Newsletter IEA Bioenergy Task 37: 12/2023

Biogas policy in Europe

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IEA Bioenergy workshop: Bioenergy in a Net-Zero-Future

This workshop discussed the role of bioenergy in the transition to a carbon neutral energy system. Reaching net-zero emissions globally by 2050 requires an unprecedented transformation in how energy is produced, transported and used. In the IEA Net Zero by 2050 scenario, modern bioenergy use rises to 100 EJ in 2050, meeting almost 20% of total energy supply. In an energy mix dominated by wind and solar, sustainable bioenergy features prominently in flexible energy generation, industry and transport, and is increasingly used in connection with carbon capture and utilization or sequestration (CCUS). In the morning sessions, the focus of the contributions was on policies and strategies to support the role of bioenergy in the energy transition. In the afternoon sessions the flexibility of bioenergy.

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Task 37: Strategies for emission control on biogas upgrading plants

Within the meeting of Task 37 in Switzerland a workshop was held on the emission control of biogas upgrading plants. The upgrading process of biogas to Biomethane results in a main gas stream containing up to 99% biomethane and a second gas stream containing the separated CO2 and an unwanted rest of biomethane, called methane slip. This CO2 rich gas stream is either directly emitted to the atmosphere or its content of methane is oxidized before the release into the atmosphere, according to the applicable regulations. National regulations on the handling of

the methane slip differ substantially in EU countries. France has recently changed the thresholds, in Switzerland new regulations are discussed. The presentations addressed the options for the reduction of the emissions and put the options for emission reduction into a context with GHG balances and national situation in Switzerland and France was considered as well as the use of biogenic CO_2 and promising developments in bioenergy concepts.
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Decarbonizing transport in France: a roadmap for the energy mix

In June, the French government presented its proposed roadmap for decarbonizing the transport sector. Drawn up by industry professionals, it highlights the need for an energy mix with a high proportion of CNG in certain sectors. Unsurprisingly, natural gas has the greatest potential in heavy-duty vehicles with nearly 40% CNG by 2040. According to projections, diesel will have all but disappeared from sales figures by 2040, to be replaced by two major energies: electric power with a 45% market share, and CNG with 39%, although no distinction is made between LNG and CNG. According to the working assumptions, the number of trucks running on CNG will increase from 8,000 vehicles in 2022 to 32,000 in 2025 and 77,000 in 2030, generating energy requirements of 5 and 11 TWh respectively. To combat price volatility, the authors also call for the fuel's competitiveness to be supported by a price subsidy, and for bio-NGV to be included in the TIRUERT from 2024 to encourage the substitution of bio-NGV for CNG in transport. A purchase subsidy is also suggested to offset the extra cost compared with an equivalent diesel model. In the bus sector, electric vehicles are likely to dominate in the long term. While CNG should continue to account for 35% of sales up to 2030, its market share will rapidly decline thereafter as battery-powered electric vehicles gain ground, accounting for 92% of sales by 2040.
More (in French)

EC: Updated sewage sludge directive

The Sewage Sludge Directive (SSD) aims at encouraging the use of sewage sludge in agriculture while preventing negative health and environmental impacts. It sets quality requirements for the sludge and the soil on which it is to be used, by setting upper limits on their content in heavy metals. It also requires sludge treatment before application and consideration of the nutrient needs of the plants. Finally, the directive prohibits the use of sludge on grassland and soil under fruit and vegetable crops (with certain exceptions). The current recast of the Urban Wastewater Treatment Directive however, emphasizes the importance of the recovery of nutrients from sewage sludge for the agricultural sector and highlights the strong potential of AD.
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New proposal of the EC on the accounting of GHG emissions of transport services

Before the summer break, the European Commission presented the Greening Transport Package. As part of the package, the Commission unveiled the proposal on CountEmission EU, which establishes a standardized methodology for calculating emissions from transport services to overcome the barriers that prevent harmonising the measurement of GHG emissions and facilitate its uptake in the transport sector. The proposal's objective is to guarantee that businesses and customers receive accurate and comparable information about their carbon footprint for both passenger and freight services by setting a common regulatory framework for GHG emissions accounting across the entire multimodal transport chain, thus creating a level playing field between modes, segments, and the Union's national networks. In regards to the calculation methodology, the proposal applies the new ISO standard 14083:2023 as this was identified as being the most relevant and proportionate in achieving the proposal's objectives. Under ISO

