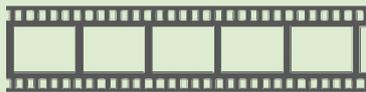


Valorizing local hedgerow prunings to supply a community heating network at La Méauçon

22440 La Méauçon
150kW biomass boiler
65 t/y of hedgerow prunings, local fuel provision by SCIC Bocagénèse
Start of the operation: October 2016



THE STORY

Located near Saint-Brieuc in the Côtes-d'Armor department of the Brittany region, this rural town has nearly 1,300 inhabitants. Commissioned in October 2016, the installation blends into the landscape of the village La Méauçon, and delivers heat to two substations via a network of 160 meters: the town hall and the multipurpose room located at the top of the rock, on the one hand, and the school, canteen and nursery, below, on the other. In total, 1940 m² are heated.

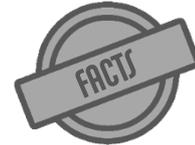
The story dates back to 2010. The two gas boilers which supplied the town hall and the village hall, as well as the fuel-fired boiler of the school group reaching the end of its life, the desire to reduce the energy bill which rose each year to € 32,000, i.e. 5% of the operating budget.

The elected officials of the municipality, Mayor Armelle Bothorel, and Deputy City Councilor Jean-Marc Labbé, passionate about renewable energy and convinced of the value of the local wood resource, made it possible to complete this project.

The 65 tons of wood chips consumed each year are supplied by SCIC Bocagénèse from sustainably managed hedges, i.e. where the harvesting of the resource is planned, selected, to allow regeneration or program the corresponding replantings.

The shredding is carried out by a local service provider, which makes it possible to achieve a P31-P45 particle size. The wood chips, previously dried in a ventilated shed for 6 months up to 25% humidity, travel about thirty kilometers and are delivered once a month in winter. The useful volume of the silo being 60 m³, the maximum quantity delivered is 11 tons or 40 m³. Contracted at €31.5 excl. VAT/MWh per tonne is marketed at €110 excl. VAT/T.

A new propane gas boiler has also been installed as a back-up system in the event of unavailability of the biomass boiler. Over the last 3 years, this boiler has consumed 30 MWh, or only two tons of propane gas, while the biomass boiler has produced 581 MWh of heat, consuming 204 tons of wood chips.



Challenger

- Sustain the envisaged supply and guarantee fuel price stability over the long term
- Make the most of the existing buildings and secondary hydraulic network and reduce costs



Keys of success

- Judicious and simple installation and technical choices.
- Take the time to visit several facilities and gather feedback from each client
- Contract the fuel supply with a service provider who knows the quality criteria to be respected: humidity at 25%, particle size P31-P45
- Take charge of the management and maintenance of the boiler and establish the right settings from the start by involving the maintenance agents of the technical services who carry out the reception of deliveries once or twice a month and emptying the ash compartment once per week in winter
- Technical trainings delivered by AILE



Technology

- Thermal demand study carried out by a local installer for a power of 150kW
- Three heat meters in the boiler room (propane gas boiler inlet, wood boiler outlet, network outlet), a heat meter for each substation
- 77% wood boiler efficiency, network losses 9.7%
- 97% coverage of the heat demand by wood energy



Economy

- More than €12,000 in annual fuel savings.
- Funding from Département 22 : 47,264 € ; Funding from region of Brittany: 47,264 €
- 10 – 11 years return on investment



Community

- Participation in the job-creating Breton wood energy sector
- Encourage the sustainable management of the bocage by local farmers and help them diversify their activities
- Raising citizen awareness on ecological issues

