

An aerial photograph of a lush green forest. In the center, there is a large, teardrop-shaped pond with clear blue water. The forest is dense with various shades of green, and a light mist or fog is visible on the right side, partially obscuring the trees.

# **THE BIOMETHANE PATHWAY**

**Polish Biomethane Organization**

2023



Polish Biomethane  
Organization

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# Foreword

Dear Reader,

The Polish Biomethane Organisation was established less than a year ago but is growing rapidly, bringing together industry experts and representatives of the leading fuel, energy and heating groups operating in Poland. Our environment is also changing dynamically, and Renewable Energy Sources are playing an increasingly important role. Last year brought new directions clearly indicating the need to accelerate the production and use of biomethane in the European Union. According to the European Commission's REPowerEU targets, Member States are to increase biomethane production to 35 billion cm<sup>3</sup> by 2030. However, no installation producing the zero-emission and environmentally friendly equivalent of natural gas has so far been built in Poland. The neglect is all the greater in view of the fact that the domestic potential for biomethane production is estimated to be around 8 billion cm<sup>3</sup> per annum and that Poland, according to the "GasForClimateReport", ranks among the top five European Union countries in terms of biomethane production capacity. This is our collective opportunity to accelerate the energy transition and reduce our dependence on imported fossil gas through the development of the biomethane market. Meanwhile, the primary barrier preventing the development of the biomethane industry continues to be the lack of adequate regulations to shape the market and support investors in pioneering biomethane projects.

It is therefore important to analyse the current legal conditions that form the basis for the business of producing, feeding into the gas network and selling gaseous fuel in the form of biogas and agricultural biogas, and ultimately biomethane. This report presents a comprehensive diagnosis of the legal state of the biomethane industry and calls for further directions for investors' support and development. The introduction of a legal definition of biomethane and instruments for the operational support of its production, the integration of biomethane facilities into the gas network, the facilitation of the investment and construction process and the use of biomethane in the implementation of the National Indicative Target are the most important areas requiring specific provisions in the proposed laws and regulations.

As the Polish Biomethane Organisation, we are very hopeful and convinced that the current year 2023 will be the next chapter in the history of RES in Poland and the first to start real activity for members of the biomethane industry. This study is a detailed guide to the legal prerequisites for building an entirely new energy and economic field from scratch.

Enjoy the reading



Michał Tarka

**General Director,  
Polish Biomethane Organization**



# Polish Biomethane Organization

Members of the Polish Biomethane Organization:





LEGAL ANALYSIS

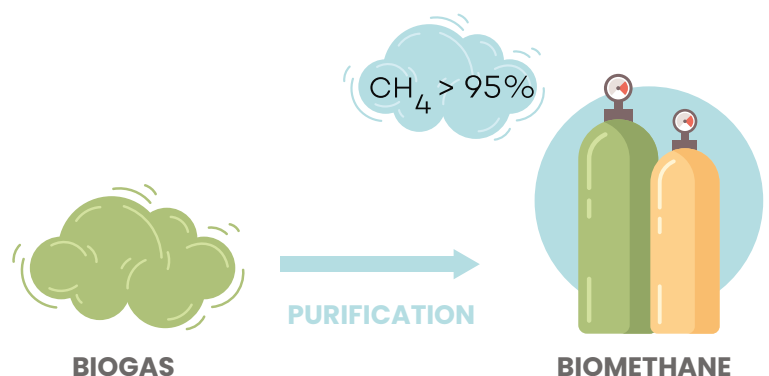
# Introduction



The ongoing transformation of the energy system in the European Union is at a turning point: while the EU targets set for 2020 have been reached to a large extent, the 2030 targets are much more challenging to achieve, not to mention the Deep Decarbonisation Pathways by 2050. Between 2020 and 2030, a drastic reduction in the share of coal in power generation, the start of the decarbonisation process in the transport sector, and steps towards closer integration of energy end-use and supply processes through sectoral integration strategies are to be expected in many Member States. In this respect, natural gas was supposed to play a key role as a storable energy source and therefore as a factor providing freedom of action for players in the energy generation sector. However, the reduction in the supply of this fuel to the European market has resulted in an accelerated transformation in the gas sector aimed at reducing the industry's CO<sub>2</sub> emissions. It currently accounts for around 25% of total CO<sub>2</sub> emissions in the European Union and 20% of emissions in the EU energy sector. A strategic decision seems to have been made - biogas and biomethane obtained through its purification are currently the best solution in this situation, together with measures aimed to reduce methane emissions at the early stages of the supply chain. In the long term, the so-called green hydrogen obtained from renewable energy sources or precisely from renewable gaseous fuels will be used.

In this respect, the link between the energy, transport and agricultural sectors is biomethane, i.e. methane produced during the anaerobic digestion of various biodegradable biomass feedstocks, which is then converted to biomethane parameters using purification technologies. Consequently, a new investment perspective is emerging in many EU countries for the production of biomethane, involving the production of biogas and its subsequent upgrading to natural gas quality parameters and feeding it into the gas network, production of bioCNG or bioLNG.

By using appropriate equipment and purification technologies, it is possible to obtain biogas with the parameters of methane-rich gas type E, i.e. with a methane content exceeding 95% - **such purified biogas is commonly referred to as biomethane.**



The main process of biogas upgrading to natural gas quality biomethane is the separation of CO<sub>2</sub> to achieve high methane purity with its lowest possible losses and low energy consumption. The ultimate goal is to ensure that biomethane becomes a sustainable part of the gas supply and is consistently used in all industries that use gaseous fuels. As a side note to the presented considerations, it can be pointed out that the traditional methods of biogas upgrading can be divided into the following types of processes: membrane separation, scrubbing (absorption methods), pressure swing adsorption and cryogenic

separation. Membrane separation and water scrubbing technologies enjoy some prevalence as preferred upgrading techniques. The use of membranes has increased, making it a leading technology in the market as of 2014/2015. Biomethane is therefore of considerable importance for energy security, efficient decarbonisation of energy systems and transport, local area development and optimisation in the agricultural sector as well as in the context of development and decarbonisation of the chemical industry.

## I. Energy security



in 2018 the EU imported  
**363 billion cubic m<sup>3</sup> of natural gas**  
worth  
**EUR 90 billion**

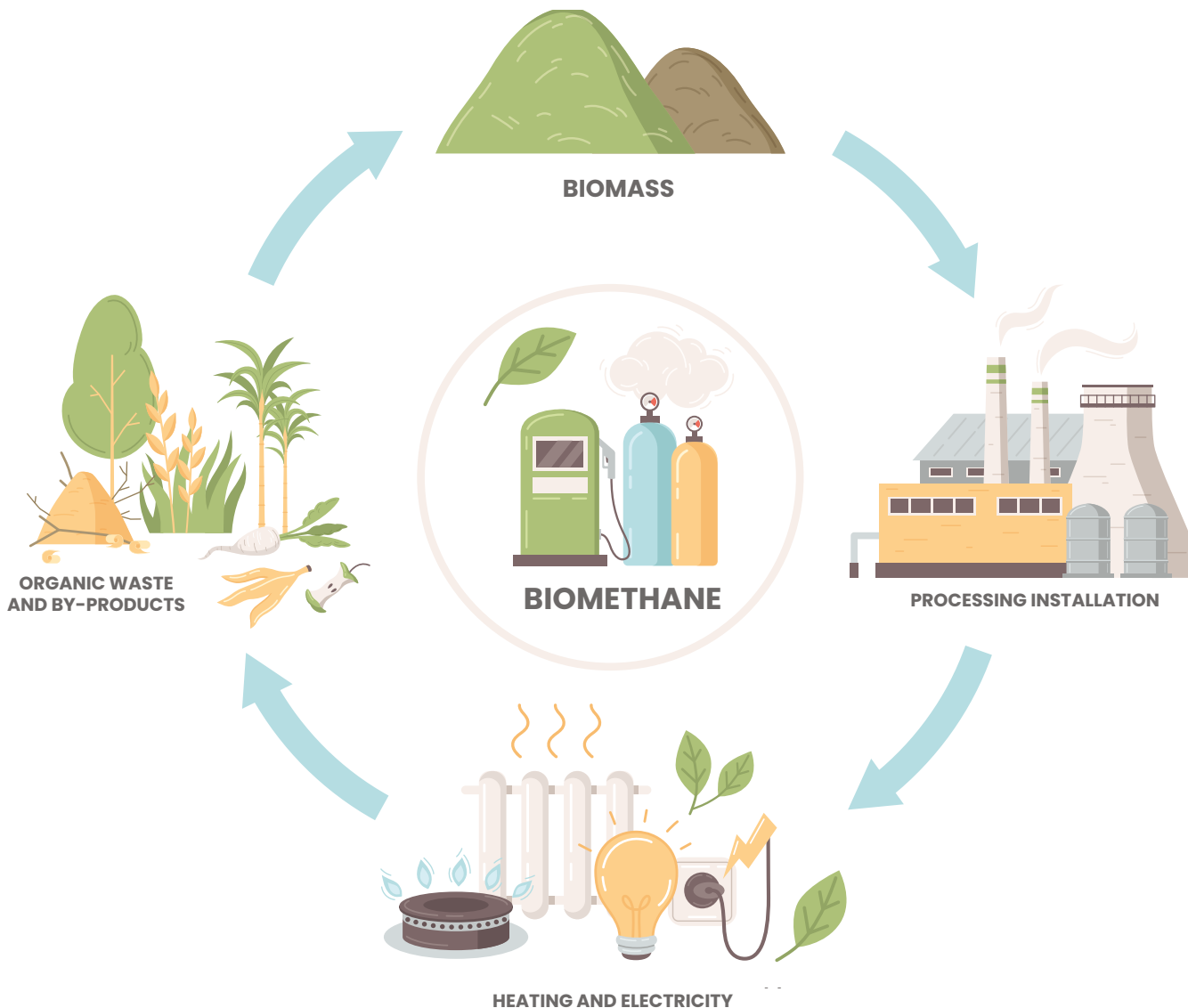
In 2018 the EU imported 363 billion cubic metres (m<sup>3</sup>) of natural gas worth EUR 90 billion, which accounts for over 20% of its total energy imports<sup>2</sup>. **Imports were dominated by Gazprom's supply (40% in 2018), which will have to be replaced for obvious reasons.** It therefore seems indisputable that the key to ensuring energy security lies in making optimal use of the energy resources available in individual EU Member States. In the context under consideration, a renewable energy source (hereinafter referred to as: RES) which can be used for the production of gaseous fuels is biogas upgraded to the parameters of a methane rich gas used in a particular gas network. Biomethane is currently fed into the gas network in the amount of about 3 billion m<sup>3</sup>/year and it may effectively stop the decline in the production of gaseous fuels in individual EU Member States and limit the growth of imports in the discussed period (see *European Biogas Association (EBA), Statistical Report 2022*).

<sup>2</sup> It should be noted that, in terms of value, 70% of the EU's import costs are for crude oil in liquid form. Its largest external supplier is Russia, which satisfies 30% of the EU demand, followed by Norway (13%). Average EU spending on imports has declined from a record monthly average of EUR 38 billion in 2012 to EUR 25 billion in the first half of 2018. See: <https://ec.europa.eu>.



## II. Effective decarbonisation and emissions reduction

**Biogas and biomethane form the core of circular economy.** Indeed, a variety of raw materials are used to produce them (energy crops, agricultural waste or residues, industrial residues, food waste and household waste). The resulting fuel is storable and the residue, in the form of digestate, is rich in nutrients and suitable for use as organic fertilizer, reducing the need for energy and artificial fertilizers, while limiting water and soil pollution



The agricultural sector is responsible for 10% of the EU's greenhouse gas (GHG) emissions<sup>2</sup>. Biogas is one of the most sustainable energy sources for which reductions in greenhouse gas emissions can be achieved, related to the avoidance of methane emissions from, among other

things, agricultural manure through its use as a feedstock. The consumption of nitrogen fertilisers (produced from natural gas) per hectare has also been increasing in the EU in past years, reaching 11.5 million tonnes in 2015.

<sup>2</sup> Greenhouse Gas Emission Statistics - Emission Inventories<sup>2</sup>, Statistics Explained, Eurostat, June 2018, publication available at <https://ec.europa.eu/eurostat/statistics-explained/pdfscache/1180.pdf>

The use of digestate can also contribute to reducing fertiliser imports, which were worth EUR 4.29 billion in 2017, while food imports to the EU are growing<sup>3</sup>. Biomethane is also suitable for use in the transport sector, which accounts for 24% of total GHG emissions in the EU - including in particular in city buses, heavy goods vehicles, as well as maritime and inland waterway shipping. The use of biomethane would reduce CO<sub>2</sub> emissions in the transport sector and reduce pollution, as biomethane has virtually no nitrogen oxide (NOx) emissions. Biomethane would therefore support the objectives of the recently adopted *Clean Mobility Package*. Given that it can also be fed directly into the gas network, biomethane would also enable the optimal use of existing gas infrastructure, in principle reducing the costs of transforming the energy sector.

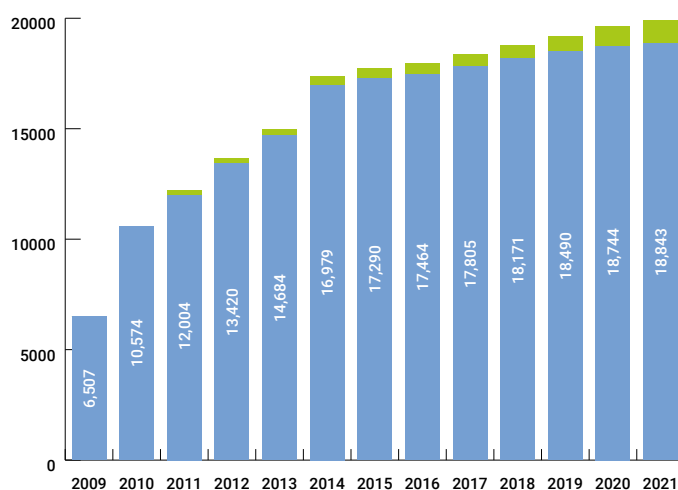
## Rural development

Biogas and biomethane production in rural areas can be a tool for developing new forms of economic activity providing stable employment (on average from 4 to even 10 FTEs in the case of a larger installation), as well as jobs related to construction, waste/residue treatment or substrate supply and digestate collection. Furthermore, obtaining gaseous fuels to meet the energy needs of end users from domestic sources not only reduces the need for imports, but also influences the development of the domestic economy in the gas sector itself and related sectors (technologies, services, energy raw materials) as well as economically activates rural regions and contributes to the increase of stable incomes in agriculture, which provides substrates for biogas production.



While the use of biogas to generate in CHP units has long been the preferred solution in many EU countries (especially in Germany), biomethane-based projects have also been developing dynamically in recent years, especially in Italy, Denmark and Sweden, and more recently also in France, Germany and the UK. According to data by EBA, at the end of 2022 there were 18,843 biogas plants operating in the EU (about half of them in Germany), as well as 1,067 biomethane plants (see: EBA Statistical Report 2022, pp. 30-32).

The number of biogas CHP installations and biomethane installations in Europe for the period 2009-2021 has been presented below.



There is therefore a clear trend indicating the development of biomethane installations in the EU relative to the stabilised growth of biogas CHP installations.

In terms of biomethane, the number of new projects starting production in 2021 increased significantly, with more than 150 new biomethane installations in France

<sup>3</sup> It is worth noting that the EU has an overall trade surplus in chemicals, with exports reaching EUR 330 billion in 2017 against imports of EUR 195 billion in the same period. The EU has recently limited cadmium content in fertilisers to 60 mg/kg and the recently adopted EU fertilising products regulation recognises digestate as a fertilising product and encourages the use of organic materials as fertilisers. This should also facilitate imports of organic fertilisers. See: "Production and international trade in chemicals", Statistics Explained, Eurostat, August 2018, publication available at <https://ec.europa.eu>; "Agri-environmental Indicator - Mineral Fertiliser Consumption", Statistics Explained, Eurostat, June 2017, publication available at <https://ec.europa.eu>

alone, and growth is also noticeable in the Netherlands, the UK, Italy, Denmark and Sweden. In contrast, the total production of gaseous fuels from biomethane reached 37 TWh, which translates into 3.5 billion m<sup>3</sup> of biomethane (see European Biogas Association, EBA Statistical Report 2022, pp. 26-27). Unfortunately, no biomethane plant was operational in Poland in 2022.

However, this situation poses a number of problems and challenges. In the first place, these are the production costs and the associated public subsidy costs, which so far made biomethane about four times more expensive than natural gas. This situation changed dramatically with the rise in natural gas prices, which practically equalled the cost of biomethane production. This is therefore the best time to introduce possible support instruments, the essence of which should now be to maintain this level in the long term, allowing for a return on investment should market prices for natural gas fall.

Another challenge is to accurately assess the availability of resources, to optimize their supply in order to reduce the related costs (the higher the demand, the more complex the logistics), and finally to ensure the continuity of a sufficient supply of raw materials. Particularly important is the need for further development of knowledge and experience with the cultivation of energy crops as catch crops. Further challenges relate to public acceptance of issues such as odour nuisance, landscape integration and risk perception. These factors may not only delay the implementation of a particular investment project, but also cause strong opposition to other projects, even leading to their abandonment.

The above issues are presented in the relevant chapters of this study, divided into issues relating to the perspectives of the EU legislation on biogas use in the gas sector and a detailed analysis of the current legal framework for the biomethane support system in Poland and the surrounding national market conditions.

Therefore, the possibility of using biomethane in the gas sector has become the subject of detailed legal regulations shaping the rules of conducting this type of

economic activity. The issues analysed in this study will concern selected legal instruments which are designed to encourage entrepreneurs to conduct economic activity in the field of biomethane production and, among others, feeding into the gas network or the production of bioLNG/bioCNG, thus supporting energy security in the gas sector. Therefore, a detailed legal analysis is required of both the EU regulations, which provide a general framework for the possibilities of use of biomethane in the gas sector, and the more detailed national solutions shaping biogas production instruments in Polish law. Due to the limited nature of this study, only selected legal instruments will be analysed in detail, which in the opinion of the authors are crucial for the development of the biogas sector. These instruments include, first and foremost, the biogas offtake obligation, which is referred to in more detail in section 4.3 of this study, which guarantees the possibility to use the gas network to supply biogas to customers, as well as correlated instruments of operational support for economic activity consisting in biogas production.

Although these instruments were intended to encourage entrepreneurs to undertake this type of activity, they have not fulfilled their function. In view of the above, chapter III of this study proposes legislative postulates which, in the opinion of the authors, could effectively initiate a biomethane support system in Poland and enable the launch of this sector of the economy.

# 1. BIOMETHANE IN EUROPEAN LAW AND ITS PERSPECTIVES FOR DEVELOPMENT

**The production and use of biogas are of interest to the European Union. The EU refers to biogas (biomethane) both in the strategic documents specifying the objectives of the EU energy and climate policy for the coming years and in the adopted and drafted regulations. The most important provisions of the regulations in force in this respect and the most important assumptions arising from other documents adopted, inter alia, by the European Commission have been presented below.**

## 1.1 Biomethane in EU strategies - perspectives for sector development

### The European Green Deal

The European Union has repeatedly communicated that it intends to support the development of the biogas sector in the coming years. One of the most important documents in the recent time in which such declarations have been made is the so-called European Green Deal (Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, The European Green Deal, COM/2019/640 final).

The European Green Deal is a new strategy for the economic development of the European Union assuming a thorough reconstruction of the EU economy in order to achieve climate neutrality by 2050. It is a response to the climate crisis and environmental degradation. The European Green Deal is a set of initiatives, strategies and plans which will reduce Europe's greenhouse gas emissions to "net zero" by 2050 at the latest.

It assumes that within 30 years, Member States, including Poland, will switch to a low-emission economy, not using (or using only to a very limited extent) non-renewable natural resources. This will be achieved through the so-called fair energy transition. It is assumed that

biogas (biomethane) will be one of the elements playing an important role in this reconstruction.

### EU strategy to reduce methane emissions

One of the most important strategies of the European Green Deal is the EU Strategy to reduce methane emissions (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on an EU strategy to reduce methane emissions, COM/2020/663 final), referring to biogas, among other things. The European Commission plans to take action to reduce methane emissions, which will help slow down climate change as well as improve air quality.

The largest source of methane emissions is agriculture (40%-53%). The Commission accepts that there are potential synergies and trade-offs in this sector to reduce the cost of methane abatement through, inter alia, biogas production. As the Commission explains, "biogas from agricultural waste or residues can also cost-effectively mitigate methane emissions in the agriculture and the waste sectors. (...) The collection and use of high methane emitting organic wastes or residues from farming as biogas substrates should be further incentivised."

Importantly, the Commission has pledged to set up a pilot project to help rural areas and farming communities build biogas projects and access funds to produce biogas from agricultural waste. The Strategy also signals legislative changes to the gas market to facilitate the uptake of renewable gases, including by considering issues such as the connection to the infrastructure and market access for distributed and locally-connected production of renewable gases. The Commission has also accepted that the upcoming revision of RED II in 2022, will present opportunities for further targeted support to accelerate the development of the market for biogas.

### EU strategy for energy system integration

Another pillar of the European Green Deal which addresses the issue of biogas is the EU Strategy for Energy System Integration (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Powering a climate-neutral economy: An EU Strategy for Energy System Integration, COM/2020/299 final). The Commission explained in this material that one way to achieve sectoral integration is through the use of biogas.

The Strategy points out that "While direct electrification and renewable heat present the most cost-effective and energy-efficient decarbonisation options in many cases, there are a number of end-use applications where they might not be feasible or have higher costs. In such cases, a number of renewable or low-carbon fuels could be used, such as sustainable biogas, biomethane and biofuels, renewable and low-carbon hydrogen or synthetic fuels. These cases include a number of industrial processes, but also transport modes such as sea and air freight, where sustainable alternative fuels such as advanced liquid biofuels and synthetic fuels will have an essential role to play." The Commission stated in its Communication that today, biofuels, biogas and biomethane account for only 3.5% of all gases and fuels consumption and are largely based on food and feed crops. There is therefore considerable area for development in the transport sector using, among others, biogas and biomethane.

The Commission acknowledged that although the deployment of biofuels and biogases has so far been hampered



by regulatory uncertainty, the revised RED II has taken a first step to address these issues by introducing a target of 3.5% for the consumption of advanced biofuels and biogas in transport. The Communication also declares that, in the future, EU regulations will introduce comprehensive terminology for renewable and decarbonised gases such as, among others, biogas, biomethane and other advanced biofuels. The Commission has also accepted that it will consider additional support measures in favour of, inter alia, biogas and biomethane (and other renewable and low carbon fuels).

### New EU Circular Economy Action Plan

Another pillar of the European Green Deal is the new EU Circular Economy Action Plan ((Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions A new Circular Economy Action Plan for a cleaner and more competitive Europe COM/2020/98 final).

The plan envisages initiatives to restore resources to the economy, addressing the entire life cycle of products, from design and production to use, repair, reuse and recycling.

Although the Commission did not address this issue explicitly in the above-mentioned plan - there is no doubt that the production and use of biogas (biomethane), in connection with the use of, inter alia, agricultural waste, is one of the elements of the chain in a circular economy. As part of this chain, the biomethane created in this way can be used to produce electricity, among other things. In this context, it is worth underlining that the Commission has declared that support is planned for circular economy projects.

As it can be seen from the information presented above, a number of changes in EU regulations concerning biogas/biomethane can be expected in the near future. According to generally available information, the European Commission is working on legislative projects concerning, among others, amendments to RED II and amendments to the ETD Directive (Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity, Official Journal of the EU L 283 of 31 October 2003, pp. 51-70, as amended).

As far as RED II is concerned, modifications will be introduced most probably in accordance with the directions of changes in strategies and plans presented above (first of all, in the European Green Deal), presented by the European Commission in recent months. On the other hand, as far as the provisions on taxation of energy products and electricity are concerned, one may expect differentiation of excise duty rates according to the environmental friendliness of fuel and electricity use and the energy value of the product. In such an arrangement, liquid biofuels such as bioLNG and bioCNG would likely be taxed more favourably than fossil fuels. Disadvantageous treatment of biofuels is also to be eliminated (currently taxation of biofuels in terms of EUR/GJ is disproportionately high).

## Recovery Plan for Europe

The COVID-19 crisis poses a new economic challenge for Europe, including in the energy sector. Faced with a phenomenon unprecedented in its history, the European Union and its individual Member States had to adopt emergency measures to protect the health of its citizens and prevent an economic collapse. EU authorities and national governments were forced to take new measures to mitigate the socio-economic impact. It is worth stressing here that in the initial phase of the COVID-19 pandemic, the burden of helping businesses affected by the economic restrictions fell on the shoulders of the Member States, but the scale of the impact of COVID-19

affecting the integrity of the European Union and the proper functioning of the internal market led EU authorities to take the initiative to take extensive measures to combat the effects of COVID-19.

For these reasons, on 27 May 2020 the European Commission proposed a temporary recovery tool, the EUR 750 billion NextGenerationEU Recovery Plan, as well as an increase in the long-term EU budget for 2021-2027 allocated for specific purposes<sup>4</sup>. The proposed package of measures towards the economy was endorsed by EU Heads of States and Governments, who reached political agreement on the package proposed by the European Commission on 21 July 2020<sup>5</sup>. In line with the consensus reached by Member States, the Recovery Plan will be linked to the Multiannual Financial Framework (MFF) because, as the conclusions point out, recovery effort is needed as a quick and effective answer to a temporary challenge, but this will only yield the desired result and be sustainable if it is linked to and in harmony with the traditional MFF<sup>6</sup>.

The foundation of the Recovery Plan is the premise that the plan for European recovery will need massive public and private investment at European level to set the Union firmly on the path to a sustainable and resilient recovery, creating jobs and repairing the immediate damage caused by the COVID-19 pandemic whilst supporting the Union's green and digital priorities<sup>7</sup>. This challenge makes it clear that the pillar of the EU's economic recovery will be the private sector players who will be able to demonstrate their entrepreneurial spirit in projects of public interest. One of the areas of implementation of these projects are the "Union's green priorities", i.e. the transition to green energy sources in particular Member States of the European Union.

The Recovery Plan is important for investment in the energy sector, including the biogas market. Although the instrument in question does not refer directly to biogas in the Council conclusions, it does place a clear emphasis

4 Communication from the Commission Europe's moment: Repair and Prepare for the Next Generation (SWD (2020) 98 final), Brussels, 27 May 2020. COM(2020) 456 final.

5 Conclusions of the Special Meeting of the European Council (17, 18, 19, 20 and 21 July 2020) (Note), Brussels, 21 July 2020 (OR. en) EUCO 10/20 (hereinafter referred to as: Conclusions 2020)

6 Conclusions 2020, p. 1

7 Conclusions 2020, p. 3

on green energy. The instrument is intended to provide additional support for the transformation of the European Union into a clean, energy efficient, low carbon and climate resilient society based on circular economy<sup>8</sup>. Instead, energy infrastructure is seen as a “Connecting Europe” facility, allowing for the free movement of people, goods, capital and services<sup>9</sup>. The Recovery Plan also identifies ‘green’ objectives for the attainment of which at least 30% of the allocated resources are used<sup>10</sup>.

The most important elements of the instrument are the allocation of 50% of the resources for modernization, among other things, through: scientific research and innovation through “Horizon Europe” instrument, fair climate and digital transformation through the Just Transition Fund and “Digital Europe” programme, preparedness, recovery and resilience to crises funded through the instruments in this assistance programme.

The Recovery Plan resources are divided between headings such as Single Market, Innovation and Digital (EUR 10.6 billion); Cohesion, Resilience and Values (EUR 721.9 billion); Natural Resources and Environment (EUR 17.5 billion). Resources from the Recovery Plan have been allocated to the various components which form the instrument. Components of the plan include:

**Recovery and Resilience Facility:** the most important component of the Recovery Plan, with a budget of EUR 672.5 billion in loans (EUR 360 billion) and grants (EUR 312.5 billion) to support reforms and investments by EU countries. The facility was adopted on the basis of the Regulation of the European Parliament and of the Council (EU) 2021/241 of 12 February 2021 establishing the Recovery and Resilience Facility . It aims to mitigate the economic and social impact of the COVID-19 pandemic and ensure that Europe’s economy and society are more sustainable, resilient and better prepared for the challenges and opportunities of green and digital transition. Member States shall prepare national recovery and resilience plans to access funding under this facility. EU member states were obliged to submit plans with

coherent packages of projects, reforms and investments in six policy areas by 30 April 2021:



**Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU):** The Recovery Plan also includes EUR 47.5 billion for the new REACT-EU initiative. It continues and extends the crisis response and crisis repair measures delivered through the Coronavirus Response Investment Initiative and the Coronavirus Response Investment Initiative Plus. This tool will help to ecologically and digitally rebuild the economy and make it more resilient

**Just Energy Transition Fund:** The Recovery Plan will provide EUR 10 billion to the Just Transition Fund to address the social and economic impacts of the EU’s drive to become climate neutral by 2050. The main objective of this Fund is the economic diversification of the territories most affected by climate change, where retraining and active integration of workers and job seekers will be necessary. Funding under the instrument will cover energy and transport infrastructure projects, including gas infrastructure and heating systems, as well as decarbonisation projects (<https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX:52020PC0022>).

<sup>8</sup> Conclusions 2020, p. 48 (point 99).  
<sup>9</sup> Conclusions 2020, p. 20 (point 31).  
<sup>10</sup> E.g. point 72(a) of Conclusions 2020.

The Recovery Plan will also provide additional resources to other European programmes or funds, such as:

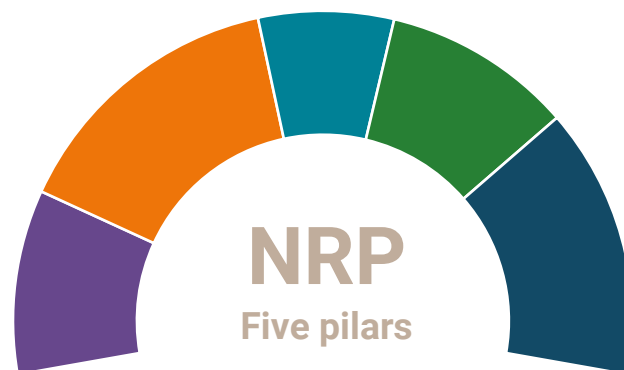
- „Horizon 2020” (EUR 5 billion);
- InvestEU (EUR 5.6 billion);
- Rural development programmes (EUR 7.5 billion);
- RescEU (1EUR 1.9 billion).



