros.

The cost only include staff cost.

UIDEE will contribute with 30,000 euros (2 staff working at 20%, and 4 staff working at 15% during 12 months)

Andalusian Energy Agency will contribute with 30,000 euros (3 staff working 20% during 12 months)

6. Funding sources (if relevant):

Staff cost from own funding of participating entities.

30,000 euros Andalusian Energy Agency own funding

30,000 euros UIDEE own funding

Date: 11th April 2022

Signature: Francisco Javier Ramírez García

Managing Director

Agencia Andaluza de la Energía

Stamp of the organisation (if available): _____

