

RESOURCE EFFICIENCY = cascading use of raw material



**How to make
the best use of
our natural
resources?**



confederation of
european paper industries

Using **wood** and **paper for recycling**
for energy only...

... with subsidies!



Policy supports wood-based energy production

The Renewable Energy Directive sets binding targets for EU Member States. To reach these binding renewable energy targets, Member States have put in place financial incentives (e.g. green certificates or feed-in tariffs). Biomass is expected to provide 57% of renewable energy consumption by 2020 of which two thirds will be based on solid biomass from the forest. The support for the direct burning of wood to create renewable energy increases the pressure on the wood markets.

Burning wood out of the forest

This is one way of using our resources with often very low conversion efficiencies, it creates simple value and jobs, but...

... is this
resource
efficient?



There is a more clever way
to use wood! Please turn
the page to find out how ...

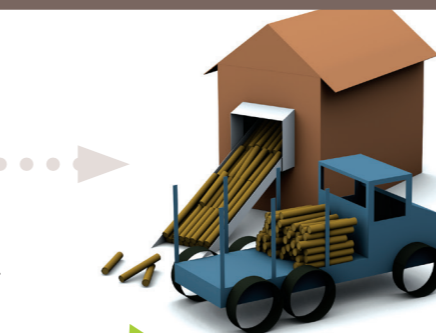
Using **wood** and **paper for recycling** for energy only...



... **OR** for wood products, pulp and paper, recycled paper and ...

Creating green jobs

When looking at job creation in a sector that is part of the bio-economy the pulp and paper industry value chain creates **7 times** more jobs for every job created by the energy alternative. In absolute terms the pulp and paper industry value chain creates **1,597,200 jobs**, while the energy alternative rests at **238,800 jobs**.



Adding value for the economy

Promoting the use of wood first as a raw material to make products, encouraging the recycling of used products, and then recovering energy when recycling is no longer feasible, is far more economical than burning it immediately for renewable energy partly based on subsidies. An independent study* shows that converting wood to **energy** would create **20.1 billion euros value**, while when using the same amount of wood as a **raw material first** and for energy production last the value is estimated at **97.1 billion euros**. The wealth creation in the pulp and paper industry value chain is mainly market driven and **5 times** that of the energy alternative.

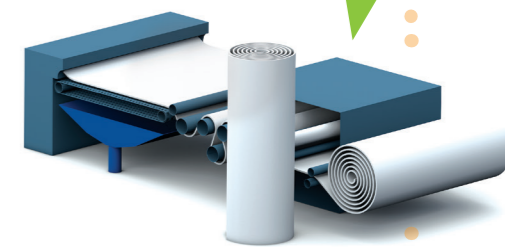


... creating energy in the end



Using raw materials most efficiently

Using **wood** and **paper for recycling** for manufacturing purposes does not only add value and create jobs, it does so in a resource efficient manner. A new study named "Wood flows in Europe (EU27)" shows that due to recycling and the use of waste and by-products in the pulp and paper industry, **1 m³ of wood** creates products worth **2.38 m³ of wood**. This is resource efficiency at its best.



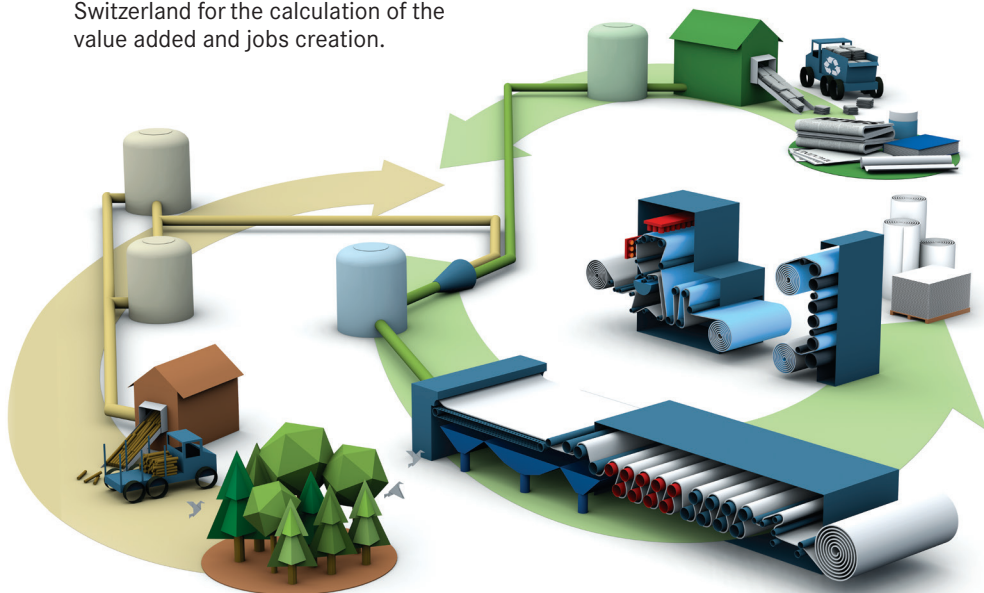
Paper adds up...

The European pulp and paper industry is the biggest single industrial user and producer of renewable energy in the EU today. 54% of the industry's total primary annual energy consumption is **biomass-based**. And we have the potential to do even more in the future. We have the experience, technology and supply chain to play a big part in the bio-economy and that in a resource efficient manner.

Use wood and paper for recycling for paper production first and for energy last!

What is the value chain?

The pulp and paper industry works closely together with several other industries to achieve efficiencies. In this leaflet the value chain includes the pulp, paper and paperboard industry, upstream activities (e.g. sawmill) and downstream (e.g. printing). For the energy alternative it includes the wood based energy conversion, upstream suppliers and downstream clients of wood based energy. Geographically, the analysis covers EU 27 for both studies and also Norway and Switzerland for the calculation of the value added and jobs creation.



For more information, go to www.cepi.org or contact:
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References:

Udo Mantau, University of Hamburg 2011, *Wood Flows in Europe (EU 27)*,
http://www.cepi.org/wood_flows_in_europe

* Pöyry 2012, *Employment and Value added – a comparison between the European pulp and paper industry and the bioenergy sector*

Printed on certified paper from sustainably managed sources.

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