One of the biggest beneficiaries of the programme is Poland, which will receive EUR 23 billion in grants and EUR 34 billion in loans by the end of 2023. The time to use the granted funds is the end of 2026 at the latest. The implementation of EU obligations concerning the Recovery Plan is the adoption by Poland of the National Recovery and Resilience Plan.

The National Recovery and Resilience Plan (hereafter referred to as: the NRP or the Plan) is an expression of planning activity of the Member State and the European Union itself, which plays an important role in the proper functioning of the economy, regardless of the prevailing political and economic regime, and at the same time plays a law-making role in shaping individual sectors of the economy, including in particular the energy sector. In a modern and economically developing country, planning can be considered an indispensable element of shaping the socio-economic order, without violating the principle of freedom of economic activity based on private property. The task of economic planning under market economy conditions is to influence economic processes and, in particular, to orient the conduct of entrepreneurs in the public interest (e.g. combating the effects of COVID-19) expressed in the economic policy of the state, to determine priorities and to support economic initiatives. However, economic planning must not be the shaping of the economy against the rules of the market coordinated by competition mechanisms but should be their use in the public interest.

Money under the NRP will be invested under five pillars:



Resilience and competitiveness of the economy

- PLN 18.671 billion (17,3%)

Green energy and reduction of energy intensity

- PLN 28.673 billion (26,6%)

Digital transformation

- PLN 13.706 billion (12,7%)

Effectiveness, accessibility and quality of healthcare

- PLN 19.254 billion (17,9%)

Green and intelligent mobility

- PLN 27.439 billion (25,5%)

The Plan, as any act of this type, contains a diagnostic and programming part and a number of general statements that need to be clarified in the specifically adopted normative acts. However, the NRP contains a number of direct references to the energy sectors and biogas.

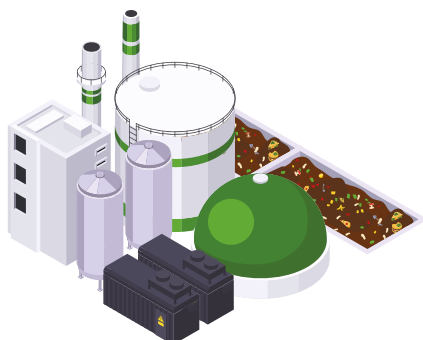
The NRP states that *the core of the green transition of the economy is the energy transformation described in the National Energy and Climate Plan for the years 2021-2030 and the Polish Energy Policy until 2040. It will be based on three pillars: the so-called 'just transition', building a zero-emission energy system and promoting good air quality* (NRP, p. 177).

From the point of view of biogas market development, the most important pillar of the NRP is Pillar I, which includes such reforms as clean air and energy efficiency, improved conditions for the development of hydrogen technologies and **other decarbonised gases**, improved conditions for the development of renewable energy sources, support for sustainable water and sewage management in rural areas,



increased use of environmentally friendly transport. Over the past several years, Poland has made very significant progress in reducing the negative environmental impact of the energy sector, in particular through modernisation of generation capacities and diversification of the energy generation structure. However, dependence on carbon fuels is still much higher than in other EU Member States. As Poland's energy balance is based on fossil fuels, the transformation of the economy to **a low-carbon model** will require major efforts on the part of citizens, economic sectors and regions whose functioning is to a large extent connected with the use of high-carbon fuels (str. 175 KPO).

With respect to biogas, the NRP clearly states that the **challenge is also to take advantage of the enormous potential Poland has for biogas - which can be generated from waste and residues from the agricultural, food and municipal sectors in particular - estimated at nearly 7.8 billion m<sup>3</sup> of biogas.**



**7,8 billion m<sup>3</sup>**  
**Poland's biogas potential**

According to the data presented in the NRP, production of biomethane in the 2030 perspective should amount to 1 billion m<sup>3</sup>/year, which, for instance, translates into the construction of about 500 installations with a biomethane production volume of 2 million m<sup>3</sup>. Additional demand will also come from other sectors, including industry and heating, following the launch of the process of 'greening' the gas networks. The introduction of legal changes allowing for the development of the biogas market will be preceded by an analysis of the potential and demand for biomethane from different sectors of the economy.

The NRP assumes the implementation of provisions which will allow for the development of the biogas market, including decentralised solutions. Biogas is treated as a new source of renewable energy with great potential in Poland, allowing for increased use of alternative energy sources as well as generating new revenues for public and private sector entities.

It is necessary to emphasize such legal solutions announced in the NRP as:

preparation of an amendment to the Act of 20 February 2015 on renewable energy sources containing a definition of the rules for conducting business activities in the field of biomethane production (regulation of the activity of biomethane producers) - the so-called biomethane package;

preparation of an amendment to the Act of 20 February 2015 on renewable energy sources containing a definition of the rules for conducting business activities in terms of defining support schemes for this type of production (support schemes under the FIP system, i.e. covering the negative balance);

preparation of legislative solutions enabling production of biomethane and its feeding into the gas network and use in transport;

preparation of legislative solutions to introduce a system of guarantees of origin for biomethane fed into the gas transmission and distribution network to promote the use of biomethane and to encourage the end user to purchase it in order to demonstrate that a particular quantity of gas was produced from renewable sources;

implementation into the Polish legal system of the obligation to increase the share of renewable energy sources in heating and cooling at the rate of 1.1% / year-on-year for the period 2021-2030;

notification of an assistance programme for the biomethane sector to the European Commission .

Its assumptions show that over the next few years, Poland should invest in technologies and projects allowing for the transition to a low-carbon economy that does not use

(or uses to a very limited extent) non-renewable natural resources. This will be achieved by using the Polish economy's potential in biogas

## 1.2 Current European legislation on biomethane

In the current legal status, the European legislator regulates quite intensively both the natural gas market and the support system for renewable energy sources. In this respect, one of the renewable energy sources, defined in Article 2(1) of RED II is biogas, i.e. gas originating from waste dumps, sewage treatment plants, and from biological sources. Biogas, *expressis verbis*, is also defined as gaseous fuel produced from biomass, so its application should also be reflected in the regulations concerning the gas sector (Article 2(28) of RED II).

Consequently, regulations concerning biogas are also included in Directive 2009/73/EC, which contains systemic conditions concerning the rules for the functioning of the gas sector in the EU. In this respect, it is pointed out that the competitive regime introduced by this Directive does not only apply to natural gas and LNG but also applies to biogas and other biogas derived from biomass in a non-discriminatory manner as long as its feeding into and transport through the gas system is technically feasible and complies with safety standards. Therefore, the only condition for the application of these competitive solutions to biogas, even if only in terms of access to gas infrastructure, is the need to guarantee safety and appropriate technical conditions for feeding biogas into the gas network. Moreover, in Recital 41 of the Preamble to Directive 2009/73/EC, the European legislator pointed out that non-discriminatory access to the gas system for biogas should take into account the chemical characteristics of those gases. In connection with the above, it should be pointed out that Directive 2009/73/EC, in principle, ensures access of biogas installations to the gas technical infrastructure, although it enables Member States to limit this access depending on the technical and chemical (quality) parameters of the biogas produced. Recital 26, on the other hand, indicates that Member States should take concrete measures to assist the wider use of biogas and gas from biomass, the producers of which should

be granted non-discriminatory access to the gas system under the conditions mentioned above.

The necessity of using a number of legal instruments in the scope of supporting the integration of renewable energy sources with the relevant power networks is also indicated by RED I and RED II. While RED I regulations, in its majority, concerned the instruments addressed to RES installations using biogas for electric energy production, RED II regulations put more emphasis on feeding biogas into gas networks, and then using it as stable and storable RES fuel for heating and transportation purposes, including directly as bioLNG or bioCNG, or as biocomponent for production of traditional transportation fuels of the second generation.

Regarding access to the gas network, Member States shall assess the need to extend existing gas network infrastructure to facilitate the integration of gas from renewable sources. Member States can also impose on gas transmission and distribution system operators within their territory the obligation to publish technical regulations concerning the rules of connecting to the network which include the requirements concerning gas quality, odorization and pressure, as well as the obligation to publish connection tariffs for connecting gas from renewable sources based on objective, transparent and non-discriminatory criteria (Article 20 of RED II). These rules stipulate that the costs of transporting biomethane through the gas network should not be artificially high, thus preventing access to the gas network. Moreover, it was indicated that the costs of connecting new producers of gas from renewable energy sources to the gas network should be objective, transparent and non-discriminatory. In addition, due account should be taken of the benefits to the gas network of connecting new and local gas producers from renewable energy sources. Therefore, EU Member States should not charge biomethane producers

for all the costs associated with connecting their installations to the gas network.

It should therefore be pointed out that in the current state of law, EU regulations unequivocally indicate the need to integrate the gas network with RES installations producing biomethane, although they do not formulate uniform quality standards in this respect, leaving this issue to individual Member States. The above means that the quality and physicochemical parameters enabling injection of biomethane into the gas network may be at different levels in individual Member States (J. Holewa, E. Kukulska-Zajac, M. Pegielska, *Analiza możliwości wprowadzenia biogazu do sieci przesyłowej*, Nafta-Gaz 8/2012, s. 524).

A significant impetus to the development of the biogas industry has also been provided by legal solutions making it obligatory to use gaseous fuels from biomass. First of all, it should be pointed out that the European legislator, by introducing the regulations contained in Articles 25-31 of RED II, aims at increasing the role of renewable energy in the transportation sector. In this respect, in Article 25 of RED II, an obligation was introduced for the fuel suppliers to ensure that the share of renewable energy within the final consumption of energy in the transport sector is at least 14 % by 2030 - the so-called minimum share, out of which the contribution of advanced biofuels and biogas produced from feedstock listed in Annex IX part A to RED II as the share in the final energy consumption in the transportation sector is to be at least 0.2% in 2022, at least 1% in 2025, and at least 3.5% in 2030. It is about using advanced biofuels and biocomponents of the second generation in the transport sector, which originate from the use of various kinds of biodegradable waste, such as in particular biowaste, waste of animal origin, sewage sludge, fraction of industrial biomass waste unsuitable for use in human and animal food chain, including material from agri-food industry, fishery and aquaculture.

What is more, according to Article 27(2)(a) of RED II, the share of biofuels and biogas for transport produced from the feedstock listed in Annex IX part A may be considered to be twice its energy content. In the context of these regulations, biogas fed into the gas network gains strategic

importance for the fuel sector because it may be used directly as gaseous transport fuel in the form of bioCNG or bioLNG, but it may also constitute an advanced bio-component of waste origin added to liquid fuels which are the product of processing biomass (biogas) and fossil fuels (crude oil) in a common process.

In this respect, it is worth noticing Article 28(4) of RED II, which states that by 31 December 2021, the Commission shall adopt delegated acts in accordance with Article 35 to supplement this Directive by specifying the methodology to determine the share of biofuel, and biogas for transport, resulting from biomass being processed with fossil fuels in a common process (...)

Similar regulations which are the stimulus for the development of the biogas industry were also introduced by the European legislator for the heating sector. According to Article 23(1) of RED II, in order to promote the use of renewable energy in the heating and cooling sector, each Member State shall endeavour to increase the share of renewable energy in that sector by an indicative 1.3 percentage points as an annual average calculated for the periods 2021 to 2025 and 2026 to 2030. The baseline is the share of renewable energy in the heating and cooling sector in 2020 and resulting from the national energy action plans of individual Member States. For Member States where waste heat and waste cooling are not used, the indicated systematic increase in the use of renewable energy for heating and cooling can be limited to 1.1 percentage point. One of the natural directions of transformation of heating systems based on natural gas may be its gradual replacement with renewable gaseous fuels in form of biogas (biomethane) in order to increase the share of renewable energy in heating and cooling systems.

Regardless of the legal instruments supporting the integration of RES installations with the gas network, as well as the issues connected with increasing the use of biogas in transport and heating, the key norms from the point of view of these considerations are contained in Article 4(1) of RED II. There, the European legislator indicated that in order to meet or exceed the EU target of 32% share of RES,

to be achieved at national level through the contribution of each Member State to its implementation, Member States may apply support schemes for the deployment of renewable energy. Consequently, the European legislator allows for the possibility to create at the national level an appropriate support system encouraging entrepreneurs to supply particular types of energy from RES to the market, including in particular instruments of operational support for biogas production activity.

Operational support is a form of financial support for the current activity of RES energy generators, i.e. it consists in creation of various types of additional revenues connected with generation of a particular type of energy from RES. In principle, this type of state support covers the difference between the cost of producing energy from RES and the market price of a given type of energy set by the cheapest energy sources in the form of fossil fuels. What is important, the indicated competences of Member States with regard to creating instruments of support for RES in the gas sector are not subject to limitations concerning legal forms of shaping those instruments of support, included in Article 4(2)-(8) of RED II - as it is in relation to instruments of support for electricity generation. However, they apply without prejudice to Articles 107 and 108 TFEU, which means that they must comply with the rules on permitted state aid in the EU.

The possibility of legal application of support instruments is subject to detailed supervision by the European Commission, through the application of the so-called block exemptions contained in Regulation 651/2014 - commonly referred to as GBER - General Block Exemption Regulation - or by way of the Commission's assessment of an individual notification of a Member State's intention to grant support (the so-called notification), the detailed procedure of which is standardised in Council Regulation (EU) no. 2015/1589 of 13 July 2015 laying down detailed rules for the application of Article 108 of the Treaty on the Functioning of the European Union (Official Journal of the EU L 249, 24 September 2015, p. 9). In this respect it should be pointed out that while Regulation 651/2014 does not contain detailed norms regarding the possibility of creating appropriate instruments for operational support of biogas (biomethane) production, the relevant

legal norms can be found in points 77– 134 of CEEAG. This means that individual Member States should use the individual notification procedure when creating appropriate instruments for operational support of production of biogas fed into the gas network.

The CEEAG guidelines set out how to assess the compatibility of environmental (climate protection, and energy-related) support instruments subject to notification under Article 107(3)(c) of the Treaty on the Functioning of the European Union. The European Commission identifies fourteen main categories covered by this communication, among which is aid for the reduction and removal of greenhouse gas emissions, in particular through support for renewable sources (point 16).

Guidelines for setting up support instruments are included in section 4.1 of the communication. In justifying state aid in this respect, the Commission pointed out that Member State support may be necessary to achieve the ambitious EU climate policy objectives set out, inter alia, in Regulation 2018/1999 on the governance of the energy union and climate action and Directive 2012/27/EU on energy efficiency.

Of key importance from the perspective of the issue at hand is the proviso in point 80, according to which support for biofuels, bioliquids, biogas (including biomethane) and biomass fuels can only be approved by the Commission in the notification process to the extent that the fuels to be supported comply with the sustainability criteria and greenhouse gas emission reductions contained in Directive 2018/2001 (RED II) and the secondary legislation and delegated documents. In addition, it should be stressed that aid for the production of energy from waste can only be considered compatible with the guidelines set out in the communication to the extent that it concerns waste falling within the definition of renewable energy sources (point 81). The communication does not contain an explicit definition of RES, but refers to RED II, according to which energy from renewable sources means *wind energy, solar energy (solar, thermal and photovoltaic energy) and geothermal energy, ambient energy, tidal, wave and other ocean energy, hydropower, biomass and gas from landfills, sewage treatment plants and biological sources (biogas)* (Article 2(1)).

In principle, support for measures to reduce and remove greenhouse gas emissions and for energy efficiency (section 4.1.2.2) covers all technologies that contribute to the reduction of greenhouse gas emissions. This also includes, inter alia, support for the reduction or avoidance of emissions from industrial processes, including the processing of raw materials, support for the production of low-carbon energy or synthetic fuels produced using low-carbon energy, and support for energy storage (point 83). It is worth adding that, under this section, aid for the production of energy from waste is permissible as long as it concerns waste used to fuel installations falling within the definition of high-efficiency cogeneration (point 86).

An important part of the guidelines are the principles on minimising distortions of competition and trade, which are divided into five main parts covering necessity of aid, adequacy, eligibility, public consultation and proportionality. In the section on necessity of aid, the Commission indicates that Member States should demonstrate the need for the support envisaged by reference to the criteria set out in point 38, according to which it should be demonstrated that the project would not have been carried out in the absence of aid, taking into account the counterfactual situation and the related costs and revenues, having regard to what is currently in place (point 90). The assessment by the Commission will take place either on the basis of quantification (described in section 3.2.1.3), or on the basis of an analysis provided by the Member State. In this regard, it is also important to point out the obligation to update the cost and revenue analysis every three years (point 92)

An important element of the Guidelines are measures relating to the eligibility of the aid granted. In the Commission's view, tools targeted at specific activities competing with non-subsidised activities will adversely affect the level of distortion of competition, when compared with tools open to all competing activities. Consequently, support mechanisms that do not cover all competing technologies and projects with the technical potential to reduce GHG emissions should be justified by the Member State based on objective grounds (i.e. relating to, inter alia, efficiency or cost). The Commission enumerates cases where, after assessing the justification, it considers that

a restriction of eligibility does not imply undue distortion of competition. According to point 96, an undue distortion of competition does not occur if:

- a measure targets a specific sectoral or technological objective established by EU law;
- a measure aims specifically to support demonstration projects;
- a measure aims to address not only decarbonisation but also air quality;
- a Member State identifies reasons to expect that eligible sectors or innovative technologies have the potential to make an important and cost-effective contribution to environmental protection and deep decarbonisation in the longer term;
- a measure is required to avoid exacerbating issues related to network stability;
- a more selective approach can be expected to lead to lower costs of achieving environmental protection or less distortion of competition;
- a project has been selected following an open call to form part of a large integrated cross-border project, jointly designed by several Member States and which aims to have an important contribution to environmental protection in the Union's common interest, and either it applies an innovative technology, which follows on from a research and development and innovation (R&D&I) activity conducted by the beneficiary or by another entity as long as the former acquires the rights to use the results of the previous R&D&I activity, or it is amongst the early adopters of an innovative technology in its sector.

The Commission's guidance also introduces regulations for public consultation, which will apply from 1 July 2023. The obligation of public consultation will in principle apply to all aid measures for the reduction and removal of greenhouse gas emissions, including through support for renewable energy and energy efficiency, unless there are exceptional, justified circumstances. The guidelines distinguish between requirements for the manner of public consultation depending on the amount of support to be granted. Support with an estimated annual value of

at least EUR 150 million should be preceded by a public consultation of at least six weeks, while the duration of the consultation for support with an estimated value below the above amount has been limited to at least three weeks. In this regard, it should be pointed out that public consultations preceding the granting of public aid of at least EUR 150 million should also meet a wider range of criteria than aid of a lower amount (point 99). Measures with an estimated value of less than EUR 150 million per year are exempt from this obligation if competitive tendering procedures are used and the measure does not support investment in production, including energy, or other fossil fuel-based activities (point 100).

Turning to the specific forms of granting state aid, it should be pointed out that the Commission's preferred method of granting support is through a tendering procedure, in line with the competition principles outlined in the document (point 103). Access to the mechanism in the form of a tendering process should in principle be open to all eligible beneficiaries. However, the Commission identifies two cases where the tendering procedure may be limited to one or more categories of beneficiaries. A limitation is possible where a single procedure open to all eligible beneficiaries would lead to suboptimal results or would not achieve the objectives of the measure, including where there is a significant disparity between the amounts to be bid by different categories of beneficiaries (104).

It should be emphasised that the guidelines presented by the Commission contain exceptions to the requirement to allocate aid and to determine the level of aid through a competitive tendering procedure. A deviation from the above requirements may be justified if the Member State provides evidence that one of the three situations identified in the communication applies. The first case involves a situation where there is insufficient potential supply or number of potential bidders to ensure competition, in which case the Member State must demonstrate that it is not possible to increase competition by reducing the budget or facilitating participation in the tendering procedure. The exception allowing for a waiver of the tendering procedure also applies when the beneficiaries of the aid granted are so-called small projects as defined in the communication (inter alia, in the case of

heat generation and gas production technologies, projects with an installed or equivalent capacity of 1 MW or less, and in the case of projects owned 100% by SMEs or the renewable energy community, projects with an installed capacity or maximum demand of 6 MW or less). The final condition for waiving the requirement to allocate aid through a tendering procedure is that the project in question meets the following conditions together, as previously indicated in point 96 of CEEAG:

- a project has been selected following an open call to form part of a cross-border project, jointly designed by several Member States and which aims to have an important contribution to environmental protection in the European Union's common interest, and
- it applies an innovative technology, which follows on from a research and development and innovation (R&D&I) activity conducted by the beneficiary or by another entity as long as the former acquires the rights to use the results of the previous R&D&I activity, or it is amongst the early adopters of an innovative technology in its sector (107).

The support mechanisms put in place to achieve decarbonisation can take a variety of forms, including pre-financing through grants and on-going support payment agreements (e.g. contracts for difference), with mechanisms covering predominantly operational costs only to be used if the Member State demonstrates that the effects of such a mechanism are more beneficial to the environment (124).

In determining the amount and manner of support to be granted, Member States may use competitive certificates or supplier commitment systems, or may use a form of tax reduction or parafiscal levy (e.g. a levy to finance environmental policy objectives). However, these arrangements are subject to the requirements of meeting the criteria set out in the guidelines (points 108-109).

In the context in question, it is worth pointing out an important proviso that, when developing support mechanisms, Member States are required to take into account information on support already received from

the documentation on the mass balance system (within the meaning of Article 30 of RED II (point 111)).

The support granted may also take the form of a soft loan to the provider of services to improve energy performance as part of an energy performance contract. Member States should then ensure a significant co-investment rate by commercial debt finance providers (point 113).

Importantly, from 1 July 2023, each of the proposed mechanisms should include an estimate of the amount of subsidy per tonne of CO<sub>2</sub> equivalent emissions avoided, as well as provide assumptions and a calculation methodology, with the methodology adopted being similar for all measures promoted by the Member State to allow comparison of the costs of the measures adopted. According to the guidelines, Member States should, as part of their estimate of the amount of subsidy per tonne of avoided emissions, determine the net reduction in emissions as a result of the proposed action, taking into account emissions produced or reduced during the life cycle. Another necessary element is a description of the short- and long-term interaction with any other relevant policies or mechanisms (taking into account, inter alia, the EU ETS).

It should be stressed that the guidelines in question require Member States to demonstrate that reasonable measures will be put in place to ensure that the projects for which aid has been granted are actually implemented. As examples of such tools, the Commission points to setting clear deadlines for projects, checking the feasibility of projects as part of the prequalification for aid, requiring participants to pay securities or monitoring the development and implementation of projects (120).

It is also worth pointing out the following two cases where, in principle, the Commission will not consider the effects of the proposed mechanisms to be positive. The first is if the decarbonisation aid leads to a crowding out of investment in greener alternatives available on the market, or if it locks in certain technologies by hindering the development of the market for the above. The second



situation concerns Member State aid for biofuels, bioliquids, biogas and biomass fuels, which may not exceed the maximum percentage thresholds set for the share of such fuels in final energy consumption in the road and rail transport sectors in Article 26 of Directive 2018/2001.

Therefore, in view of the above considerations concerning the EU rules for biogas (biomethane) use in the gas sector, as well as the possibility of creating appropriate instruments to support its production, the following section of this study should review the current legal regulations for biogas fed into the gas network in Polish legislation and then set these regulations in the market environment affecting the demand and supply of gaseous fuels in the form of biogas and biomethane.

In 2020, Poland consumed around 20 billion m<sup>3</sup> of natural gas. Due to the peculiarities of the Polish energy market, there are many indications that demand for natural gas will grow in the current decade before stabilising or gradually declining. In line with the European Commission's announcements related to the pursuit of climate neutrality, it is necessary to reduce the share of natural gas (fossil/mineral natural gas) in the energy mix by around 70% by 2050.

## 2. BIOMETHANE IN POLAND AND ITS PERSPECTIVES FOR DEVELOPMENT

It is therefore necessary to identify opportunities to supplement gaseous fuels with biomethane, which can be a substitute for natural gas in terms of its physical and chemical properties and its use, while at the same time, due to the way it is formed, it lacks the disadvantages of its fossil/mineral counterpart.

According to the National Ten-Year Network Development Plan for 2020-2029, the demand for gaseous fuel will be in the range of 21 to 30 billion m<sup>3</sup>/year (depending on the scenario) and this level should be maintained in the following years. In turn, according to the approved "Energy Policy of Poland until 2040", already from 2030, 10% of the gaseous fuels transported through gas networks should be renewable and low-emission fuels.

Furthermore, according to the "Energy Policy of Poland until 2040", an important element of the strategy proposed therein will be to strive for the optimal use of own energy resources, which will involve replacing fossil fuels with their renewable counterparts. In this case, the demand for gaseous fuels is expected to be partly met by using the domestic production potential of biogas, biomethane, other renewable gases. If the right technical conditions are met, these gases can be fed into the gas network, just like fossil methane, which will have a positive impact on increasing their use. Another important element of the strategy identified in this document will also be to ensure that part of the demand for petroleum products is met by increased use of biocomponents and alternative fuels, as well as biomethane. An important element of the strategy in this act is also the expansion of the national gas network, which will mean expansion and modernisation in the area of distribution.

It should also be noted that the planned expansion of natural gas storage capacity and the use of salt caverns

under the current strategy will create better conditions for the popularisation of the previously mentioned decarbonised gases such as biogas and biomethane. The current total capacity of the seven underground methane rich gas storage facilities (UGS) is about 3.2 billion m<sup>3</sup>, which is nearly one-sixth of annual domestic consumption, and the diversified geographical location of the existing storage facilities is a definite advantage in supporting the flexibility of gas system operation.

To further enhance energy security, the document calls for the expansion of UGS to at least 4 billion m<sup>3</sup> (an increase of one-third of the current capacity) and an increase in the current maximum offtake capacity of gas from storage - from 53.5 million m<sup>3</sup>/day to at least 60 million m<sup>3</sup>/day (an increase of about one-sixth of the current capacity) by the 2030/2031 winter season.

It is also worth mentioning that, according to the document, the energy market is changing, which results in the increased use of low- or zero-carbon energy sources. Responding to these needs, and with plans to increase the use of biogas and biomethane in Europe's gas networks, gas operators need to commit to researching and developing options for feeding these gases into the network, transporting them and storing them. The technical parameters of the existing networks currently allow only a small share of gaseous fuels other than natural gas in the transport mix, making it difficult to increase the use of these decarbonised gases. This should be done in close cooperation between the gas operators and the producers of these gases, in order to take into account both the technical parameters of the network and the quality of the gases.



The potential for biomethane production is also influenced by RED II, adopted in 2018, which makes it mandatory to achieve by 2030 14% share of RES in transport (mainly biocomponents in liquid biofuels), including at least 3.5% from advanced biofuels (from non-food plant matter). This implies a significant increase in demand for biocomponents, biomethane and RES electricity used in transport. Additional restrictions introduced by RED II, such as the reduction in the use of food feedstocks (7% and an increase of a maximum of 1% from 2020 levels), the increase in requirements for reducing greenhouse gas emissions from biofuel production, as well as the aforementioned target for advanced biofuels, point to the need to transform the sector in the coming years. In order to achieve the target for the share of RES in transport, a national indicative target (NIT) is set for each year, i.e. a minimum share of renewable fuels and biocomponents in the total amount of liquid fuels and liquid biofuels consumed during a calendar year in road and rail transport.

The use of RES in transport is an excellent opportunity to exploit domestic biomass resources and local potential. From the point of view of raw material competition between the energy industry and the agri-food industry and for the purpose of promoting the circular economy, it makes sense to increase the use of waste-derived biocomponents. The use of biomethane for transport, produced from municipal waste and the agri-food industry, among others, is becoming particularly important, and the results of research into increasing the capacity to transport gases other than natural gas through gas networks will be crucial to the effectiveness of the application of this technology.

The document also envisages that the energy use of biomass, both thermal and anaerobic (biogas) in biogas plants and for biofuel production, will increase. The reason for this biomass development is the growing bio-waste stream resulting from increasing consumption and the tightening of waste management regulations, which are gradually restricting the landfilling of bio-waste. Agricultural biomass will continue to play a large role in meeting the demand for feedstock and it is important that there is no feedstock competition

between the energy sector and the agriculture, agri-food and processing industries. Furthermore, biomass should be used as close to its origin as possible so that its transport, including the associated emissions and costs, does not adversely affect the environmental and economic impact.

According to current development projections, the use of RES (especially biogas) in electricity generation will increase steadily, especially after 2025, due to the expected technological and economic maturity of individual technologies. It is estimated that in 2030, the share of renewable energy in the energy sector will be at least 32% net, and in 2040 around 40%. Regulatory conditions and system mechanisms will support this objective and the development of individual technologies, in a way that ensures secure grid operation and acceptable electricity prices. In this case, the potential of biogas and biomethane will be used mainly for district heating, but part of the resources will also be channelled into electricity generation, especially cogeneration. The advantage of biogas is that it can be used for regulatory purposes, which is particularly important for operational flexibility.

In the field of energy policy, it should also be added that the current international situation affects many aspects of energy policy and now implies the need to change the approach to ensuring energy security towards greater diversification and independence. For this reason, on 29 March 2022, the Council of Ministers adopted the assumptions of the update of the "Energy Policy of Poland until 2040".

Poland's updated energy policy must also take into account energy sovereignty, with its specific component of rapidly decoupling the national economy from imported fossil fuels (coal, oil and natural gas) and their derivatives (LPG, diesel, oil and kerosene) from the Russian Federation and other countries subject to economic sanctions. This will be achieved through diversification of supply, investment in production capacity, line infrastructure and storage, as well as alternative fuels. In the other pillars of Poland's energy policy - a just transformation, a zero-emission energy system and good air quality - measures



to reduce the demand for fossil fuels from the Russian Federation and other countries subject to economic sanctions will be strengthened in order to increase Poland's energy security.

