

## Annex 2 Table of Key Policies: GERMANY

Policy title	Nature of the measure	Summary of the measure, its goals and coverage	Relevance to biomass use	Potential consequences for biomass resource use
<b>Category 1 - directly drive or impact on the uptake of bioenergy from solid and gaseous sources</b>				
<b>National Biomass Action Plan for Germany 2009</b>	Strategy paper with number of binding targets	<p>Compliments the EU Biomass Action Plan, and Climate and Energy Package targets to increase share of renewable energy in primary use</p> <p>Sets out the potential for the use of biomass in Germany, quantifies the biomass share in meeting current demand and identifies available reserves. It also describes the German government's strategies towards promoting bioenergy use in the heating, electricity and fuel sectors, and the measures it intends to take in implementing them</p> <p>double the share of</p>		

			<p>bioenergy in Germany's energy supply by 2020. Increasing the share of renewable energy in electricity production to at least 30 percent by 2020.</p> <p>Increasing the share of renewables-generated heat from the current 6.6 percent to 14 per cent by 2020.</p>		
				<a href="http://www.bmel.de/cae/servlet/contentblob/750066/publicationFile/41337/BiomassActionPlan.pdf">http://www.bmel.de/cae/servlet/contentblob/750066/publicationFile/41337/BiomassActionPlan.pdf</a>	
<b>Renewable Energy Sources</b>  <b>EEG 2000</b> <b>EEG 2014 (1<sup>st</sup> August 2014)</b>  <b>number of updates until August</b>  <b>EEG Energie and Umweltact 2013</b>	<b>Energy</b>  <b>August</b>  <b>August</b>	Binding Act	It lays out legislation for renewable energy, including German equivalent of a feed in trariff	<p>The EEG 2014 aims to constantly and cost effectively increase the share of renewable energy sources in the German electricity supply. According to Section 1 para. 2 EEG 2014, renewable energy shall account for</p> <p>40% to 45% of the share in the gross electricity consumption by 2025</p> <p>55% to 60% by 2035 and</p> <p>for 80% by 2050.</p> <p>Renewable Energy Sources Act (EEG) contains sustainability</p>	<p>According to Section 3 EEG 2014 the individual expansion corridor targets are as follows:</p> <p>Onshore wind power: net annual growth corridor target of 2500 MW</p> <p>Offshore wind power: reduction of the national targets for offshore wind power from 10 GW to 6.5 GW by 2020 and from 25 GW to 15 GW by 2030</p> <p>Solar power: gross annual growth corridor target of 2500 MW</p> <p>Biomass: gross annual growth corridor target of 100 MW</p> <p>Notable reduction of</p>

requirements for biomass and these must be further defined in a separate sustainability ordinance. The German government's draft sustainability standards for biofuels, which will finalise these requirements and govern monitoring activities, are now being reviewed in line with the EU Sustainability Directive.

bonuses for biomass use

Costs of the EEG system are distributed to electricity consumers via the so-called EEG Surcharge (EEG-Umlage). Details of this reallocation can be found in the 2010 Equalisation Scheme Ordinance (Verordnung zur Weiterentwicklung des bundesweiten Ausgleichsmechanismus - AusglMechV) and the Equalisation Scheme Execution Ordinance (Verordnung zur Ausführung der Verordnung zur Weiterentwicklung des bundesweiten Ausgleichsmechanismus (Ausgleichsmechanismus-

	Ausführungsverordnung - AusglMechAV).		
	<a href="http://mediathek.fnr.de/media/downloadable/files/samples/e/e/eeg-amendment2012.pdf">http://mediathek.fnr.de/media/downloadable/files/samples/e/e/eeg-amendment2012.pdf</a>		
<b>Renewable Energy Heat Act</b>  <b>Erneuerbare-Energien-Wärmegesetz (EEWärmeG) (2014)</b>	<p>Comparable to the EEG but with focus on energy used for heating</p>	<p>The Renewable Energies Heat Act (Gesetz zur Förderung Erneuerbarer Energien im Wärmebereich – EEWärmeG) promotes the increase of heat generated from renewable energy to 14% by 2020.</p> <p>Whilst nearly half energy use in Germany goes towards heating only 6% of this is renewable, and mostly comes from wood. For new buildings it provides a prescribed percentage of renewable energy, and for old buildings there are requirements for retrofits.</p> <p>Requirements depend on the type of renewable energy, for new builds:      Thermal solar: 15%      Geothermal and biomass, bioenergy: 50%</p> <p>The Renewable Energy Heat Act sets out</p>	<p>Largely increase use of biomass for heating, but placed some sustainability criteria</p>

