



## Legislative framework

<b>Country:</b>	Austria
<b>Date start:</b>	11/2016
<b>Date finished:</b>	03/2017

## Substrate regulations

			<b>Explain restrictions and/or exceptions</b>	<b>Source of information</b>
<b>Animal byproducts (ABP)</b>	<i>Does the country apply ABP-legislation?</i>	YES	<p>According to EU legislation about animal byproducts ((EG) No. 1069/2009) the animal byproducts will be categorized into three categories.</p> <p>Based on this, animal byproducts in Austria are regulated in the law „Abfallwirtschaftsgesetzes 2002 (AWG 2002).</p> <p>According to this law, animal byproducts have to be able to be applied to a specific waste treatment plant, such as a combustion / co-combustion plant or applicable for treatment in a biogas plant or composting plant (§ 3 Abs. 1 Z 5 AWG 2002).</p> <p>The collection and treatment of animal byproducts are subject to plants which are authorized according to (EG) Nr. 1069/2009.</p> <p>According to AWG 2002 there is a “Bundes-Abfallwirtschaftsplan” which is renewed every six years. This plan describes the animal byproducts in section 2.11</p>	<p><a href="#">(EG) Nr. 1069/2009</a></p> <p><a href="https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&amp;Gesetzesnummer=20002086">https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&amp;Gesetzesnummer=20002086</a></p> <p><a href="https://www.bmlfuw.gv.at/gruentec/bundes-abfallwirtschaftsplan/BAWP2017.html">https://www.bmlfuw.gv.at/gruentec/bundes-abfallwirtschaftsplan/BAWP2017.html</a></p>
<b>Sewage</b>	<i>Is this material allowed in biogas production?</i>	YES	Yes, however in Austria, biogas production from sewage sludge	<a href="http://www.umweltbundes.de">http://www.umweltbundes.de</a>



<p><b>sludge from waste water treatment plants</b></p>	<p><i>If yes, are there any restrictions to spreading the digestate from that production?</i></p>	<p>YES</p>	<p>plays a minor role. It is mostly done to achieve a (partly) autarkic energy supply at the waster water treatment plants.</p> <p>The EU-Directive 86/278/EEC from 1986 regulates the spreading of sewage sludge in the European Union.</p> <p>Additionally, Austria has its own regulations which are defined in "Klärschlamm - Materialien zur Abfallwirtschaft", page 60 →The digestate of biogas production from sewage sludge can be spread as fertilizer or soil conditioner [1]</p> <p>The distribution of this digestate onto agricultural land is subject to complex soil analysis and not permitted on "ÖPUL" land (=land which belongs to Austria's Agriculture-Environment Programm)</p>	<p><a href="http://mt.at/fileadmin/site/publikationen/BE001.pdf">mt.at/fileadmin/site/publikationen/BE001.pdf</a></p> <p><a href="http://www.umweltbundesamt.at/fileadmin/site/publikationen/REP0221.pdf">http://www.umweltbundesamt.at/fileadmin/site/publikationen/REP0221.pdf</a></p>
<p><b>Agricultural materials (not included in ABP)</b></p>	<p><i>Are there any restrictions for this material?</i></p>	<p>YES</p>	<p>Bio-waste / organic waste material is defined in "Bundes-Abfallwirtschaftsplan 2017" which is based on the law „Abfallwirtschaftsgesetzes 2002 (AWG 2002).</p>	<p><a href="https://www.bmlfuw.gv.at/gruentec/bundes-abfallwirtschaftsplan/BAWP2017.html">https://www.bmlfuw.gv.at/gruentec/bundes-abfallwirtschaftsplan/BAWP2017.html</a></p>
<p><b>Bio-waste / organic waste material (not included in ABP)</b></p>	<p><i>Are there any restrictions for this material?</i></p>	<p>YES</p>	<p>Bio-waste / organic waste material is defined in "Bundes-Abfallwirtschaftsplan 2017" in section 3.3 which is based on the law „Abfallwirtschaftsgesetzes 2002 (AWG 2002).</p> <p>The collection and treatment is subject to the EU regulation (EG) Nr. 1774/2002 "Health rules concerning animal by-products not intended for human consumption"</p> <p>In Austria, most of this biowaste is</p>	<p><a href="https://www.bmlfuw.gv.at/gruentec/bundes-abfallwirtschaftsplan/BAWP2017.html">https://www.bmlfuw.gv.at/gruentec/bundes-abfallwirtschaftsplan/BAWP2017.html</a></p> <p><a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002R1774&amp;from=DE">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002R1774&amp;from=DE</a></p>