Some modifications to EPP2040 are therefore envisaged for biomethane. These changes will mainly relate to further diversification of supply and the provision of alternatives to hydrocarbons/liquid fuels. Reducing the demand for liquid fuels will be achieved by intensifying activities related to the use of alternative energy sources in transport, i.e. biocomponents in liquid fuels, biomethane, biogas or electricity. Increased promotion will include the use of "clean" public transport, a change in driver behaviour towards greener driving or greater use of rail freight. Further efforts will also be made to replace the demand for natural gas with decarbonised gases and other fuels with established efficiencies, including, among others, through the development of biomethane-based technologies as an important alternative to natural gas.

Taking the above into account, it should be emphasised that the minimum level of decarbonised gas in 2030 should be 10%, i.e. 2-3 billion m<sup>3</sup>/year. Taking into account the target variant (2050), i.e. the Commission's aim to implement the Green Deal, and assuming that the demand for gaseous fuel does not decrease drastically, the amount of renewable gases in the Polish gas system should be 70%, i.e. between 14 and 21 billion m<sup>3</sup>/year. By renewable gases here we mean biomethane and biohydrogen.

The above calculations show the huge challenge facing the Polish economy in terms of capacity to produce, transmit and distribute these new renewable fuels. For this to be possible, very concrete and rapid action is needed at the political and legislative level to enable the creation of new renewable gas sources and the expansion and reconstruction of gas networks. With the development of the agricultural biogas sector, the energy use of agricultural by-products and residues from agri-food processing is growing in importance. The energy potential of the agri-food sector for agricultural biogas production is estimated at more than 7.8 billion cubic metres per year.

References and indications for biomethane and biogas are also included in the "National Energy and Climate Plan for the years 2021-2030". The document highlights the role of individual RES technologies in the energy mix, identifying biogas and biomethane as controllable energy sources that will, among other things, allow to complement other unstable renewable sources and provide opportunities to use particularly troublesome waste or harness local bioenergy resources. Greater use of these biogas fuels is also important to achieve the target indicated in this plan to increase the share of RES in the electricity sector to around 32% in 2030.

The plan also sets a target of achieving a 14% share of renewable energy in transport by 2030, which is important in this case as biomethane is mentioned several times as part of the development of alternative fuel infrastructure. The plan refers to the funding of a number of fuel infrastructure projects under the Low Emission Transport Fund. However, the Low Emission Transport Fund was abolished on 30 September 2020, and in its place a new multi-year commitment was created for the National Fund for Environmental Protection and Water Management, which was obliged under Article 401c (9c) of the Act on environmental protection to allocate its funds of no less than 15% for, inter alia, the following purposes:

financing the construction or expansion of infrastructure for the distribution or sale of CNG or LNG, including biomethane, or hydrogen, or the construction or expansion of infrastructure for charging electric vehicles used for transport;

aid to manufacturers and energy companies active in the production of liquid fuels, liquid biofuels, other renewable fuels, CNG or LNG, including from biomethane, for use in transport;

funding for manufacturers of means of transport using electricity, CNG or LNG, including from biomethane, or hydrogen for propulsion, as well as for entrepreneurs active in the production of components for these means of transport;

funding for research related to the development of new types of bio-components, liquid biofuels, other renewable fuels, or the use of CNG or LNG, including from biomethane, or hydrogen, or electricity, used in transport or related new construction solutions;

subsidising the purchase of new vehicles or vessels powered by liquid biofuels, CNG or LNG, including those derived from biomethane, or hydrogen, or using electricity for propulsion;

promoting the production and use of bio-components and liquid biofuels

The principles and the amount of funding to be granted for the above-mentioned purposes will be determined each time by the National Fund for Environmental Protection and Water Management on its website. There are currently several programmes run by the fund, aimed at subsidising projects to reduce energy and fuel consumption in public transport (the "Green Public Transport" programme), or financing subsidies for zero-emission vehicles (such as the "GEPARD" and "Mój Elektryk" programmes).

In addition, one of the annexes to the aforementioned plan indicates that biomethane could also be a key element in justifying the construction of local, stand-alone pipelines located in places where the gas network does not currently reach and where there is potential for biomethane production to meet local energy needs.



Legal basis for  
biomethane in Poland –  
current regime



A detailed discussion of the legal regime for biomethane in Polish law first requires the clarification of certain terminological issues related to the notion of biogas and biomethane in Polish legislation, as well as the determination of the meaning of the term RES installation in the context of installations for the production of purified biogas fed into the gas network. These findings will then lead to an analysis of the issues related to the regulations concerning the possibility of feeding biogas and biomethane into the gas networks, as well as an analysis of the instruments available in the Polish legislation to support the production of biogas and biomethane fed into the gas network.

However, it should be noted that biomethane economic activities fall within the scope of the legislative process implementing the RED II regulations, which will be discussed in detail in chapter V of this Memorandum. This means that the current rules may change especially with regard to the current support scheme. However, the process of forming the final regulations is not yet complete, so it makes sense to review the current regulations and then review the currently proposed amendments to these regulations. In this chapter, we indicate the current regulations concerning biomethane in Polish law.

# 1. BIOGAS AS A GASEOUS FUEL FED INTO THE GAS NETWORK

## 1.1 Concept of biogas

The notion of biogas in Polish law was regulated in Article 2 clause 1 of RESA. According to the statutory definition, biogas is a gas obtained during the processing of biomass, in particular using animal or plant waste processing facilities, sewage treatment plants and landfills. This refers to biogas resulting from the anaerobic digestion of substances that constitute biomass, whereas by way of example, the legislator indicates that this can be biogas resulting from the digestion of animal and vegetable waste or biogas produced in landfills (so-called landfill biogas), or biogas resulting from the digestion of sewage sludge (so-called sewage treatment plant biogas). The term biogas therefore covers the widest spectrum of biomass from which biogas can be produced. In the context of the analysed issues, it is therefore crucial to refer to the statutory definition of biomass indicated in Article 2 clause 3 of RESA, which indicates which substrates may be subjected to the process of anaerobic digestion leading to the production of biogas from biomass.

According to the current legislation, biomass is the biodegradable fraction of products, waste or residues of biological origin from agriculture, including plant and animal matter, forestry and related industries including fisheries and aquaculture, processed biomass, in particular in the form of briquettes, pellets, torrefaction and biocarbon, as well as the biodegradable fraction of industrial or municipal waste of plant or animal origin, including waste from waste treatment installations and waste from water and waste water treatment, in particular sewage sludge, in accordance with waste legislation on the eligibility of the energy fraction recovered from the thermal treatment of waste.

Taking this definition apart, it should first be pointed out that biomass can be regarded as a broad spectrum of solid or liquid substances that are biodegradable. Consequently, the concept of biomass is immanently linked to biodegradation, i.e. the decomposition of organic matter by living organisms into simpler chemical components. In other words, a requirement for a product, waste or residue of biological origin from agriculture to be considered biomass is that it is fully biodegradable. In this state of affairs, plastic waste and packaging will not be biomass, or any other renewable fuel (regardless of the degree of processing).

In the following definition, the legislator indicates examples of substances that can be considered biomass if they meet the requirement of full biodegradability. This includes parts of products, waste or residues of biological origin from agriculture, including plant and animal substances, forestry and related industries, including fisheries and aquaculture. This formulation of the definition gives quite a lot of leeway to consider biological substrates as biomass that can undergo biodegradation, i.e. aerobic or anaerobic decomposition of organic compounds into simpler elements, including biogas.

Exceptionally, the biodegradable fraction of industrial or municipal waste of plant or animal origin, including waste from waste treatment installations and waste from water and sewage treatment, in particular sewage sludge, will also be considered biomass in accordance with the waste regulations on the eligibility of the part of energy recovered from thermal waste conversion. In other words, the specific legal regulations will make it possible to partially count various types of mixed waste that nevertheless have an appropriate biodegradable fraction.

A detailed catalogue of waste which can be used in biogas production is contained in the annex to the Regulation of the Minister of Climate of 2 January 2020 on the catalogue of waste (Journal of Laws of 2020, item 10). This secondary legislation lists, inter alia, waste from agriculture, horticulture, hydroponics, fisheries, forestry, hunting and food processing (group code 02) as substrates:

- sludge from washing and cleaning of agricultural products (waste type code 02 01 01 and 02 02 02);
- plant-tissue waste (waste type code 02 01 03);
- animal faeces, urine and manure (waste type code 02 01 06);
- waste from forestry (waste type code 02 01 07);
- fallen and culled animals (waste type code 02 01 82);
- waste from hydroponics (waste type code 02 01 83);
- waste not otherwise specified which belong to waste from agriculture, horticulture, hydroponics, forestry, hunting and fisheries (waste type code 02 01 99);
- feedstock and products unsuitable for consumption or processing (waste type codes 02 02 03 and 02 03 04);
- sludge from on-site sewage treatment plants (waste type code: 02 02 04 for meat production; 02 03 05 for waste from preparation, processing of food products and food stimulants, and waste of vegetable origin; 02 04 03 for waste from the sugar industry; 02 05 02 for waste from the dairy industry; 02 06 03 for waste from the baking and confectionery industry; 02 07 05 for waste from the production of alcoholic and non-alcoholic beverages);
- waste from preservatives (waste type code 02 03 02);
- post-extraction waste (waste type code 02 03 03);
- pomace, sludge and other waste derived from the processing of plant products (excluding 02 03 81) (waste type code 02 03 80);
- wastes from the production of plant feed (waste type code 02 03 81);
- tobacco waste (waste type code 02 03 82);
- waste not otherwise specified derived from the preparation, processing of food products and food stimulants, and waste of vegetable origin including from fruit, vegetables, cereal products, edible oils, cocoa, coffee, tea and tobacco preparation and processing, yeast and yeast

extract production, molasses preparation and fermentation (excluding 02 07) (waste type code 02 03 99);

- soil from cleaning and washing beet (waste type code 02 04 01);
- pulps (waste type code 02 04 80);
- waste not otherwise specified originating from the sugar industry (waste type code 02 04 99);
- waste whey (waste type code 02 05 80);
- waste not otherwise specified originating from the dairy industry (waste type code 02 05 99);
- unusable food fats (waste type code 02 06 80);
- waste not otherwise specified originating from the baking and confectionery industry (waste type code 02 06 99);
- waste from spirit distillation (waste type code 02 07 02);
- pomace, must and post-fermentation sludge, fermented wash (waste type code 02 07 80);
- wastes not otherwise specified originating from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa) (waste type code 02 07 99).

The concept of biogas, as mentioned earlier, is broader than that of agricultural biogas, which means that it can also include other waste listed in the aforementioned regulation even if it is not of an agricultural nature. In this case, the potentially usable biological substrates can be the following:

- organic waste other than those mentioned in 16 03 05, 16 03 80 (waste type code 16 03 06);
- foodstuffs out-of-date or unfit for consumption (waste type code 16 03 80) (including waste from big box stores);
- leftovers the nutrition of patients in infectious wards (waste type code 18 01 82);
- liquids from anaerobic treatment of municipal waste (waste type code 19 06 03);
- digestate from anaerobic treatment of municipal waste (waste type code 19 06 04);
- liquids from anaerobic treatment of animal and vegetable waste (waste type code 19 06 05);
- digestate from anaerobic treatment of animal and vegetable waste (waste type code 19 06 06);

- fats and oil mixtures from oil/water separation containing only edible oils and fats (waste type code 19 06 09);
- biodegradable kitchen and canteen waste (waste from restaurants or other catering establishments) (waste type code 20 01 08);
- oils and edible fats (waste type code 20 01 25);
- mixed municipal waste (waste type code 20 03 01);
- waste from markets (waste type code 20 03 02).

However, it must be borne in mind that these substrates, in order to be used effectively for the fermentation process, must undergo pre-treatment so that the substrates are not contaminated and can be effectively subjected to the methane fermentation process.

If, therefore, we are talking about the production of biogas itself in its broadest definition, then it is possible to use all the substances, waste or products indicated above. On the other hand, the legislator also distinguishes specific types of biogas which require the use of certain types of substrates in order to maintain their status. In this respect, we can therefore speak of agricultural biogas, landfill biogas, sewage treatment plant biogas and other biogas. It is first necessary to analyse the concept of agricultural biogas as the type of biogas that can count on the greatest preferences from the legislator, including those relating to the investment and construction process and the highest reference price level conditioning the level of RES support.





## 1.2 Concept of biogas agriculture

Regardless of the concept of biogas, the legislator decided to introduce a separate specific definition of agricultural biogas, contained in Article 2 clause 2 of RESA. Agricultural biogas is a gas obtained by methane fermentation of agricultural raw materials, agricultural by-products, liquid or solid animal excrements, by-products, waste or residues from the processing of products of agricultural origin or forest biomass, or plant biomass harvested from areas other than recorded as agricultural or forest areas, with the exception of biogas obtained from raw materials originating from landfills, as well as sewage treatment plants, including on-site wastewater treatment plants from agri-food processing, which do not separate industrial wastewater from other types of sludge and wastewater. In this context, the possibility of using plant biomass harvested from land other than that registered as agricultural or forestry is of particular importance, which determines the open nature of the catalogue of substrates that can be subject to methane fermentation leading to the production of agricultural biogas.

In the context of the analysed definition of agricultural biogas, the issue of the possibility to use sewage sludge originating from on-site wastewater treatment plants (industrial wastewater) deserves particular attention. In this respect, as part of the amendment of the RESA of 19 July 2019, the legislator amended the definition of agricultural biogas to indicate that it does not include biogas obtained from wastewater treatment plants, including on-site wastewater treatment plants from agri-food processing, where there is no separation of industrial wastewater from other types of sludge and wastewater.

In this regard, it should therefore be pointed out that sewage sludge from agri-food processing, as a substrate of great value due to its availability and

the benefits of its use in reducing the operating costs of wastewater treatment plants through both energy production and waste management, can be used to produce agricultural biogas, provided that it is collected without being combined with anthropogenic sludge. In other words, for the production of agricultural biogas only sewage sludge can be used which, prior to being put into an RES installation, is selectively collected and stored by a given production facility within a separate water and sewage system, independent from domestic sewage sludge disposed of in municipal wastewater treatment plants. These sludges must not mix in any part of the infrastructure and if the industrial wastewater is effectively separated from the domestic sewage sludge, then it can be used to produce agricultural biogas. In contrast, sewage sludge of anthropogenic origin can only be managed as part of the production of non-agricultural biogas, in particular as a mixture of different substrates (different biogas) or as biogas from a sewage treatment plant.

Therefore, from the physicochemical point of view, agricultural biogas is biogas, although its production must take place from substrates enumerated above. Therefore, it should be emphasised that in the Polish legal system, there is both a notion of biogas and agricultural biogas, with the reservation that not every biogas is agricultural biogas. This division is irrelevant from the point of view of the biotechnology process, whereas it has major legal implications in the legislative sphere. Therefore, in the further part of this study, the authors will use the term agricultural biogas, as a gas obtained exclusively from substrates mentioned in Article 2 clause 2 of RESA and the term biogas, which they will equate with biogas produced from biomass other than agricultural biogas, including biogas produced in a landfill site or wastewater treatment plant.

In the light of the consideration of the scope of substrates enabling the production of agricultural biogas, it is also important to note the information of the National Support Centre for Agriculture of 9 April 2020, ref. no. CEN.DI.WOZE.760.8.2020.BPE.1 (hereinafter referred to as: NSCA Information). As indicated in point 11, the definition of agricultural biogas has taken on an open catalogue, in the sense that, in addition to waste from agricultural production, it is also possible to manage plant biomass collected from areas other than those registered as agricultural or forestry, e.g. municipal green waste, selectively collected municipal biodegradable waste, etc. However, in this respect, a certain limitation is precisely the content of NSCA Information, which indicates that it is not possible to use as input (substrate) for agricultural biogas production waste starting with the number 20, which means: municipal waste including selectively collected fractions. The usual interpretation of the relevant provisions of the RESA - including, in particular, the reference to the possibility of using plant biomass harvested from land other than that registered as agricultural or forestry - is not binding in this respect. It is possible to request a different interpretation, but this would require proper justification, which could prolong potential proceedings, including in particular the procedure for entry into the register of agricultural biogas producers kept by the Director General of the National Support Centre for Agriculture (Article 24 clause 1 of RESA).

As indicated above, waste falling into category 02 - waste from agriculture, horticulture, hydroponics, fisheries, forestry, hunting and food processing - can be included without any doubt as possible substrates for biogas production (detailed list in point 8). A separate situation applies to waste falling into the group without the 02 code, where there is a potential for use, but where the position expressed in the NSCA Information must be taken into account and can be appropriately legally challenged. From the practice of using different substrates, it is still possible to point to the procedure for confirming the applicability of a given substrate by

the NSCA. As a result, if you wish to use waste without the 02 code, you should first apply to the Director of the National Support Centre for Agriculture for the issuing of the relevant information confirming the admissibility of the use of this waste in biogas production.

The use of suitable substrates in the production of agricultural biogas is particularly significant as an agricultural biogas producer is obliged to use only the substrates listed in the definition of agricultural biogas. In the event of a breach of the aforementioned obligation, which can be demonstrated by the Director General of the NSCA as part of an inspection carried out pursuant to Article 33 of RESA, this body is authorised to issue a decision prohibiting a given producer from performing an economic activity in the field of agricultural biogas. The consequence of such a decision to prohibit economic activity will be the deletion of the entry from the register of agricultural biogas producers, with the producer being able to obtain a new entry no earlier than three years from the date of the decision to prohibit economic activity.

Furthermore, due to the qualified nature of agricultural biogas in accordance with the relevant support instrument regulations (e.g. RES auction, FIT/FIP), individuals representing the relevant generator are required to make a declaration to this effect, under penalty of criminal liability, that only substrates referred to in Article 2 point 2 of RESA, i.e. used for the production of agricultural biogas, will be used. The relevant declaration shall be made upon guidance on the awareness of criminal liability for making a false declaration pursuant to Article 233 § 6 of the Act of 6 June 1997 - Penal Code (consolidated act, Journal of Laws of 2022, item 1138, as amended), which is currently punishable in principle by imprisonment of between 6 months and 8 years.

## 1.3 Other biogas categories

The national regulations contained in the RESA also indirectly distinguish “landfill biogas” arising from waste that is at least partly biodegradable and deposited in the cells that make up a landfill. In this case, there is no separate statutory definition that specified in detail the type of substrates used. The issue here is the status of the site where biodegradable waste is stored, and such a site must have formal landfill status within the meaning of Article 3 clause 25 of the Act on waste of 14 December 2012 (consolidated act, Journal of Laws of 2022, item 699, as amended). In this respect, the definition of biogas found in the RESA allows for assuming that any type of biomass can be used to produce landfill biogas, as long as it belongs to the biodegradable matter that will be found in landfills.

The concept of “biogas from sewage treatment plants” distinguished in the RESA is of a similar nature. As with landfill biogas, this type of biogas also lacks a statutory definition that specifies the type of substrates used to produce it. It is therefore biogas, which is produced from

the decomposition of organic compounds in the form of sewage sludge that ends up in a specific location such as a sewage treatment plant. Also bearing in mind the definition of agricultural biogas which allows the use of industrial wastewater as a substrate, it should be pointed out that the biomass used to produce biogas at a sewage treatment plant will include, in particular, anthropogenic domestic wastewater.

The norms of the RESA also use the notion of “other biogas” than those already indicated above (e.g. in Article 70a clause 1 point 4 or clause 2 point 1 letter d of the RESA when listing entities that may benefit from the FIT and FIP support scheme, and in Article 77 clause 5 point 4 and 4a of the RESA in the case of regulations concerning the determination of the reference price of energy sold at RES auctions). This term should primarily be associated with various mixtures of different types of biogas, but also to biogas produced from other than agricultural substrates indicated in Article 2 clause 2 of RESA, if it is not produced in landfills or sewage treatment plants.



## 1.4 Concept of biomethane

In this respect, it should also be pointed out that the Polish legislation does not contain a definition of biomethane, and therefore it is a legal language term to describe purified biogas brought to quality parameters of a particular gas network, allowing it to be fed into the gas system. In this respect, the concept of biomethane appears only in BLBA where liquefied biomethane is defined as liquefied methane produced from biomass (Article 2 clause 9b of BLBA, the so-called bioLNG), compressed biomethane is defined as a mixture of compressed hydrocarbon gases, mainly C1 methane, produced from biomass (Article 2 clause 9c of BLBA, the so-called bioCNG), as well as bio-hydrogen is defined as hydrogen produced from biomass (Article 2 clause 9d of BLBA), which can be used as a bio-component intended for the production of liquid fuels or constituting transport fuels in their own right (liquid biofuels).

In the context of the use of biomethane in the transport sector, Article 23 clause 1f of BLBA also seems to be of key importance, indicating that the minister competent for energy may lay down, by way of a regulation, the methodology for calculating biohydrogen content in fuels whose production process uses biomethane, taking into account the state of technical knowledge in this respect resulting from research on the content of these bio-components in fuels or experience in their use. This provision came into force on 1 January 2020 and made it possible to use biohydrogen produced from biomethane as a bio-component contained in liquid fuels used in all types of transport. However, as at the date of drafting the Memorandum, the minister competent for energy has not issued the relevant secondary legislation.

## 1.5 Concept of gaseous fuels

The last notion necessary from the point of view of this study is the notion of gaseous fuels defined in Article 3 clause 3a of ELA. In accordance with its wording, gaseous fuels are methane-rich or nitrogen-rich natural gas, including liquefied natural gas and propane-butane or other types of combustible gas, supplied through a gas network, as well as agricultural biogas, irrespective of their use (see A. Dobrowolski, *Komentarz do art. 3 ustawy - Przepisy energetyczne* [in:] Z. Muras, M. Swora (ed.), *Prawo energetyczne. Tom I. Komentarz do artykułu 1-11s*, Lex/el.). Therefore, both agricultural biogas *expressis verbis* mentioned in the definition (irrespective of its physical state and supply method), as well as other biogas (gas from landfills, wastewater treatment plants or mixed) should be recognised as a gaseous fuel only when supplied via the gas network. In other words, biogas other than agricultural biogas can only be considered as a gaseous fuel if it is fed into the gas network. Therefore, the offtake obligation, which is discussed in more detail in section 4.3 of this chapter, is crucial for the use of biogas as a gaseous fuel.



## 2. BIOGAS PLANT AS A RES INSTALLATION

Continuing the discussion of the terminological grid, it is now necessary to analyse the notion of a RES installation in the context of an installation for the production of biogas fed into the gas network. In this respect it has to be pointed out that according to Article 2 clause 13 letter a) and b) of RESA the subject of relevant support schemes and instruments are installations constituting a dedicated set of: a) devices used for energy generation described by technical and commercial data, in which energy is produced from renewable energy sources or b) buildings and equipment constituting a technical and functional whole used for the production of agricultural biogas. A RES installation can also be connected to an energy storage facility, including an agricultural biogas storage facility. Thus, interpreting the above definition, it may be indicated that a RES installation will be both:

**a) a dedicated set of equipment used to generate electricity from agricultural biogas described by appropriate technical and commercial data;**

**b) a dedicated group of buildings and equipment constituting a technical and functional whole used to produce agricultural biogas;**

**c) a combination of both these installations, i.e. a dedicated set of equipment used to generate electricity from agricultural biogas described by technical and commercial data, as well as a set of buildings and facilities constituting a technical and functional whole used to produce agricultural biogas**

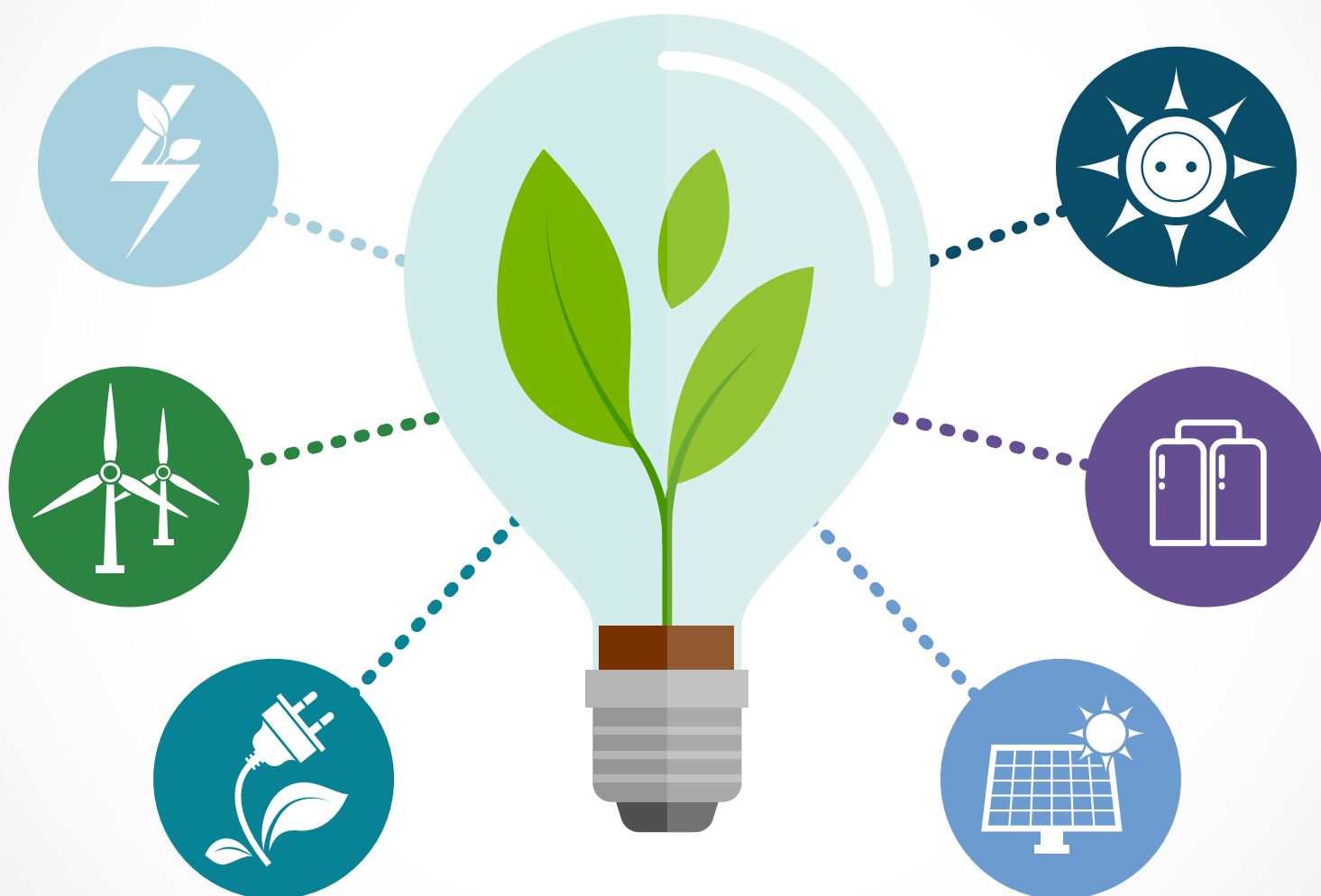
This conclusion arises after taking into account the meaning of the conjunction 'or' in the process of linguistic interpretation of the notion of RES installation. The legislator's use of such an expression is an example of using a non-separable alternative, thanks to which it takes into account the possibility of occurrence of all three types of RES installations indicated above. It seems that in the agricultural biogas sector, the most common RES installations are precisely those that constitute a conglomerate of jointly technologically connected buildings and equipment used to produce agricultural biogas (a fermentation tank and a network of pipelines) and devices used for energy generation and power offtake (individual generation units and a power grid with the place of their connection to the grid). However, it is also impossible to exclude the operation of a dedicated set of equipment for the production of electricity from agricultural biogas described by appropriate technical (e.g. nameplate, place of connection) and commercial (invoices, commercial offers, etc.) data.

However, what is most important from the point of view of these considerations, a RES installation, within the meaning of Article 2 clause 13 letter b) of RESA is also a dedicated set of buildings and equipment constituting a technical and functional whole, used only for the production of agricultural biogas (so-called biomethane installation). In this respect it should be emphasized again that the notion of RES installations does not include installations producing biogas other than agricultural biogas (e.g. biogas from landfills or from wastewater treatment plants), which feed this gaseous fuel into the gas network. Therefore, the subject of relevant support schemes and instruments contained in the provisions of the RESA - which will be discussed in detail in point 5 of this chapter - are only RES installations producing

gaseous fuels from agricultural biogas, and there are no adequate instruments dedicated to other installations which produce gaseous fuels from biogas other than agricultural biogas. In this respect, *de lege ferenda* it should be postulated that the notion of a RES installation

should also be extended to a dedicated set of buildings and equipment constituting a technical and functional whole used only for biogas production (regardless of whether it is agricultural biogas).

## RES installations

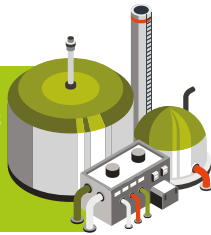


# 3

## 3. CONDUCTING ECONOMIC ACTIVITY IN THE FIELD OF BIOGAS PRODUCTION

The terms and conditions for conducting economic activity in the field of agricultural biogas are set out in chapter 3 of RESA. As part of the Memorandum, it is advisable to skip the considerations of an agricultural biogas producers in a RES installation with an annual capacity of up to 200,000 m<sup>3</sup> of agricultural biogas (agricultural biogas micro-installations), as a type of economic activity which will not significantly influence the development of commercial production of agricultural biogas with a view to selling it on the market.

Agricultural biogas micro-installations  
under 200,000 m<sup>3</sup>



Whereas economic activity concerning the production of agricultural biogas in RES installations other than agricultural biogas micro-installations - annual capacity of agricultural biogas exceeding 200,000 m<sup>3</sup> - is a regulated activity and requires an entry to the register of producers conducting economic activity in the field of agricultural biogas, referred to as the register of agricultural biogas producers. The register is kept by the Director General of the National Support Centre for Agriculture, who makes the relevant entries on the basis of an application from a producer conducting economic activity in the field of agricultural biogas.

regulated activity  
over 200,000 m<sup>3</sup>



The procedure for entry into such a register is considerably simplified and is based on appropriate declarations made by the producer covered by the guidance of the authority regarding liability for making false declarations.

