

Examples of biomass heating



Commercial and municipal heating

Biomass plant heating a residential complex in Norway and biomass plant heating an industrial warehouse in France.



Agricultural heat

Biomass furnace on a greenhouse and biomass hot air generator on grain dryer in Finland.



Customized solutions

Biomass heating adapts to any application requiring hot water or hot air and can even be used in specific cases. The photo on the right shows a still running in Southern France that is distilling Cognac using chipped vine as fuel.



Säättötuli Canada distributes commercial biomass heating systems. Our systems are based on a well-known Finnish technology which sturdy units have been providing green heat for over 30 years in polar conditions of Northern Europe. Heating systems are also available as containerized heat plants.



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Biomass heating

**A renewable,
carbon-neutral
and socially
responsible energy**

Neutral carbon footprint



Wood-energy chips, that are commonly used for biomass heating, are made with leftovers of the logging process. **From an economical point of view, harvesting a tree just to burn it makes no sense.**

Wood-energy chips are made with all that is left aside by other wood-based industries (lumber, furniture, pulp and paper), mainly hog, branches and treetops. Usually that resource is either left in the forest to decompose naturally or burned onsite.

The carbon stored in that biomass will in any case be transferred to the atmosphere. Either by the decomposition process that emits methane (a gas with high greenhouse effect), or by the campfire-type burning emitting thick smoke with lots of particulate matter.

Therefore, **burning that resource in a modern biomass boiler won't emit more CO₂ than it will anyways.**

The only difference will be that the burning process is much cleaner and controlled than a burning hog pile, emitting no visible smoke nor burning wood smells.

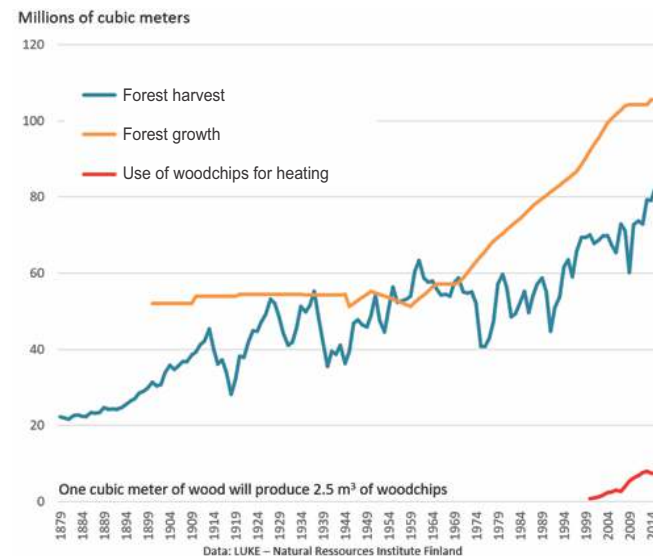
Moreover, the energy is used to produce heat that would, in most cases, be produced by burning fossil fuels if biomass heat is not available.

A renewable energy

Forests grow and regenerate naturally. **For their development, trees capture the carbon in the form of CO₂ from the air.** The energy needed to capture that CO₂ comes from the sun. Basically, trees are a natural form of storage for the sun's energy.

The CO₂ emitted during the combustion process makes a cycle when it's captured by a growing tree. With fossil fuels, carbon is pumped from underground into the atmosphere.

Therefore, **biomass heating is a carbon-neutral renewable energy**, as long as the forests are used in a sustainable manner.



The graphic above shows the evolution of **forest harvest** (blue) and **forest growth** (orange), as well as **woodchip usage for heat** (red) in Finland over the years.

It clearly shows that the sustainable forestry practices, that started to be enforced in the 1960s, allow the forest to regenerate faster than it is currently harvested.

Finland is the country where woodchip heating is the most advanced. 26% of the heating needs of the country are covered with biomass. The graphic shows that even if the country were to double its woodchip consumption for heating, the forests would still be growing more than they are harvested. Finland is a polar country, so the heating needs are consequent.

Good forestry practices include regular thinning of the forest. It will decrease the risk of wood diseases as well as boost the growth of the trees. All that biomass can be used as fuel in biomass boilers.

Great for local economy

Wood-energy chips are an economical and ecological way of heating, but only when the chip is produced at a maximum of 100km from the boiler. Otherwise, the savings on the heating bills will decrease due to transport costs.

Heating with biomass will naturally contribute to the local economy.

When you fill a heating-oil tank, your money will only benefit the delivery company before leaving for the petrol-producing country or province.

When you fill a silo with woodchips, your money will feed a whole chain of local actors from the nurseryman to the forester and up to the person using the chipper.

Several studies have demonstrated the positive effects of biomass heating on local economy. We can send you free of charge a translation of one of those studies. If you are interested by that matter, do not hesitate to contact us.