			treated in biogas and composting plants.	
<b>Monitoring</b>	<i>Who takes care of the monitoring of these regulations?</i>	Farmers, plant owners, municipalities, county administration, AGES (Austrian Agency for Health and Food Safety Ltd.)		

### Alternative handling

				Explain restrictions and/or exceptions			Source of information
<b>What alternative handling processes are allowed?</b>	x	<b>Composting</b>	x	<b>Combustion</b>	x	<b>Landfilling</b>	<a href="https://www.bmlfuw.gv.at/greentec/bundes-abfallwirtschaftsplan/BAWP2017.html">https://www.bmlfuw.gv.at/greentec/bundes-abfallwirtschaftsplan/BAWP2017.html</a>
	<i>Another?</i>						
<b>Regulations</b>	<i>Are there regulations to reduce the incentive of alternative handling? (ex. no organics allowed in landfills)</i>			YES	According to the "Deponieverordnung 2008", it is not allowed to put waste with a share of organic carbon higher than 5% dry matter content, on landfills in Austria.		<a href="#">Deponieverordnung 2008</a>

### Building regulations

		Explain restrictions and/or exceptions	Source of information	
<b>Guidelines</b>	<i>Are there any documents of guidelines for construction of biogas plants?</i>	YES	Information about the legal and technical conditions for the permission, the the installation and operation of a biogas / biomethane plant is described in „Biogas & Biomethan in Österreich Nationale Erfordernisse und Hemmnisse für die Genehmigung und den Betrieb von Biogas/ Biomethan - Anlagen in Österreich“ [2]	<a href="http://www.lea.at/download/Biogas/BiogasMethanRegions/Biogas_und_%20Biomethan_Oesterreich_2012.pdf">http://www.lea.at/download/Biogas/BiogasMethanRegions/Biogas_und_%20Biomethan_Oesterreich_2012.pdf</a>
	<i>If yes, Are they widely used?</i>	YES	It is assumed.	



