

EU biogas and biomethane inventory of regulatory framework



Number of regulatory act	SWD(2014) 259 final
Name of regulatory act	State of play on the sustainability of solid and gaseous biomass used for electricity, heating and cooling in the EU (Commission Staff Working Document)
Link	http://ec.europa.eu/energy/sites/ener/files/2014_biomass_state_of_play_.pdf
Date of Publication	28/07/2014
Date of Implementation	n.a
Purpose	The SWD provides a review of the state of play of the sustainability of solid and gaseous biomass for electricity, heating and cooling production in the EU.
Relevance for the biomethane sector	The SWD is not a legally binding legislative document, nevertheless, it assesses a sustainability of biomass and GHG methodology (mass-balance).
Scope	Sustainability of the EU solid and gaseous biomass used for electricity, heating and cooling up to 2020 and beyond; GHG methodology
Targets	The SWD in its introduction states that solid and gaseous biomass used for electricity, heating and cooling production "is the biggest source of renewable energy in the EU and is expected to make a key contribution to the 20% EU renewable energy target by 2020".
Sustainability Criteria	Part 3 provides a review of national biomass sustainability criteria and its potential impacts on the internal market. It was concluded that "currently a limited number of Member States have adopted broadly consistent sustainability schemes and no apparent internal market barriers have been identified thus far. Therefore, at this stage, it is considered that the risk of market distortion caused by national sustainability regulations can be effectively managed through the existing EU tools on technical standards."
Mass-balance	Box 2 in the context of the GHG methodology explains a mass-balance approach: "The GHG methodology set in the 2010 Biomass Report uses a mass balance approach, whereby physical mixing of certified and non-certified products is permitted but products are kept administratively segregated. The system ensures that for the volume of biomass for which sustainability claims are made at the end of the supply chain, sufficient certified material has been added to the supply chain, taking into account relevant conversion factors. However, a number of stakeholders have highlighted that this approach creates difficulties for the majority of existing biogas plants that typically use a mixture of locally-produced feedstock, ranging from animal manure, to food/feed energy crops (such as silage maize) and to residues from the agro-food industry. They claim that given the operational characteristics of biogas plants, a mass balance approach results in lower GHG saving performances compared to an alternative approach whereby the GHG emission default values are calculated for the entire mixture within a given biogas plant."
Support Systems (subsidies, feed in tariffs, etc)	
Non-discriminatory access to the grid	
Transport sector	
Waste regulation	
Emission Regulation	Part 4.3 is on assessing the lifecycle GHG emission performance of biomass. It was observed that "the GHG performance of biogas and biomethane plants can be improved by using higher shares of waste, animal manure and slurry as feedstock, while improving as much as possible the operational performance and efficiency of the installation itself (e.g. through closed digestate storage or by flaring the methane in the off-gases of upgrading plants). Limiting the use of dedicated annual energy crops in the production of biogas/biomethane can also contribute to avoid direct and indirect negative impacts resulting from high monoculture production in certain areas (e.g. distortive effects on land prices)." The SWD concluded that "given the above analysis, it is considered to be good practice for existing bioenergy installations to achieve GHG savings of at least 70% compared to the fossil fuels comparators. This equates to lifecycle emissions of less than or equal to 86 kg CO ₂ equivalent per MWh of biomass heat generated, to 201 kg CO ₂ equivalent per MWh of biomass electricity, and 78 kg CO ₂ equivalent per MWh of biomethane injected into the grid." Therefore, "while a number of knowledge gaps still exist, the vast majority of the biomass used today in the EU for heat and power are considered to provide significant GHG savings compared to fossil fuels."