14083:2023, the quantification of emissions is performed on a well-to-wheel basis, which includes greenhouse gas emissions stemming from energy provision and vehicle use during transport and hub operations. The European Commission decided not to impose a reporting obligation on economic operators to provide their carbon footprint, but rather opted for a voluntary approach to calculating and disclosing GHG emissions.
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The French government relaunched the biomethane sector

For several months now, the industry has been alerting the government to the need to increase the feed-in tariff of biomethane. In July's publication in the Official Journal confirmed that the industry's main demands were heard and accepted by the government: annualization of maximum production capacity, indexation of the coefficient used to calculate the biomethane feed-in tariff and neutralization of the automatic degression of the tariff. These measures have long been supported by the industry representatives who are very satisfied with the government's willingness to listen. These measures are very necessary for the further development of biomethanization in France. The texts will be completed in the coming months with the launch of a new call for tenders and the introduction of biomethane production certificates demonstrating that biomethane is an important vector in the decarbonization of the gas grid. By 2030, the sector could be producing 70 TWh of renewable gas in France (20% of today's consumption).
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Swiss gas industry steps up promotion of renewable gases

The Swiss gas industry has set itself the goal of ensuring gas supply entirely with climate-neutral gases by 2050. To this end, it is promoting the feed-in of renewable gases via the Biogas Fund established in 2011 by means of investment and feed-in contributions over a period of 36 months. To make the feed-in more attractive, the Association of the Swiss Gas Industry VSG is increasing the feed-in contributions by 50 percent from June 1, 2023. They now amount to 3.052 cts/kWh for producers and 0.763 cts/kWh for the network operators concerned. The investment contribution continues to be CHF 2,000 per Nm3/h. The injection of domestic biogas could be increased tenfold in the last years. In 2022 the production and injection of renewable gases in Switzerland were expanded once again. 5 new upgrading units were added, so that 42 plants are now connected to the grid. Together with the biogas imports, the share of renewable gases in the Swiss gas network is already almost 8 percent. However, it could be considerably more, because many project developers still opt not for biogas injection, but for less efficient local electricity production.
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Energy Efficiency Directive, FuelEU Maritime Regulation and AFIR adopted

In July the revised Energy Efficiency Directive, FuelEU Maritime Regulation, Alternative Fuel Infrastructure Regulation (AFIR) were approved, as part of the 'Fit for 55' package of legislation to reduce EU greenhouse gas emissions by at least 55% by 2030. Under the revised legislation, the EU will have to reduce final energy consumption by 11.7% by 2030, compared to 2020. The European Parliament and Member States agreed to almost double the annual energy savings obligation at national level. Regarding maritime greenhouse gas emissions, the new FuelEU Maritime regulation will ensure that the greenhouse gas intensity of fuels used by the shipping sector gradually decreases over time as much as 80% by 2050. Finally, the EU will deploy more recharging and refueling stations for alternative fuels in the coming years enabling the transport sector to significantly reduce its carbon footprint following today's adoption the AFIR. Under this regulation, from 2025 onwards, fast recharging stations for cars, vans and heavy-duty vehicles will need to be installed along the EU's main transport corridors.
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EEX to provide registry and auctioning services for biogas certificates in France

The European Energy Exchange (EEX) has been appointed by the French Ministry of Energy Transition to develop and operate registry and auctioning services for biogas Guarantees of Origin (GOs), as well as registry services for biogas production certificates.
EEX will launch the biogas GO registry in 2023, taking over from the French gas distributor GrDF, the current operator of the scheme. First auctions for biogas GOs are expected to be held at the beginning of 2024. Similar to the French Power GO registry managed by EEX since 2013 and the operation of the corresponding primary auctions, the company will become the issuing body (registry operator) as well as auction operator for the new products. For the registry services, EEX will use the G-REX platform, developed by Grexel, which is the state-of-the-art platform for registries in Europe.