**An application for entry in the register of agricultural biogas producers includes only:**

- 1) basic data identifying the producer concerned;
- 2) specification of the type and scope of economic activity in the field of agricultural biogas and the place or places of its performance, as well as the annual capacity of a particular installation in which agricultural biogas is produced, measured in m<sup>3</sup>/year;
- 3) a declaration regarding the availability of adequate facilities and installations, including technical equipment, meeting the requirements set out in particular in the fire protection regulations, sanitary regulations and environmental protection regulations, making it possible to conduct this economic activity;
- 4) a document confirming the legal title to the buildings in which the economic activity in the scope of agricultural biogas will be conducted.

A producer conducting economic activity within the scope of agricultural biogas is obliged to use only substrates listed in Article 2 clause 2 of RESA used for the production of agricultural biogas, to possess documentation confirming the date of the first production of agricultural biogas in a particular RES installation, as well as to keep documentation concerning:

- a) the quantities and nature of all substrates used for the production of agricultural biogas, including specific requirements for the use of waste from on-site sewage treatment plants and additional labelling of waste from the wider agricultural sector;
  - b) the total amount of agricultural biogas produced, specifying the amount of agricultural biogas which is fed into the gas distribution network, used for the production of electricity in a separate or cogeneration system or used in any other way,
  - c) the quantities of by-product resulting from the production of agricultural biogas,
  - d) the quantities of agricultural biogas purchased and the data of the entity from whom the agricultural biogas was purchased;
- 1) a declaration made by the producer in the application for entry in the said register which is not in conformity with the actual state of affairs;
  - 2) using by the producer untrue documents confirming the legal title to the building facilities in which economic activity in the field of agricultural biogas will be performed, the fulfilment by these facilities of specific requirements or documents confirming the date of first production of agricultural biogas;
  - 3) failure to remove breaches of conditions by the producer relating to the submitted reports or building facilities in which economic activity in the field of agricultural biogas will be conducted;
  - 4) violation of the obligation of reporting or of using only substrates not included in the definition of agricultural biogas;

taking into account the above information, the producer is obliged to submit quarterly reports to the Director General of the National Support Centre for Agriculture within 45 days from the end of each quarter in which the agricultural biogas plant is operated

in this respect, an indicated administrative body may conduct an appropriate inspection of the performance of economic activity in the field of agricultural biogas (Article 33 of RESA ).

The aforementioned authority makes an entry of the producer in the register of agricultural biogas producers within 7 days from the date of receiving a relevant application together with all required declarations. If the entry does not take place within 14 days from the date of receipt of the relevant application, the producer may start the relevant economic activity. On the other hand, refusal of an entry to the register can only take place in strictly specified and enumerated cases, when a final decision prohibiting a given producer from conducting economic activity in the field of agricultural biogas has been issued, or the producer has been removed from the register within 3 years preceding submission of an application for entry to the register due to the prohibition to conduct such activity.

The Director General of the National Support Centre for Agriculture issues a decision prohibiting a producer from conducting economic activity in the field of agricultural biogas in the case of:

In the case of issuing a decision prohibiting a particular producer from performing economic activity in the field of agricultural biogas, the Director General of the National Support Centre for Agriculture, *ex officio*, removes the producer from the register, which makes it impossible for the producer to continue conducting such economic activity. A producer who was covered by the indicated decision may again obtain an entry in this register not earlier than after three years from the date of the original decision. However, a particular RES installation - agricultural biogas plant - used to conduct economic activity covered by such a decision may again serve to conduct this activity no earlier than after 3 years from the date of issuing the decision.

It should also be pointed out that in relation to other categories of biogas that can constitute a gaseous fuel fed into the gas system, in particular biogas originating from a wastewater treatment plant connected



to the gas network, the general provisions concerning the concession obligation contained in Article 32 of ELA apply. However, it should be pointed out in this respect that pursuant to Article 32 clause 1 point 1 letter a) of ELA, the indicated obligation does not cover the conduct of economic activity concerning the production of gaseous fuels, including biogas other than agricultural biogas, if - in accordance with Article 3 clause 3a of ELA - such biogas

is fed into the gas network. In other words, it should be pointed out that, in the current legal conditions, conducting economic activity in the field of production of gaseous fuels from biogas generated in a wastewater treatment plant or mixed biogases is not subject to relevant restrictions (rationing) regarding the possibility to undertake such economic activity.



# 4

## 4. FEEDING BIOGAS INTO THE GAS NETWORK

### 4.1 Legal basis for biomethane project preparation

The investment and construction process for RES projects is a multi-stage process consisting of a sequence of legal and factual actions aimed at the implementation of a facility or a complex of such facilities for the production or processing of gaseous fuels from RES. Taking into account the general principles concerning the conduct of the investment and construction process, the requirements related to the implementation of the various stages of an investment consisting in the construction of a RES installation producing biogas or agricultural biogas are presented below.

The first step is to find a suitable land property on which a biogas plant (biomethane plant) investment project can be realised. This stage involves a series of steps to check the site in question in terms of both technical and formal legal considerations. At this stage, in particular, aspects concerning the location of the project should be taken into account, analysing them in terms of the possibilities of the area, environmental conditions or obtaining conditions for connecting the planned installation to the gas or electricity network, which will determine the possibility of implementing the project. Bearing in mind that biogas plants will predominantly be located in rural areas, two issues will be essential. Firstly, the restrictions arising from the rules on restrictions on the marketing of agricultural real estate must

be taken into account, followed by the possibility of their use for purposes other than agricultural activities (so-called de-agriculturalization).

In the context of the first of the signalled challenges, the key regulation is found in Article 2a of the Act of 11 April 2003 on shaping the agrarian system (Journal of Laws of 2022, item 461, consolidated act, as amended), which establishes restrictions on the acquisition of agricultural property. Therefore, at least special purpose vehicles investing in individual biogas projects can acquire agricultural properties smaller than 1 ha without any obstacles. Larger agricultural properties, on the other hand, can only be disposed of with the permission of the Director of the NSCA, which is only issued in strictly defined circumstances, which are not generally the case with biogas plants.

In the case of larger properties, these restrictions can be diversified by geodetic subdivision into several plots not exceeding the indicated area or by obtaining a favourable interpretation from the NSCA confirming, for example, that the investment in an agricultural biogas plant falls within the scope of agricultural activities on the purchased property. It is also possible to model the acquisition of the property in question after it has already been changed to a non-agricultural use.

However, with regard to the need to use the property for purposes other than agriculture, it is advisable to locate the agricultural biogas plant on land of mineral origin of class IVa-VI enabling the avoidance of the fee for excluding the land from agricultural production, in accordance with the regulations of the Act of 3 February 1995 on the protection of agricultural and forestry land (Journal of Laws of 2022, item 2409, consolidated act, as amended).

Secondly, it should be examined whether there are realistic possibilities to connect such a RES installation to the electricity grid (design distance from the main transformer station (MTS), transformer capacity, line capacity, etc.) and to the gas network (distance of the investment project from the gas pipeline, pipeline capacity, etc.). The availability of electricity or gas infrastructure is one of the key elements to be taken into account when selecting the location for a biomethane plant investment project, as it directly and significantly affects the cost of the entire investment. Furthermore, the availability of such connection sites is limited (much more than grid connection sites), all the more so if we consider sites where the seasonality of gas offtake does not adversely affect the declared volumes of biomethane gas offtake. In fact, in terms of obtaining conditions for connection to the gas network, conditions are observed which indicate that in the spring and summer months, gas system operators limit (even to 0%) the possibilities of feeding gaseous fuel into the relevant network, justifying this by the lack of absorption capacity of this network due to low consumption of this fuel by end customers. This needs to be changed by ensuring an appropriate level of investment in the construction and upgrading of gas networks and the inclusion of operating and investment costs in this regard in tariffs, as discussed in more detail in, inter alia, chapter III, point 2 of this report. In addition, it must be emphasised in this regard that securing title to the property must include not only the biogas plant, but also the access road and the property allowing for the realisation/pipeline

for connection to the relevant network (usually under a transmission easement).

In the case of agricultural biogas plants, at this stage of investment realisation, it is also worth ensuring the broadest possible information campaign among the local community regarding the benefits of this type of investment, a detailed presentation of the design of a given investment and clarification of possible doubts related to the safety of the investment so as not to cause unnecessary social disputes at subsequent stages. Therefore, both the local authorities and the local community would need to be consulted before any further action could be taken.

In the next stage, it is already necessary to move on to obtaining the relevant administrative acts enabling the construction of the biomethane plant in question to begin legally. In this respect, it is incumbent upon the investor in a RES installation larger than the equivalent of a 500 kW to take environmental considerations into account in the investment process. Pursuant to Article 75 of EPA, in the course of construction work, the investor carrying out the project is obliged to take into account the protection of the environment in the area where the work is carried out, in particular the protection of the soil, greenery, natural landforms and water relations. If it is not possible to protect natural elements, measures should be taken to remedy the damage caused, in particular through nature compensation. Furthermore, certain investment projects may require a so-called environmental decision and a detailed environmental impact assessment report. Pursuant to Article 71 clause 2 of EPA, a decision on environmental conditions is required for planned:

- projects which may always significantly affect the environment and
- projects likely to have a potentially significant impact on the environment.

The list of projects falling into the two aforementioned categories is contained in the Regulation of the Council of Ministers of 10 September 2019 on projects likely to have a significant impact on the environment (Journal of Laws of 2019, item 1839). According to the aforementioned regulation, such decisions are not listed among the projects which may always have a significant impact on the environment. In the case of projects likely to have a significant potential impact on the environment, agricultural biogas installations should be classified as installations for the production of fuels from plant products (§3 clause 47 of the regulation), or alternatively as waste processing installations other than those specified in §3 point 47 of the regulation, if in addition to agricultural substrates, other substrates having the status of waste will be processed in the biomethane installation (§3 clause 82 of the regulation). Such investments in biomethane installations could potentially require a detailed environmental impact report, provided that the authority in charge of the proceedings determines the obligation to carry out an environmental impact assessment and defines the scope of the report. Alternatively, the authority may also issue a decision stating that there is no need to conduct an environmental impact assessment, and consequently, the entire procedure regarding the environmental impact of such a project ends at the so-called screening stage, the conclusion of which is that the investor does not need to prepare a detailed report on the environmental impact of the project.

Importantly, in both cases, it is also stipulated that projects which may potentially have a significant impact on the environment do not include installations for the production of agricultural biogas within the meaning of Article 2(2) of RESA, with an installed electrical power of no more than 0.5 MW or producing an equivalent amount of agricultural biogas used for purposes other than the production of electricity. This means that such biomethane installations are explicitly excluded from the scope of investments which, even potentially, may require the preparation of a detailed environmental





impact report, and consequently it will not be necessary to obtain an appropriate environmental decision at all.

The next step is to take into account the norms resulting from the zoning rules in the course of the investment and construction process. In this respect, the compatibility of the biomethane plant investment with the provisions of the local spatial development plan is required. The investor should therefore first check whether the local spatial development plan has been adopted at all by the competent municipal council, and only then the possible compliance of the planned investment with these provisions. This plan contains both a descriptive and a graphic part, so for a complete analysis it is necessary to obtain an extract from the local spatial development plan. Examination of this plan will make it possible to establish what development is permitted on the site, the basic parameters of the investment project and to get an idea of how neighbouring areas are developed.

The plan is made available in the locally competent municipality, and pursuant to Article 30 clause 1 of PLDA, any entity without a demonstrated legal interest has the right to inspect the local spatial development and obtain the necessary extracts therefrom. This requires the submission of a properly structured application and the payment of the relevant stamp duty. In doing so, it should be borne in mind that the investor cannot influence the parameters of the local spatial development without amending it, which is a very long and costly procedure. At the same time, in cases where there is a local spatial development plan, it should also be borne in mind that the land to be used for the construction of a biomethane plant must be defined as industrial land and not agricultural land.

In the absence of a valid local spatial development plan for the property in question, an agricultural biogas plant will be able to be constructed on the basis of an individually issued zoning decision specifying the permissible development and use of the property in question, as

referred to in Article 59 of PLDA. The amendment to the rules for issuing a decision on development conditions for RES installations introduced in Article 61 clause 3 of PLDA, introduced very beneficial solutions concerning the lack of necessity to fulfil the so-called good neighbourhood conditions in the scope of the necessity to demonstrate that the real property on which the biogas plant is planned to be located has access to a public road, as well as to demonstrate that at least one neighbouring plot, accessible from the same public road, is developed in a manner allowing for the determination of requirements concerning the new development with respect to the continuation of functions, parameters, features and indices of development and land management, including the overall dimensions and architectural form of buildings, building line and intensity of land use - which undoubtedly significantly facilitates obtaining this type of administrative decision.

The next step is to conclude an appropriate network connection agreement with the relevant energy company performing the tasks of a gas distribution or transmission system operator (hereinafter referred to as: the network company). In the procedure for concluding a network connection agreement, it is crucial to determine the conditions under which the connection will be technically and economically justified. The network company defines these conditions in a document called "connection conditions" by the legislator. They constitute information communicated by the network company specifying the conditions under which the construction of a given connection will be justified under the provisions of Article 7 clause 1 of ELA, which simultaneously results in the obligation to conclude a connection agreement during the term of those connection conditions. This information forms the basis for the start of negotiations shaping the final version of the connection agreement, which is the direct source for the implementation of the connection of a given RES installation to the gas network. It should also be emphasised that, unlike in the case of electricity connections, an application for the determination of

connection conditions does not require the attachment of the relevant decision on development conditions or an extract from the local spatial development plan.

With regard to electricity grids, the institution of an advance payment for the connection agreement paid together with the application for the determination of connection conditions was introduced. It is a remedy to discourage unreliable applicants and to give credibility to the desirability of the planned project. This advance should be reimbursed, after appropriate settlement, in the event that the investment intention is abandoned by the entity applying for the connection of a RES installation. If, however, the investment is continued, in accordance with the purpose of this advance payment, it should be settled with the connection fee itself, the terms of which will be established in the connection agreement negotiated by the parties. In the currently applicable ELA, the legislator does not require the relevant advance payment to be made and documented when submitting the application for the determination of the conditions for connection to the gas network, however, an analysis of the legal regulations planned for introduction (amendments to the ELA) indicates that it may also be introduced in relation to investors in the gas sector.

The legislator has also adopted a number of legal instruments to support the connection of RES installations to the gas network, although these are far less intensified than in relation to twin biogas installations connected to the electricity grid. In this respect, Article 7 clause 1 of ELA indicates that despite the assumption of equal treatment of entities applying for connection to the gas network, RES installations should be connected first. However, the legislator does not specify how the priority of connecting RES installations to the network should be implemented in practice. Hence, it seems that the clarification of this additional criterion will have to take place in the practices adopted by the individual network companies, regulated, for example, in their Grid Codes. Although this obligation has been drafted

by the legislator in very general terms, it seems to oblige network companies to manage their network assets in such a way as to enable RES installations to be connected to the relevant gas network in the first place. Priority consideration of applications for connection conditions for biomethane installations could be a good standard to apply.

The legislator also interferes in a special way with the content of the contractual provisions that must be included in the connection agreement - the basic elements of such an agreement are contained in Article 7 clause 2 of ELA. The mere extension of the network for the connection of installations belonging to those applying for connection to the network is provided by the network company, enabling them to be carried out in accordance with the competition rules also by other undertakings employing staff with relevant qualifications and experience in this field. As a result, the investor is, in principle, only responsible for acquiring the legal title and for constructing the pipeline between the connection point designated by the network company and the place where the biomethane installation is to be located. In this respect, it is important that the parties to the connection agreement clearly define the precise scope of the responsibility of both parties for the investment and the construction of the connection, taking into account the content of the legal provisions in this respect, including the definition of a connection under the System Regulation and well-established case law. Insofar as the network company is responsible for the execution of the connection scope described in the connection agreement, the connection fee related to the connection of sources cooperating with the gas network shall be determined on the basis of the actual expenditure incurred for the connection.

When discussing the investment process for biogas installations, it is also worth mentioning another instrument supporting the connection of RES installations in the form of a preferential network connection fee. Balancing the interests of network companies and

entities applying for the connection of RES installations, the legislator decided to stipulate that only half of the connection fee determined on the basis of actual expenses should be charged for the connection of a RES installation to the electricity grid. These provisions should be qualified as legal solutions to support the generation of electricity from RES, including biogas. Unfortunately, this type of support instrument does not cover biomethane installations that intend to feed gaseous fuel into the gas network. Hence, the economic burden of connecting the biomethane plant to the gas network is borne by the investor.

However, with regard to the production and sale of agricultural biogas, the conditions for feeding biogas into the gas distribution network are particularly important. These conditions not only enable the physical transport of and trade in a gaseous fuel in the form of biogas, but are also an important element for such installations to be covered by an appropriate support scheme. Hence, in the remainder of this memorandum, the quality (physio-chemical) parameters of biogas fuel (biomethane) permitted by the network companies should be subjected to particular legal scrutiny.

## 4.2 Quality parameters of biogas fed into the gas network

A key element related to biogas production and sale is the detailed conditions for feeding biogas into the gas distribution network and, more broadly, into the gas transmission network. These conditions not only enable the physical transport of and trade in a gaseous fuel in the form of biogas but are also an important element for such installations to be covered by an appropriate support scheme.

In this respect, it should also be pointed out that in the previous legal status, there was a *lex specialis* regulation introducing detailed quality parameters only for agricultural biogas fed into the gas distribution network. These parameters were contained in the Biogas Regulation, which was issued on the basis of Article 9a clause 11 of ELA, which, following the entry into force of the RESA, no longer contains a statutory delegation to issue the regulation in question. However, according to interim provisions included in the RESA, the regulation was binding to the date of entry into force of secondary legislation issued on the basis of Article 62 of RESA, however not longer than for the period of 24 months from the date of entry into force of chapter 4 of RESA, i.e. until 1 July 2018. The Biogas Regulation specified in particular quality parameters of agricultural biogas fed to the gas distribution network. In this respect, it should be pointed out that, in principle, they are identical with the quality parameters of gaseous fuels transported through the transmission and distribution gas networks set out in §38 of the System Regulation. The only exception was the maximum Wobbe index range for methane-rich gas, which is between 45.0 MJ/m<sup>3</sup> inclusive and 56.9 MJ/m<sup>3</sup> inclusive in the System Regulation and up to 54.0 MJ/m<sup>3</sup> inclusive in the Biogas Regulation.

The Biogas Regulation also stipulated detailed terms and conditions of connecting agricultural biogas installations to the gas distribution network, which in this respect constituted *lex specialis* in relation to the provisions of Article 7 of ELA.

In this respect, it should also be emphasised that the connection of installations producing biogas other than agricultural biogas to the gas network could take place in accordance with the general rules sets out in Article 7 of ELA, in connection with Article 1 clause 3 of RESA.

However, as already indicated, the current relevant quality parameters for feeding biogas (biomethane) into the gas network are set out in the recently amended System Regulation. The regulation specifies, among other things, the quality parameters of all gaseous fuels, including biogas fed into the gas network, as well as the conditions for connecting production facilities to the network. As far as the quality parameters are concerned, the following physical and chemical properties of biogas fed into the network have been determined:

- hydrogen sulphide content shall not exceed 7.0 mg/m<sup>3</sup>,
- mercaptan sulphur content shall not exceed 16.0 mg/m<sup>3</sup>,
- total sulphur content shall not exceed 40 mg/m<sup>3</sup>,
- mercury vapour content shall not exceed 30.0 µg/m<sup>3</sup>,
- dew point temperature of water at 5.5 MPa shall be:
  - a) from 1 April to 30 September, not more than +3.7 °C,
  - b) from 1 October to 31 March, not more than -5°C.

Moreover, with respect to combustion heat, this parameter shall not be less than 34.0 MJ/m<sup>3</sup> for biogas (biomethane) fed into networks transporting methane-rich natural gas of group E, with a Wobbe index ranging from 45.0 MJ/m<sup>3</sup> inclusive to 56,9.0 MJ/m<sup>3</sup>. The discussed regulation enables also biogas injection into the networks which transport nitrogen-rich gas of subgroups  $L_w, L_s, L_n, L_m$ .

However, key changes to the characteristic physical and chemical parameters were introduced as part of the Regulation of the Minister of Climate and Environment of 6 August 2022 amending the regulation on detailed



conditions for the operation of the gas system (Journal of Laws of 2022, item 1899). The document introduces a number of important changes concerning biomethane. Among other things, the amended regulation defines the quality parameters of gaseous fuels and the technical standards for connection to the grid.

With regard to the technical parameters stipulated by the regulation, it is important to point out the changes introduced in § 38, which defines the quality requirements of gaseous fuels transmitted through gas transmission and distribution networks. The combustion heat parameters indicated in § 38 clause 1 point 6, originally only applicable to natural gas, now cover all gaseous fuels transported through gas networks. In addition, points 7-15 and clauses 1a-1c were added within § 38 clause 1. Clause 1 point 7 specifies a maximum oxygen content of 0.5% [mol/mol] in gaseous fuels fed into the network, with the above requirement not applying to gaseous fuels for which:

- the dew point temperature of the water in the area of the gas network into which the gaseous fuel is fed is greater than  $-8^{\circ}\text{C}$ ;
- this fuel will be the fuel source for the storage facility - for which the oxygen content in the gaseous fuel should not exceed 0.2% [mol/mol].

Subsequently, § 38 clause 1, added points 8 to 16 for gaseous fuels transported through transmission and distribution networks specify as follows:

- the carbon dioxide content should not exceed 3.0% [mol/mol];
- dust content with a particle diameter greater than  $10\ \mu\text{m}$  should not exceed  $1.0\ \text{mg}/\text{m}^3$ ;
- the total siloxane content should not exceed  $0.3\ \text{mg}/\text{m}^3$
- converted into silicon;
- the relative density should be not less than 0.555 and not more than 0.700;
- the hydrogen content should not exceed 0.0% [mol/mol];
- the carbon monoxide content should not exceed 0.1%

[mol/mol];

- the content of chlorine compounds (as total chlorine) should not exceed  $1.0\ \text{mg}/\text{m}^3$ ;
- the content of fluorine compounds (as total fluorine) should not exceed  $10.0\ \text{mg}/\text{m}^3$ ;
- ammonia content should not exceed  $2.0\ \text{mg}/\text{m}^3$ .

By adding clauses 1a-1c in § 38, the legislator has clarified the way in which the quality parameters established in the paragraph in question are determined. Consequently, in accordance with the regulation, it is permissible for the quality parameters defined in § 38 clause 1 to be exceeded to the extent resulting from the permissible measurement error of the instrument of the metering and billing system. In the above regard, it was also indicated that the quality parameters for gaseous fuels including hydrogen sulphide, mercaptan sulphur and total sulphur should be determined prior to the conversion process.

Under the added provisions, where metering equipment, facilities and networks are adapted for the transmission of gaseous fuels with a higher hydrogen content in such a way as to ensure the safety of end user equipment, a hydrogen content in gaseous fuels other than that set out in clause 1 point 12 is allowed, but not exceeding 10% [mol/mol].

Through amendments to § 38 clause 5, the catalogue of gaseous fuels with parameters other than those set out in § 38 clause 1 and 3 that can be supplied by an energy company engaged in the transmission or distribution of gaseous fuels at the customer's request has been extended. Consequently, the provision of § 38 clause 5 covers not only natural gas, but also other gaseous fuels. This possibility, until now, has only been conditional on there being no disruption to the gas system. Now, as a consequence of the amendments in question, in order for the supply of gaseous fuel with quality parameters other than those specified in the regulation to be lawful, it must not result in the deterioration of the conditions for the supply of gaseous fuel to other customers and the deterioration of the quality parameters of that fuel.

As part of the amendments within § 38, clauses 7a to 7b have also been added specifying the obligations of energy companies involved in the production of biomethane with regard to the frequency of testing of the quality parameters indicated in § 38 clause 1. Testing of the aforementioned parameters is carried out by the company at the entry points to the transmission or distribution system (§ 38 clause 7a). The company is obliged to communicate the results of the measurements to the gas system operator (transmission or distribution). If the result of the measurement indicates an irregularity in the parameters tested, it is incumbent on the biomethane energy company to repeat the test immediately, and if the second test shows that the quality parameters are not met, the operator shall suspend the offtake of the gaseous fuel (§ 38 clause 7b). The frequency of the relevant tests, which stipulate their lowest frequency of "at least once every...", may also prove problematic, which may mean that network companies will require them to be carried out at a higher frequency, with consequent increases in operating costs.

An undoubtedly significant change in the scope of the regulation in question is also the assignment to the entity feeding biomethane of the responsibility for ensuring the quality parameters required by the operator at the entry point to the gas system (§ 39 clause 3). According to the previous wording of the provision § 39 clause

2, if the quality parameters for gaseous fuels specified in § 38 were not met, an energy company engaged in the transmission or distribution of gaseous fuels could refuse to accept such fuels for transmission. Under the amendments in question, this possibility of refusal applies to the acceptance of fuels for the purpose of transmission or distribution. It should be noted, however, that the company loses the above-mentioned possibility of refusal, if by providing an additional service, it achieves the quality parameters specified in § 38 for these fuels.

It is also worth pointing out the technical requirements for the connection of biomethane facilities to the gas network in point 4.3 of the appendix to the regulation.

As part of the changes introduced within the aforementioned section, an obligation has been imposed on an energy company involved in the production of biomethane to install a gaseous fuel quality testing facility and a reversing facility to return biomethane with inappropriate parameters to its generator (point 4.3.3.). In addition, point 4.3.1. lays down the obligation to install equipment for adapting the parameters of biomethane to the quality parameters of gaseous fuels indicated in § 38 of the regulation, with equipment for increasing the calorific value of biomethane being specified within the above scope. In terms of compression facilities allowing biomethane to be injected into the network at a higher pressure, in accordance with point 4.3.2. they shall be installed at the connection point. An exception to this obligation is the case where the distribution system operator specifies in the connection conditions that the construction of the aforementioned installation is not necessary.

The Regulation of the Minister of Climate and Environment of 6 August 2022 amending the regulation on detailed conditions for the operation of the gas system modifies the existing rules of the gas system in a way that is important from the perspective of the development of the biomethane sector. The document in question, among other things, by adapting the provisions of the regulation to the use of gaseous fuels other than natural gas in the gas system, or by specifying the obligations of an energy company producing biomethane, allows the use of biomethane to a wider extent.

However, the above provisions mean that, under the current System Regulation, the quality parameters of gaseous fuels transported via gas transmission and distribution networks are therefore identical to those (apart from the specific parameters indicated in §38 clause 1 points 8 to 16) that biogas (biomethane) must meet. On the one hand, this means that the legislator does not assume any lowering of the quality standards for biogas production injected into the gas network in relation to natural gas transported through it, but on the other hand, due to the identical quality parameters of purified biogas (biomethane) and natural gas, this enables the transport of such biogas using all the elements of the gas network. This means that a RES installation producing biogas, having met all the indicated parameters, can be effectively connected to the gas distribution network, and then the buyer of this gas fuel can effectively transport the produced both via the distribution networks and the transmission networks.

In conclusion, however, it should be pointed out that the System Regulation does not require biogas fed into the gas network to be purified to the parameters of E-type methane-rich gas, and it also allows biogas with a lower degree of combustion heat to be fed into the network. In this context, possible solutions are:

- 1) connection of the biomethane installation to the existing gas network managed by one of the DNOg or
- 2) construction of own gas network together with the assumption of the role of DNOg on that network, or designation of another entity performing the tasks of DNOg on behalf of the network owner.

The option of constructing one's own network, although it involves additional investment outlays, is advantageous since it makes it possible to set individualised physical and chemical parameters of the gaseous fuel fed into the network, within the framework of the standards admissible under § 38 of the System Regulation.



## 4.3 Obligation to offtake biogas fed into the gas network

In this context, the basic legal regulation is indicated in Article 118 of RESA, which states that the DNOg within its area of operation offtakes biogas or agricultural biogas which meets the quality parameters for gaseous fuels fed into the network, set out in regulations issued pursuant to Article 9 clause 1 and 2 of ELA, produced in a RES installation directly connected to the network of this operator. The indicated provision in fact duplicates the earlier regulations concerning agricultural biogas indicated in Article 9c clause 6a of ELA, although its disposition also covers the necessity to offtake biogas fed into the gas network other than agricultural biogas. In this regard, it is worth emphasizing unequivocally that this obligation only applies to energy companies carrying out the tasks of DNOg and no longer applies to the transmission system operator. The obligation to offtake the produced biogas is also inextricably linked with the obligation to conclude an agreement for the connection of the installation to the gas network referred to in Article 7 of ELA, as the installation must be directly connected to the gas network of the DNOg which fulfils the obligation in question. In this respect, it should also be recalled that installations producing biogas other than agricultural biogas do not constitute a RES installation as referred to in Article 2 clause 13 of RESA (see point 2 of this chapter). In light of the above, *de lege ferenda* it would be advisable to propose to the legislator that Article 118 of RESA be expanded to state that this obligation applies to biogas facilities connected directly to the network of a particular DNOg. This would make it possible to extend this obligation to other installations which produce biogas other than agricultural biogas, e.g. biogas from wastewater treatment plants, which has an important development potential in terms of feeding biogas into the gas network. An alternative solution would be to change the legal definition of the term RES installation contained in Article 2 clause 13 of RESA, which would cover all facilities used for biogas production, and not - as in the current legal state - only for the production of agricultural biogas.

The above-mentioned regulations are, therefore, an implementation of legal solutions presented in Directive 2009/73 as well as RED I and RED II, which constitute a guarantee of offtaking any quantity of biogas or agricultural biogas injected into the gas distribution network, fulfilling at the same time relevant quality parameters set out in proper secondary legislation. In this respect, the Polish legislator has also implemented solutions which make it possible to limit the need to offtake agricultural biogas due to a failure to comply with technical quality parameters and safety standards, which may, however, currently result in operators



making too extensive use of the premise of a failure to comply with these parameters and standards to refuse to offtake biogas.

