



The cooperation of the local community in wine producing area of “El Penedès” to produce heat in municipal buildings with vineyard prunings

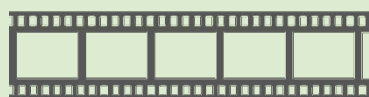
Vilafranca del Penedès (Barcelona, Spain)

400 t/yr of vineyard pruning

Started 2015

District heating (municipal buildings & nursery)

Heat in winery for process and hot water



THE STORY

Vilafranca del Penedès is the principal town in the county of Alt Penedes, one of Spain's most famous wine regions in Catalonia. At the start of the agrobiomass heating initiative in 2013 there was a favourable social context: interest in developing a more sustainable image for tourism and wine producing industry, as well as a general interest to reduce the disposal of pruning wood in open field fires.

The turning point was the materialisation of all actors interests in form of a LIFE+ project: Vineyards4heat. The project led to the creation and monitoring of a new value chain on vineyard pruning with subsequent investments of the participants.

COVIDES (the largest farmers cooperative in the area facilitated access to the pruning residues), NOU-VERD, a gardening and agricultural services company started the harvesting and biomass supply operations to a new boiler installed in Cavas Vilarnau (local relevant winery) and to a new municipal district heating (La Girada). INNOVI (local cluster for innovation in wineries) followed to promote the replication of the project. All the interests were aligned by Vilafranca del Penedès city council, who clustered all actors and led the process and Vineyards4Heat project.

The initiative continues on a commercial status nowadays, after the conclusion of the project in 2018. The business is economic and able to supply pruning wood at 70 €/t (competitive with fossil fuels). A new company started the biomass supply recently. More than 300 t/yr are being currently mobilised. The municipal district heating is being expanded, and managed by EMAVSA, the public municipal company on water supply, that now widened its competences to also provide energy service for heating.

Through this model all actors have a gain. The council saves in energy costs and contribute to its Sustainable Energy and Action Plan, the farmers save time and money in handling the pruning wood (paying a small fee per hectare collected) and wineries brand the more sustainable practices.



Challenges

- Achieve good economics and effective collection of pruning
- Put into operation two boilers of small size able to run 100% with inhomogeneous shredded vineyard pruning
- Expand the use beyond the initial facilities
- Remain operative after the ending of EU-funding



Keys of success

- City council vision and compromise (adhered to Covenant of Majors for Climate & Energy)
- Good framework conditions & interest of all actors
- Dynamisation through a LIFE+ project
- Incorporating new competences on heating energy supply to the municipal company of water EMAVSA



Technology

- Engineering to install a 130 kW Herz Firematic boiler at Vilarnaus' winery (able to use pruning and forestry wood).
- Selection of appropriate 500 kW boiler and installer for the Girada district Heating (Heizomat RHK-AK-500).
- Careful design of storage and feeding systems
- Farmers reduce time to get permits, and avoid time and costs related to managing and behold the open-air firing piles.
- Initial investment in machinery and Vilarnaus' boiler partly covered by Life+ project.
- Fuel cost reduction between 55 to 85% able to balance the costs to invest in new boiler systems and lead to non-subsidised reduction of La Girada district heating costs.



Economics



Community

- All relevant actors of the community represented and receiving positive impacts thanks to the initiative.
- Fire risks abated (burning in open air have been reduced)
- Relevant efforts of all participants in promoting the image of the initiative in local and national media
- Project awarded at EU and National level