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Pronovo develops the Swiss GoO system for renewable fuels and combustibles

To ensure enforcement of the various instruments within the federal government's energy and climate strategy, a national guarantee of origin system for renewable gaseous and liquid fuels (eTS/eBS) is being developed. The system will go into operation at the beginning of 2025. Pronovo will be responsible for operating the eTS/eBS system and handling the guarantees of origin, when it goes live at the beginning of 2025. Based on its many years of experience in the area of guarantees of origin for electricity, Pronovo was commissioned by the Federal Office for the Environment (FOEN) and the Federal Office of Energy (SFOE) to support the federal government in designing and setting up the system.

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Estonia hopes to continue producing biomethane-powered buses

Unlike many Western European countries, where diesel-fueled buses have been replaced by electric ones, Estonia's bus fleet relies heavily on those running on biomethane. A quarter of the buses used to provide the country's public transport are fueled with biomethane. This is why Estonia, along with seven or eight other EU Member States, is among those requesting that biomethane buses can continue to be produced after 2030. Estonia has made significant investments in biomethane production and the purchase of gas buses, and hopes that the deadline will be postponed in order for there to be a more reasonable payback period on those investments. The plenary meeting of the European Parliament followed Estonia's wish and accepted an amendment to the CO2 emission regulation that for new urban buses the share of zero emissions vehicles shall be 90% as from the reporting period of the year 2030 and 100% as from the reporting period of the year 2035.

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European Commissions Czech plan to support $2.54B biomethane scheme

The European Commission has approved, under EU State aid rules, a €2.4 billion Czech scheme to support the construction and operation of new or converted sustainable biomethane production plants. The measure will contribute to the implementation of Czechia's National Energy and Climate Plan and to the European Green Deal targets, while helping end dependence on Russian fossil fuels in line with the REPowerEU Plan. Czechia notified to the Commission its intention to support the production of sustainable biomethane to be either (i) injected into the natural gas grid or (ii) delivered to a filling station or dispensing unit, for use in applications ranging from transportation to heating. The scheme will run until 31 December 2025 and will support the construction and the operation of new or converted biomethane production plants in Czechia. The measure is expected to benefit mostly small and medium-sized enterprises or renewable energy communities with projects of up to 6 MW installed capacity.

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Renewable energy: Council adopts new rules

In October the European Council adopted the new Renewables Energy Directive (RED III) to raise the share of renewable energy in the EU's overall energy consumption to 42.5% by 2030 with an additional 2.5% indicative top up to allow the target of 45% to be achieved**.** Each member state will contribute to this common target. In transport Member States (MS) will have the possibility to choose between a binding target of a 14.5% reduction in greenhouse gas intensity in transport from the use of renewables by 2030; or a binding share of at least 29% of renewables within the final consumption of energy in the transport sector by 2030. The new rules establish a binding combined sub-target of 5.5% for advanced biofuels (generally derived from non-food-based feedstocks) and renewable fuels of non-biological origin (mostly renewable hydrogen and hydrogen-based synthetic fuels) in the share of renewable energies supplied to the transport sector. Within this target, there is a minimum requirement of 1% of renewable fuels of non-biological origin (RFNBOs) in the share of renewable energies supplied to the transport sector in 2030. The directive strengthens the sustainability criteria for the use of biomass for energy, in order to reduce the risk of unsustainable bioenergy production. Member states will ensure that the cascading principle is applied, with a focus on support schemes and with due regard to national specificities.

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Increase of market premium in Austria for biogas

On October, an agreement was reached in Austria on the adjustment of the subsidy conditions under the Renewable Energies Expansion Act (EAG). The current Market Premium Ordinance will be re-issued by Climate Protection Minister Leonore Gewessler with the approval of three other ministries. A significant change for biogas plants concerns the amount of the "market value to be applied" in cents per kWh for the calculation of the market premium granted on application for biogas-based plants, as set out in article 11. For newly constructed biogas plants with applications submitted in calendar year 2023, the value to be applied will increase from the previous 27.00 cts/kWh to 30.64 cts/kWh. The increase was a response by the ministries to the significant changes on the electricity market and the high price increases in plant and construction costs.

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