The relevant quality parameters allowing for injecting agricultural biogas into the gas distribution network were already described in point 4.2 of this chapter. Therefore, having regard to the legal norm resulting from Article 118 of RESA, it should be pointed out that only a biogas producer's failure to meet the above-mentioned quality parameters is the only basis for refusing to offtake such gaseous fuel from an installation connected directly to the network of a particular DNOg. Therefore, if a producer meets the biogas quality parameters described above, and the relevant DNOg refuses to accept such biogas and at the same time prevents the

transport of such gaseous fuels, the operator shall be subject to a fine imposed by the President of the Energy Regulatory Office on the basis of Article 56 clause 24 of ELA or on the basis of Article 168 clause 7 of RESA.

However, studies conducted on the physicochemical properties of biogas in its unprocessed form (without purification) show that, as a rule, it does not meet the quality requirements imposed by the relevant provisions of secondary legislation (see J. Holewa, E. Kukulska-Zajęc, M. Pęgielska, *Analiza możliwości wprowadzania biogazu do sieci przesyłowej*, *Nafta-Gaz* 8/2012, pp. 524-529; M. Wiśniecka, J. Holewa-Rataj, E. Kukulska-Zajęc, *Analiza możliwości wprowadzania biogazu do sieci gazu ziemnego*, *Instal* 11/2016, pp. 38-42; W. Kostowski, K. Górny, *Analiza możliwości mieszania biogazu z gazem ziemnym z uwzględnieniem limitów wymaganej jakości gazu sieciowego*, *Instal* 3/2010, p. 18). Therefore, the most important condition for feeding biogas into the gas network is to bring its physicochemical parameters to a level that corresponds with the parameters of the gas network.

In this context, it should also be emphasised that the obligation on the DNOg to offtake biogas with the above-mentioned technical parameters should not be equated with an obligation to purchase concerning for instance heat from RES (Articles 116 and 117 of RESA). This means that a biogas producer can inject a certain amount of biogas into the gas network, although in order to sell that gaseous fuel, it needs to find an entity on the market willing to buy that biogas and use it for its own needs (end user) or an energy company trading in gaseous fuels. In view of the above, the indicated provisions require DNOg only to physically offtake the biogas in question and to enable the provision of distribution (transport) services for that biogas. In this context, it is extremely important to find a biogas customer who, taking into account both the material value of biogas (gaseous fuel) and the intangible value of biogas (RES fuel), will ensure the economic viability of the investment in the renewable gas installation.



# 5

## 5. SUPPORT SCHEMES FOR AGRICULTURAL BIOGAS PRODUCTION

In the context of the terminological considerations included in points 1 and 2 of this chapter, it should be pointed out that the relevant support schemes and instruments regulated in the RESA can apply to RES installations generating electricity from different categories of biogas (the so-called biogas installation), as well as installations whose activity is based solely on the production of agricultural biogas fed into the gas grid (the so-called biomethane installation) - it is postulated to expand it to other categories of biogas, including in particular the biogas originating from wastewater treatment plants. In this respect it should be pointed out that biomethane installations producing gaseous fuel in the form of agricultural biogas fed into the gas distribution network can potentially benefit from two support instruments in the form of:

1. certificates of origin for agricultural biogas, as well as
2. newly introduced dedicated RES auctions, where the subject of support will be the equivalent amount of electricity resulting from the conversion of agricultural biogas.

Therefore, anticipating some further considerations, it will be sufficient at this stage only to point out that the Polish legislation allows the support instrument to be extended only to installations producing agricultural biogas and feeding it only into the gas distribution network. At this point, it is still necessary to point out that significant changes are planned in this respect, which are discussed in point 8 of this chapter. The project is expected to address, among other areas, biomethane, clusters, guarantees of origin and support for the oldest RES installations, which could continue the support period.

### 5.1 Equivalent amount of electricity converted from biogas fed into the gas network

However, before we move on to a detailed discussion of the existing support instruments, a legal analysis should be made of the detailed provisions concerning the possibility of confirming data on the production of agricultural biogas fed into the gas distribution network. The statutory delegation to issue the regulation in question is contained in Article 62 of RESA, which, as already indicated, is to replace the existing Biogas Regulation. That regulation expired by operation of law on 30 June 2018, and new secondary legislation based directly on the statutory delegation contained in the provisions of the RESA should be

issued by that date. However, the scope of the statutory delegation to issue the two regulations is not identical. The potential regulation issued on the basis of Article 62 of RESA, due to the limitation of the authorisation to issue secondary legislation, does not, unlike the existing Biogas Regulation, stipulate in a detailed manner such issues as quality parameters for agricultural biogas fed into the gas distribution network, or the conditions for connecting agricultural biogas installation to the gas distribution network. Although these elements were included in the original provisions of the RESA, they were removed in the course

of further amendments, introducing the need to apply *lex generalis* norms contained in the System Regulation (work is currently underway to amend it). In the course of the reform of the system of support for biogas fed into the gas network, it is postulated *de lege ferenda* that these elements should be reintroduced into the statutory delegation enabling the issuance of secondary legislation.

In the current legal status, pursuant to Article 62 of RESA, the minister competent for climate issues should specify, by way of a regulation, the detailed scope of the obligation to confirm the data concerning agricultural biogas fed into the gas distribution network, including:

- a) requirements concerning the measurement, recording and calculation of the amount of agricultural biogas produced,
- b) place of measurement of the amount of produced agricultural biogas for the purpose of the performance of the obligation to confirm the data referred to in Article 49 clause 4 of RESA,
- c) the manner of converting the amount of generated agricultural biogas into the equivalent amount of electricity generated in renewable energy source installations for the purposes of the fulfilment of the obligation referred to in Article 52 clause 1 of RESA;

- taking into account the need to ensure the security of the gas system operation, the available technologies for the production of agricultural biogas and the need to establish the amount of such biogas. Unfortunately, as at the date of drafting this analysis, the minister competent for climate issues has not decided to introduce this secondary legislation, creating a legal loophole that makes it *de facto* impossible to use support instruments for agricultural biogas fed into the gas distribution network. However, it should be pointed out that relevant work was carried out, which was manifested, for instance, by presentation for internal consultation with the biogas industry of a draft regulation of the Minister of Energy on the detailed scope of the obligation to confirm data on the amount of agricultural biogas produced in a renewable energy source installation, in the version dated 12 June 2018.

In the context of this statutory delegation to issue a regulation, it is crucial to determine the method of converting the amount of produced agricultural biogas into an equivalent amount of electricity generated in RES installations. However, having regard to the above-mentioned draft regulation of the Minister of Energy dated 12 June 2018, it should be indicated that it was envisaged to maintain the current pattern with regard to the principle of calculating the amount of produced agricultural biogas converted into an equivalent amount of electricity possible to be produced in RES installations. Consequently, the current Biogas Regulation provided the following formula for calculating the equivalent amount of electricity converted from agricultural biogas:

$$E_{OZEekw} = \sum_{i=m}^n (M_i \cdot r_i) \cdot \eta$$

whereas the symbols mean the following:

- $E_{ozeekw}$  - amount of electricity which can be generated from renewable energy sources equivalent to the produced agricultural biogas fed into the gas distribution network [MJ],
- $N$  - amount of batches of agricultural biogas fed into the gas distribution network
- $M$  - designation of subsequent batch of agricultural biogas fed into the gas distribution network
- $M_{bri}$  - amount of agricultural biogas fed into the gas distribution network in individual batches [m<sup>3</sup>], with specified calorific value measured by means of the measurement and settlement device,,
- $r_i$  - actual calorific value of a particular batch of agricultural biogas fed into the gas distribution network [MJ/m<sup>3</sup>],
- $D$  - reference value of efficiency for separate electricity generation in a unit using agricultural biogas ( $\eta = 52.5\%$ ).

## 5.2 Certificates of origin for agricultural biogas

Firstly, it has to be pointed out that gaseous fuel in the form of agricultural biogas fed into the gas distribution network can be granted certificates of origin of agricultural biogas referred to in Article 48 clause 1 of RESA. Therefore, this instrument constitutes the basic mechanism of operational support for agricultural biogas plants, which in addition to the sale of biogas injected into the gas network can also obtain revenues from the sale of property rights arising from certificates of origin of agricultural biogas (the so-called brown certificate).

Before commencing the activity in question, the entrepreneur must obtain an officially confirmed incentive effect, in which the President of the Energy Regulatory Office on the basis of a technical and economic description of the proposed investment project states whether the proposed project would be implemented if the entrepreneur were not entitled to certificates of origin for agricultural biogas, determining additional revenues connected with their sale. Moreover, an entrepreneur can obtain certificates of origin of agricultural biogas only if agricultural substrates, described in Article 2 clause 2 of RESA, were used to produce agricultural biogas. The last formal condition leading to the acquisition of a certificate of origin of agricultural biogas is the need to submit a properly constructed application to the President of the ERO, which can only be submitted via an appropriate DNOg in whose area of operation the particular agricultural biogas plant is located. Certificates of origin of agricultural biogas are granted for the period of 15 consecutive years counting from the date of first production of agricultural biogas, however not longer than until 31 December 2035. In this respect one should remember that the first production of agricultural biogas can take place already during technological commissioning of a particular agricultural biogas plant.

The next part should consider the rules of functioning of the mechanism ensuring demand for the purchase of property rights arising from the certificates of origin of agricultural biogas. The mechanism is based on the

obligation set out in Article 52 clause 1 of RESA which requires certain entities to obtain certificates of origin or certificates of origin of agricultural biogas and submit them to the President of the ERO for redemption, or to pay an appropriately calculated substitution fee. This obligation is carried out by entities described in detail in Article 52 clause 2 of RESA, which will be hereinafter referred to as obliged entities. The above obligation is deemed fulfilled if for a given year the sum of energy resulting from redeemed certificates of origin, the equivalent amount of electricity resulting from redeemed certificates of origin of agricultural biogas, or from the payment of the substitution fee corresponds to the specified limits, as indicated in Article 59 clause 1 letter a-e and clause 2 letter a-e of RESA. Therefore, the mechanism of trading in agricultural biogas certificates of origin is part of an existing and well-known support system in the RES industry, which is based on trading in green certificates. Nevertheless, the amendments introduced in this respect to the provisions of law concern in particular the scope of the obligation to redeem the indicated certificates and its detailed division into percentage shares of particular certificates of origin fulfilling this obligation.

The key change introduced as of 1 July 2016 is the excluding from the obligation to obtain and present certificates of origin to the President of the ERO for redemption of a separate division into a so-called "green obligation" traditionally implemented through certificates of origin (the so-called green certificates), as referred to in Article 59 clause 1 of RESA, and the so-called "blue obligation" which requires a separate purchase of certificates of origin for electricity originating exclusively from agricultural biogas plants, as referred to in Article 59 clause 2 of RESA (see *Information of the President of the ERO of 17 October 2016 no. 54/2016 concerning fulfilment of the obligation to obtain and present for redemption certificates of origin or certificates of origin of agricultural biogas or to pay the substitution fee for 2016, pp. 3-10*).



At the same time, the legislator unequivocally determined the proportions between the two obligations, indicating that by 2022 the obligation to acquire certificates of origin and submit them for redemption to the President of the ERO shall be deemed fulfilled if the quantitative share of the total amount of electricity resulting from the redeemed certificates amounts to 18.5% with respect to the “green obligation” and 0.5% with respect to the “blue obligation”, which has already occurred in relation to the green obligation which in both 2020 and 2021 amounted to 19.5%. For 2023, this obligation has been reduced to 12% and 0.5% respectively. However, in accordance with Article 60 of RESA, the minister competent for climate issues may, by way of a regulation, change the size of this percentage for subsequent calendar years. A consequence of separating a special obligation only for agricultural biogas plants is the amendment to Article 44 clause 1a of RESA which requires that certificates of origin be issued separately for electricity generated from agricultural biogas and from renewable energy sources other than agricultural biogas.

Without going too deeply into the inter-temporal provisions (which could be the subject of a separate study in their own right), it should be noted that starting from 1 July 2016, obliged entities should fulfil the so-called “blue obligation” to the extent indicated above through legal instruments such as certificates of origin confirming the production of electricity from agricultural biogas after 30 June 2016 (the so-called blue certificates) or through an equivalent amount of electricity resulting from certificates of origin of agricultural biogas (the so-called brown certificate) referred to in Article 48 of RESA or, alternatively, through payment of a properly calculated substitution fee.

From the perspective of this study, the most interesting issue is the possibility of fulfilling the “blue obligation” by presenting certificates of origin of agricultural biogas to the President of the ERO for redemption issued to agricultural biogas plants feeding biogas into the gas network. Pursuant to Article 59 clause 2 of RESA, biogas plants which produce agricultural biogas only, fulfil the “blue obligation” in the equivalent amount of electricity resulting from the certificates of origin of agricultural biogas. This means that issued certificates are converted into

the equivalent of electric energy which can be generated in renewable energy sources according to the formula described in §7 of the Biogas Regulation. In this respect the volume of biogas fed into the gas network, the calorific value of this biogas and a reference efficiency value of 52.5% are taken into account. Therefore, obtaining certificates of origin of agricultural biogas redeemed for the ‘blue obligation’ corresponds to the equivalent amount of electricity calculated in accordance with the above-mentioned formula for agricultural biogas not used to produce electricity but injected into the gas distribution network.

When analysing the demand of obliged entities for so-called “brown certificates” (certificates of origin for agricultural biogas) shaped by the legislator, it should also be pointed out that the possibility of creating RES installations generating electricity from agricultural biogas that generate the so-called “blue certificates” can only be obtained by producers operating biogas plants that were put into operation before 1 July 2016. As a result, there is a limited number of them, and what is more, in the current legal state there can be no more such RES installations which could provide the alternative certificates of origin desired by obliged entities. Certificates of origin of agricultural biogas (the so-called brown certificates) can also be obtained by newly designed agricultural biogas plants injecting biogas into the gas network, for which the maximum support period is limited to 31 December 2035.

In this respect it should also be pointed out that the perspective for investments in newly designed agricultural biogas plants that wish to take maximum advantage of the period to which they are entitled to obtain certificates of origin for agricultural biogas ended on 1 January 2020. If a technological commissioning (i.e. first production of agricultural biogas) of a proposed biogas plant is commenced after that date, such an installation will be able to obtain certificates of origin of agricultural biogas, but for a shorter period of time, limited to 31 December 2035. Therefore, taking into account the limited number of currently operating agricultural biogas plants generating electricity and the possibility of organising separate RES ‘migration’ auctions for them, it should be pointed out that the fulfilment of the “blue obligation” in the coming



years will be largely based on trading in agricultural biogas certificates of origin (the so-called brown certificates) referred to in Article 48 of RESA, generated by agricultural biogas plants connected to the gas distribution network.

Furthermore, when analysing the issue of demand for agricultural biogas certificates of origin, it is necessary to point to very favourable regulations included in Article 47 clause 2 of RESA. This provision indicates that entities obliged to fulfil both the “green obligation” and the “blue obligation” are first obliged to obtain and present for redemption property rights resulting from certificates of origin and certificates of origin of agricultural biogas. Therefore, in accordance with this provision, the obliged entity first performs the above-mentioned obligations by obtaining and submitting for redemption relevant certificates if any of the weighted average prices of property rights resulting from these certificates is lower than the value of a unit substitution fee determined in Article 56 of RESA. In view of the above, obliged entities may pay a substitution fee, thus fulfilling the obligations arising

from Article 52 clause 1 in connection with Article 59 clause 1 and 2 of RESA only if the weighted average price of property rights arising from, for instance, certificates of origin of agricultural biogas is higher than the unit substitution fee, i.e. PLN 300.03/MWh. Further, Article 47 clause 7 of RESA indicates that despite the existence of grounds to fulfil the obligation by redemption of certificates of origin of agricultural biogas (the so-called brown certificates) or relevant certificates of origin confirming generation of electricity in an agricultural biogas plant (the so-called blue certificates), the obliged entity may pay a substitution fee also in the event it demonstrates that it submitted orders to buy property rights arising from such certificates in session transactions, but due to the lack of sales offers it was unable to purchase any rights during six sessions from the beginning of the calendar year to 31 May of the following year, in an appropriate amount determined for a given year (currently 0.5%) - lack of sufficient supply of particular certificates. Thus, as a rule, when the price of certificates of origin of agricultural biogas available on the market stays below the unit substitution fee price - PLN 300,03/MWh, obliged entities will not be able to meet the obligation by paying the substitution fee and therefore they will maintain demand for, among others, certificates of origin of agricultural biogas at a fairly stable level, close to the amount indicated above.

Summing up the previous discussion concerning the instrument of certificates of origin of agricultural biogas (the so-called brown certificate), it should be pointed out that the legislator intends to carry out a detailed reform of the support system for agricultural biogas fed into the gas network, which is also connected to the lack of notification of this support instrument by to the European Commission. In view of the above, one may be tempted to conclude that this instrument will be gradually phased out and replaced with new support instruments, and the failure to issue appropriate secondary legislation enabling the receiving of these certificates only confirms the presented thesis. Irrespective of this, the main drawbacks of this support instrument include the lack of stability associated with the level of demand for such certificates, as determined annually by the minister competent for energy.

## 5.3 RES auctions for agricultural biogas

The second currently available instrument for supporting agricultural biogas fed into the gas distribution network is the possibility of using the RES auction instrument regulated in Articles 71-93 of RESA. Hence, a producer generating agricultural biogas on separable alternative basis has the possibility to choose agricultural biogas support instrument in the form of certificates of origin of agricultural biogas or a RES auction for agricultural biogas - according to the rules and volumes of a RES auction, with the reservation that each of those instruments requires the production of gaseous fuel in the form of agricultural biogas and feeding it into the gas distribution network.

Pursuant to the binding solutions contained in Article 73 clause 3b of RESA, RES auctions for agricultural biogas plants, referred to in clause 3a point 3, also cover the sale of agricultural biogas produced in a renewable energy source installation and fed into the gas distribution network. This means that RES auctions dedicated to installations using only agricultural biogas to generate electricity also include the sale of that biogas, provided that it has been fed into the gas distribution network. As a result of the above, the subject of the auction for the sale of electricity generated from agricultural biogas in RES installations is much broader than the sale of this electricity only, as it also covers the sale of gaseous fuel in the form of agricultural biogas, which according to the secondary regulations issued on the basis of Article 62 of RESA will be converted into the equivalent amount of electricity resulting from this biogas.

The rules of the auction System Regulated in Article 71-93 of RESA also apply respectively to biomethane auctions, which in particular require a pre-qualification procedure, submission of a properly calculated auction bid, as well as accounting for the declared level of

equivalent volume of electricity converted from agricultural biogas fed into the gas distribution network. This thesis is also confirmed by the detailed provisions contained in the Auction Regulations for the sale of electricity generated in RES installations, which in §12 clause 7 also provides for the possibility to make an auction bid equivalent to the amount of electricity converted from agricultural biogas fed into the gas network.

In this context it should be pointed out that pursuant to Article 184h clause 1 of RESA, biomethane installations will compete in RES auctions with electricity biogas plants within the reference prices and volumes provided for this type of RES auctions, with the reservation that biomethane installations will, as a rule, be accounted for with a higher coefficient of the equivalent amount of electricity converted from agricultural biogas, expressed in MWh, than classic electric agricultural biogas plants, which will significantly increase the revenue projected for a reference agricultural biogas plant with an installed capacity equivalent to 1 MW. It should also be emphasised that, in accordance with the latest legislation, the Council of Ministers will set the volume of electricity to be auctioned at RES auctions for the individual years 2022-2027 by means of a regulation, with any adjustments to these assumptions made as part of an amendment to the secondary legislation only allowed to be made upwards, i.e. as part of an increase in the available volume. Moreover, according to Article 77 clause 6 of RESA, reference prices determined for RES installations, referred to in clause 5 point 1, 6 and 7, are applied accordingly to RES installations in which agricultural biogas is produced and fed to the gas distribution network, taking into account the method of converting the amount of produced agricultural biogas into an equivalent amount of electrical energy set out in regulations issued pursuant to Article 62 of RESA.

In this respect, the support system for biogas fed into the gas distribution network would be linked to electricity prices, which would naturally relate the level of its support (additional state aid) to the alternative use of this type of gaseous fuel in the form of agricultural biogas for cogeneration purposes (the so-called CHP) and transport electrification (electromobility). Consequently, the average electricity prices quoted in the TGeBase index (PLN/MWh) would be the benchmark price for the settlement of the negative balance for the equivalent volume of electricity resulting from the conversion of agricultural biogas fed into the gas distribution network, pursuant to Article 93 clause 2 point 3 of RESA. Therefore, if electricity prices fall due to RES development, the support for biomethane installations will be related to this and will also possibly decrease together with the TGeBase index.

Moreover, as already indicated in point 4 of this chapter, legislative work is in progress to introduce appropriate secondary regulations to ensure the implementation of the provisions of the act enabling the conversion of the equivalent volume of electricity from agricultural biogas fed into the gas distribution network. First and foremost, there is a draft regulation of the Minister of Energy regarding the detailed scope of the obligation to confirm data on the produced agricultural biogas fed into the gas distribution network, which maintains the current formula regarding the principle of calculating the amount of produced agricultural biogas converted into an equivalent amount of electricity possible to be produced in a renewable energy sources. Alternatively, the proposal to introduce this formula for calculating the equivalent amount of electricity directly into the provisions of the RESA is also considered, which will further strengthen the stability of these provisions. The introduction of these provisions is necessary for the effective operation of biomethane installations which, based on the current legislation, would possibly be contracted under auctions held in next calendar years.

In 2022, the Regulation on reference prices also set the maximum level of support available in the RES auction for installations using agricultural biogas. Pursuant

to Article 77 clause 6 of RESA, the respective prices for biomethane installations are PLN 785/MWh for installations corresponding to an installed electrical capacity of less than 500 kW; PLN 715/MWh for installations corresponding to an installed electrical capacity of not less than 500 kW and no more than 1 MW; and PLN 700/MWh for installations corresponding to an installed electrical capacity of more than 1 MW. These prices will therefore constitute the maximum level of the reported auction prices for biomethane installations in the auction in 2022. It is also worth noting that the Regulation on reference prices also provides for higher prices for biogas facilities generating electricity from high-efficiency cogeneration, which perversely makes biomethane facilities more competitive than cogeneration biogas plants in the direct competition of these RES installations in the relevant auction baskets referred to in Article 73 clause 3a in connection clause 3b and in connection with clause 4 of the RESA. In other words, a biomethane installation, due to the fact that it will be able to submit a lower reference price, will be able to effectively contract the submitted equivalent amount of electricity converted from agricultural biogas as long as biogas cogeneration plants refer to the higher level of their reference price.

Taking into account the reference prices applicable in 2022 and assuming that the current formula for calculating the equivalent amount of electricity is maintained, a sample revenue model can be calculated for a reference biomethane installation corresponding to 1 MW of installed electrical capacity submitted to this year's RES auction.

## Biogas reference plant data

**2,100,000 m<sup>3</sup>**

annual production of purified agricultural biogas  
(biomethane)

**38 MJ/m<sup>3</sup>**

actual calorific value of an individual  
batch of agricultural biogas

Naturally, the standards of agricultural biogas fed into the network depend on the particular technology and the gaseous fuel purification standards used. The parameters of individual batches will be determined by measurement and settlement devices installed at the point of connection of the agricultural biogas plant to the gas distribution network.

Based on the reference data indicated above, the equivalent amount of electricity resulting from agricultural biogas fed into the gas distribution grid can be calculated as follows:

$$(2,100,000 \text{ m}^3 * 38 \text{ MJ/m}^3 * 0.525) : 3600$$

$$= 11\ 637 \text{ MWh}$$

The calculated value represents the annual electricity equivalent resulting from the conversion of agricultural biogas entering the gas distribution network, which will then form the basis for the calculation of the negative balance.

The calculated equivalent can be submitted to RES auctions and will be supported as part of the auctioned price, which, however, has to be reduced by the average electricity price component (TGeBase index PLN/MWh). An additional revenue element will be the sale of gaseous fuels produced in the agricultural biogas plant. However, given the drastic increase in the price of electricity used in this model to calculate the eventual surcharge for the equivalent amount of electricity, this makes these settlements completely uneconomic. As a result, the model as currently constructed is not in line with market conditions and, due to the large increase in electricity prices, does not provide support for agricultural biogas installations wishing to feed it into the gas network.

*De lege ferenda*, assuming no broader reforms are carried out, it should also be postulated that the above legal instrument providing support for the production of gaseous fuels from RES should also cover another biogas originating from biomass, which from a technological point of view can be fed into the gas network on similar terms as agricultural biogas. This refers to the production of gas in the process of processing biodegradable waste other than agricultural waste, which will also allow for the production of biogas with quality parameters adapted to the operating parameters of the gas network. In the current legal status, the Polish legislator has not decided to support economic activity concerning the production of gaseous fuels from other substrates than those indicated in Article 2 clause 2 of RESA (agricultural biogas), which undoubtedly has a negative impact on the optimum level of utilisation of energy resources available in Poland for the production of gaseous fuels. In particular, it regards large amounts of biogas generated at wastewater treatment installations, which in the current legal status, despite being injected into a gas distribution network, cannot count on being covered by available support instruments dedicated solely to RES installations producing agricultural biogas injected into such a gas network.

# 6

## 6. INVESTMENT AID TO SUPPORT THE CONSTRUCTION OF BIOMETHANE INSTALLATIONS

### 6.1 Grants and preferential loans

Instruments to subsidize the establishment of biogas or biomethane production installations are part of a number of support programmes in Poland in the coming years. In the nearest future, the sources of funding for such initiatives are two main pools of funds:

1. the first comes from the European Regional Development Fund, which finances operational programmes implemented at two levels:
  - a. nationwide - the so-called operational programme European Funds for Infrastructure, Climate, Environment 2021-2027 (FEnIKS),
  - b. regional - the so-called regional operational programmes, such as the European Funds for Green Wielkopolska;
2. the other comes from the Reconstruction and Resilience Facility, which funds the National Recovery Plan.

Subsidizing is provided for under operational programmes financed by the European Regional Development Fund, while loan support will be provided under the National Recovery Plan. At the time of drafting the Memorandum, detailed assumptions regarding calls for applications for the above-mentioned support instruments and the specific conditions associated with them are not known, but the assumptions contained therein allow us to indicate key information.

#### Subsidies

The primary tool for supporting biogas installations in the coming years will be FEnIKS Specific Objective 2.2: Supporting renewable energy:

- a) Area of support: stimulating the creation of new installations for the production of electricity, installations for the production of heat and the production of alternative fuels from RES, together with energy storage facilities operating for the RES source and connection to the grid. There are currently no restrictions on the properties of the installation.
- b) Key application evaluation criteria: cost-effectiveness (value of subsidy per 1MWh/1MW of energy) and environmental goals (reduction of CO<sub>2</sub> emissions).
- c) Funding pool (2021-2027):

#### I. Biomass

**less developed regions (<75% of average EU-27 GDP): EUR 74,117,647.00,**

**regions in transition period (75%<x<100% of average EU-27 GDP): EUR 10,588,235.00,**

**more developed regions (>100% of average EU-27 GDP): EUR 5,294,118.00;**

## II. Biomass with high levels of greenhouse gas reduction

**less developed regions (<75% of average EU-27 GDP): EUR 14,000,000.00,**

**regions in transition period (75%<x<100% of average EU-27GDP): EUR 2,000,000.00,**

**more developed regions (>100% of average EU-27 GDP): EUR 1,000,000.00.**

Support instruments unrelated to direct financing of biogas/biomethane facilities but conducive to the development of the biogas sector in Poland, will be FEnIKS Specific Objective 2.1: "Supporting energy efficiency and reducing greenhouse gas emissions" focused on supporting investments in the district heating sector, where the use of biogas facilities in generating units will be one of the elements taken into account when granting support (allocation: over EUR 1 billion). A further enabling instrument is Specific Objective 2.3 of FEnIKS: "Development of intelligent energy systems and networks and energy storage systems outside the Trans-European Networks for Energy (TEN-E)" providing subsidies for the expansion, redevelopment, reassignment and modernization of gas transmission and distribution networks to adapt them for the transmission of biomethane among other things, allocation: (over EUR 1 billion).

In addition, support mechanisms have been provided for within the framework of regional operational programs, for example, the operational programme for the Lower Silesia region for 2021-2027 provides for more than EUR 4 million, for the Pomerania region more than EUR 8 million, for the Wielkopolska region more than EUR 6 million, and for Mazovia: EUR 16 million. Some operational programmes stipulate that support will apply to small installations (Pomerania, Lower Silesia), i.e. installations of less than 0.5 MW for biogas.

### Loans

The National Recovery Plan provides for support in the form of loans to entrepreneurs serving Objective B1.2.1 of the National Recovery Plan: "Energy efficiency and RES in enterprises - investments with the greatest potential for reducing greenhouse gases". The draft NRP includes a support mechanism worth EUR 300 million for general activities related to energy efficiency and RES. However, the National Recovery Plan stipulates, in terms of renewable energy sources, a preference for wind and solar power.

### Other measures

In the case of Poland, in general, domestic measures related to supporting investments in biogas and biomethane facilities are supported by the National Fund for Environmental Protection and Water Management, which periodically modifies or presents new support mechanisms. It is now available to obtain support under the 'Agroenergia' programme, i.e. to support the production of energy from renewable sources in the agricultural sector, including for agricultural biogas plants with an associated agricultural biogas production installation with a capacity of no more than 500 kW, along with associated energy storage facilities.

### Support rules

At the moment, Poland has not notified the European Commission of any specific aid programme for the biogas and biomethane sector in connection with the new financial perspective. Most likely, the support mechanisms will be largely based on the so-called Block Exemption Regulation (651/2014/EU). In terms of investment aid, subsidies are provided for eligible costs considered as additional investment costs, understood as:

if the investment costs for renewable energy production can be separated from the total investment costs as a separate investment (for example, as an easily separable additional element in an already existing facility), such a cost related to renewable energy constitutes eligible costs;

if the cost of investment in renewable energy production can be determined by reference to a similar, less environmentally friendly investment that would likely have been carried out in the absence of aid (e.g., a reference energy production installation from natural gas), such difference between the costs of the two investments determines the cost associated with renewable energy and constitutes eligible costs.

