BRANCHES

BOOSTING RURAL BIOECONOMY NETWORKS FOLLOWING MULTI-ACTOR APPROACHES

An example of **microgeneration in Italy**

Cip Calor Ltd is a small forest company (4 employees) based near Lake Como in the Central Italian Alps.

Cip Calor manages a small but adapted machine fleet, which includes three forestry-fitted farm tractors and as many excavators, plus a cable yarder, a woodchipper and a truck. Given the rugged terrain conditions encountered in the Italian mountain, about half of the total harvest is extracted by cable.

In 2010 Cip Calor launched a Biomass Trade Center, where the owners of wood stoves, fireplaces and chip-fed heating plants could find all the fuel they needed. Confronted with the need of producing a variety of wood fuels, Cip Calor decided to get into biomass quality sorting and improvement. An essential element of this new strategy has been the wood gasifier, commissioned in 2013 (a classic German-built Spanner plant) and funded thanks to dedicated state incentives. The plant consists of two 45 kWe gasifiers that feed an endothermal engine and generator, plus the drying and screening unit. Cip Calor has decided to build and manage this plant, in order to capture a larger share of the added value in forest fuels, while finding a viable outlet for the less valuable component of their annual harvest.

The microgeneration unit has worked well during the 7 years of operation and Cip Calor is happy with the investment which has accrued >20% ROI (return on investment). In fact, this is just one example for the growing a number of logging contractors who have integrated their business vertically into the value chain, so as to capture a larger proportion of the transformation benefits. Many more have joined Cip Calor, each devising their own creative way to make the most of the opportunity offered by diffused microgeneration.

KEY WORDS

Gasification
Wood fuels

COUNTRY/REGION

Italy/Lombardy

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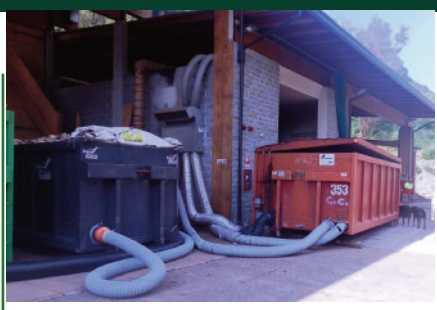
ADDITIONAL INFORMATION

In the local small-scale woodchip market a question that often occurs is how to use larger chips that are not suitable for residential users. Today most commercial gasifiers are capable of using large-size chips with the following benefits: additional revenue from power generation; possibility to use the large size material stream coming from the screening line; availability of heat for drying both chips and firewood.

The latter benefit is crucial to Cip Calor's commercial policy, based on guaranteed fuel moisture content. Such ambitious target can only be planned when resorting to active drying, so Cip Calor has developed the following efficient firewood management strategy: in Winter they harvest just as much firewood as to fulfil the minimum expected demand and store it over the Summer to get air-dried. When the next Winter comes and firewood sales progress, Cip Calor can better see what the trend is; if they see that their stock starts getting depleted, they intensify the current firewood harvesting and actively-dry the additional new stock. It only takes about 15 days in the dryers for the moisture content of freshly cut split firewood to drop below 30%. Resorting to active drying incurs a small additional cost, since the gasifier generates heat as a collateral product and a main issue for plant managers is how to efficiently use that heat. The dryers themselves are simple self-built units obtained by fitting a conventional container with a grate floor and a blower to push hot air from the gasifier through the firewood mass – something any small entrepreneur can get manufactured at minimum cost.



ABOUT BRANCHES

BRANCHES is a H2020 "Coordinaton Support Action" project, that brings together 12 partners from 5 different countries. The overall objective of **BRANCHES** is to foster knowledge transfer and innovation in rural areas (agricolture and forestry), enhancing the viability and competitiveness of biomass supply chains and promoting innovative technologies, rural bioeconomy solutions and sustainable agricultural and forest management.

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101000375

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