



**COLOR
CIRCLE**
Interreg Europe



European Union
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Development Fund

Interregional Learning Event n°2

Gonzalo Esteban López

Sustainable Energy Technician, DIPGRA

gestebanlopez@dipgra.es

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Una nueva política industrial basada en la economía circular

1. Hacer que los productos sostenibles sean la norma en la UE – Eco-diseño.
2. **Dar mayor visibilidad a los consumidores y compradores públicos - "Derecho a la reparación".**
3. Centrarse en los sectores: que utilizan la mayoría de los recursos y dónde el potencial de circularidad es alto como: **electrónica, baterías y vehículos, embalajes, plásticos, textiles, construcción y edificios, alimentos, agua y nutrientes.**
4. **Garantizar menos residuos:** modernizar las leyes de residuos de la UE (por ejemplo, baterías, embalajes, vehículos al final de su vida útil y sustancias peligrosas en equipos electrónicos).

Up to
80% 
of products' environmental
impacts are determined at
the design phase



The Commission will propose measures to ensure that **all packaging in the EU is reusable or recyclable** by 2030.



New business models based on renting goods and services will help to shift **consumption patterns away from single or limited use products.**



A new industrial policy based on the circular economy

1. Make sustainable products the norm in the EU- eco-design
2. Give greater visibility to consumers and public buyers (right to repair devices)
3. Focus on sectors: which ones use the most resources and where the potential for circularity is high such as: electronics, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients.
4. Guarantee less waste: modernize EU waste laws (eg batteries, packaging, end-of-life vehicle and hazardous substances in electronic equipment)

PROVINCE OF GRANADA

ESMARTCITY (<https://esmartcity.interreg-med.eu/>) and POCITYF (<https://pocityf.eu/>) European projects

- #2 Regional Strategy of Green and Circular Economy

Regional Strategy of Green and Circular Economy, following the EU Action Plan for the Circular Economy – “Closing the loop”

POCITYF

Integrated Solutions: the cornerstones of city's Renewable Energy Transitions

POCITYF will demonstrated 10 integrated solutions, built on top of innovative technologies. The solutions are grouped into 4 Energy Transition Tracks:



Positive Energy Buildings & Districts



P2P energy storage and management



E-mobility integration into smart grid



Citizen driven co-creation



PROVINCE OF GRANADA

According to the Spanish 2030 Circular Economy Strategy:

In the same way that matter and energy are related in physical terms, circular economy and energy transition are as well. There are clear synergies between both concepts, which converge in the need to rationalize the use of limited resources as much as possible and to decarbonise the economy.

Stop using fossil fuel resources and use renewable sources of energy is already Circular Economy, as well as reducing the consumption of energy is part of the philosophy of Circular Economy.



PROVINCE OF GRANADA

Moreover, applying biomass for energy use is a "circular economy paradigm", as it covers the production of energy by renewable means, as well as enables to produce previously considered waste materials.

Specially for biomass of agricultural origin, its potential within the circular economy "is immense" since many by-products so far considered waste are already becoming raw materials in other processes, such as power generation.

In rural areas such as our province, the use of agricultural waste is a crucial factor of the circular economy development, and in our area Olive industry is really important. In the last years olive bone/pit have become an asset of our farmers instead of a waste to get rid off.

As well, olive prunnings is another «waste material» we are trying to include in our circular economy policies.

PROVINCE OF GRANADA

Considering these aspects, a collaboration among private company Iberian Biomass, Granada University, and Public Administrations, tried in the past years to search for innovative ways to use olive pruning's for Biomass applications. Biomass pellets were shelled mixing pine wood and olive pruning's to reduce the quantity of Chloride, but finally the private company didn't reach enough quality and stopped producing its pellets in Moclin municipality.



PROVINCE OF GRANADA

Nevertheless, the European project BIOMASUD kept certifying new solid biomass options considering international standards, and specifically in Andalusia we have different companies with a standardization and certification process to cope enough quality standards with OLIVE PIT. Thus local public administrations can help local businesses related to olive industry with the implementation of biomass facilities that consume olive pit.





HUETOR TAJAR CASE STUDY



OLIVE PIT CASE STUDY

SUSTAINABLE ENERGY PROJECTS IN HUETOR TAJAR:

The European Covenant of Mayors initiative affects all municipalities in Europe, and is in fact spreading internationally, and the measures that this initiative suggests are fully replicable from one municipality to another.

In addition, the specific actions taken by Huetor Tajar are technically and economically viable experiences, so that in each of these actions replicability in third municipalities is demonstrated.

Finally, it should be noted that if a municipality of about 10,000 inhabitants is capable of carrying out these actions, it will be possible for bigger municipalities as well.

The screenshot shows the website for the Pacto de los Alcaldes, specifically the page for Huetor Tajar. The website has a blue and green header with the logo and navigation menu. The main content area is titled 'Firmantes' and 'Huetor Tajar'. It features a section for 'Action Plan in a Nutshell' with details on approval date and CO2 reduction target. Below that is a table of 'Sustainable Energy Action Plan Documents' and a section for 'Key Results of the Baseline Emission Inventory' with a table showing emission factors.

