

ENRD Thematic group on Green Economy

7th April 2016



Co-funded by the Intelligent Energy Europe Programme of the European Union

TESLA at a glance

- **TESLA** - European project funded by EU program “Intelligent Energy for Europe”
- **AIM - the reduction of energy consumption in industrial processes in:**
 - **WINERIES**
 - **OLIVE OIL MILLS**
 - **ANIMAL FEED FACTORIES**
 - **FRUIT AND VEGETABLES PROCESSING PLANTS**
- **A 3 years project (16-03-2013 to 15-03-2016)**
- **A multidisciplinary team**, including cooperative businesses, academic research centres and experts in energy efficiency.
- Combination between cross cutting techniques successfully proven in other industries and the development of specific tools fitting the sectorial characteristics were used

Audits in cooperative businesses



✓ **110 audits on cooperative industrial sites**

Cogeca members involved:

- ✓ **Coop de France**
- ✓ **Legacoop (IT)**
- ✓ **Confagri (PT)**
- ✓ **Spanish Agrifood Cooperatives**

A multi-actor project

- ✓ **Three types of actors involved in TESLA:**
 - **4 member organisations of COGECA:** Coop de France, Legacoop (IT), Confagri (PT), Spanish Agrifood Cooperatives
 - **The scientific members of the project:** ENEA, Tecaliman, Italian Agency for Energy, Politechnical University of Madrid, Evora University and CIRCE Foundation
 - **30 European companies in technologies:** ABB, Schneider Electric, Siemens, Philips, ...

- ✓ The external Key Actors enable to provide the necessary and adapted technology and the technical point of views useful to implement specific measures

The way we did it

- ✓ **Training sessions:** 37 professionals of agro-food sector were trained in auditing skills
- ✓ **4 Handbooks on energy efficiency** have been edited. Handbooks addressed to the four sub-sectors of the project and in the five languages.
- ✓ **Guides providing recommendations on Best Available Techniques (BAT)** for Energy Efficiency to be implemented regarding the facilities or the agro-food processes.
- ✓ The **TESLA tool:** an easy-to-manage virtual tool available and downloadable from the project webpage. Provide an **energy diagnosis for the studied agro-industry:**
 - The result of the analysis
 - Comments and comparison with other European agro-industries
 - An analysis of the potential energy saving measures

The way we did it

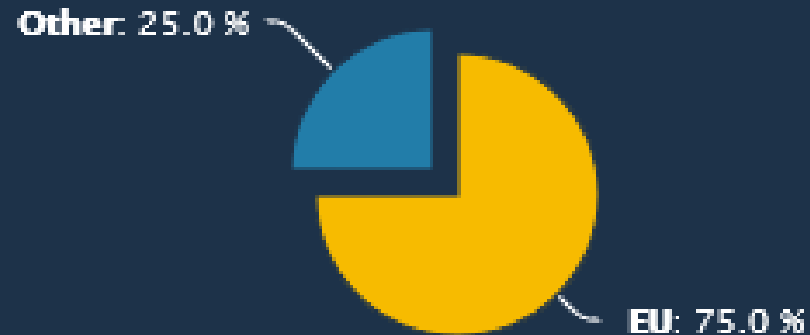
- Example of fruits and vegetables processing plants

Recommendations to achieve energy efficiency

- ✓ The most efficient cooling system
- ✓ Lighting: no more no less
- ✓ Electric resistance VS. Thermal heating
- ✓ Optimizing performance of Compressed Air Systems (CAS)
- ✓ Insulation, in chambers and pipes

The challenges of the project

Overall budget 1.570.318,00 €
including 1.177.738,50 €
from the European Union



- ✓ Commitments with strong indicators of success measurements
 - 10,8 million euros on energy efficiency investments
 - 3.118 toe/ year of savings in primary energy (36GWhour)
 - 4.300 tCO₂e / year reduction of greenhouse gas emissions
- ✓ 3 year project. The project “roadmap” designed in 2012 with narrow possibilities to change things
- ✓ An important budget to manage
- ✓ The audits - 680 specific energy efficiency measures, 300 measures to be implemented