In the first case, the value of the subsidy is 45% of eligible costs, in the second case: 30% of eligible costs. The indicated regulation provides for additional support bonuses for small (+20%) and medium-sized entrepreneurs (+10%) and regional bonuses: 15% for regions that meet the conditions of Article 107(3)(a) of the Treaty on the Functioning of the European Union (e.g. Kujawsko-Pomorskie Province), and by 5 percentage points for investments carried out in areas covered by the support that meet the conditions of Article 107(3)(c) of the Treaty (e.g. Wielkopolska Province).

## 6.2 Tax relief for biomethane as a combustion engine fuel

In national legislation, we have not identified specific tax concessions or exemptions related to the use of biomethane, however, there is some excise tax preference in the marketing of fuels in the form of gases for the propulsion of internal combustion engines. CNG and LNG in particular are therefore concerned, but also exspressis verbis biogas irrespective of the type of substrates from which it is derived (not only agricultural biogas), as well as hydrogen and biohydrogen, which will be defined under the RESA and BBLF amendments. The legislator also did not indicate the physical state of such biogas, hence both so-called bioCNG and bioLNG are involved, which can be used to power internal combustion engines once the physical and chemical parameters have been met.

The tax preference indicated is the application of a zero rate of excise duty to methane fuels intended to power internal combustion engines. This regulation, was introduced in Article 89 clause 1 point 12 letter aa and b of the Act on excise duty of 6 December 2008 (consolidated act, Journal of Laws of 2022, item 143), hereinafter referred to the Excise Act. Zero excise duty may be applied to CNG, LNG, bioCNG and bioLNG for which excise duty liability arose on or after 14 August 2019. Based on Article 163b of the Excise Act, the operation of such tax preferences falls within the scope of Article 44 of Regulation 651/2014. According to the wording of the provision under comment, the zero-excise rate applies during the period of application of Regulation 651/2014, which according to Articles 58 and 59 applies until 31 December 2023.





## 7. MANAGEMENT OF NOXIOUS SUBSTRATES - KEY ISSUES

### 7.1 Restrictions on storage of manure outdoors and the use of energy crops

The storage of manure is subject to a number of restrictions that result from EU guidelines contained, among others, in Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources. In response to the stated objectives of the nitrates directive, pursuant to Article 106 clause 4 of the Act of 20 July 2017 - Water Law Act (Journal of Laws of 2021, item 2233), on 12 February 2020, the current Regulation of the Council of Ministers on the adoption of the "Programme of measures to reduce water pollution by nitrates from agricultural sources and to prevent further pollution" was published (hereinafter referred to as: *The Nitrate Reduction Programme or the Programme*).

Pursuant to Article 16 clause 30b letter b of the Water Law Act, manure belongs to natural solid fertilizer. In turn, point 1.4 of the Appendix to the Programme specifies the conditions for storing natural fertilizers and handling leachate, where the general rule is to store them in an environmentally safe manner that prevents leachate from entering water and soil. To this end, agricultural production entities shall ensure the environmentally safe storage of natural fertilizers for a period of time when their agricultural use is not possible. This requires the provision of impermeable surfaces of storage areas for solid natural fertilizers

and the capacity of covered, in particular with a flexible cover or floating cover, tanks for liquid natural fertilizers, which should have a sealed bottom and walls. The capacity of tanks for liquid natural fertilizers should allow them to be stored for a period of 6 months.

Calculation of the required capacity of tanks or areas for storage of natural fertilizers is preceded by drawing up the herd turnover, calculating the throughput of livestock in the technological group, and then calculating the average annual stocks. The calculated annual average stocks of livestock are converted into LUs (i.e. Livestock Units).

If the natural fertilizers produced on the farm are subjected to technological processing or transfer, the required capacity of tanks and the area of natural fertilizer storage may be reduced accordingly.

Agricultural production entities shall adjust the area or capacity of their natural fertilizer storage to the requirements set forth in the Programme by:

- 1) **31 December 2021** - for entities raising or breeding livestock in excess of 210 LUs, including entities raising or breeding poultry in excess of 40,000 stations or raising or breeding pigs in excess of 2,000 stations for pigs weighing more than 30 kg or 750 positions for sows;

- 2) **31 December 2024** - for entities raising or breeding livestock in numbers less than or equal to 210 LUs.

Prior to the expiration of the indicated deadlines, these entities shall ensure the storage of liquid natural fertilizers in sealed tanks with a capacity to store at least 4 months' production of this fertilizer.

Under point 1.4 subpoint 7, the exception indicates that it is possible to store manure temporarily, but for no longer than 6 months from the date of creation of each pile, directly on agricultural land if:

the piles are located outside the depressions of the land, on as flat a site as possible, with a permissible slope of up to 3%, in a non-sandy and non-wetland site, at a distance of more than 25 m from the shoreline of surface waters, the sea belt and water intakes, if a protection zone has not been established under the provisions of the Water Law Act (Journal of Laws 2021.2233);

the location of the pile and the date on which manure was deposited in a given year on a given plot shall be marked on a map or sketch of the plot, which shall be kept for a period of 3 years from the date of completion of manure storage;

manure in the pile shall be stored again in the same site after 3 years from the date of completion of the previous manure storage.

The aforementioned manure storage conditions exclude bird manure (subpoint 8 of the Appendix to the Programme). In other words, bird manure must not be stored directly on the ground at all. In addition, according to subpoint 10, natural fertilizers shall not be stored at a distance of less than 25 m from the shoreline of surface waters and the sea belt, as well as wells or water intakes, if a protection zone has not been established - under the Water Law Act.

Moving on to the issue of the possibility of using energy crops for biogas purposes, it should be pointed out that to date, national regulations on restrictions on the use of selected energy crops (e.g. corn silage) have not been regulated. Nevertheless, the RED II regulations specify, among other things, sustainability and GHG emissions limitation criteria for biofuels, bioliquids and biomass fuels. In response to the partial implementation of RED II into Polish legislation, work is underway on amending the BLBA.

In this regard, see more extensively the discussion in point 8 of this chapter.

Regarding silage storage, the Nitrate Reduction Programme only indicated that silage shall not be stored directly on the ground. Specifically, silage is stored in silos, plastic sleeves, on slabs or on a base of foil, chaff, straw, or other material that absorbs leachate and under foil cover.

In relation to the storage of other waste from agri-food production, it should also be noted that in 2020, the Regulation of the Minister of Climate on detailed requirements for waste storage came into force (Journal of Laws of 2020, item 1742). Paragraph 12 of this regulation indicates that the storage of waste that may cause odour nuisance on properties adjacent to the waste storage site also applies to biodegradable waste, i.e. waste that is used in biogas plants. This waste shall be stored only in premises, including storage halls, equipped at least with:

- ventilation systems and ventilation equipment that limit, in particular, the entry of dust into the air, as well as limit possible odour nuisances;
- high-speed doors.

Nevertheless, substrates processed in biogas plants in principle do not cause odour nuisance due to the required tightness of the fermentation process, but periodically as part of the handling of larger volumes of substrates related to the campaign nature of agricultural production (e.g. a short beet campaign and the need to collect pulp in a short period of time) can be a source of short-term



emissions of undesirable odours. However, this provision exposes operators to the need to make additional investments that will not be used most of the time during the year, or their storage capacity will be used only to a small extent. Substrates delivered to the biogas plant are mostly used on the day of delivery and do not require storage, given that a 1MW biogas plant can process about 100 tons of substrates/waste per day.

Another undesirable effect of this regulation is the lack of transitional provisions for installations commissioned in that year. While a 48-month transition period was introduced for installations in operation before the regulation came into force (1 January 2021), installations for which, for example, the investor has a building permit, but

construction has not started or, worse, is under construction and has not been completed before January 2021, were completely ignored. These investors have been put in a situation in which the authorities of the Provincial Inspectorate of Environmental Protection (WIOŚ) refuse to give permission to commission the installation (according to Article 76 of the Environmental Protection Law) because the investor has not taken into account the construction of a storage hall for storing waste. Currently, the issue has been raised by the industry and work is underway at the Ministry of Climate and Environment to introduce possible derogations for biogas plants.

## 7.2 National restrictions on the distribution of digestate

In most currently operating agricultural biogas plants in Poland, the digestate is recorded as waste with code 19 06 05 (liquids from anaerobic treatment of animal and vegetable waste) or code 19 06 06 (digestate from anaerobic treatment of animal and vegetable waste) and managed on agricultural land in accordance with the requirements of the Regulation of the Minister of the Environment of 20 January 2015 on the process of recovery R10 (Journal of Laws of 2015, item 132). This includes digested animal manure, which according to the Act on fertilizers and fertilization is natural fertilizer, and under environmental regulations is waste with code 02 01 06. The use of digestate in the R10 process of recovery can be used to improve soil quality, which is defined under current law as “treatment on the surface of the soil that benefits agriculture or improves the quality of the environment”.

The R10 recovery regulation stipulates that the digestate must meet the requirements under the Act on Fertilizers and Fertilization, as well as the sanitary requirements stipulated by veterinary regulations. Management of digestate in the R10 process of recovery creates a number of difficulties of a formal and legal nature. The waiting time for processing the application and issuance of the permit often exceeds 4-6 months, and a change in the list of agricultural properties on which it is applied results in the need to amend the permit. Depending on the amount of digestate to be processed, the staroste or provincial marshal, when issuing a permit to manage digestate in accordance with the R-10 method, is required to obtain an appropriate opinion from the commune administrator/mayor in charge of the place where the digestate is processed as waste. However, commune/municipal authorities most often lack expertise in the fertilizer processing of digestate, which only prolongs the waiting time for such a permit.

In addition, the authority issuing the permit to process the digestate using the R-10 method applies to the Provincial Inspectorate of Environmental Protection (WIOŚ) for a statutory inspection despite the fact that the digestate is not stored in the fields prior to processing. The entire procedure involved in proceeding with an inspection including the inspection itself sometimes takes several months.

Another condition for the issuance of an R-10 recovery permit is the submission of the results of the digestate quality test. The investor does not yet have the digestate to conduct tests before launching the biogas plant. It is worth noting that current legislation also requires that the soil be analysed for heavy metals before fertilization.

Some local authorities demand these analyses at the application stage for a permit to manage digestate (as waste), which exposes the investor to additional costs. In addition, the Act on waste, in defining the R-10 process, does not provide for the possibility of processing the digestate outside installations and facilities without its storage. For technological reasons, digestate is not stored in agricultural fields, but after being brought to the field, it is directly spread on the field and covered as quickly as possible with an appropriate agrotechnical treatment. Despite this, any entity (biogas plant) applying for a permit for waste management (fertilization of soil with digestate) is required to indicate in the application the place and manner of storage of waste, as well as to show legal title to the place. Thus, the absence in the application of the information required by Article 42 clause 2 point 5 of the Act on waste results in a call to supplement formal deficiencies in the application.

Some authorities expect a number of documents to be attached to the application, the submission of which is not justified for the application of digestate to agricultural land as part of the R-10 recovery process, when no storage is expected. An example of an appendix is, for example, documenting the legal title to dispose of the property - e.g. a lease agreement in the form of a notarial deed - while the biogas plant operator does not own the land and performs the process of fertilizing with the digestate on the basis of a civil law agreement with a farmer or other entity. In practice, one can encounter decisions that also precisely specify the dose of digestate to be applied to a specific parcel of land, which the digestate fertilizing operator is obliged to apply for 10 years of the permit, regardless of changes in its chemical composition that may occur in subsequent years.

The procedure related to the renewal of the permit for waste treatment in the R10 process (fertilization with digestate) requires the submission of a new application, so it is the same as when applying for a permit for the first time. This results in an excessively long administrative procedure.

An alternative form of managing the digestate product is to use it as a fertilizer rather than R-10 recoverable waste. However, in this regard, it is necessary to meet the conditions for marketing the fertilizer. Thus, the producer has two possible paths it can use.

Under the first of these, as of 16 July 2022, Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products and amending Regulations (EC) no. 1069/2009 and (EC) no. 1107/2009 and repealing Regulation (EC) no. 2003/2003, is already in full force and effect (Official Journal of the EU L 170 of 25 June 2019, p. 1). This regulation does not replace existing national fertilizer regulations, and the Ministry does not plan to repeal the provisions of the Act on fertilizers and fertilization

regarding the marketing authorization of fertilizers and plant growth stimulator. Accordingly, it is up to manufacturers of fertilizer (including the digestate product) to decide whether to apply the requirements of Regulation 2019/1009 when marketing it, including the range of possible substrates to be used, and to affix the CE marking to their products (including those based on digestates from biogas plants). The use of this procedure means that these products will be able to be used both in Poland and moved freely in the single market, without additional authorizations, but exempted with all conditions under Regulation 2019/1009.

On the other hand, the second option a producer can opt for is to use the national provisions of the Act on fertilizer and fertilization. As a result, producers of digestate who, for various reasons, are unwilling or unable to meet the requirements of Regulation 2019/1009 will be able to market their fertilizer only domestically under the Polish Act on fertilizers and fertilization. In this regard, however, an administrative decision issued by the minister responsible for agriculture will be necessary, constituting a permit to market a fertilizer or a plant growth stimulator exclusively for the domestic market. The decision in question is issued based on the results of tests of the fertilizer or a plant growth stimulator, relevant opinions issued by agricultural science institutions, draft instructions for use and storage, and a copy of the decision of the district veterinarian on approval of the processing plant for animal by-products and derived products of the producer of fertilizers or plant growth stimulators and the assignment of a veterinary identification number, or a statement that it has been obtained. A key drawback of being able to obtain this decision is the need to maintain the chemical composition of the fertilizer covered by the decision, which may be difficult to maintain in the long term for biogas plants using different types and sources of waste.

According to the Programme, on agricultural land, as a rule, fertilizers can be applied at the following times:

Type of fertilizers	Nitrogen mineral fertilizers and natural liquid fertilizers	Natural solid fertilizers
Land type		
Arable land	1 March -20 October	
Arable land in the municipalities included in the list attached as Appendix no. 2 to the Programme	1 March -15 October	1 March - 31 October
Arable land in the municipalities included in the list attached as Appendix no. 3 to the Programme	1 March -25 October	
Permanent crops	1 March -31 October	1 March - 30 November

## 7.3 Restrictions on the use of animal by-products

The use of animal by-products (hereinafter referred to as: ABP) in light of current sanitary and veterinary regulations requires compliance with Regulation 1069/2009 and Regulation 142/2011.

Pursuant to Article 10 of Regulation 1069/2009, post-slaughter animal by-products are classified as category 3 material. Categorizing ABPs accordingly is important, among other things, for their application. According to Article 14 letter f of Regulation 1069/2009, post-slaughter ABPs can be converted into biogas. One of the basic requirements, as regulated in Article 24 of Regulation 1069/2009, which obliges natural and legal persons under whose physical control ABPs remain to ensure that the enterprises or plants they control which process these by-products into biogas are approved by the competent authority. In accordance with national legislation contained in Article 6 clause 4 of the Act of 11 March 2004 on animal health protection and fighting against infectious animal diseases (Journal of Laws of 2020, item 1421), the competent authority supervising the conduct of supervised activities is the District Veterinarian.

As a result, any entity that intends to use manure waste from meat plants, among others, in the ABP biogas production process is required to submit an application

for approval of supervised activities to the territorially appropriate District Veterinarian 30 days before the start of operations. Start of operations shall be understood as the introduction into the biogas plant of ABPs, for example, slurry or digestion residues from another biogas plant (using ABPs for production) which are often used for start-ups. It is necessary to comply with these formalities when planning a technological start-up to avoid unpleasant consequences, for example, in the form of administrative penalties amounting to tens of thousands of PLN.

Once an application for approval is submitted to the District Veterinarian, a preliminary inspection is carried out to determine whether the installation meets all the formal and technical requirements (as described in Regulations 1069/2009 and 142/2011) for assigning a veterinary number and approving the activity. Article 44 of Regulation 1069/2009 provides for provisions under which the District Veterinarian may issue a conditional decision for a period of three months (up to a maximum of six months) during which the entity has time to fully adjust the installation and develop and implement appropriate procedures. Indeed, while a properly designed biogas plant generally has the appropriate technical equipment, often investors do not have a HACCP system developed and implemented.

In addition, according to the wording of Article 29(1)(b) of Regulation 1069/2009, entities performing the conversion of ABSs into biogas are required to introduce, implement and maintain a permanent written procedure or procedure based on a risk analysis and critical control point system (HACCP). Without a developed and implemented HACCP system, the biogas plant will not receive full approval of operations from the District Veterinarian.

In this regard, Article 44 of Regulation 1069/2009, in conjunction with Article 27 of that regulation, describes the general conditions and requirements for approval of the procedure of an enterprise or plant. Meanwhile, Annex V to Regulation 142/2011 introduced specific requirements for the conversion of animal by-products and derived products into biogas:

- The choice of ABP conversion method determining the appropriate infrastructure and mandatory equipment of the agricultural biogas plant (point 1, chapter I, section 1),
- Ensuring the optimal distance of the biogas plant from livestock (point 3, chapter I, section 1),
- Having own laboratory (or using an external laboratory) to conduct analyses in consultation with the District Veterinary (point 4, chapter I, section 1),

- Developing and implementing a special pest control programme (point 3, chapter II),
- Documenting hygiene requirements (points 4. and 5, chapter II),
- Standard transformation parameters for category 3 material: maximum particle size before entering the unit: 12 mm; minimum temperature of all material in the unit: 70 degrees C and the minimum processing time in the unit without interruption: 60 min. (point 1, chapter III, section 1).

After exceeding the maximum time limit (up to 6 months) for adjusting the biogas plant to the requirements of Regulations 1069/2009 and 142/2011, the District Veterinarian has the right to issue a decision ordering a ban on biogas production from animal substrates with immediate enforceability. For violations of veterinary regulations (such as operating without approval, lack of implemented HACCP procedures, improper activities on ABPs), the authority has the right to impose administrative fines of up to tens of thousands of PLN. In addition, if it is determined that this type of activity poses a threat to human and animal health, the District Veterinarian is required to report the suspected crime to law enforcement authorities.



# 8

## 8. BIOGAS AND BIOMETHANE IN THE LIGHT OF THE LEGISLATIVE PROCESS IMPLEMENTING THE RED II REGULATIONS

With a view to optimising the rules of the regulated market for agricultural biogas plants, particular attention should be paid to the careful monitoring of any planned legal changes that will directly affect the operating conditions for RES installations in the form of agricultural biogas plants generating electricity or gaseous fuel in the form of biomethane. It is therefore necessary to analyse the legal changes to be introduced in 2022 as part of the legislative processes currently underway.

As a result, significant changes to the operation of agricultural biogas plants are planned as part of the government's draft law amending the Act on renewable energy sources and certain other acts (catalogue no. UC99), which is currently at an advanced stage of legislative work. Another important government piece of legislation relating to the operations of biogas plants is the draft law amending the Act on biocomponents and liquid biofuels and certain other acts (catalogue no. UC 110), which is also at the legislative process stage and will refer to the mandatory use of biomethane in the fuel sector.

In the event that significant changes are made to the proposed legislation during the governmental legislative process or parliamentary work, a supplement will be prepared to the submitted Memorandum.

Given the above findings regarding the ongoing legislative processes, it is important to review and analyse the specific regulations that will affect the rules for agricultural biogas plants for the production of electricity or gaseous fuel in the form of biomethane. The above will allow the business models developed to be adapted to the most up-to-date legal conditions. This will enable the optimisation of projected revenues and the occurrence of certain synergies, taking into account the proposed legal solutions for the planned biogas projects. Therefore, the remainder of this Memorandum should focus on a detailed analysis of the legal changes regarding the support instruments available in 2022 for such RES installations, which in turn will enable the economic basis for conducting this type of activity in Poland to be determined.

### 8.1 Draft law amending the renewable energy sources act and certain other acts (no. UC99)

This draft legislation introduces in Article 2 of RESA a definition of 'biomethane' which will be described as a gas derived from biogas or agricultural biogas with a gross calorific value of not less than 34.0 MJ/m<sup>3</sup>. This definition, together with the relevant regulation issued pursuant to Article 9 clause 1 of ELA (see chapter 4.2) will allow the parameters of this type of renewable gaseous fuel to be

defined, thus creating the possibility of feeding it into the gas distribution or transmission network. The ability to transport biomethane through these networks will make it significantly more attractive as a renewable fuel and increase the opportunities to market and sell it as a clean substitute for natural gas.



The amendment also introduces changes to the effect that the production of biogas for the production of biomethane (with a view to its purification) or the production of biomethane from biogas (other than agricultural) will become a regulated activity, which will require an entry in the register of regulated activity (simplified procedure) maintained by the President of the ERO (Article 7 and Article 8 of RESA). With regard to biogas production, the draft also indicates that the regulations covering the obligation to be entered in the register of biogas producers only apply to the economic activity of producing biogas for use in the production of biomethane in a separate installation or the production of biomethane from non-agricultural biogas, which narrows down the type of installations to be entered in the register. This introduces a simple and clear requirement for the registration of activities related to the production of biomethane or the biogas needed to produce it, and in addition, the legislator also dispenses with the obligation to obtain a discretionary licence to carry out this economic activity.

On the other hand, the business activity of producing biomethane from agricultural biogas will constitute a regulated activity and will require an entry in an open register of agricultural biogas producers, kept by the Director General of the NSCA (Article 25 of RESA). The obligation to keep records of the amount of agricultural biogas produced, the amount of agricultural biogas used to produce biomethane and the amount of biomethane produced from agricultural biogas has also been extended, detailing the amount sold (with an indication of the entity that purchased the biomethane from agricultural biogas) and the amount of biomethane used in other ways. In the remaining scope, the draft amendment indicates that the provisions for the registration of agricultural electricity biogas plants should apply *mutatis mutandis* to the registration of such biomethane biogas plants. Producers carrying out the above-mentioned economic activities are also obliged to submit semi-annual reports containing the information listed above to the President of the ERO. (Article 9 clause 1a of RESA). The relevant provisions concerning the refusal of registration are also being amended (Article 13 of RESA) and the prohibition of economic activities relating to the production of biogas



for the production of biomethane or the production of biomethane itself (Article 14 clause 1a).

The tasks of the Director of the NSCA are extended accordingly, and after the changes will also include the monitoring of quantities and types of raw materials used for the production of biomethane from agricultural biogas as well as biocomponents used in transport fuels (Article 128 clause 5 of RESA).

The draft under review also provides for the abandonment of the support system for agricultural biogas fed into the gas distribution network in the form of certificates of origin for agricultural biogas. As a consequence, Articles 47a - 51 of RESA are to be repealed, and the provisions on the obligations to redeem such certificates or pay a substitute fee are to be modified accordingly. Unfortunately, in place of these norms, the drafters do not propose an alternative support system, which has been widely criticised by the industry.

On the other hand, a positive change is the extension of the possibility for the President of the ERO to issue guarantees of origin in respect of biomethane, renewable hydrogen and heat and cold from RES (in Article 120 et seq. of RESA) - implementation of RED II solutions. These guarantees are the only document that certifies to the final customer the environmental values resulting from avoided CO<sub>2</sub> emissions and that the amount

of electricity, biomethane, renewable hydrogen or heat or cooling, respectively, specified in these documents, has been produced in RES installations and has been fed into the network. However, guarantees of origin are also to be issued to biomethane and renewable hydrogen producers when they are delivered to the end user by means of transport other than gas networks (e.g. tanker trucks with bioLNG). Guarantees of origin shall include, in particular, an estimate of the value of CO<sub>2</sub> avoided due to the generation and injection of biomethane, heat or cold or renewable hydrogen into the network or elsewhere. Such guarantees are subject to sale on the Polish Power Exchange to interested parties who care about demonstrating environmental objectives (e.g. corporations meeting avoided emission targets), which consequently generates additional economic value for generators from the sale of these guarantees (voluntary support system).

With a view to greater integration of biomethane installations into the gas network, it is also proposed to introduce an obligation to provide a transmission or distribution service for biomethane meeting the quality parameters for gaseous fuels fed into the network. Such an obligation would be incumbent on the relevant operator of the network infrastructure to which the biomethane installation in question would be connected, and would consist in the impossibility of refusing to accept into the network and to transport the quantities of biomethane that meets the quality requirements specified in the connection agreement. **A contrario**, if a particular batch of biomethane would not meet these quality requirements, the gas system operator may refuse to accept it into the network. Nor should the analysed obligation be equated with an obligation to purchase biomethane, but only with a guarantee to provide a service for its transport to a purchaser of this gaseous fuel designated by the generator. At the same time, the fulfilment of the above-described obligation by the operators will be guaranteed by means of the introduction of appropriate administrative financial penalties (Article 168 clause 7 of RESA).

The proposed amendment also amends the Energy Law with regard to the definition of gaseous fuels, which in addition to agricultural biogas are to include biomethane

(Article 3 clause 3a of the Energy Law). This amendment is in line with the wording of the definition of biomethane proposed in the RESA, thus enabling the use of this energy carrier in gas distribution and transmission networks.

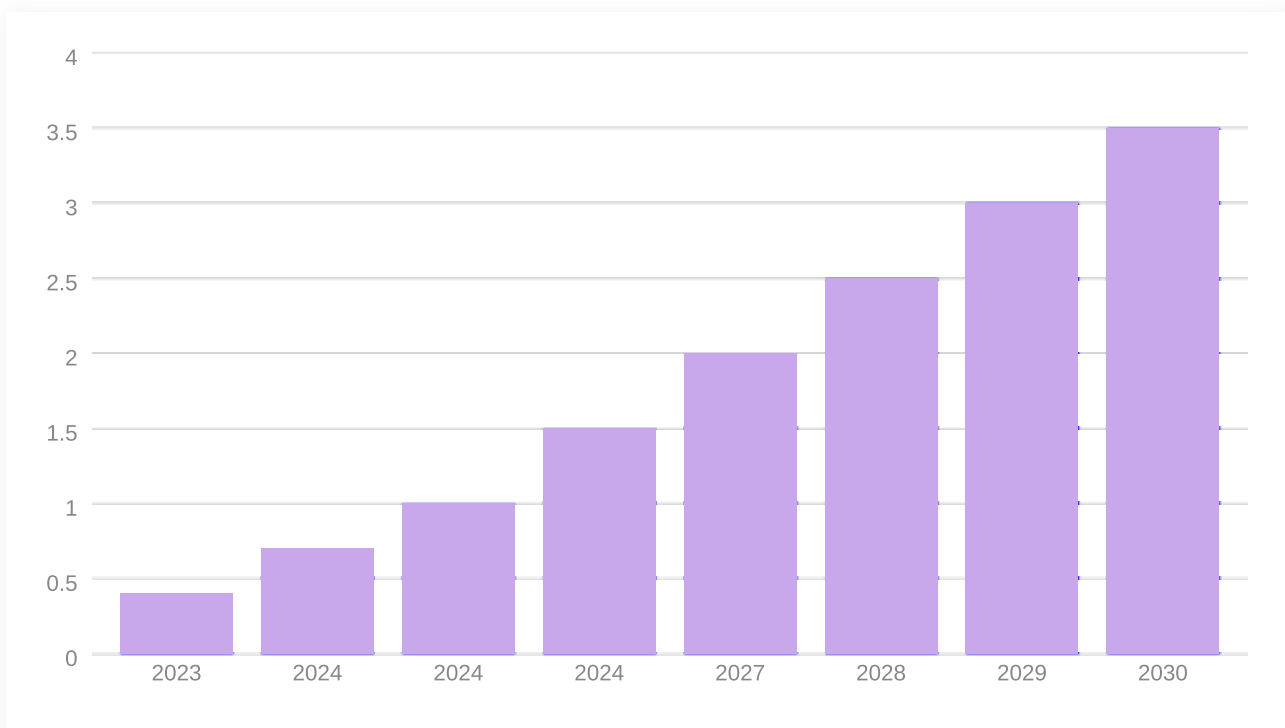
The draft also introduces very favourable solutions for investors, which oblige energy companies involved in the transmission or distribution of gaseous fuels to indicate an alternative location for a biomethane generation investment if it is not possible to connect to the gas network for technical or economic reasons at the location indicated by the applicant (Article 7 clause 1d of the Energy Law). In other words, if the network operator refuses to issue the network connection conditions, the network operator is obliged to indicate to the investor another alternative location (the nearest location) where the connection could be made. These regulation can be seen as an appropriate step for the development of biomethane production, as their introduction will allow investors to gain knowledge of the location that potentially allows them to obtain connection approval and will create the possibility to analyse the profitability of this biomethane investment within this location. Such a solution will, in view of the currently limited possibilities for biomethane to be fed into distribution networks due to their insufficient absorption capacity, significantly increase the chances of a positive decision being issued for the connection of these facilities to the gas network. In this respect, however, it should be postulated that the operator should only be obliged to indicate an alternative location within its network in the same network area.

The draft also contains transitional provisions indicating that producers who commenced economic activity in the production of biogas for the production of biomethane or the production of biomethane from biogas or from agricultural biogas before the date of entry into force of the proposed act will be required to submit an application for entry in the competent register within two months of the date of entry into force of the act (Articles 9 and 13 of the draft).

## 8.2 Draft law amending the act on bio-components and liquid bio-fuels and certain other acts (no. UC 110)

First of all, it should be pointed out that the draft introduces a definition of the concept of advanced bio-components which are bio-components produced from raw materials referred to in Appendix 1, part A (**analogous to Appendix IX, part A of RED II**). Both biocomponents themselves and advanced biocomponents can be used to demonstrate the achievement of RES targets in the fuel (transport) sector, as part of the obligation to meet the National Indicative Target (hereafter referred to as: NIT) by producers, importers and traders of liquid fuels. The concept of advanced bio-components described in this way, together with the definition of bio-components which already includes liquefied and compressed biomethane and bio-hydrogen, will allow them to be recognised as advanced bio-components if they are produced from the specific waste substrates indicated in the above appendix.

