

The ETIP RHC Biomass Panel

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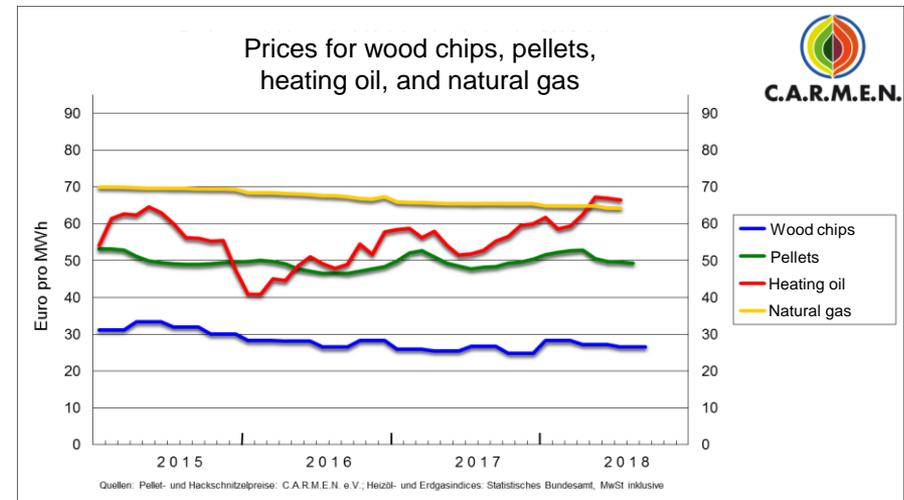
Challenges and support needs

- The **biomass potential** is not yet fully exploited in Europe
 - Many forests are privately owned and not well managed
 - Large quantities of agricultural residues are not used
 - Improving the efficiency and sustainability of forests and forest sourcing technologies/concepts
 - Developing economic technologies for increasing the share of agricultural residues



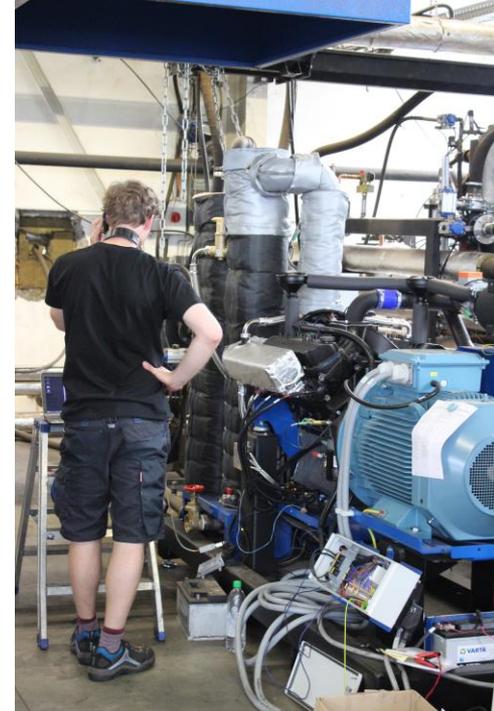
Challenges and support needs

- Barriers for the **replacement** of existing heating technologies with biomass technologies
 - Low fossil fuel prices
 - Lower initial investment costs for gas/oil boilers
 - Subsidies scheme for fossil fuel solutions
 - Consumer decisions often rely on installers/chimney sweepers opinions (not a barrier in a true sense, more a channel)
 - Lowering costs of biomass boilers, developing technologies for using biomass-oils, highlighting long-term cost advantages of biomass to consumers, training of installers/chimney sweepers



Challenges and support needs

- **Coupling of heating and cooling with the power sector**
 - The heat use changes if biomass CHP systems are shifting from electricity base load driven operation to electricity peak load driven operation
 - High initial investment cost of micro CHP
 - Developing low cost solutions for heat storages, micro CHPs and monitoring
- **Developing modern biomass conversion technologies**
 - Technologies on intermediate bioenergy carries (e.g. torrefaction, bio-oil)
 - Although big achievements have been made on the development of conversion technologies, more technical developments are needed



Challenges and support needs

- Damaged image of biomass systems because of **emissions**
 - Emissions (e.g. fine PM) is especially relevant for some cities/regions due to their geographic/climate situations (e.g. Graz, Austria; Po valley, Italy)
 - Replacing the old stock of residential wood stoves/boilers with existing efficient and modern technologies
 - Developing modern, cost efficient filters and controlled combustion technologies
- Damaged image of biomass systems because of **sustainability** debate
 - Biomass sourcing needs to be sustainable
 - Develop credible, but feasible solutions to guarantee sustainable biomass sourcing



Horizontal Working Group (HWG)

- The Biomass Panel proposed a HWG
 - 100% RHC for individually heated and cooled buildings**
- Aim: develop integrated **strategies** and **roadmaps** for 100% RHC (**all technologies!**) in buildings and provide input to the **ETIP RHC vision**
- The HWG was **adopted** yesterday at the ETIP RHC Board Meeting
- The HWG is now being set up
- If you are interested to contribute, please contact us!

Summary of challenges and support needs

Challenge	Needed developments	Needed support
Biomass sourcing	More efficient and sustainable sourcing; use of new feedstock such as from agriculture	RTD and support policies on forestry, feedstock mobilisation, and smart logistics
Technology replacements	Need of replacement of fossil combustion technologies with efficient renewable ones	Support policies on consumer behaviour and economies, training for middlemen, RTD to improve economies
Sector coupling	Couple existing and new biomass systems while considering the impact of heat supply	RTD on low cost solutions for heat storages, micro CHPs and monitoring

Summary of challenges and support needs

Challenge	Needed developments	Needed support
Conversion technologies	More efficient and sustainable sourcing; use of new feedstock such as from agriculture	RTD and support policies on forestry, feedstock mobilisation, and smart logistics
Emissions	Incentivize the replacement of old residential stove/boilers with new efficient one. Reduce the emissions of biomass combustion	Support policies and RTD on modern, cost efficient filters and controlled combustion technologies
Sustainability	Ensuring the sustainable sourcing of all biomass	Support policies and RTD on sustainable biomass sourcing