Pacto de los Alcaldes
Compromiso con una energía sostenible local

Pactodelosalcaldes.eu MI Pacto

Acerca de Acciones Participación Apoyo Comunicación

Buscar... OK español (es)

Firmantes

Huetor Tajar

Overview Action Plan Support

Action Plan in a Nutshell

Date of formal approval: 2012-09-01
Overall CO₂ emission reduction target: 20%

Sustainable Energy Action Plan Documents

Title	Size	Language
Plan de Acción para la Energía Sostenible. Municipio de Huetor Tajar	1744007 kB	es

Key Results of the Baseline Emission Inventory

Baseline year: 2007

1) Greenhouse gas emissions and final energy consumption per capita

Emission factor	tonnes CO ₂ equivalent/capita	MWh/capita
IPCC	4.9	16.6

2) Greenhouse gas emissions per sector

OLIVE PIT CASE STUDY

SUSTAINABLE ENERGY PROJECTS IN HUETOR TAJAR:

- 750 kW Biomass District Heating based on Olive Bone/Pit.
- 225 KW Biomass Boiler for the «Padre Manjón» early childhood education center.
- Biomass boiler of 80 kW for the Nursery Building.
- Photovoltaic Plant of 20 KW in the municipal swiminpool.
- Improvement in Outdoor Public Lighting 421 LED luminaires, remote managed control panels, and 265 simple HPS light points at double level.
- 30KW Photovoltaic Plant, Geothermal and Biomass Heating for the Agro-Food Center for Technological Innovation in «Poniente Granadino».

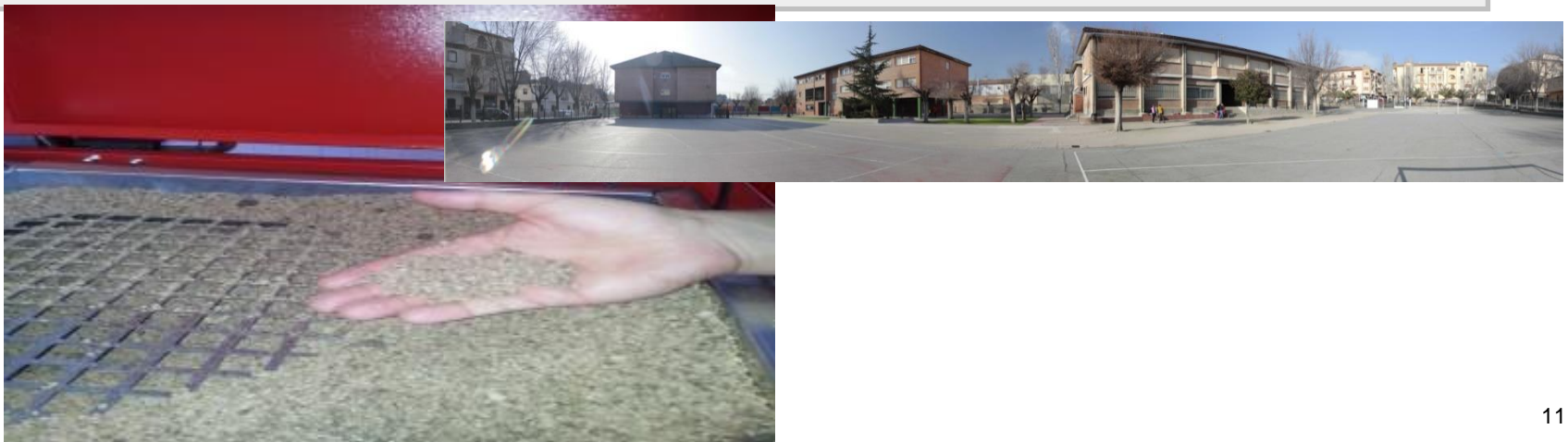


OLIVE PIT CASE STUDY

SUSTAINABLE ENERGY PROJECTS IN HUETOR TAJAR:

This is the case of the installation of the district heating network of several public buildings, since it is the only one that has been implemented in Spain with certified boilers that accept olive pit, and that feeds 100% of olive pit from rural surrounding area. Moreover the boiler constructor is a local company that certifies special boilers adapted to olive pit.

As well, the public business model for managing municipal sports facilities with quotas adapted to citizenship, and with green numbers of income thanks to the low energy cost associated with these facilities, is undoubtedly a success story to be replicated.



OLIVE PIT CASE STUDY

ENERGY SAVINGS:

		Energía kWh
•Cal	• District biomass heating, 750kw with olive stone	750.000,00
•Cal	• 225kw biomass boiler for the Father <u>Manjón</u> Early Childhood Education <u>Center</u> .	225.000,00
•Cal	• 80 kW biomass boiler for nursery	80.000,00
•Pla	• Photovoltaic plant on the roof of a heated pool, 20 kW	34.000,00
•Mej	• Improvement in outdoor public lighting (power saved)	228.990,13
•Pla	• 30 Kw <u>photovoltaic plant</u>	51.000,00
TOTAL.		1.368.990,13





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Thank you!

Questions welcome



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