The introduction of this definition is also linked to the introduction of a mandatory minimum share of advanced biocomponents in the implementation of the NIT, which will be set at the 3.5% required for 2030 (Article 23d). This implies that fuel companies must use a minimum level of advanced bio-components, including in particular biomethane or bio-hydrogen produced from specific waste substrates. In other words, this significantly affects the level of demand for the purchase of biomethane by owners of refineries in Poland (e.g. PKN Orlen S.A., Grupa Lotos S.A.), who will be able to use it to meet their NIT obligation. These regulation will have a positive impact on the attractiveness of biomethane production by stimulating, at the statutory level, a compulsory increase in demand for this type of biofuel (direct use of biomethane, e.g. bioCNG or bioLNG fuels) or advanced bio-component (addition



PLANNED INCREASE IN DEMAND FOR BIOMETHANE

of biohydrogen or biomethane to the refinery process leading to diesel or petrol) through the introduction of a statutory obligation for the general use of bio-components and advanced biofuels in the transport sector. The drafters have also planned a system of gradual achievement of the set target for the share of advanced bio-components, which ensures a systematic increase in demand for biomethane: 1) in 2023 - 0.4%; 2) in 2024 - 0.7%; 3) in 2025 - 1%; 4) in 2026 - 1.5%; 5) in 2027 - 2%; 6) in 2028 - 2.5%; 7) in 2029 - 3%, up to a target of 3.5% for 2030.

With regard to advanced bio-components, a regulation is also adopted stating that, for the purposes of calculating the numerator, the share of biocomponents and gaseous biofuels produced from used cooking oil and animal fats is limited to only 1.7 % of the energy value of transport fuels. This means that the level of biomethane's type competing to the advanced bio-component has also been statutorily reduced, which further ensures greater demand for biomethane itself. The draft also contains other important requirements for limits related to the use of biocomponents and gaseous biofuels. In this respect, a maximum limit for the use of food and fodder crop biocomponents (the so-called first generation) of 6.1% of the total volume of liquid fuels and liquid biofuels used in transport after 2020 is introduced.

The definition of bio-hydrogen has also been clarified accordingly, which, after modification, indicates that it is hydrogen produced from biomass, including biomethane (Article 2 clause 9d). Together with other regulations, this amendment allows biohydrogen derived from biomethane (not necessarily already produced from the substrates indicated in Annex IX to RED II) to be used as a bio-component for the production of fuels, e.g. in hydrocracking and hydrodesulphurisation processes in which biohydrogen is included as a RES in the liquid fuel molecules (e.g. petrol and diesel). This provides the opportunity to use biohydrogen extracted from biomethane produced from non-waste substrates to meet the fuel companies' NIT obligations.

The issue of biohydrogen is also addressed by the previously mentioned Article 23d, which introduces an obligation for a minimum share of biohydrogen produced from biomethane in fuels used for road and rail transport. This implies that, as part of the obligation described above, those licensed to produce liquid fuels by processing crude oil or refinery feedstocks and other hydrocarbons will be required to ensure that the proportion of biohydrogen produced from biomethane is no less than 1.75% of the total volume of liquid fuels and liquid biofuels used in transport by 2030. The introduction of the obligation described above is also a positive step, as it allows a certain fixed and minimum level of demand to be created for the bio-component, which is biohydrogen produced from the biomethane supplied. The drafters have also planned a gradual system to reach the set target for the share of biohydrogen, ensuring a systematic increase in demand: 1) in 2025, 0.1%; 2) in 2026, 0.2%; 3) in 2027, 0.4%; 4) in 2028, 0.7%; 5) in 2029, 1.1% up to a target of 1.75% for 2030.

The draft adds provisions in Article 33 in clause 1 points 5ac-5ad and 10 to 11 sanctioning breaches of the obligations for a minimum proportion of advanced biocomponents and a minimum proportion of biohydrogen produced from biomethane. These standards will therefore safeguard the level of demand for advanced biocomponents (e.g. biomethane from waste substrates) and biohydrogen from biomethane in a real way and contribute to compliance by refining and fuel companies.

The very definition of NIT is also being changed, which according to the draft law and as previously agreed as part of the calculation methodology, is also to include such biofuels and biogas components as biomethane (including bioLNG and bioCNG) and biohydrogen in particular. The explanatory memorandum to the draft amendment indicates that this will make it possible to realise 14.8% of the national share of renewable energy in transport (RED II requires 14% across the EU), but also to realise the sub-targets described above for the use of advanced bio-components (biomethane from waste)



and biohydrogen (hydrogen derived from biomethane). At the same time, the draft indicates how the National Indicative Target is to gradually increase in each year:

- 1) 2023 - 9,0%;
- 2) 2024 - 9,5%;
- 3) 2025 - 10,0%;
- 4) 2026 - 10,5%;
- 5) 2027 - 11,5%;
- 6) 2028 - 12,6%;
- 7) 2029 - 13,5%;
- 8) up to a target of 14.8% for 2030.

In the explanatory memorandum to the draft amendment, it is estimated that in order to meet the sub-targets related to the share of advanced biocomponents and borane, the transport sector in Poland needs between 1.5 - 2 billion m<sup>3</sup> of biomethane by 2030 (depending on the level of petrol and diesel consumption), which creates a large investment need in this area and an opportunity for developers of biomethane installations.

It is further indicated that the analysed bio-components and gaseous biofuels can only be credited to the NIT implementer for the fulfilment of the above-mentioned obligations if they fulfil the sustainability criteria and the criterion of greenhouse gas emission reduction. It is therefore a requirement for individual biocomponents and gaseous biofuels that conditions their use for the purpose of demonstrating RES in the transport sector.

Article 28b clause 1 specifies what percentage reduction using biocomponents and gaseous biofuels will meet the criteria for greenhouse gas savings. This provision indicates the minimum values that will have to be achieved over certain time periods in order for the share of biocomponents and gaseous biofuels to be considered as meeting the criteria for emission reductions. In the first case, emission reductions by means of biocomponents and gaseous biofuels will be deemed to have been achieved if the greenhouse gas emission savings from the use of these additives and gaseous biofuels are at least 50% for production in installations in operation on or before

5 October 2015. This is followed by an emission reduction of 60% for generation in installations commissioned between 6 October 2015 and 31 December 2020, and an emission reduction reaching 65% for installations commissioned from 1 January 2021. The amendment aligns with the RED II requirements the national sustainability criteria detailed in Articles 29ba - 29bh, relating to biodiversity, protection of carbon-rich land, sustainable agricultural management, reduction of greenhouse gas emissions and land use and land use change and forestry.

It is also important to highlight certain facilities dedicated to the use of waste generated in agriculture, for which only the condition of no double counting and a percentage reduction in greenhouse gas emissions is binding, i.e. without meeting the other sustainability criteria. This derogation also applies to waste and residues from agriculture, aquaculture, fisheries and forestry which are first processed into another substance or product before being transformed into biocomponents or gaseous biofuels. For installations using non-waste biomass, on the other hand, the sustainability criteria and the reduction of greenhouse gas emissions only apply to installations with a total rated thermal input greater than or equal to 2 MW. This means that it is planned that smaller installations using biomass for fuel purposes will not be subject to these additional certification requirements.

Irrespective of the specific provisions indicated above, in practice this comes down to the need to use an accredited certification scheme for biomass used for the production of gaseous biofuels and biocomponents used for RES purposes in transport. The indicated verification schemes meet the criteria of sustainability and the criterion of reducing greenhouse gas emissions by relying on voluntary schemes that are recognised by a decision of the European Commission (Article 30(4) of RED II).

These schemes have procedures to ensure that those operating under them and complying with the requirements of the voluntary certification scheme in question, place products on the market that meet the required emission and sustainability criteria. The producer will therefore have to use the services of independent certification

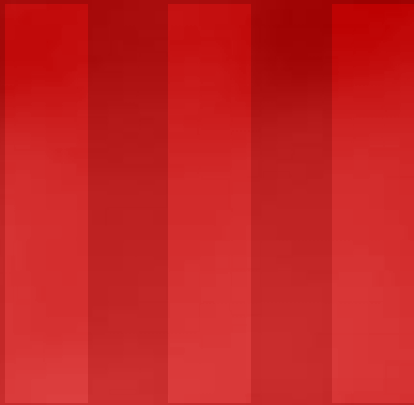


bodies with a recognised certification system and the right to issue certificates to entities involved in the production of bio-components, bioliquids or fuels from biomass, respectively, as well as participants in the certification chain involved in the sourcing, trading, processing of biomass for the production of these substances. Ultimately, the certification body will issue a certificate to the generator in question in accordance with the rules laid down by a recognised certification scheme, allowing the biomass to be used for the production of biocomponents and gaseous biofuels, as well as further use for the purposes of the NIT by fuel companies.

Similar regulations are being introduced into the RESA, where it is proposed that financial support from public funds, including EU funds, for the generation and use of electricity in RES installations using gaseous fuels from biomass (e.g. agricultural biogas plants) can be granted only after certain sustainability criteria have been met (see point 29) and the criteria for the reduction of greenhouse gas emissions set out in the introduced Article 135a clause 3 of RESA have been met. It indicated that it was to be respectively:

- 1) 70% for the use of biomass fuels in installations commissioned between 1 January 2023 and 31 December 2025,
- 2) 80% for the use of biomass fuels in installations commissioned from 1 January 2026.

However, a relevant exemption has been introduced for the aforementioned obligation, in line with that contained in RED II, where the indicated obligations in respect of the sustainability criteria and the emission reduction criterion does not have to be met by installations using gaseous fuels from biomass (e.g. biogas, agricultural biogas, biomethane) in installations generating electricity, heat or cold in installations with a total thermal capacity of the installation of at least 2 MW. Consequently, this means that smaller CHP biogas plants will be able to benefit from support under the current rules, with additional obligations if this capacity is exceeded.



Proposals for further  
legislative work

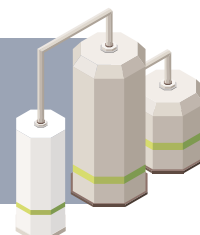




In Poland there is a large potential to produce biogas and at the same time biomethane for transport and heating purposes.

This is confirmed by numerous scientific studies (e.g. University of Life Sciences in Poznań) and statistical data (Central Statistical Office). The amount of waste that can be used to produce biomethane and the growing volumes of plant and especially animal production in the country make us one of the largest possible producers of biomethane in the European Union. Production capacity and previous experience in biogas production in Poland mean that a volume of around 500 million m<sup>3</sup>

biogas generation by 2030  
~500 mln m<sup>3</sup>

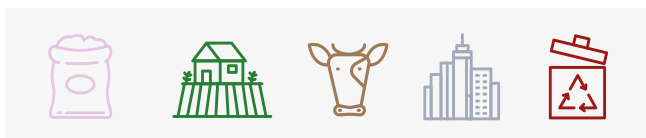


of biomethane per year is feasible by 2030, assuming a stable economic basis for the operation of such facilities.

In the following, we briefly outline the feasibility of implementing effective solutions to build a biomethane plant through the identified economic and legal aspects. This analysis formed the basis for the justification of the proposed amendment to the RESA and the BLBA with regard to the use of biomethane for transport purposes in terms of the share of advanced biofuels in the balance of renewable energy sources in transport, as well as its use for heating purposes.

There are a number of biomethane projects identified by Polska Spółka Gazownictwa which have applied to it for the issuance of connection conditions and demonstrate a production potential of 60 million m<sup>3</sup> per annum (own data) throughout Poland. The emergence of new projects and the finalization of the planned ones is a matter of activating the incentives discussed later in this Memorandum.

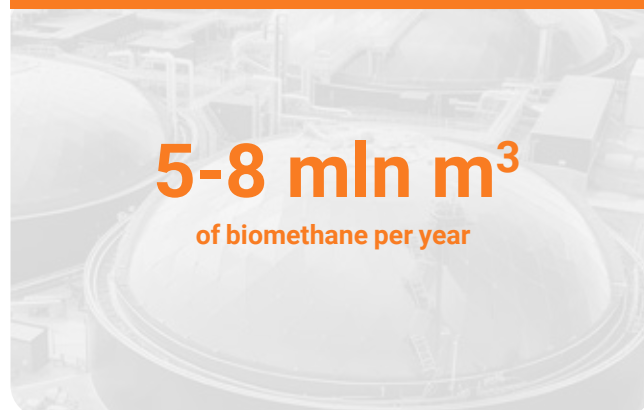
For the production of biomethane, locations rich in waste and at the same time with convenient conditions for connection to the gas network should prevail. [Examples of such locations include the vicinity of sugar mills, large agri-food processing plants, livestock areas, and urban locations that have implemented advanced waste segregation practices, including re-food.](#)



The size of biomethane installations injecting gas into the network should allow for a financially efficient investment. European experience shows that modern biomethane plants should produce a minimum of about 5-8 million m<sup>3</sup> of biomethane per year.

Currently also there are no regulatory incentives for gas connections and adequate distribution tariffs or other economic justification for the efficient connection of biogas plants to the gas network. Biomethane plants should be exempted from part of the trading and connection fees like other RES installations in the electricity sector or alternatively these costs should be included in the methodology for calculating the level of support

## Biomethane plant capacity



In terms of planning of biomethane investment projects, developers expect simplification of procedures for obtaining an environmental decision for larger projects and clarification of doubts regarding small biomethane projects.

To conclude, it should be pointed out that the development of the biomethane sector in Poland is a challenge that can only be met in cooperation between all stakeholders: Ministry of Agriculture and Rural Development, Ministry of Climate and Environment, oil companies, gas companies and the biogas industry. The enormous potential of biomethane production can be utilised primarily by making the economic case for operationally difficult investments such as large biogas plants. The introduction of favourable technical options for injecting biomethane into the network appears to be a major barrier to the development of a sufficient number of installations. The lack of a stable support system for obtaining financing for this type of investment also poses significant difficulties.

# 1. INTRODUCTION OF A LEGAL DEFINITION OF BIOMETHANE

It should first be pointed out that the effective launch of the biomethane market requires the definition of basic legal concepts. In this respect, it is necessary to define the concept of biomethane, the draft wording of such a concept has been proposed in the Act amending the renewable energy sources act and certain other acts (no. UC99):

*3c) biomethane - a gas derived from biogas or agricultural biogas with a gross calorific value of not less than 34.0 MJ/m<sup>3</sup>;*

In this respect, the proposed amendment is to be welcomed, which in particular makes it possible to develop for gas purposes the significant potential of existing biogas plants producing biogas from sewage sludge at wastewater treatment plants throughout the country. In total they produce today about 270 million m<sup>3</sup> of biogas, which in this case (good calorific value) is about 150 million m<sup>3</sup> of biomethane (data from the ERO). Interestingly, since these plants only produce as much biogas as they need for their own use, their owners declare that they can easily double their production if they are given an appropriate support tools. Other biogas produced from substrates other than agricultural biogas will also be covered by this concept, allowing it to be included in the RES support scheme.

With regard to the proposed wording of the definition, it would seem worthwhile to clarify that the term covers gas derived from biogas or agricultural biogas regardless of its physical state, including in liquefied or compressed

form. In addition, it also seems necessary to clarify the maximum achievable combustion heat of such a gaseous fuel (without conditioning) at a level that is physically acceptable, e.g. 38 MJ/m<sup>3</sup>.

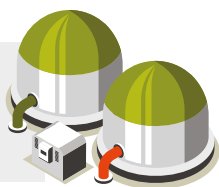
As part of a draft in question, it is also proposed to amend the concept of gaseous fuels regulated in Article 3 clause 3a of ELA, which is to be extended to include the concept of biomethane. The solutions for the definition of biomethane have also been transferred to the amendment of the BLBA.

The amendment to the notion of RES installation regulated in Article 2 clause 13 letter b of RESA should also be assessed positively, which assumes that such an installation is also a set of separate buildings and equipment constituting a whole technical and utilitarian unit for the production of agricultural biogas, biogas or biomethane or renewable hydrogen. A very important postulate is also the legislator's unambiguous definition of which substrates fall within the scope of the definition of agricultural biogas set out in Article 2 clause 2 of RESA by indicating the codes for such waste, taking into account the broadest possible scope, including waste with codes other than 02. It is also necessary to regulate the management of waste, which can be used as a substrate for biogas production in such a way that its processing by biogas plants is the priority, and in the future the only way to manage it.

## 2. INTRODUCTION OF OPERATIONAL SUPPORT INSTRUMENTS FOR BIOMETHANE PRODUCTION

Given the legal situation regarding the rules for the production of gaseous fuels from biogas (biomethane), it seems necessary to propose a separate support instrument dedicated to biogas installations from different substrates, which will be tailored to their specific technical and economic circumstances. In this respect, however, EU norms on state aid rules for climate and environmental protection and energy-related objectives must be taken into account.

### Support schemes for installations of different capacities



POB welcomed the fact that the amendment to the RESA no. UC99, which is currently under discussion, proposes the introduction of a support instrument based on a fixed purchase price for biomethane installations with an installed capacity of 1 MW or less. This instrument is essentially based on the contract for difference (CfD) concept, which has already been tried and tested in the Polish legal environment and is successfully used in the case of the current support system for RES installations using biogas.

With this in mind and recognising the need for an even development of the biomethane sector, the **POB also sees the need to extend this support instrument to RES installations with an installed capacity greater than 1 MW, as well as to those transporting the biomethane produced in compressed or liquefied form by means of transport other than gas networks.**

Consequently, we propose that producers of biomethane fed into the gas network or producing bioCNG or bioLNG, who are admitted to the support system, should be entitled to cover the so-called negative balance - which in practice

means covering the difference between the market price of the gaseous fuel and the price enabling producers to cover the costs of producing biogas (biomethane) and a reasonable return on investment. The mechanism in question also assumes that, in the event of an excessive increase in the price of gaseous fuel as quoted on TGE S.A., it will be possible to have a positive balance justifying the return of excess funds.

In view of the need to avoid the negative effects of a competitive allocation system (auction) in the case of a negligible number of biomethane projects in the first phase of market development (during the transitional period), it is proposed to introduce a single allocation method for the right to cover the negative balance for biomethane installations up to and above 1 MW installed capacity, which will then evolve into two separate instruments for large and small biomethane installations as the market develops and the supply of biomethane projects increases.

In the first phase of the system, the possibility to enter which will be limited by the relevant deadline and the capacity of the permitted biomethane installations, support could be granted by means of an administrative decision issued by the President of the ERO, while in subsequent years support will be granted in the form of competitive auctions complying with EU rules on state

aid for RES. The differences between the two phases of the scheme relate only to the way in which projects are selected to be entitled to cover the negative balance. The possibility of granting support by means of an administrative decision issued by the President of ERO (or a certificate) as in the wording proposed in the draft UC99 should also, in the longer term, apply to biomethane production only in installations with an equivalent capacity of no more than 1 MW. This means that such RES installation projects would ultimately benefit from a fixed purchase price instrument without having to participate in an auction system.

### Elements common to both phases of the support scheme

One of the basic premises of the support system is the efficient acquisition and redistribution of resources to support biomethane production. The costs of operating the support scheme will be passed on to all end users of the gas system through an introduced biomethane charge added to end users by gas system operators (in proportion to the volume of gaseous fuel consumed). The rules for setting the rate and its collection by gas system operators could be modelled on the existing RES fee regulated in the RESA.

### Financing and settlement of the support scheme

The costs of operating the support scheme will therefore be allocated to all end users of the gas system. This allocation will affect the level of variable transmission and distribution charges and consequently change the burden of these charges on end customers. However, it should be pointed out that the use of the so-called differential mechanism under the auction system and the guaranteed premium under the fixed purchase price effectively counteract the excessive burden of the charge in question on end users of gaseous fuels. This is because, in the event of high gaseous fuel prices, the guaranteed level of revenue will be offset by the market price of gaseous fuel and, consequently, the level of the required surcharge (premium) on the set biomethane price will be significantly minimised. Revenues from the additional charges will be transferred by the TSO and the DSO to feed into the support system.

In turn, the entity responsible for settling the public aid will be Zarządca Rozliczeń S.A., which will dispose of the funds collected from the biomethane levy in this respect. Due to the foreseen financial consequences with regard to, inter alia, the President of the ERO, the minister competent for climate affairs and the minister competent for agriculture related to new tasks and administrative costs, the entry into force of the planned regulations will have an impact on the level of state budget expenditure in accordance with the expenditure rule.

### Support period

The POB calls for this to be a period of 20 years from the date of commencement of biomethane generation to cover the negative balance, taken as the maximum period of support, which is the period corresponding to the average life cycle of a biomethane plant project.

Enabling long-term planning of investment activities in the construction of biomethane installations requires the support to be unchanged over a period that allows investors to recoup their investments. Due to the scale of the projects and the need to commit significantly more capital (compared to the capital expenditure incurred by generators using other RES technologies, including the cost of connecting to the gas network or the installation for liquefaction or compression of biomethane), a longer support period than for other RES technologies is required.

### Prevention of over-support

As with other support instruments, it is proposed to include a mechanism whereby the investment aid received by a given generator for a given biomethane installation project is deducted from the price indicated in the decision of the President of the ERO (in phase I for large installations or ultimately for small installations) or the generator's offer (in phase II) (an adjusted price is calculated). The generator's obligation to provide such information will occur at the stage of submitting an auction bid or application to the President of the ERO.

In addition, individual generators will also be required to submit a relevant declaration after the end of each calendar year of use of the support instrument, as well as on an ad hoc basis when such assistance is obtained. The relevant declarations will be subject to verification by the President of the ERO with regard to the correctness of the calculation of the level of investment aid and the adjusted price, and if they are not submitted by the statutory deadline, they will also be subject to the payment of an appropriate administrative penalty.

#### Obligation to produce biomethane for the first time within 5 years of receiving support

The POB proposes that generators who are granted the right to cover a negative balance should be obliged to start producing biomethane to cover the negative balance within 5 years from the date of the auction settlement or in the case of generators participating in the first phase, from the date of the relevant administrative decision by the President of the ERO (or certificate).

This deadline may, in exceptional cases beyond the control of the generator, be extended by way of an administrative decision by the President of the ERO, e.g. due to social protests, lengthy arrangements and obtaining administrative decisions, as well as the failure to connect to the gas network for reasons attributable to the gas operator or despite the conclusion of an agreement with a technology provider, the failure to supply equipment used for biogas purification and its liquefaction or compression.

#### Settlement of a negative balance

The settlement of a negative balance in all cases will be done according to rules analogous to those provided for generators participating in the current support system for RES-E using biogas (payments at the request of the generator by Zarządca Rozliczeń [Settlement Administrator], possibility to offset a current positive balance against a future negative balance, etc.).

Once entitled to settle a negative balance, the eligible generator shall inform the settlement operator once of the date

on which biomethane was first produced under the support scheme and then, each time after the end of a given month, shall apply for settlement of this balance. Importantly, the generator shall submit the application by the 15th of the month following the month covering the settlement in question, under pain of losing the right to payment of the balance settlement for the settlement period in question if this deadline is not met. Zarządca Rozliczeń shall pay the relevant negative balance settlement funds within 30 days of the request.

The rules should also address the issue of a generator's failure to feed all or part of the biomethane into the gas network through no fault of the generator as a result of network failure or absorption problems - it is proposed that, in such a case, the generator should be entitled to financial compensation, except in the event that the connection agreement does not guarantee that the generator can feed the full declared biomethane volume into the network. The financial compensation would be equivalent to the reference price for biomethane and would be paid by the Zarządca Rozliczeń S.A. for the amount of biomethane that the generator could not produce and feed into the grid for reasons beyond its control.

In view of the extended support period (20 years), it is proposed to introduce an obligation to account for the negative/positive balance on an annual basis. The above solution will be beneficial both from the point of view of the scheme's management - in the event of a positive balance throughout the period, there will be no need to wait until the end of the period (20 years), and from the point of view of the scheme's beneficiaries and financial institutions - they will not need to secure funds in the event of a positive balance at the end of the support period. The proposed solution will introduce greater transparency and certainty into the operation of those participating in the support scheme, due to the annual settlement of the balance and thus no need for a single overall settlement of 20 years of operation in the scheme.

**The first phase of the support scheme for large biomethane installations and the target support instrument for small biomethane installations - the right to cover the negative balance granted by individual decision of the President of the Energy Regulatory Office.**

Projects with the highest level of maturity in the investment process, guaranteeing the production of biomethane before 2030 and thus contributing to the 2030 climate and energy policy targets, will be able to take part in the first phase of the support scheme.

At this stage, support will be granted at the request of the generator by the President of the ERO by way of an administrative decision (or certificate). Small biomethane installations (corresponding to an installed capacity of 1 MW or less) will be able to receive support on identical terms due to the relevant exemption in the CEEAG. With the application for a decision, the generator will have to attach:

1. the original or a certified copy of the connection conditions or the connection agreement to the gas transmission or distribution network or the offer to purchase equipment for the liquefaction or compression of biomethane;
2. the original or a certified copy of the valid building permit issued for the proposed RES installation, if required under construction law regulations;
3. the material and financial schedule for the implementation of the proposed RES installation;
4. statements confirming the use of new equipment and relevant substrates;
5. an obligation to produce biomethane for the first time in a RES installation within 60 months from the date of the decision of the President of the ERO;
6. the information specified in the regulations issued pursuant to Article 37 clause 6 of the Act of 30 April 2004 on proceedings in public aid cases.

The need for the generator to have the above-mentioned decisions and documents ensures that only those projects with the fastest completion of the investment process and biomethane generation will participate in the first phase of the support scheme, and before a sufficient number of projects have been prepared to participate in the RES auction.

It remains to be defined in detail to indicate the maximum total annual output of large-scale biomethane projects that will be able to participate in the first phase of the support scheme. Similarly, by regulation, this amount will be allowed to be limited in relation to small biomethane installations. The right to cover the negative balance by means of an administrative decision will not be granted to RES installations whose admission to the support scheme would result in these values being exceeded. Priority for the award of the right to cover a negative balance will be determined by the order in which complete applications are submitted. Due to EU regulations and guidelines regarding state aid, it will be necessary to set a cut-off date for the President of the ERO's decision to grant the right to cover the negative balance, e.g. 31 December 2027 (sufficient development of biomethane projects to enable a competitive auction). After this date, it will not be possible to obtain the right to cover the negative balance for larger biomethane installations under a non-competitive mechanism. It is therefore necessary to precisely separate the first and second phases of the biomethane support scheme.

The amount of the price to be used as the basis for settling the negative balance will be determined by the minister competent for climate in consultation with the minister competent for agriculture

The unit price for the settlement of the negative balance in the first phase of the support scheme, as well as for small biomethane installations, will be determined by a regulation issued by the minister competent for climate matters in consultation with the minister competent for agriculture. This price should be set separately for large and small biomethane installations, as well as for those that are connected to the gas network or liquefy or compress biomethane due to the different costs of these technologies.

In order to ensure that the price level is aligned with the level of support actually needed, the price level will be set on the basis of the macroeconomic indicators indicated in the statutory delegation:

1. operating costs and additional investment costs incurred during the operating period in which the generators will exercise their right to cover the negative balance;

2. investment costs incurred during the project preparation and construction period, together with the necessary technical infrastructure and the set of equipment for feeding the biomethane into the gas network or for carrying out the liquefaction or compression process;
3. a reasonable return on the capital employed in the business activity of preparing, building and operating the biomethane plant;
4. or those provided for in Article 77 clause of RESA, including in particular the predicted price development of biomass and other fuels and the unit price of CO<sub>2</sub> emission allowances, or the impact of RES installations on the environment, including on the reduction of atmospheric pollutant emissions, in particular methane.

In doing so, setting the price by regulation will ensure both transparency and the necessary regulatory flexibility to change the price level, as well as allow the social partners to participate in the legislative process. The established fixed purchase price will be indexed annually for inflation to take into account variable operating costs.

#### Incentive effect and negative balance claim

As part of the procedure for granting the right to cover the negative balance, the President of the ERO will assess whether the proposed investment would have been realised in the case where the RES installation producing biomethane would not have been granted the right to cover the negative balance under the proposed support instrument (the so-called incentive effect).

On the basis of an application from a generator meeting the requirements set out in the act, the President of the ERO will issue a decision to grant the right to cover the negative balance. The granting of the right to cover the negative balance for biomethane installations in the first phase of the scheme, and ultimately for small installations (granted outside the competitive procedure) will be subject to individual notification to the European Commission. The exercise of the right to cover the negative balance, i.e. its payment, will only be possible after a Commission decision declaring this support admissible under EU state aid rules.

#### Second phase of the support system - pay-as-bid auctions with no obligation to sell a specific quantity

The auction system, which is already used in national regulations, is in line with state aid rules in the European Union. Such aid for the operational support of RES fuel and energy generating installations should be granted through a competitive tendering procedure on the basis of clear, transparent and non-discriminatory criteria (with exceptions justifying a deviation from this procedure for, inter alia, the first phase introduced by this act and small installations).

This means that, apart from the exception envisaged for the first phase of the support scheme for biomethane installations, for which the rationale is that it is not possible to effectively conduct competitive auctions during the transition period due to the low supply of projects, as well as the need to initiate the emergence of the first projects, the POB indicates that the auction system is the most appropriate mechanism for setting a competitive level of support in the form of bids from individual generators covering specific biomethane projects.

With regard to the organisation of auctions, it is possible to make use of the experience and competence gained by the President of the ERO in the organisation of the current auction system for RES-E installations. The President of the ERO will be responsible for announcing, conducting and adjudicating the auctions; however, given the characteristics and scale of the biomethane project, it is proposed that the years in which the first auctions are held should be set at a statutory level (statutorily defined year, volume and auction budget). Such a solution provides certainty of an auction being held within a certain timeframe, enabling investors to better plan the actions required to obtain the right to participate in the auction (long-term predictability for investors). Similarly, in view of the need for greater predictability and certainty as to the terms and conditions of the auctions, in the first years of operation of the support scheme, the maximum number of installations that can be granted the right to cover the negative balance should also be set at a statutory level. In the subsequent years of the system's operation, depending on the energy policy pursued, these parameters may be set on an optional basis by means of a regulation of the Council of Ministers issued in the year



preceding the year in which the auction is to be held. The auctions themselves will be conducted using an online auction platform (OPA).

The POB advocates that in the auction, each generator should submit one bid which would be classified to the other participants in the auction. Auctions will be settled on a bid price (i.e. pay-as-bid formula) and the bids with the lowest unit price per MWh of biomethane will win the auction. An auction mechanism structured in this way will enable the cost of marketing biomethane to the end user to be minimised and provides a significant incentive to seek innovative technological solutions to reduce the cost of its production.

