

“Testing” the sustainability principles and criteria developed during the Main stage project

In contrast to biofuels and bioliquids, for which binding, EU-wide sustainability criteria are in place, the introduction of corresponding criteria for solid and gaseous biomass has so far been left to the discretion of member states. In the absence of binding EU-wide sustainability criteria for solid and gaseous biomass, several energy utility companies and grid transmission operators started to set up and implement corporate sustainability schemes on a voluntary basis. Several utility companies concluded voluntary agreements with public authorities. The reasons are manifold: to secure and validate high GHG emission savings compared to fossil fuels; to protect biodiversity; to limit negative direct and indirect land use changes; to ensure high resource efficiency and to increase social acceptance. The applied corporate sustainability criteria vary in scope, focus and have different chains-of-custody.

One of the objectives of the Extension stage project was to enter into a dialogue with public and private energy utilities and other market actors, and to promote validation and “testing” of the principles and criteria for sustainable bioenergy production which have been developed during the Main stage.

In a first step, the project partners prepared a report assessing existing corporate sustainability initiatives and strategies covering solid and gaseous biomass in the Baltic Sea region and beyond¹. Info box 2 briefly summarizes the main results of the report.

Info box: Results of the corporate sustainability strategy assessment

Due to the growing demand for biomass, the large energy utility companies in the EU increasingly rely on importing biomass, especially wood biomass in the form of pellets, for their power plants. The Baltic Sea Region countries, Canada, the US and Russia are the main sources of biomass for those companies, including those considered in the assessment. In the light of the growing demand for biomass, sustainable biomass sourcing (responsible sourcing) becomes an increasingly topical issue for energy companies. Environmental impacts of biomass sourcing, lifecycle greenhouse gas emissions, effects on food production and prices, and impacts on local economies are taken into account.

Companies use different sustainability principles when they source their raw materials, including biomass. The criteria are incorporated in their internal CSR policies or in their supplier Codes of Conduct, or refer to international norms such as the UN Global Compact. For example, the agreement on sustainable biomass sourcing signed between the city state of Berlin and **Vattenfall** covers criteria related to GHG balance, biodiversity protection, carbon stock protection, preservation of environmental quality (air, soil, water), and social criteria - for the entire supply chain of wood biomass produced, purchased transported and used as a fuel. The agreement that explicitly formulates social sustainability criteria referring to land rights and labour legislation goes beyond the scope of the Renewable Energy Directive and the recommendations contained in the Commission’s Biomass Sustainability Report EC(2010)11. Criteria covering protection of environmental resources (soil, water and air) are extended to biomass from third countries.

The **Sustainable Biomass Partnership** (SBP), formerly known as the **Initiative Wood Pellets Buyers**, was launched by GDF SUEZ and unites other energy utility companies like E.On, Vattenfall, Drax Plc,

¹ The report can be found at <http://www.bioenergypromotion.net> (Link to website)

and Dong that burn large quantities of wood pellets. The goal is to enable the trading of industrial wood pellets among the partner companies. These companies consider co-combustion of biomass with hard coal in their coal-fired power plants as a quick and effective measure for reducing CO₂ emissions. SBP/IWBP has drawn up its own sustainability principles to facilitate the trading of wood pellets through the design of common product specifications and sustainability principles. The principles consider the main aspects of solid biomass sustainability: GHG balance, carbon stock, biodiversity, soil and air quality protection, protection of water resources and socio-economic issues.

Criteria designed by SBP/IWBP, as well as schemes developed by Vattenfall and E.ON, cover issues like GHG balance, carbon stock and biodiversity, and are closely related to the respective requirements of the Renewable Energy Directive (RED) for biofuels and bioliquids. The minimum GHG reduction targets of IWBP ($\geq 60\%$.) and the Vattenfall agreement ($\geq 50\%$) are more ambitious than those recommended by the European Commission in its Biomass Sustainability Report ($\geq 35\%$), but less ambitious than those proposed by Bioenergy Promotion ($\geq 80\%$).

For several small and medium-scale CHP biomass co-fired plants owned by Vattenfall, Dalkia and EDF as well as for district heating systems owned by JSC "Komunālserviss and TILDe JSC 'Tukuma Siltums' in Latvia, the demand for biomass is covered by regional/local suppliers. Regional/local supplies are based on agreements with local players: forestry companies, farmers, paper manufacturers, sawmills, furniture makers, etc. According to local conditions and corresponding permits, the biomass fuel comprises local forestry resources, waste from the timber and woodworking industry and purpose-grown crops.

Some energy utility companies of varying sizes have their own forest product procurement strategies, so their suppliers know they will only buy products that come from legal sources and from operations that manage forests to high environmental standards. In most cases, their procurement strategies give preference to suppliers who certify their operations under schemes such as FSC, PEFC or SFI. They are accepted as "proof" of "sustainable forest management" for bioenergy.

The report can be found at <http://www.bioenergypromotion.net> .

The results of the assessment were discussed at the workshop "Sustainable bioenergy for the future energy system" organized by the Polish project partners in Brussels during the EU Sustainable Energy Week in June 2013. Its purpose was to create a dialogue with energy utilities, other market actors and the European Commission on sustainability criteria for biomass. A **discussion paper** was prepared in advance, which can also be found on the project website.

The workshop highlighted similarities and differences between the various systems, their advantages and disadvantages taking into account actual policy developments at the EU level, particularly the European Commission's plans to amend the existing sustainability framework for solid and gaseous biomass.

The partners emphasized that Bioenergy Promotion stands out from many other sustainability initiatives by its emphasis on resource and energy-efficient bioenergy production and use. Co-firing of biomass in large coal-fired electricity only plants which can, indeed, achieve high GHG savings, faces much scepticism among BP-2 partners due to the inefficient use of the resource and high loss of surplus heat. On the other hand, efficient utilization of surplus heat in biomass co-generation plants would contribute to the decarbonisation of both the electricity and

heat sector. The consortium considers that co-firing of biomass in conventional power plants will also complicate the transition to a more distributed and flexible energy system.

The consortium also pointed out that the entire lifecycle remains sustainable, and independent verification by third parties should be ensured. However, the partners did not specify any concrete product standard, certification system or traceability/chain of custody system.

Besides the transnational workshop held in Brussels in 2013, the Latvian Environmental Investment Fund organized a **stakeholder workshop** in Riga in December 2012, during which the BP-2 sustainability principles and criteria were discussed and checked for relevance and practicability by local stakeholders. The project team presented sustainable criteria and analysed cases. The invited experts were from a variety of sustainability-related areas, such as economics, environmental protection, social and energy, agricultural and environmental policies give an overview about the situation in these fields regarding bioenergy. Following the discussion entitled "Sustainable Bio-energy: natural capital and the economy", key expert and local stakeholder findings were that BP-2 sustainability principles and criteria must be shared by fields as Biodiversity, Resource efficiency, Energy efficiency, Impacts of climate change, Social aspects and the Economy. Roundtable participants discussed bioenergy sustainability in Latvia and how sustainability criteria can be applied to the situation in Latvia. Customization options for implementation of the listed criteria in Latvia are: compulsory green procurement, requirement for the supplier to prove the origin of bioenergy resources (biodiversity criteria extension) and technical support and guidelines in the preparation of procurement documentation, including sustainability criteria.