	<p><i>Are there any documents of guidelines for the construction of systems for the produced gas? (Security, upgrading, gas pipelines etc.)</i></p>	<p>YES</p>	<p>„TECHNISCHE GRUNDLAGE FÜR DIE BEURTEILUNG VON BIOGASANLAGEN“ published by the Federal Ministry of Science, Research and Economy of Austria</p>	<p><a href="http://www.renewable-energy-concepts.com/fileadmin/user_upload/download-infos/TG_Beurteilung_Biogasanlagen_2007.pdf">http://www.renewable-energy-concepts.com/fileadmin/user_upload/download-infos/TG_Beurteilung_Biogasanlagen_2007.pdf</a></p>
<p><b>Permission process</b></p>	<p><i>Is the permission process for small and medium scale biogas plants easier/faster?</i></p>	<p>NO</p>	<p>No information found that it is faster for small and medium scale biogas plants.</p>	
	<p><i>Describe the process:</i></p>		<p>The following list [3] contains the federal laws which need to be considered for permission for the building and operation of biogas plants:</p> <ul style="list-style-type: none"> <li>• Raumordnungsgesetz</li> <li>• Baurecht</li> <li>• Abfallrecht</li> <li>• Gewerberecht</li> <li>• Gasrechtliche Bewilligung</li> <li>• Elektrizitätsrechtliche Bewilligung (bei Stromeinspeisung in das Netz)</li> <li>• Umweltverträglichkeitsprüfungsgesetz</li> <li>• Wasserrecht</li> </ul> <p>For grid injection the following regulations have to be considered:</p> <ul style="list-style-type: none"> <li>• Gaswirtschaftsgesetz</li> <li>• ÖVGW-Richtlinie G 31</li> <li>• ÖVGW-Richtlinie G 33</li> </ul> <p>The permission process has also been described in “TECHNISCHE GRUNDLAGE FÜR DIE BEURTEILUNG VON BIOGASANLAGEN BMWA 2007” [4]:</p> <p>Following specialist fields may be concerned during the permission process (additional to the above mentioned laws):</p> <ul style="list-style-type: none"> <li>• building technique</li> <li>• fire prevention</li> <li>• manufacturing systems engineering</li> <li>• process engineering</li> <li>• electrical engineering</li> </ul>	<p><a href="#">Raumordnungsgesetz</a></p> <p><a href="#">Baurecht</a></p> <p><a href="#">Abfallrecht</a></p> <p><a href="#">Gewerberecht</a></p> <p><a href="#">Gasrechtliche Bewilligung</a></p> <p><a href="#">Umweltverträglichkeitsprüfungsgesetz</a></p> <p><a href="#">Wasserrecht</a></p> <p><a href="#">Gaswirtschaftsgesetz</a></p> <p><a href="#">ÖVGW-Richtlinie G 31</a></p> <p><a href="#">ÖVGW-Richtlinie G 33</a></p>



		<ul style="list-style-type: none"> <li>• explosion control</li> <li>• groundwater protection</li> <li>• water protection</li> <li>• air pollution control</li> <li>• noise control</li> <li>• waste-disposal technology</li> <li>• hygiene</li> <li>• employee protection</li> <li>• traffic engineering</li> </ul>	
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## Handling of products

			Explain restrictions and/or exceptions	Source of information
<b>Digestate</b>	<i>Are there any regulations for the spreading of digestate from biomethane production?</i>	YES	Quality requirements for spreading digestate from biogas/biomethane production as a fertilizer are defined in the following two directives [5]: <ul style="list-style-type: none"> <li>• Düngemittelverordnung 2004 (Austria)</li> <li>• REGULATION (EC) No 2003/2003 relating to fertilisers</li> </ul>	<a href="#">Düngemittelverordnung 2004 (Austria)</a>  <a href="#">REGULATION (EC) No 2003/2003 relating to fertilisers</a>
	<i>Are there any regulations for transporting of digestate from biomethane production?</i>	YES/NO	No information found.	
	<i>Is there a system for certification of digestate from biomethane production?</i>	NO	No (see page 8 of [6])	
<b>Electricity</b>	<i>Do you need permission to sell the electricity on the grid?</i>	YES	The Connection to the grid is defined by laws at federal and regional level in Austria. [7]  There is a grid usage fee which is defined in "Systemnutzungstarife-Verordnung 2010"	<a href="#">Systemnutzungstarife-Verordnung 2010</a>
<b>Heat</b>	<i>Are there regulations for selling heat?</i>	YES/NO	No information found.	