	<p>sustainability requirements for the type of biomass used. For example, palm and soya oil produced under nonsustainable conditions may not be used to comply with the Act's obligations to use renewable energy.</p> <p>Also creation of Market Incentive Program to provide incentives for renewable heating and cooling systems</p>
	<p><a href="http://www.gesetze-im-internet.de/bundesrecht/eew_rmeg/gesamt.pdf">http://www.gesetze-im-internet.de/bundesrecht/eew_rmeg/gesamt.pdf</a></p>
<p><b>Combined Heat and Power Act</b></p>	<p>Binding act affecting grid operators</p> <p>The law on the maintenance, modernisation and expansion of combined heat and power (CHP) generating systems obliges the grid operators to provide a connection to their grid for the CHP plants and units listed in the law and to accept the CHP electricity generated by these CHP plants and units in their grid.</p> <p>The price which the operator of the CHP plant or unit and the grid operator agree for this</p> <p>Provides incentives for creating CHP systems</p>

	<p>electricity has to be paid in addition to a surcharge stipulated in the law and dependent on the type of CHP plant or unit.</p>
	<p><a href="http://www.gesetze-im-internet.de/kwkg_2002/index.html">http://www.gesetze-im-internet.de/kwkg_2002/index.html</a></p>
<p><b>Energy Concept (2010) and 2011 Energy Package</b></p>	<p>BMW 2010 Energy Concept</p> <p>Important measurable criteria of the Energy Concept:</p> <p>The reduction of greenhouse-gas emissions,</p> <ul style="list-style-type: none"> <li>• Renewable energies' share in gross final energy consumption,</li> <li>• The proportion of electricity generation from renewable energies in gross electricity consumption and</li> <li>• Primary energy consumption</li> </ul> <p>The German government's 2010 Energy Concept specifies that renewable energies are to account for 18 percent of gross final energy consumption by 2020 and 60 percent by 2050 across all sector</p> <p>But also reduces a number of bonuses in relation to biomass which were linked to earlier versions of the EEG.</p> <p>Describes conditions for sustainable biomass. Calls for need to minimise uses which compete with food.</p> <p>Nevertheless biomass and biogas assumed to have a more prominent role in both heating and electricity production.</p> <p>Foresees increase use of biomass but increased sustainability criteria</p>

<b>Market Incentive Programme (MAP)</b>	Part of the EEWärmeG provides financial incentives for new builds and retrofits incorporating renewables.	Promote renewables-generated heat €500 million for the period 2009 to 2012.  Provide financial support for the following: Solar panels, Automatically fed combustion systems for biomass, low emission wood glassification, efficient heat pumps, geothermal systems, district heating networks powered on renewables, biogas pipelines.  For biogas plants up to a capacity of 350 Nm <sup>3</sup> /h of upgraded biogas are entitled to a grant of up to 30 percent of the investment costs.	Increase uptake of renewable energies, including biomass
		<a href="http://www.erneuerbare-energien.de/EE/Navigation/DE/Foerderung/Beratung_und_Foerderung/Marktanreizprogramm/marktanreizprogramm.html">http://www.erneuerbare-energien.de/EE/Navigation/DE/Foerderung/Beratung_und_Foerderung/Marktanreizprogramm/marktanreizprogramm.html</a>	
<b>Category 2 - Impact on the nature or extent of the feedstock base</b>			
<b>Biomass-electricity-sustainability ordinance(BioSt-NachV)</b>	Sustainability criteria for bioenergy	Germany has been among the top runners in trying to implement sustainability criteria for biofuels	

	<p>The BioSt-NachV shall ensure that liquid biomass used for electricity production and paid for under the EEG regime will comply with binding ecological and social sustainability standards. It establishes a biomass certification scheme.</p> <p>The ordinance will enter into force on 24 August 2009, except for provisions regarding certification (§§ 24 and 34 BioSt-NachV) which will enter into force on 1 January 2010.</p>
	<p><a href="http://www.gesetze-im-internet.de/biost-nachv/index.html">http://www.gesetze-im-internet.de/biost-nachv/index.html</a></p>
<p><b>Initiative for the Sustainable Supply of Raw Materials for the Industrial Use of Biomass (INRO)</b></p>	<p>Voluntary Industrial Certification Scheme for Renewable Raw Materials</p> <p>Initiative on Sustainable Provision of Raw Materials for the Material Use of Biomass" (INRO) is to reach an agreement with the industry on voluntary certification of renewable resources before primary processing</p>
	<p><a href="http://www.inro-biomasse.de/en.htm">http://www.inro-biomasse.de/en.htm</a></p> <p><a href="http://www.inro-biomasse.de/documents/INROOnlineBrochure.pdf">http://www.inro-biomasse.de/documents/INROOnlineBrochure.pdf</a></p>

