

Biomass as a primary fuel for replacing natural gas and district heating

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Biomass covers around half of our total renewable energy consumption and is expected to also contribute to half of the EU 2020 renewable energy target. As the political discussion on energy security is 'heats up', biomass is being considered a primary fuel for replacing natural gas and district heating. But how sustainable is it? Scientific experts, policymakers and NGO and industry representatives addressed this question at the recent European Biomass Association (AEBIOM) conference in Brussels.

The difference between [biomass](#) and fossil fuels is one of time scale. According to the Biomass Energy Centre, if it is managed on a sustainable basis, biomass is harvested as part of a constantly replenished crop. This maintains a closed carbon cycle with no net increase in atmospheric CO₂ levels.

However, the closed [carbon cycle](#) vision for biomass may not always be achieved. Additionally, the question of sustainability goes beyond CO₂ emissions alone - it includes other concerns such as biodiversity and food security.

At the AEBIOM conference, European Commission representatives reiterated the Commission's conclusion that it is not necessary to introduce binding sustainability criteria for solid and gas biomass in order to achieve the 2020 targets.

Giulio Volpi, of DG Energy, noted, 'The risks of unintended environmental impacts [from biomass] can be addressed and minimised through existing or new EU measures in other fields, not specifically the energy field ... There is a lot of potential with biomass that needs to be exploited and we need to make sure that the policy framework is supportive of biomass.'

However, sustainability remains a distinct challenge for the sector. Peter Wilson of the Sustainable Biomass Partnership (SBP), an industry initiative, pointed to the insufficient uptake of existing sustainability schemes (FSC and PEFC) in key forest source areas. He presented the SBP's upcoming Biomass Assurance Framework as a 'bridging solution' offering a set of standards and processes which will allow sector companies to demonstrate compliance with legal, regulatory and sustainability requirements using existing mechanisms.

Uwe Fritsche, of the International Institute for Sustainability Analysis and Strategy (IINAS), offered the scientific perspective, listing the range of issues we will face as we attempt to transform into a bioeconomy with biomass as an important component. These include: greenhouse gas emissions from land use change and carbon stock change; biodiversity problems in terms of converting grasslands, wet lands and peat lands; food security and the land tenure issues and acidification.

Mr Fritsche also pointed to the 'fuel issue'. He noted, 'The more we trade bioenergy and the more we valorise forest products there is also a risk that we might misplace some of the fuel that is needed

for the livelihood for a lot of people on this earth'.

IINAS is currently working with the EU's Joint Research Centre (JRC), the European Environment Agency (EEA) and others to consider the latest science behind these issues. Mr Fritsche noted that talks are ongoing on potentially developing a matrix which identifies risks of greenhouse gas implications of using forest products.

The IINAS is also involved in one of the many EU-funded projects exploring the potential and sustainability of biomass. S2BIOM aims to improve the [sustainability](#) of the biomass delivery chain. Launched in September 2013, the S2BIOM team is working to design and evaluate optimal biomass delivery chains and strategies to support the sustainable delivery biomass feedstock at local, regional and pan European level.

More information: www.aebiom.org/conference/

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