



Agencia Andaluza de la Energía
CONSEJERÍA DE LA PRESIDENCIA,
ADMINISTRACIÓN PÚBLICA E INTERIOR
CONSEJERÍA DE HACIENDA Y FINANCIACIÓN EUROPEA



BUILD2LC
Interreg Europe



European Union
European Regional
Development Fund

Innovation: REDEJA Energy Management Network of
the Andalusian Government

**Andalusian Energy Agency
Regional Ministry of the Presidency;
Public Administration and Interior;
Finance and European Funds**

3rd December 2020 | Online meeting

REDEJA- Energy Management Network of the Andalusian Regional Government

Created to promote and carry out activities aimed at improving **energy efficiency**, promoting the use of **renewable energy** and achieving the optimisation of energy contracts in **energy consumption centres** of the Administration of the Andalusian Regional Government and other Andalusian public entities.

REDEJA

Pioneer tool in Spain to boost sustainable energy principles in the Andalusian government.



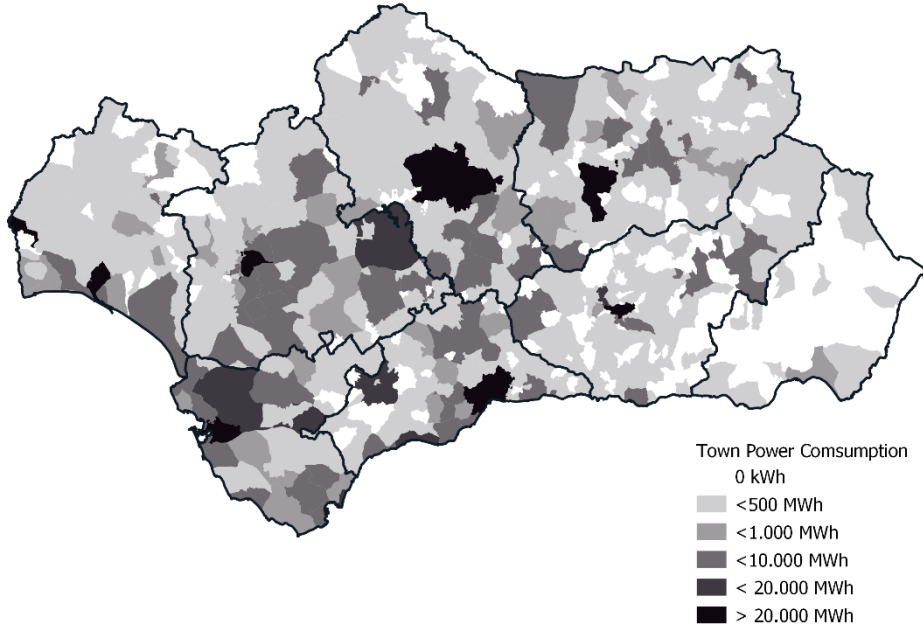
Takes **advantage of the high economic and energy potential** in buildings of the Andalusian Regional Government.



The Andalusian Energy Agency is responsible for a **specific, coordinated and effective management of the energy bills of all entities and agencies of the Andalusian Regional Government**

From 31st october 2019 all energy supply 957GWh/yearly will be 100% certified renewable energy sources in 4332 buildings, which implies a decrease in CO2 emissions into the atmosphere, estimated at almost 500,000 tons per year. "!!!"

Energy Management Network of Andalusian Regional Government (REDEJA)



number of supplies: **4.891**

approximate electrical consumption: **930 GWh/year**

total billing amount: **134 M€**



Optimization of energy supply contracts

↳ **Energy audits** and other energy analysis in public buildings

↳ **Investments** in equipment and infrastructures

Topic Report Innovation: How to accelerate innovation uptake for energy rehabilitation.



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INNOVATION
*HOW TO ACCELERATE
INNOVATION UPTAKE FOR
ENERGY REHABILITATION*
TOPIC REPORT — SEVILLE, 30th NOVEMBER 2017

**BUILD2LC Project
Boosting Low Carbon
Innovative Building
Rehabilitation in
European Regions**

The topic report is a communication action for the general public to show the main conclusions and results of the events being held with stakeholders in relation with BUILD2LC topics.
More info: interregeurope.eu/build2lc



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Topic Report Innovation: How to accelerate innovation uptake for energy rehabilitation



— SUMMARY OF SESSION 4 good practices in innovation

Stefan Östlund, Region Jämtland Härjedalen

HOSPITAL OF ÖSTERSUND – LARGE ENERGY SAVINGS WITH INNOVATIVE VENTILATION SOLUTIONS

Stefan Östlund is the managing energy engineer of the Hospital of Östersund. He presented some of the renovation solutions and thus reduction of energy demand, that has been done in the hospital's ventilation system during the past 40 years.

From a yearly energy consumption of nearly 297 000 kWh in 1978 it has decreased to 125.000 kWh in 2017. Every renovation work has been carried out during ongoing hospital activities in the operation rooms, with very high demands on ventilation compared to ordinary buildings. This has made the work even more complicated. The investments have had an average pay-off time of 15 years. In comparison to what is possible in most businesses this is a long time. Since the hospital has long-term owners and a long-term perspective to work from, it has been possible to do.



Topics that are addressed during the meetings are for instance:

- Academic session on the innovation system and large scale transitions
- The role of an innovation strategy and circular economy in Region Jämtland Härjedalen.
- Workshops on the role of innovation order to reach near zero-energy buildings.
- Good practices Exchange among partner regions.
- Study visits.