**Category 3 - Wider impact on the use of the biomass resource base**

<p><b>National Strategy for the Bioeconomy (2013)</b></p> <p>Nationale Politikstrategie Bioökonomie (2013)</p>	<p>Strategic document</p> <p>policy</p>	<p>It sets out the strategy of the German government on how to develop a bioeconomy</p>
<p><a href="http://www.bmel.de/SharedDocs/Downloads/EN/Publications/NatPolicyStrategyBioeconomy.pdf?__blob=publicationFile">http://www.bmel.de/SharedDocs/Downloads/EN/Publications/NatPolicyStrategyBioeconomy.pdf?__blob=publicationFile</a></p>		
<p><b>National Research Strategy for the Bioeconomy 2030 (2010)</b></p> <p>Nationale Forschungsstrategie BioÖkonomie (2010)</p>	<p>Strategic document</p> <p>research</p>	<p>It sets out the strategy of the German government on how to development research and development projects to allow the bioeconomy to develop</p>
<p><a href="http://www.bmbf.de/pub/Natinal_Research_Strategy_BioEconomy_2030.pdf">http://www.bmbf.de/pub/Natinal_Research_Strategy_BioEconomy_2030.pdf</a></p>		
<p><b>Biomass-electricity-sustainability ordinance (BioSt-NachV)</b></p>	<p>Sustainability criteria for bioenergy</p>	<p>Germany has been among the top runners in trying to implement sustainability criteria for biofuels</p> <p>The BioSt-NachV shall ensure that liquid biomass used for electricity production and paid for under the EEG regime will comply with binding ecological and social sustainability standards. It establishes a biomass certification scheme.</p>

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<b>National Action Plan for the Sustainable Use of Plant Products</b>		
		<a href="http://www.bmel.de/EN/Agriculture/Plants/_Texte/AktionsplanPflanzenschutzmittel.html?nn=529662">http://www.bmel.de/EN/Agriculture/Plants/_Texte/AktionsplanPflanzenschutzmittel.html?nn=529662</a>
<b>Initiative for the Sustainable Supply of Raw Materials for the Industrial Use of Biomass (INRO)</b>	Voluntary Industrial Certification Scheme for Renewable Raw Materials	Initiative on Sustainable Provision of Raw Materials for the Material Use of Biomass" (INRO) is to reach an agreement with the industry on voluntary certification of renewable resources before primary processing
		<a href="http://www.inro-biomasse.de/en.htm">http://www.inro-biomasse.de/en.htm</a>
		<a href="http://www.inro-biomasse.de/documents/INROOnlineBrochure.pdf">http://www.inro-biomasse.de/documents/INROOnlineBrochure.pdf</a>
<b>Fraunhofer Center for Chemical and Biotechnological Processes (CBP)</b>	Research institute/ Programme	Currently under construction at the chemical site in Leuna (Saxony- Anhalt). After completion in 2012, this will function as a 'biorefinery development centre' aimed at pro-

	<p>viding the appropriate framework for connections between research and industry in the context of ambitious projects.</p> <p>The CBP Leuna will be financed by the German federal government (BMBF, BMELV, BMU), the state of Saxony-Anhalt, and the Fraunhofer Society.</p>
<p><b>Plant Biotechnology of the Future (2011)</b></p>	<p>Research programme</p> <p>The "Plant Biotechnology of the Future" research initiative was launched in 2011 as the successor to the national research program GABI (Genome Analysis in the Biological System of the Plant) and involves public institutions and private enterprises (public-private partnership). Its focal areas of research are:</p> <ul style="list-style-type: none"> <li>(1) Increasing yields and yield stability in crops</li> <li>(2) Creating and selecting quality traits</li> <li>(3) Sustainable crop cultivation.</li> </ul>

[http://www.kws.de/aw/KWS/company\\_info/Company/Research\\_and\\_Breeding/Cooperation/Publicly\\_funded\\_projects/~evom/ Plant Biotechnology of the Future rese/](http://www.kws.de/aw/KWS/company_info/Company/Research_and_Breeding/Cooperation/Publicly_funded_projects/~evom/Plant_Biotechnology_of_the_Future_rese/)

**Forest Climate Fund (2011)**

Funding

The Federal Government has provided the financial basis for the establishment of a forest climate fund in the draft Federal Budget for 2012. Resources are to be allocated amounting to Euro 35 million per year for the fund, which is to be set up by 1 January 2013 under the joint patronage of the Federal Ministries of Agriculture and of the Environment.