<b>Biomethane</b>	<i>Is there a standard for using biomethane in vehicles?</i>	YES	<p>107. Bundesgesetz: Gaswirtschaftsgesetz 2011</p> <p>In Austria, Bio-CNG is defined as a blend of natural gas and biogas, which consists of almost 100% methane and is pressurized up to 165-300 bar. [8]</p> <p>Austria aimed to introduce a 20% Bio-CNG-Fuel (which consists of 20% biomethane from biogas plants) together with the establishment of 200,000 CNG vehicles until 2020. (BMWFJ, 2010b)</p>	<p><a href="#">107. Bundesgesetz: Gaswirtschaftsgesetz 2011</a></p> <p><a href="http://www.umweltbundesamt.at/fileadmin/site/publikationen/DP141.pdf">http://www.umweltbundesamt.at/fileadmin/site/publikationen/DP141.pdf</a> Section 4.3.1</p>
	<i>Is there a standard for injecting biomethane into the grid?</i>	YES	<p>The guideline ÖVWG Richtlinie G33 defines the aimed methane content (&gt; 96 %) as well as additional requirements such as frequency of measurements, the pressure at injection and the injection quantity. [8]</p> <p>To use biomethane as a substitute of natural gas the heating value of the biomethane has to be adjusted (Wobbe-Index).</p> <p>The biogas quality has to meet the quality demands of the Guideline „ÖVWG Richtlinien G3112 (for imported gas) and G3313 (for gas from regenerative processes) [2]</p> <p>If the mentioned quality demand is met then the gas grid operator have to grant access to the national gas grid according to the law “Gaswirtschaftsgesetz (2011)”. This grant access is based on the EU Directive 2003/55/EG.</p>	<p><a href="http://www.umweltbundesamt.at/fileadmin/site/publikationen/DP141.pdf">http://www.umweltbundesamt.at/fileadmin/site/publikationen/DP141.pdf</a> Section 4.3.1</p> <p><a href="#">Gaswirtschaftsgesetz (2011)</a></p>



				<a href="#">EU Directive 2003/55/EG</a>
	<i>Is there a permission process for selling standardized biomethane?</i>	YES	Yes, there is a documentation process necessary, which can be done through the Biomethane Register Austria. The Biomethane Register Austria issues certificates about quality and origin of bioemethane which is fed into the natural gas grid. Therefore the market participant has to be registered at the Biomethane Register.	<a href="#">Biomethane Register Austria</a>

## Environmental goals

		Explain restrictions and/or exceptions	Source of information
<b>Climate</b>	<i>What are the overall goals for reducing greenhouse gas emissions?</i>	The national goal is to have a share of 34% renewable energy (gross final energy consumption) until 2020 (in comparison to 23.3% in 2005). The development of renewable energy until 2020 is described in the EU Directive 2009/28/EG.	<a href="#">EU Directive 2009/28/EG</a>
	<i>Are there goals for reducing the use of fossil fuels in the transport sector?</i>	Yes, Austria aimed to introduce a 20% Bio-CNG-Fuel (which consists of 20% biomethane from biogas plants) together with the establishment of 200,000 CNG vehicles until 2020. [8]	
<b>Eutrophication</b>	<i>Are there goals for reducing eutrophication due to leakage of nutrients from digestate spreading?</i>	YES  The Council Directive 91/676/EG of the European Union concerning the protection of waters against pollution caused by nitrates from agricultural sources, Article 1, aims to reduce and prevent suchlike water pollution.  Therefore, the European member states have to establish action programs which contain binding required measures.  The Austrian Ministry for Agriculture, Forestry, Environment	<a href="#">Council Directive 91/676/EG</a>



			and Water Management implemented the Directive 91/676/EG with an action program called "Aktionsprogramm Nitrat 2012".	<a href="#">Aktionsprogramm Nitrat 2012</a>
	<i>If yes, how does this reflect in the legislation on spreading of digestate?</i>	There is the action program "Aktionsprogramm Nitrat 2012", which needs to be examined every 4 years according to Article 5 of the Council Directive 91/676/EG of the European Commission.  This action program regulates for example:	<ul style="list-style-type: none"> <li>• a midterm prohibition of fertilisation with maize straw in late autumn</li> <li>• a concretisation of documentation obligations concerning fertilisation at a certain size of a farm</li> <li>• the obligation to have written agreements about the absorption of farm fertiliser</li> </ul>	→The Austrian action program can be downloaded here: <a href="https://www.bmlfuw.gv.at/wasser/wasser-oesterreich/wasserrecht-national/recht-gewasserschutz/AP-Nitrat2012.html">https://www.bmlfuw.gv.at/wasser/wasser-oesterreich/wasserrecht-national/recht-gewasserschutz/AP-Nitrat2012.html</a>  <a href="#">Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources</a>