Due to the technical diversity of biomethane projects, it will make sense to distinguish the so-called technology baskets, within which different types of biomethane plant will compete due to different investment and operating costs. In this respect, it is postulated that baskets should be distinguished at 3 levels due to:

**a) the type of feedstock used - i.e. agricultural biomethane, non-agricultural biomethane;**

**b) the method of biomethane transport - i.e. connection to a gas network, liquefaction of biomethane into bioLNG, compression of biomethane into bioCNG;**

**c) the annual throughput of the biomethane plant, or installed capacity up to and above 6 MW.**

In order to ensure the competitiveness of the auction procedure, a mechanism will be introduced to ensure that competitiveness is maintained even if the supply of projects does not exceed the volume allocated for the auction. Modelled on the solutions already in place, the auction could be won by those generators whose

bids together did not exceed 90% of the total biomethane volume covered by all submitted bids. This solution limits the possibility of undue financial advantage in the event of a small (but sufficient for the auction to be held and resolved) number of bids submitted. The minimum number of projects to enable the auction to be resolved would be three bids.

#### Pre-qualification for the auction

The process of assessing a generator's readiness to produce biomethane is key to ensuring that projects are actually implemented. Passing pre-qualification will be mandatory for all generators who intend to enter the auction. Pre-qualification will be carried out by the President of the ERO at the request of the investor/entity acting on behalf of the investor of the planned biomethane installation and will concern the possibility of taking part in the auction system and the qualification of the installation in question to an appropriate technological basket, which determines the reference value applicable to it, determining the maximum amount of the premium under the settlement of the negative balance.

Thus, only those generators for which it is sufficiently plausible and technically feasible to actually set up installations and produce biomethane will be admitted to the auction. Technical pre-qualification enables an ongoing assessment of the investment potential of a biomethane plant and the timely start of production. The generator will submit an application for admission to the auction together with:

1. the original or a certified copy of the connection conditions or the connection agreement to the gas transmission or distribution network or the offer to purchase equipment for the liquefaction or compression of biomethane;
2. the original or a certified copy of the valid building permit issued for the proposed RES installation, if required under construction law regulations;
3. the material and financial schedule for the implementation of the proposed RES installation;
4. a statement confirming the use of specific feedstocks;

5. an obligation to produce biomethane for the first time in a RES installation within 60 months from the date of issuing the decision.

Pre-qualification will also have a financial dimension requiring an appropriate deposit to secure the timely commencement of biomethane generation in the amount of PLN 12 for each 1 kW of installed biomethane capacity. The pre-qualification process also plays an important informative role, on the basis of which the investment potential can be estimated and thus the auction budget correctly determined. On the basis of the aforementioned application and the deposit paid, the President of the ERO will issue a certificate of eligibility to participate in the auction.

#### No penalties for failing to meet the declared level of biomethane production

The EU rules on the determination of state aid through competitive tendering proceedings do not require generators bidding in an auction to be obliged to produce the specific volume declared in their bid. In other words,

in a competitive auction procedure, it is merely a matter of setting the amount of support within a declared auction bid that includes a price level that will sufficiently encourage the start of biomethane production.

It is therefore not envisaged to introduce an obligation to produce and sell a certain volume of biomethane and, consequently, administrative fines as an appropriate sanction for failure to meet the declared production level. However, it is envisaged that a generator who does not start generating biomethane by the statutory deadline will not only lose the deposit paid, but will also lose the use of the entitlement to settle the negative balance against the installation. In addition, both the generator concerned and the RES installation project will be subject to an additional 3-year ban on participation in the auction system.



# 3

## 3. INTEGRATION OF BIOMETHANE INSTALLATIONS INTO THE GAS NETWORK

Another key element for the launch of the biomethane sector in Poland, besides the support system for this type of activity, is to ensure the technical feasibility of introducing this type of renewable gaseous fuel into the distribution and transmission gas networks in Poland.

In view of a number of technical challenges related to the possibility of connecting biomethane installations to the network and transporting a new type of gaseous fuel in the form of biomethane, which can be solved by making appropriate infrastructural investments, it is proposed to introduce legal provisions enabling the introduction of dedicated transmission and distribution tariffs covering gaseous fuels from biomethane. The possibility of generating additional funds in this way will also provide the opportunity for greater involvement of companies involved in the transmission or distribution of gaseous fuels, which will gain an economic basis for transporting biomethane.

This solution would not only make it possible to finance the necessary infrastructure and network investments to solve current technical problems, but would also make it possible to pass on these costs in principle to end users of gaseous fuels, who are particularly keen to use environmentally friendly fuel in the form of biomethane. In other words, the burden of these investments, which are after all essentially financed by the tariff, would not extend to all end users of gaseous fuels (including, at least, those in households), but would only affect end users using the gas system for biomethane. Consequently, there needs

to be an appropriate review and supplementation of the norms concerning the principles of tariff approval regulated in the Act of 10 April 1997 - Energy Law (Journal of Laws of 2022, item 1385, consolidated act, as amended) and the Regulation of the Minister of Energy on the detailed principles for shaping and calculating tariffs and settlements in gas fuel trade (Journal of Laws of 2021, item 280 consolidated act).

Alternatively, appropriate funding for gas distribution system operators to adapt their gas networks to transport biomethane could be provided by introducing a tariff for biomethane producers for feeding each kWh of gaseous fuel into the gas network - a solution which should be reflected in the level of costs calculated as part of establishing a reference price for this type of biomethane installation.

Ultimately, under the third of the available solutions, the financial resources needed to adapt the gas networks for the transport of biomethane could be fully internalised to all consumers of gaseous fuels and thus become an additional element of the transmission or distribution tariff to be taken into account by the President of the ERO as part of the tariff proceedings concerning each gas system operator.

An important change with regard to the determination of the physical and chemical parameters of gaseous fuels, including biomethane, was the amendment of the System Regulation. In this respect, one of the key barriers drastically limiting connectivity is the regulation of a minimum combustion heat level of 34 MJ/m<sup>3</sup>. However,

the legislator has not standardised the maximum level of gross calorific value that network companies can require, with the result that in many cases they request this parameter to be brought to a level of more than 38 MJ/m<sup>3</sup>, which is physically impossible to achieve even for the most purified biomethane (without having to enrich it with additional heavy hydrocarbons).

The reason for this is that natural gas enriched with other gases of higher calorific and calorific heat (e.g. supplemented with propane) is transported by this system, which results in a significant increase in these parameters at individual locations. In this respect, in accordance with the Grid Codes adopted by the network companies, they designate specific heat of combustion settlement areas (ORCS) and the monthly average heat of combustion values assigned to them, which, due to their chemical composition, may not be met by biomethane installations, e.g. heat of combustion even above 40 MJ/m<sup>3</sup>.

In order to solve this problem, it is proposed to introduce an obligation into the regulations of the ELA concerning the rules for shaping the instructions in question to require a new ORCS to be partly fed with biomethane injected to the gas network due to the connection of a new biomethane plant, with a safe level of combustion heat, but one that is acceptable and achievable within the technological process of biomethane generation and purification.

Furthermore, it would be worth considering specifying a maximum level of combustion heat that network companies will be able to require as part of the creation of new ORCS, but at a level that is physically acceptable to investors of biomethane installations (without having to treat it with, for instance, propane-butane). The possible level fluctuates between 36 and 38 MJ/m<sup>3</sup>, but in order to be able to create new network sections, especially island sections fed from biomethane installations, it is proposed to maintain the possibility of using the minimum level of 34 MJ/m<sup>3</sup> stipulated in the System Regulation and, with the agreement of the relevant network company, even with lower calorific value, if this is acceptable from the point of view of network operation security and the expectations of local end users.

On the other hand, network companies should also not face a legal barrier in the form of a threat of non-approval of such a change by the President of the ERO in the event of the connection of a biomethane installation due to the need to amend their Gas Grid Code (IRIES). Indeed, these entities should take into account the public interest in the need to ensure energy security in terms of increasing the level of domestic production capacity to reduce imports of natural gas and to exclude such imports from the Russian Federation altogether, even if this would be at the expense of a minimal reduction in the level of combustion heat at certain locations. In addition, a legal basis must also be provided for the possibility of changing the parameters of the gaseous fuel supplied to already connected end users within the framework of the new ORCS thus created, without any possible compensation being charged to the network companies concerned as a result of a change in the parameters of the gaseous fuel supplied.

Network companies and investors in biomethane installations should also be provided with an alternative option to bring biomethane up to the level of the combustion heat operating in the ORCS in question, in the form of the use of an additional biomethane conditioning service (e.g. by adding propane to enrich the calorific and combustion heat of the gaseous fuel). In this respect, §39 clause 2 of the System Regulation appears to already provide an adequate basis which gives network companies the possibility to provide additional services to ensure that biomethane achieves quality parameters that meet the requirements of the respective ORCS. In this regard, however, it seems that it would be appropriate to clarify at a statutory level in the ELA the rules for the provision of this type of service, for which the network company would be responsible, while the actual costs involved would be borne by the investor of the biomethane installation, with a clearly defined level of margin for the provision of this service.

In the context of possible changes to the content of the System Regulation, it would also be worthwhile to introduce the possibility for the gas system operator to take into account larger possible fluctuations in the level of combustion heat and to change the currently applicable

level (+/- 3%) to the postulated level of +/- 10%. This possibility would provide an ad hoc solution to accommodate biomethane into the gas network with above-standard levels of combustion heat, before the formal separation of the new ORCS takes place.

Within the framework of the System Regulation, it would also be worthwhile to clearly define the maximum frequency of measurements of the quality of the individual physical and chemical parameters of biomethane, confirming that it can be fed into a given gas network. The current regulations only introduce an indication of the minimum frequency of such measurements, while leaving the maximum level of the obligation to carry out such measurements to the discretion of individual network companies may significantly hamper and increase the operating costs on the part of the biomethane installation - the unjustified and excessive frequency of the requirement for such tests, which must be financed by the investor. It would also be important to clarify the consequences of the detection of non-compliance with quality parameters as part of the tests carried out, in terms of the suspension of the offtake of gaseous fuel and the possibility and deadlines for the resumption of its offtake. Consideration should also be given to transferring the responsibility for ensuring the quality parameters of biogas or biomethane, including the measurement of these parameters, entirely to the network operator with appropriate remuneration. Such a solution could address investors' concerns about the prohibitively high costs involved in both ensuring these parameters are maintained and measured. Consequently, consideration should also be given to transferring to the network operator the obligation to install a compressor at the connection point and the obligation to adjust the pressure of the injected gas. At present, this obligation is imposed on the generator, according to point 4.3. of the appendix to the System Regulation, which is one of the most important barriers to injecting biogas (biomethane) into the transmission network.

Another element to be considered in terms of increasing the level of integration of gas networks with biomethane installations is the introduction of norms encouraging network companies to take into account investments in

the construction or expansion of gas networks (distribution or transmission) with a view to increasing the potential for connecting biomethane installations in key locations in the network development plans adopted by these companies. Such an obligation could apply to locations (sections of the network) where either the conditions for connection to the gas network have been refused or the conditions would be intermittent, due to the lack of sufficient year-round absorption capacity of the network to accommodate the declared volume of biomethane.

Finally, it is also necessary to propose the need for measures to support the development and expansion of gas networks (including the relevant reversing and conditioning facilities) using dedicated investment aid programmes for the implementation of such public utility tasks. In this respect, there will be ample room for action, particularly with EU funds earmarked for the purpose of transformation in the energy sector, with a particular focus on expanding gas networks and improving their operation in relation to the possibility of transporting gaseous fuels in the form of biomethane.

## 4. FACILITATION OF THE INVESTMENT AND CONSTRUCTION PROCESS

In addition to the above-mentioned issues relating to the support system and the integration of biomethane installations into the gas network, it is also proposed that standardisation be introduced to facilitate and speed up the various stages of the investment and construction process for biomethane installations (e.g. environmental decision, construction permit and occupancy permit). These improvements are intended to significantly speed up and facilitate investment in such installations providing renewable gaseous fuel supply.

As a postulate for discussion, one may wonder whether, given the benefits for generators of regulating all issues related to the construction and operation of biomethane installations in a single piece of legislation (such as predictability of the regulatory framework for operations, ease of application, clarity and transparency of provisions) and the need to maintain system consistency and transparency of the regulations currently in force (amendments to the RESA would significantly reduce the transparency of its provisions), one dedicated piece of legislation should be proposed, which in addition to the support system would also standardise the relevant facilitations in the investment and construction process.

First of all, it should be pointed out that in view of the need to build capacity for the production of our own resources of renewable and environmentally friendly gaseous fuel in the form of biomethane, and with a view to becoming independent of costly supplies of this fuel, the complete and permanent cessation of such imports from the Russian

Federation, and the smooth implementation of the EU's climate and energy policy objectives, it is proposed that these investments be subject to a special legal regime as public purpose investments. Consequently, amendments will be required to Article 6 of the Act on real estate management, expressis verbis specifying that investments in biomethane installations are a public purpose investment within the meaning of the act.

Further, it should also be emphasised that there is a definite need to move away from legislative calls for biomethane installations (which are part of the broader concept of RES installations) to be located exclusively within the provisions of local spatial development plans. The implementation of such a regulation will *de facto* drastically halt the development of biomethane projects, even if, within the framework of transitional provisions, the legislator decides to keep the previously issued zoning decisions for this type of investment. In substantiating this thesis, it is first necessary to point out the low saturation of the Polish area with valid local plans, which means that in the vast majority of locations, such plans are not adopted by the relevant local authorities. Furthermore, projects of this type are also located in areas where agri-food substrates are available, which can then be used in the relevant biogas processes. Consequently, a kind of flexibility is required in this respect in the investment decision, which comes down to the location of the biomethane plant in question. In this respect, it is therefore postulated that the existing rules allowing for the flexible determination of such locations, but within the framework of a decision on the location of a public purpose investment project, should be maintained. The planned standardisation should also preserve previously issued zoning decisions, which would remain valid.

However, in view of the desirability of investors cooperating with the authorities of the communes where biogas facilities could be located, it is proposed that the respective commune councils should be obliged to take potential biogas investment locations into account by means of appropriate regulations when adopting studies of commune spatial development conditions and directions or low-emission economy plans. A study is an obligatory document adopted by individual communes in order to present the spatial policy pursued within the municipality. A low-carbon management plan, on the other hand, is a strategic document that aims to set out the commune's plans for development towards a low-carbon economy that achieves environmental, social and economic benefits. Introducing an obligation to take into account potential locations for biogas investments would make it possible to harmonise the expectations of local authorities and potential investors, who could take into account the locations indicated by the commune in the study or plan when planning their investments. However, unlike in the case of local spatial development plans, the provisions of the study of commune spatial development conditions and directions and low-emission economy plans are not binding and investors could also seek permission to locate a biogas installation in a different place than those indicated in the respective study or plan as part of a public purpose investment location decision. Alternatively, another document of a planning nature could be found to identify potential locations for biogas investments, but leaving appropriate freedom for investors to choose such locations. The inclusion of such measures will certainly facilitate cooperation and coordination of spatial policy between investors and commune authorities.

On the other hand, in order to accelerate the construction and start of operation of biomethane facilities and thus supply the Polish gas system with a large volume of renewable gaseous fuels produced in zero-emission facilities, it is necessary to amend selected regulations on administrative procedures. Consequently, with regard to the administrative proceedings conducted for obtaining the various investment and construction documents obtained by the investor for the construction of the biomethane plant, i.e.:



- decision on environmental conditions,
- decision on the location of public purpose investments,
- water permit,
- building permit,
- occupancy permit,

as well as the rules on the lodging and processing of appeals in respect of those decisions, solutions should be adopted to enable them to be implemented by the manufacturers as quickly as possible and to reduce the time for such decisions to become final and legally binding. In this regard, the introduction of specific procedural rules is proposed, which would set a binding time limit for the authority in charge of the proceedings to resolve a given case (e.g. 90 days from the date of submission of a complete application) so as to guarantee investors a smooth handling of cases involving investments in biomethane installations.

In this respect, it will also be crucial to secure the timeliness of obtaining the relevant agreements, opinions, consents, etc. of other authorities involved in the process of issuing a given administrative decision (in particular Regional Directors of Environmental Protection in the case of environmental decisions). It is therefore proposed that the failure of the interacting authority to express an appropriate position on the case within the prescribed period, e.g. 14 days, should be treated as no objections to the request to issue

the relevant decision (use of the concept of the so-called tacit consent of the authority in case of non-compliance with the time limit).

On the other hand, appeals against such administrative decisions would be lodged within an accelerated period of 14 days from the date of service of the decision to the party or within 30 days from the date of notification or service of notice of issuing the decision. The appeal in question would have to set out the objections relating to the decision, specify the nature and scope of the claim being appealed and indicate the evidence supporting that claim. The processing of the appeal against the decision itself would also have to take place within a strict deadline, e.g. 60 days from the date of receipt. It is also worth proposing that, in proceedings before a higher-level authority or before an administrative court, the relevant decision concerning a biomethane installation cannot be annulled in its entirety or declared invalid in its entirety when only part of the decision concerning the part of the investment relating to the biomethane installation together with the set of equipment for the extraction of gaseous fuel to the network is affected by the defect.

In order to enforce compliance with the specific deadlines indicated above for the relevant proceedings or an appeal against the decision in question, they would be secured by an appropriate administrative fine of PLN 1,000 for each day of delay. The relevant penalty would be imposed by a higher-level authority and, in the case of cases involving an





appeal against a decision, by the minister with jurisdiction over the subject matter of the proceedings, i.e. environment, water management or construction, planning and zoning and housing.

Possible administrative court proceedings on administrative decisions to implement investments in biomethane installations could also be expedited accordingly. In this respect, it is proposed that the provisions of the Act of 30 August 2002 - Law on proceedings before administrative courts (Journal of Laws of 2022, items 329 and 655) be applied to such proceedings, to the exclusion of Article 61 clause 3 of that act, and additionally with the proviso that:

- 1) the files and the reply to the complaint shall be forwarded within 15 days of receipt of the complaint;
- 2) the complaint shall be dealt with within 30 days of receipt of the files together with the response to the complaint.

Moreover, the time limit for examining the cassation appeal against the administrative decisions indicated would be 3 months from the date of its filing.

In view of the possibility of unjustifiably blocking potential investments, it also seems crucial to limit the possibility of participation by ad hoc social organisations whose sole purpose would be to delay investment in biomethane installations. In order to eliminate such risks, it is proposed that in proceedings for the issuance of the indicated decisions, the provision of Article 31 of the Code of Administrative Procedure should apply only to a social organisation that has been entered in the competent register at least one year before the organisation requests to be admitted to the proceedings. The proposed regulation would confirm the real nature of this type of organisation, which would have a long-standing commitment to sustainability, taking into account environmental issues, and not be solely set up to block or delay investment in a biomethane plant.

Considering the environmental issues and the beneficial impact of biomethane installations in the management of various types of biodegradable waste, as well as the

favourable reduction of atmospheric emissions of greenhouse gases and methane (e.g. from manure or slurry stored in natural piles), it is worth considering increasing the annual throughput of biomethane installations of this type as projects which, even if potentially, do not have a significant impact on the environment.

As a consequence, installations that allow the production of up to 10 million m<sup>3</sup>/year of biomethane, i.e. an equivalent amount corresponding to a RES installation with an installed capacity of up to 5 MW, could be exempted from the obligation to obtain an environmental decision.

Also bearing in mind that the main part of biomethane installations can be located on agricultural land and that, in addition, such installations are undoubtedly linked to agri-food activities, being a de facto necessary complement to such activities and the last link in a circular economy, it is proposed to eliminate the restriction on the use of agricultural land for investments in biomethane installations. In this respect, it can be suggested that the Act of 11 April 2003 on shaping the agrarian system and the Act of 3 February 1995 on the protection of agricultural and forestry land do not apply in the case of transactions and investments related to the implementation of a biomethane installation.

As a final demand, the possibility of building or expanding gas networks based on ongoing biomethane investments should be included. Consequently, the construction of such networks, which would be powered at least in part by biomethane, would be regulated by the Act of 24 April 2009 on investments in the liquefied natural gas regasification terminal in Świnoujście, which would facilitate and accelerate the process of gasification and construction of gas networks in the regions where biomethane facilities will be built. On the other hand, this will also have a positive effect on increasing the connection capacity of this type of installation to the gas system, which will be able to connect more biomethane installations as part of the expansion of network capacity and the absorption capacity of individual zones.

## 5. USE OF BIOMETHANE FOR THE IMPLEMENTATION OF NIT

Companies in the refining and fuel sector face the need to use so-called second-generation biofuels or to add so-called second-generation biocomponents of waste origin to liquid fuels. In order to maintain a competitive position on the Community market, it is crucial to ensure that biocomponents of indigenous production can be used, utilising the domestic potential of the agri-food sector in this respect. Polish biomethane produced from biodegradable waste substrates and in a sustainable manner, responds to this demand.

In this respect, the drafters have already prepared a draft of the legal amendments contained in the Act amending the act on bio-components and liquid biofuels and certain other acts (no. UC 110). The originally presented draft and the proposed legal solution should be assessed positively, although particular attention should be paid to sorting out the definition issues of biomethane, biohydrogen and bioCNG and bioLNG as biofuels or biocomponents enabling their effective use in the implementation of the National Indicative Target enabling the achievement of EU climate and energy policy objectives in the transport sector.

### Possibility of biomethane biohydrogen to count towards NIT and NRT

As highlighted by national players in the refining and fuels sector, currently the most promising model for using large quantities of biomethane to meet renewable energy targets in transport is to replace natural gas with its renewable substitute in the form of biomethane, which

can easily be used in the production processes of traditional fuels (petrol, diesel, LPG). The use of biomethane in the steam reforming process will make it possible to obtain biohydrogen, which is a biocomponent within the meaning of the Act on biocomponents and liquid biofuels. If, in addition, this biomethane is derived from specific substrates of waste origin, additional benefits can be gained from the use of so-called second-generation biocomponents. The resulting biohydrogen would be incorporated into the structures of conventional fuels through hydrocracking and hydrodesulphurisation and then supplied to the transport market. As a consequence, this will enable the general objective of the NIT and the sub-objective on the use of advanced biocomponents to be met without unduly altering the pattern of the means of transport used in the country (car fleet) based on internal combustion engines. The feasibility of NIT in such a model would help to generate demand for very significant volumes of biomethane, estimated at up to 500,000,000 Nm<sup>3</sup> per year. In order to implement this model, in addition to the described injection of biomethane into the gas networks, it is necessary to issue the relevant secondary regulations on the basis of Article 23 clause 1f of BLBA:

*1f. The minister competent for energy may lay down, by way of a regulation, the methodology for calculating biohydrogen content in fuels whose production process uses biomethane, taking into account the state of technical knowledge in this respect resulting from research on the content of these bio-components in fuels or experience in their use.*

In view of the fact that such significant volumes of biomethane will be most easily supplied via gas networks, an important element in the overall structure of the legal model will still be to make it clear, within the framework of the norms adopted in the BLBA, that the possibility of using such biomethane supplied via gas networks takes place on a mass balance basis (a specific amount of MWh of biomethane). It is therefore a question of balancing the amount of biomethane purchased at the point of injection into the gas system and the amount received at the point of exit from the system - the end user's gas consumption facility. The standardisation of the above issue will unambiguously determine that, in order to implement the NIT, obliged entities will be able to take gaseous fuel from the distribution or transmission network corresponding to the quantity of biomethane purchased, without having to physically deliver a specific batch of this biomethane to a given offtake point. Of course, the relevant batch of biomethane that will be used for biohydrogen production will have to be subject to appropriate certification confirming that it meets sustainability criteria, which should not be an obstacle to the possibility of transporting this biomethane via gas networks. The idea is therefore to treat the gas system as a whole, into which an appropriate batch of biomethane has been injected, which can then be settled at commercial level within the mass balance without the need to physically deliver this biomethane to a specific point of withdrawal from the gas system.

The same solutions should be applied within the framework of Article 30b et seq. of the Act of 25 August 2006 on the system of monitoring and controlling fuel quality (Journal of Laws of 2022, item 1315, consolidated act, as amended), which introduce the obligation to meet the National Indicative Target and, for this purpose, should allow for the inclusion of GHG reductions associated with the use of biohydrogen from biomethane.

Consequently, an appropriate development taking into account the greenhouse gas emission factors for different types of biomethane (supplied by the gas network, in the form of bioLNG or bioCNG) should also undergo norms contained in the Regulation of the Minister of Climate and Environment of 4 July 2022 on the methodology for

calculating greenhouse gas emissions, determining their emission factors and the calorific value for individual fuels and the energy value of electricity (Journal of Laws of 2022, item 1494).

#### Possibility of counting bioLNG/bioCNG as part of NIT and NRT

**It should also not be forgotten that an alternative form of biomethane supply for biohydrogen production is the form of liquefied biomethane (so-called bioLNG). Consideration of this form of biomethane supply is particularly important because of the time needed to develop gas networks that allow sufficient absorption capacity for individual gas zones, where large numbers of biomethane installations may be located. Another possible model for the use of biomethane in transport is its liquefaction to bioLNG or compression to bioCNG, followed by direct use in road vehicles and in rail and maritime transport adapted to burning gaseous fuel (not using bioLNG as a bio-component).**

Given the nature of the business of selling bioLNG to road vehicles, it seems optimal that the quality requirements for LNG fuel should be the same, regardless of its origin (bio or fossil). BioLNG and bioCNG are currently defined as liquid biofuels, but it is necessary to supplement the regulations on the quality parameters for this fuel on the basis of the Act on fuel quality monitoring and control system: (I) Regulation of the Minister of Energy on quality requirements for liquid biofuels of 25 May 2016, (II) Regulation of the Minister of Economy on quality testing methods for liquid biofuels of 14 October 2016, (III) Regulation of the Minister of the Economy on the method of sampling liquid fuels and liquid biofuels of 1 September 2009, and (IV) Regulation of the Minister of the Economy on the method of monitoring the quality of liquid fuels, liquid biofuels, as well as model reports concerning these fuels and liquefied petroleum gas (LPG) and compressed natural gas (CNG) of 21 September 2007, the aforementioned regulations should be supplemented to also include bioLNG and bioCNG.

As a consequence, it will be necessary to amend the Regulation of the Minister of Climate and Environment of 9 August 2021 amending the regulation on *quality requirements for biocomponents, quality testing methods for biocomponents* and sampling methods for biocomponents, with regard to specifying quality requirements for liquefied biomethane and compressed biomethane, specifying quality testing methods for liquefied biomethane and compressed biomethane and specifying sampling methods for liquefied biomethane and compressed biomethane. At the same time, quality testing methods must not be designed to be too complex or costly, which should be taken care of during the drafting stage of the amendment to the above-mentioned regulation.

In addition, the Regulation of the Minister for Climate and the Environment of 11 July 2020 on the *calorific value of individual biocomponents and liquid fuels* will also need to be amended accordingly, with regard to the addition of calorific value by weight for liquefied biomethane and the addition of calorific value by volume for liquefied biomethane.

It is also important to point out that the development of the biomethane market, including bioLNG and bioCNG, will rely on expanded commercial relationships between independent biomethane producers and refinery-fuel entrepreneurs who will want to use biomethane derived from biodegradable waste to meet their NIT obligations either directly as a biofuel or as a biocomponent. Consequently, there should be transparency in documenting the use of biomethane for transport purposes. The basic rule in this respect is the obligation for a producer of bio-component or biofuel used for transport purposes to attach an appropriate certificate within the meaning of Article 2 clause 1 point 40 of the Act of 25 August 2006 on bio-components and liquid biofuels (Journal of Laws of 2021, item 1355, as amended), confirming compliance with the sustainability criteria. This requirement is obvious to participants in the liquid biocomponent market; however, it may not be fully understood by biomethane producers who have so far been able to use this gaseous fuel to generate electricity from RES. Therefore, in order to avoid doubts of interpretation, it would make sense to add a provision in the draft UC99 clarifying the rules for documenting the use of biomethane for transport purposes,

e.g. with the following wording: “*electricity, biomethane, renewable hydrogen consumed in transport within the meaning of the Act of 25 August 2006 on bio-components and liquid biofuels (...) shall be documented in accordance with the provisions of that act*”.

Possibility of using biomethane covered by operational public aid for NIT and NRT purposes

**The POB also calls for consideration to be given to withdrawing the amendment making it impossible to use biomethane, which was subject to appropriate operational support at the generation stage, for NIT radiation.**

Indeed, according to the proposal of Article 7 to the draft UC99, amendments are made to the Act of 25 August 2006 on bio-components and liquid biofuels (Journal of Laws of 2020, item 1233 and 1565) by adding clause 10 to Article 23 of that act to read as follows: “10. Biomethane that has received the support referred to in Article 83l clause 1 of the Act on renewable energy sources of 20 February 2015 shall not be taken into account for the obligation referred to in clause 1.” The above means that biomethane supported at the generation stage would essentially lose the possibility of its use in the transport sector to demonstrate its renewable nature. In this regard, we would like to point out that RED II determines only the minimal share (contribution) of advanced biofuels and biogas, which are to be produced from materials listed in Annex IX A. The above means, therefore, that the EU legislator does not establish an obligation to use only biomethane within the scope of achieving this particular goal, which can be achieved with the use of biomethane or with the use of other advanced biofuels. As a consequence, the EU legislator does not set a public obligation for the exclusive use of biogas (biomethane), and the way in which the specific RES target for transport is to be achieved is left to the market decisions of obliged entities, which can use a wider range of the so-called second-generation biocomponents in this regard. Hence, if biomethane is marketed by feeding it into the gas network, it should be possible to purchase it and use it in the transport sector, if of course its consumption is not demonstrated as part of the RES target in the electricity and heating and cooling sector (Article 7(1)(a-c) of RED II).

This report has been prepared based on facts and data provided by members of the Polish Biomethane Organization.

In case of any further questions, please feel free to contact us.

With kind regards,



Michał Tarka  
**General Director,**  
**Polish Biomethane Organization**



dr Marcin Trupkiewicz  
**Expert,**  
**Polish Biomethane Organization**

# THE BIOMETHANE PATHWAY

Polish Biomethane Organization

2023



Polish Biomethane  
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