FOR IMMEDIATE RELEASE
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PRESS RELEASE

New paper shows high potential of biogas production from industrial wastewater

- The EBA is launching today a new paper providing a comprehensive analysis of the potential of biogas production from industrial wastewater to reduce methane emissions.
- The paper demonstrates that it is possible to recover around 14 Mtoe (142 TWh) of biogas per year by valorising industrial wastewater.
- Waste streams are an excellent feedstock for sustainable biogas production in line with circular economy principles.

Brussels, 13 April 2021 – The new paper released today by the EBA has mapped the opportunities of producing biogas from industrial wastewaters and quantified the biogas production potential of different EU industry sectors. The results show that biogas has a high potential to mitigate methane emissions from wastewater whilst at the same time providing a huge potential source of renewable energy. This will reduce energy consumption at wastewater treatment installations, provide a solution for the management of sludge and create additional green jobs at local level. The paper includes recommendations to untap the biogas potential from wastewaters.

The findings of this paper show that it is possible to recover around 14 Mtoe (142 TWh) of biogas per year by valorising industrial wastewater from the spirits, biodiesel, pulp and paper, beer, vegetable oils, ethanol, meat, and cheese sectors. However, the large potential of biogas production from industrial wastewater is not yet considered in most studies evaluating the biogas production potential in Europe in 2050 between 87-114 Mtoe (1,008-1,326 TWh). Therefore, this potential can be higher than currently estimated.

The currently applied purification treatment of industrial wastewater has a high GHG footprint. When producing renewable gas from industrial wastewater, GHG emissions are saved in different ways. First, due to the reduced energy consumption in wastewater treatment installations. Second, by the replacement of fossil energy sources. Last, by bringing the wastewater in a closed and controlled environment, preventing methane emissions to be released into the atmosphere.

The traditional treatment of industrial wastewater entails also high shares of energy consumption. Biogas production from wastewater can decrease current electricity consumption for wastewater treatment by 75%, which corresponds to approximatively 3 Mtoe (32TWh) annually at EU level. By implementing anaerobic treatment technologies, it is also possible to decrease the excess sludge production by up to 70-80% in most cases, meaning reduced cost for sludge processing as well.

The production of renewable gas from industrial wastewater can be economically attractive. According to EBA estimates, local jobs attributed to the anaerobic treatment of wastewater can grow from 1,000 direct jobs today towards 20,000 direct jobs spread among 85,000 SME’s when untapping the full potential. The lifetime for wastewater treatment plants is typically 20-25 years, which means that until 2050 each wastewater treatment plant will be refurbished, rebuilt or replaced at least once. This creates opportunities for more sustainable choices in the coming years.

The high potential of biogas production from industrial wastewater must be considered in upcoming EU legislation. In addition, the objectives of the Urban Wastewater Directive and the Methane Strategy must be aligned with the EU clean energy agenda.
According to Vasilis Diamantis (Chair of the EBA working group Wastewater), "AD penetration to European SMEs is expected to boost the environmental technology market, create new job positions and significantly decrease greenhouse gas emissions. Economic incentives are more than necessary combined with environmental legislation and social awareness measures. Technology providers should develop sector specific solutions and ensure economies of scale for decentralized energy production. These are real challenges for the future."

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More details: Download full paper

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About the EBA

The European Biogas Association is the voice of renewable gas in Europe since 2009. EBA advocates the recognition of biomethane and other renewable gases as sustainable, on demand and flexible energy sources that provide multiple knock-on socio-economic and environmental benefits. Supported by its members, EBA is committed to work with European institutions, industry, agricultural partners, NGOs and academia to develop policies which can enable the large-scale deployment of renewable gases and organic fertilisers throughout Europe, supported by transparent, well-established sustainability certification bodies to ensure that sustainability remains at the core of the industry. The association counts today on a well-established network of over 100 national organisations, scientific institutes, and companies from Europe and beyond.