Topic Report Innovation



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— STORSJÖ STRAND

Ecological and social sustainability has been the key words during the development of the Storsjö Strand area. In 2009 the municipality of Östersund received a grant from the state which made it possible to move towards a more sustainable and innovative spatial planning. The municipality started a project which aimed to develop working methods and processes, two outcomes of this work were a Sustainability program based on the BREEAM certification system and a Design program. Similar planning processes sustainability programs could be developed for retrofitting an area with older buildings.

These documents contain requirements that take more environmental considerations than legal requirements. The documents were formulated in such a way that they could easily be converted into contracts. These contracts have since been signed by developers who wanted to buy the land and build houses there. In this way, the urban development project has contributed to greater consideration for the environment.



The group were shown around the construction site by Karin Söderberg from Östersund municipality and Gabriel Duvenskog from Persson Invest (developer).

The group was also shown around one of the apartments by a tenant, who welcomed everyone into his home. He told the group how pleasant the apartment is to live in when it is made out of wood, as it is very quiet and has great indoor climate.



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Interregional Cooperation and Regional Stakeholders

Juan Manuel Castaño, European Passive House Platform

PASSIVE HOUSES IN MEDITERRANEAN CLIMATE & SPANISH PASSIVE HOUSE PLATFORM

Juan Manuel Castaño represented the international non-profit organization "Passivhaus Building Platform". The organization has 500 members and its main purpose is the dissemination of the passivhaus standard.

Passive houses are implemented all over the world, in all kinds of climates and in all types of buildings. In some regions as the Region of Brussels or Heidelberg city (Germany) it is already compulsory to build new passive houses.

The definition of a passive house, according to the standard, is a house with a maximum heating demand at 15 kwh/m² and heating load 10 w/m², a maximum cooling demand at 15 kwh/m² and cooling load 10 W/m².

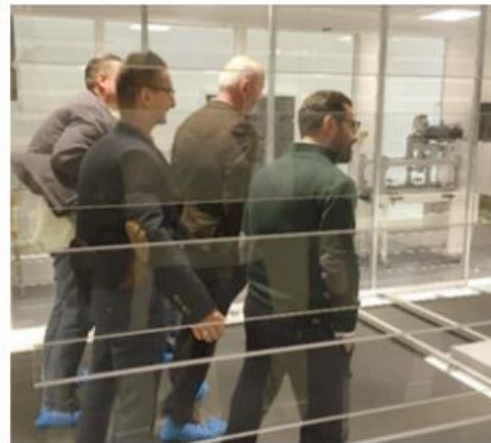
A passive house is a clear path to Nearly Energy Zero Buildings (nZEB) and certification works as a quality assurance. Since it is the same calculation procedure it is possible to make global comparisons.

Air tightness has been introduced in Spain quite recently. Despite some skepticism at the beginning it has worked well. A conclusion is that contractors need to be trained and informed. The production cost is about 0%-7% higher than regular houses, which is not a problem if the profit from the market price selling is included.



Mr Carlos García

Carlos García Delgado, Civil Engineering and Building Technical Officer. Technological Corporation of Andalusia: An example of regional Public Private Partnership to fund RTDI projects.



Benchmarking Fiche Region: Gloucestershire. Topic Innovation. Learning from System of Monitoring, Measuring and verification of energy saving (SMIV) Gloucestershire and from Interregional Collaboration

Main Needs to respond to:

Data is collected for each Project within the region but this is not centrally collate this information to monitor activities and also provide evidence of effectiveness of installations for procurement purposes; and area which will be reviewed within the UK. Project.

Main objective to transfer the good practice to any region:

Review procurement process with the aim of :

- a) Improving standards through contracting
- b) Note excluding smaller, local business.

The Andalusian Energy Agency adapted this Good practices to include IT monitoring at the REDEJA network public procurement process

- **Action 1: Innovative Financial Instruments to boost energy rehabilitation in public buildings.**
- **Action 2: Comprehensive planning of investments to be made in public buildings.**
- **Action 3: A more professional sector by enabling better training and education**

- **Action 4: Promotion of employment related to sustainable construction**
- **Action 5: Promoting innovative solutions for sustainable construction**

Action 2: Comprehensive planning of investment to be made in public buildings

An investment plan in buildings of the Andalusian Regional Government to energetically improve these buildings for an amount of 30 million euros will be implemented up to 2020.

It is necessary to design and develop complementary measures to ensure the maximum efficiency of the investments that are going to be made, as well as to guarantee the durability of the energy efficiency of these solutions.

In this sense, the investment projects to be carried out in the buildings of the Administration of the Andalusian Regional Government, the introduction of ICTs for the energy management of public buildings and installations will be compulsory.



Action 2: Comprehensive planning of investment to be made in public buildings

A reference to ICTs has been included in the Technical Specifications of the implementation of the Works that REDEJA will tender:

“The project must define and develop in detail a system of monitoring and permanent follow-up of the energy objectives achieved.

“A monitoring system consisting of sensors, measuring elements, concentrators, checkpoints, tables, etc. will be established that permanently allow the staff of the centre to know the consumption, energy efficiency and performance indicators. The objective is to be able to evaluate the performance of the installations that are the subject of the project. The monitoring system must be permanent and must be designed and sized in such a way as to store relevant information on the operation of the improvements carried out during the lifetime of the same. This system will allow to store, publish, exploit and give remote access to the data of what is being monitored.”

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Action 2: Comprehensive planning of investment to be made in public buildings

Beyond the policy priority ERDF Andalusian Operational Programme for Investment for Jobs and Growth 2014-2020. O.T.4.c.

The measure has been included as an action line of the Andalusian Industrial Strategy.

Measure 6,3,1, Programme for the promotion of ITCs in the Public Administration.



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Thank You!!!

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Internationalisation and Prospective Department
Andalusian Energy Agency



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