## Economic framework

			<b>Explain restrictions and/or exceptions</b>	<b>Source of information</b>
<b>Investment</b>	<i>Are there subsidies that cover a part of the investment costs?</i>	YES	Investment incentives for the construction of plants are foreseen [9], [8]. Investment incentives are also foreseen according to KWKG-Gesetz, if the plant has a capacity of more than 100 kW <sub>el</sub> and the heat is used as process heat or for district	KWKG-Gesetz 2014





			heating.	
	<i>If yes, how big is it and where do you apply for it?</i>		Investment incentive according to KWK-Gesetz: max. 30% of the investment for the CHP-Plant and up to 65% of the investment of environment relevant additional costs (55% for medium-sized enterprises and 45% for large-sized enterprises)	KWK-Gesetz 2014 and Förderrichtlinie KWK-Gesetz
	<i>If yes, is the support larger for small and medium scale plants?</i>	YES/NO	See above	
	<i>Are there other ways of financing the investment, special loans for this application?</i>	YES/NO	No information found.	
<b>Electricity</b>	<i>Is there a feed-in tariff system for electricity produced of biomethane?</i>	YES	<p>Legal basis for support systems for electricity produced of renewable energy source is the <b>Ökostromgesetz (ÖSG 2012)</b>.</p> <p>The Guideline „<b>Leitfaden - Biomethan und Ökostromförderung</b>“ defines the support systems for biomethane:</p> <p>The power production from biomethane, which has earlier injected to the natural gas grid, is supported through the „<b>Ökostromabwicklungsstelle</b>“ presupposed to the law “ ÖSG 2012” and General Conditions of the “OeMAG (AB-ÖKO)” .</p> <p><b>Funding conditions:</b></p> <ul style="list-style-type: none"> <li>- support application to OeMAG</li> <li>- Biomethane plant is acknowledged as renewable energy plant according to §7 of the ÖSG 2012</li> <li>- Biomethane plant is registered at “Biomethanregister” of Austria</li> <li>- Biomethane to power plant is registered at “Biomethanregister” of Austria</li> </ul>	<p><b><u><a href="#">Ökostromgesetz (ÖSG 2012)</a></u></b></p> <p><b><u><a href="#">Leitfaden - Biomethan und Ökostromförderung</a></u></b> Status: 31.10.2014, by OeMAG Abwicklungsstelle für Ökostrom AG</p> <p>Biomethanregister: <b><u><a href="http://www.biomethanregister.at/de">http://www.biomethanregister.at/de</a></u></b></p>



	<i>If yes, how is the price determined?</i>	<p>According to Ökostromgesetz 2011, the feed-in tariff for electricity produced from biomethane is between 13 - 16,5 ct/kWh. [9]</p> <p>The Ökostromgesetz (§21) fixes a bonus of 2 ct/kWh in the form of a technology bonus (for electricity produced from biomethane) or KWK-Bonus (for heat production of certain criteria are fulfilled).</p>		<p><a href="#">Ökostrom-Einspeisetarifverordnung 2016</a></p> <p><a href="#">Ökostromgesetz 2012</a></p>
	<i>Is there any other support for producing electricity from biomethane?</i>	YES/NO	No information found.	
<b>Heat</b>	<i>Is there a feed-in tariff system for heat produced of biomethane?</i>	NO	However, Ökostromgesetz 2011 intended to provide 2 ct/kWh for biogas operated CHP plants. [9]	
	<i>If yes, how is the price determined?</i>	2 ct/kWh (for biogas operated CHP plants)		
	<i>Is there any other support for producing heat from biomethane?</i>	NO		
<b>Biomethane</b>	<i>Is there a feed-in- tariff system for injecting biomethane into the grid?</i>	YES	Ökostromgesetz 2011 intends to provide a technology bonus of 2 ct/kWh for the feed-in of biomethane to the natural gas grid. [9]	
	<i>If yes, how is the price determined?</i>	<p>Dezentral power generation (fed-in biomethane) [10]:</p> <p>Plants up to 500kW: 16,5 Cent/kWh</p> <p>Plants over 500kW 13,0 Cent/kWh</p> <p>Additional bonus of 2 Cent/kWh through decentral power generation</p>		
	<i>Is there any support for producing/selling/buying biomethane as a vehicle fuel?</i>	YES	There are no taxes on the product "Bio-Erdgas" which contains 10% of biogas [9]	
	<i>Are there taxes on fossil fuels?</i>	YES	See [9]	
	<i>Are there demands or support for making biomethane available at filling stations?</i>	YES	The energy strategy of Austria intended an increase of methane filling stations.	Energy Strategy of Austria: <a href="#">Energie</a>



