

New impulses for bioenergy in Europe through biomethane boom

As of the beginning of 2023, there were almost 500 ongoing biomethane projects in Europe, bringing dynamic both to new and established markets. This is an observation of the study “Biomethane in Europe” by ecoprolog GmbH.

The attack of Russia on Ukraine last year has caused serious disruptions in the European energy markets. The high European import dependency for natural gas was painfully demonstrated. Not only because of gas and energy prices rising to unprecedented peaks, energy independence has quickly gained priority throughout European countries.

Biomethane as a direct, renewable replacement for natural gas has therefore increasingly moved into focus in Europe. As a consequence, the European Commission has proposed the Biomethane Action Plan as part of the RePower EU Package, aiming at an increase in the European biomethane production by more than 10 times until 2030.

As of the beginning of 2023, there are more than 800 biogas upgrading plants operational in Europe. However, the plant asset is very unevenly distributed. The largest asset can be found in Germany and France. Furthermore, the Scandinavian countries stand out compared to their relatively small size, especially Denmark. On the contrary, biomethane does not play a role yet in Eastern European countries.

The future market development for biomethane production will be especially driven by the demand in the heating sector as well as the transport sector. Biomethane can play a vital role in reaching the renewable energy targets in these sectors, which are hard to decarbonise. On the one hand, this leads to the development of new markets, as in Spain, where the potential for biomethane exploitation is just about to unfold. On the other hand, established bioenergy markets like the German one gain new momentum, as market participants aim to benefit from the new marketing opportunities for biomethane in these sectors. This also includes the especially sought after liquefied biomethane, for which the first projects have become operational in Europe in recent years. In this context, classic subsidy schemes like feed-in tariffs lose their importance.

To comply with the sustainability criteria set by the EU, biomethane from waste and residual feedstocks will become the standard for new developments. Biomethane from manure is most demanded especially in the transport sector, where high greenhouse gas saving values can be achieved.

Furthermore, countries with an existing and aging biogas plant asset provide further potential for biomethane production through the repowering of biogas plants. Positive factors for the retrofit of a biogas upgrading installation are for example the size of the plant, feedstock availability or gas grid access. Germany here clearly shows the highest potential with the largest biogas plant asset in Europe, with individual plants continuously dropping out of their subsidy period in the coming years.

After the editorial deadline of this study, almost 500 biomethane projects were ongoing in the assessed countries. This comprises new biogas plant constructions including upgrading

installations as well as the repowering of biogas plants with upgrading installations and/or liquefaction plants.

The study “Biomethane in Europe” by ecoprolog analyses the technologies, market factors, costs and revenues, plant asset, projects and competition in the field of biomethane production in Europe. The study is available at: www.ecoprolog.com.

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