The funds are to be used especially to plan for schemes to restore balanced landscape water resources, to better adjust to climate change, to maintain and secure forest mires, to establish new carbon-rich riparian and moist forests, as well as to set up reference areas, but also to expand the CO<sub>2</sub> reduction potential of wood. There are also plans to prevent and cope with the occurrence of large-scale damage such as storms

		or forest fires. Additionally, research, monitoring, communication and knowledge transfer are to be supported.	
		<a href="http://www.bmel.de/SharedDocs/Pressemitteilungen/EN/2011/138-AI-ForestClimateFund.html?nn=313124">http://www.bmel.de/SharedDocs/Pressemitteilungen/EN/2011/138-AI-ForestClimateFund.html?nn=313124</a>	
		<a href="http://www.waldklimafonds.de/">http://www.waldklimafonds.de/</a>	
<b>New Products Made from Nature</b>	Federal Initiative	Promotes multiple/innovative uses for biomass	
		<a href="http://www.bmel.de/SharedDocs/Downloads/Broschueren/NeueProdukteNaWaRoImAlltag.pdf?__blob=publicationFile">http://www.bmel.de/SharedDocs/Downloads/Broschueren/NeueProdukteNaWaRoImAlltag.pdf?__blob=publicationFile</a>	
<b>Too good for the bin</b>	Federal Initiative	Discourage food waste	
		<a href="https://www.zugutfuerdietonne.de/">https://www.zugutfuerdietonne.de/</a>	
<b>CCS Act (2012)</b>  Gesetz zur Demonstration und Anwendung von Technologien zur Abscheidung, zum Transport und zur dauerhaften Speicherung von Kohlendioxid – KSpG	National implementation of EU CCS Directive 2009/31/EC	Lays out guidelines for the sustainable use of CCS. Based on this CCS Act, two of the twelve EU-wide CCS demonstration projects eligible for funding are expected to be built in Germany by 2020, providing permanent CO2 storage. A storage project for industrial CO2 emissions (e.g. a joint project for CO2 from industrial biomass) is also planned. The	CCS plants can often be powered by biomass.

	<p>demonstration stage will be evaluated to aid decisions about the potential commercial use of CCS technology.</p>
	<p><a href="http://dip21.bundestag.de/dip21/btd/17/101/1710101.pdf">http://dip21.bundestag.de/dip21/btd/17/101/1710101.pdf</a></p>
<p><b>National Climate Initiative</b></p>	<p>Funding instrument. Since early 2008, funds accrued from the sale of emissions trading certificates have been used to finance a climate change mitigation initiative. Some €400 million was available in 2008. The initiative comprises a national section and an international section. The aim is to exploit existing potential for emission reductions with cost-effective measures and in broader scope, and to promote model projects. Promotion focuses on climate change activities which serve to increase energy efficiency, foster use of renewable energy and optimise biomass use in energy, heat and fuel production.</p>
	<p><a href="http://www.klimaschutz.de/">http://www.klimaschutz.de/</a></p>

<b>The Mobility and Fuels Strategy of the German Government (MFS) (June 2013)</b>	Strategy paper for biofuels	Sets agenda for biofuels in transport sector. Presents opportunities for competition over feedstocks against biomass uses	
		<a href="http://www.bmvi.de/SharedDocs/EN/Anlagen/UI-MKS/mfs-strategy-final-en.pdf?__blob=publicationFile">http://www.bmvi.de/SharedDocs/EN/Anlagen/UI-MKS/mfs-strategy-final-en.pdf?__blob=publicationFile</a>	
<b>Forest Strategy 2020 (2011)</b>		Discusses competition for wood as a feedstock. Calls for an increase in the use of "full tree harvesting" (timber, bark and crown) particularly for use in bioenergy. But also discusses issues with increase nutrient depletion. and soil erosion.  Need for cohesion with Biomass action plan	
		<a href="http://www.bmel.de/SharedDocs/Downloads/EN/Publications/ForestStrategy2020.pdf?__blob=publicationFile">http://www.bmel.de/SharedDocs/Downloads/EN/Publications/ForestStrategy2020.pdf?__blob=publicationFile</a>	
<b>Federal Emission Control Act</b>  BImSchV/BImSchG (Bundes-Immissionschutzgesetz)	Binding	Multiple legislation in relation to air pollution, noise, vibrations.	Multiple legislation covering issues, small boilers, large power plants, biofuels, etc etc 1-39  Relates to competing feedstocks, some issues relating to biomass
<b>Mobility and Fuels Strategy (2011)</b>	Strategy Paper	Focus on mobility issues. Highlights potential for biofuels in the mobility sector, but also many of its limitations.	

<http://www.bmvi.de/SharedDocs/EN/Artikel/UI/the-federal-government-s-mobility-and-fuel-strategy.html?nn=37306>

**Sustainable-biofuels ordinance (Biokraft-NachV)**

The Sustainable biofuels ordinance relates to biofuels/liquids formed in or outside the EU. Determines if they can be included as part of the EEG. Provides a number of criteria for qualification: only raw materials from sustainable cultivation can be included, raw materials from primary forests are excluded. Has been in force since January 2011, since then all biofuels must meet the criteria.