				<a href="#">Strategie Österreich</a>
	<i>Are there any other support systems for biomethane as a vehicle fuel, or biofuels in general?</i>	YES	Creation of an attractive CNG-biomethane fuel through tax exemption	Energy Strategy of Austria: <a href="#">Energie Strategie Österreich</a>
<b>SME's</b>	<i>Is there support for small and medium enterprises?</i>	YES/NO	No information found.	

## References

1. Hösel, Schenkel, Schnurer (ed.): Co-Vergärung auf kommunalen Kläranlagen. Müllhandbuch, 3059. Erich Schmidt Verlag (2002)
2. BIOMETHAN REGIONS. Biogas und Biomethan in Österreich, Broschüre zu nationalen Erfordernissen und Hemmnissen für die Genehmigung und den Betrieb von Biogas/Biomethan Anlagen in Österreich. Entstanden i.R. des EU-Projektes "Biomethan Regions" (2012)
3. Biogas Netzeinspeisung - Anlagengenehmigung. <http://www.biogas-netzeinspeisung.at/planungstipps-checklisten/anlagengenehmigung.html>
4. Bundesministerium für Familie, Wirtschaft und Jugend: Technische Grundlage zur Berechnung und Beurteilung von Immissionen im Nahbereich kleiner Quellen (Technische Grundlage Ausbreitungsrechnung) - 2010 (2010)
5. Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH: AGES. Düngemittel. <https://www.ages.at/themen/landwirtschaft/duengemittel/>
6. DI Dr. Karin MAIRITSCH, Ao. Univ.Prof. Dr. Wolfgang WIMMER, DI Siegfried AIGNER: STUDIE Über die Erschließung des Potenzials biogener Haushaltsabfälle und Grünschnitt zum Zwecke der Verwertung in einer Biogasanlage zur optimierten energetischen und stofflichen Verwertung. Anwendungsbeispiel Modellregion Mödling. [http://moedling.abfallverband.at/noeav/user/vb\\_md/dokumente/Studie\\_ECO.in\\_-\\_Mai\\_2011.pdf](http://moedling.abfallverband.at/noeav/user/vb_md/dokumente/Studie_ECO.in_-_Mai_2011.pdf) (2011)
7. Robert Brückmann, Filip Jirouš, Edoardo Binda Zane: Integration of electricity from renewables to the electricity grid and to the electricity market INTEGRATION. National report Austria. [http://www.eclareon.com/sites/default/files/austria\\_-\\_res\\_integration\\_national\\_study\\_nreap.pdf](http://www.eclareon.com/sites/default/files/austria_-_res_integration_national_study_nreap.pdf) (2011)
8. Gössl, M.: Beitrag von Fernwärme, Fernkälte und Erdgas zu Energie- und umweltpolitischen Zielen. Umweltbundesamt, Wien (2013)
9. Klaus Dorninger: Aktivitäten der Gaswirtschaft im Bereich Biomethan in Österreich. National Info Day, 18 April 2012. <https://www.energyagency.at/fileadmin/dam/pdf/veranstaltungen/GGG-Dorninger.pdf>



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10. Andreas Wolf: Biogasregister Österreich.  
<https://www.energyagency.at/fileadmin/dam/pdf/veranstaltungen/GGG-Wolf.pdf> (2012)