Lessons learnt and results achieved

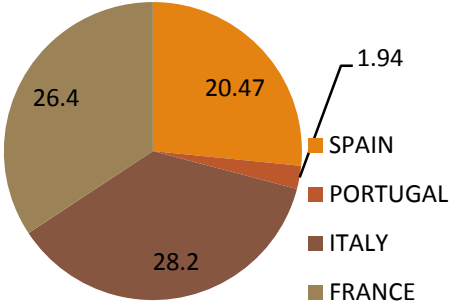
- ✓ TESLA - an excellent opportunity to exchange knowledge, skills, ways of procedures between members of COEGCA, as well amongst cooperatives of different countries
- ✓ The heterogeneities of the 4 subsectors, between the countries and even inside the regions (different processes, facilities and practices) have complicated some tasks of the projects but on the other have enriched the final output.
- ✓ The knowledge from this project has to be shared :
 - **20 brokerage events** – To extend TESLA results and tools to other agro-food industries.
 - **Handbooks and Guides on Best Available Practices on energy efficiency available** on the project webpage and disseminated within the university and scientists world

Lessons learnt and results achieved

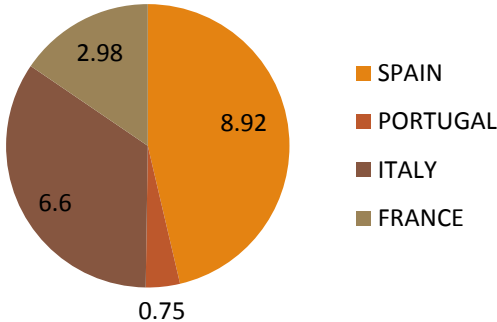
- ✓ The **multi-actor approach** and the initiative from the private sector were crucial
 - Project specialists are needed
 - Around a **100 specific meetings** between Key actors and cooperative businesses have been held
 - **30 companies, from big European corporations to local SMEs**, acted as **Key Actors** and collaborated with the project under a win-win strategy;
 - **Brokerage events have brought together up to 500 SME's**
- ✓ The **financing of investments** has played a very relevant role.
 - Some banks and financial bodies have been engaged in the project, facilitating the investments to the cooperatives.

Results achieved

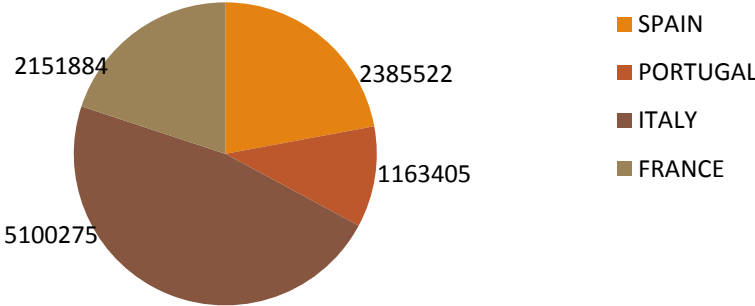
PROPOSED SAVINGS IN 110 AUDIT REPORTS. GWhour/year



ACHIEVED SAVINGS IN JANUARY 2016. GWhour/year



ACHIEVED INVESTMENTS IN JANUARY 2016. €



Next step

- ✓ **SCOoPE - Saving COOPerative Energy** – started 1 April 2016 (H2020)
- ✓ Continuation of TESLA project in new fields: Drying of cereals and fodder, meat, dairy and Fruit juices and concentrates
- ✓ Apart from initial partners - Danish (DAF), Greeks(GAIA) and Swedish (Lantmannen)
- ✓ 7 pilots of collaborative energy management between different cooperative companies

Thanks for your attention -

www.teslaproject.org

tesla



Transferring
Energy Save
Laid on Agroindustry



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