Interreg
Alpine Space
EUROPEAN UNION
BB-CLEAN

DELIVERABLE D.T1.4.1

A REPORT ABOUT THE DIFFERENT REGULATIONS ABOUT BB REGARDING BOTH APPLIANCES AND FUELS

Edited by PP6 E-Zavod 6. 12. 2019

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1. Biomass burning effects in the Alpine Region

The emission of particulate matter (PM) from the residential burning of biomass for space and water heating have a significant impact on air quality across Europe, especially in Alpine countries, where domestic wood burning is most widespread. Modern automatic pellet and wood chip appliances are significantly more energy efficient and have lower emissions than traditional fireplaces and wood log stoves, but most biomass burning is likely to take place in inefficient and polluting appliances thus contributing to exceedances of the EU limit values.

2. EU regulation on clean biomass burning

The energy and climate legislative framework of the EU is encouraging the increased use of biomass, that provides a renewable energy source contributing to the decarbonization of heating particularly at domestic level. However, biomass burning has the potential to harm the environment in relation to the release of air pollutants. Solid fuel combustion in households represents about 2.6% of total energy consumption in the EU but contributes more than 46% to total emissions of fine particulate matter [3].

The policy framework of the EU offers several instruments for dealing with emissions of domestic biomass burning, starting from legislation stimulating technological improvement such as the EcoDesign and Energy labelling directives [2].

Based on both directives the European legislation aims at removing the least efficient products from the market in order to contribute to the EU's 2020 energy efficiency objective. Due to their health impact, the Ecodesign regulations for solid fuel boilers (2015/1189/EU) and local space heaters (2015/1185/EU) also include emission limit values that have to be met. These requirements enter into force in 2020 for boilers and in 2022 for local space heaters. [4]

EU Ecodesign Directive (2009/125/EC)

- Takes into account all the environmental impacts of a product right from the earliest stage of design.
- Allows the Commission to set requirements for environmental performance of energy-related products (products with significant sales/trade in the EU).
- Main focus has been on energy in the use-phase.
- Can address other significant environmental parameters (e.g. emissions).
- Requirements have to be met in order to place a product on the market.
- Ecodesign requirements must not lower the functionality of a product, its safety, or have a

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negative impact on its affordability or consumers'health.
- Requirements are harmonised across the EU. [3]

Based on Ecodesign Directive (2009/125/EC) the following regulations were defined setting minimum requirements
- for solid fuel localspace heaters - CommissionRegulation (EU) 2015/1185
- for solid fuel boilers - Commission Regulation (EU) 2015/1189.

Expected results of the Ecodesign measures:
- For solid fuel local space heaters (2015/1185/EU recital 12): -reductions of particulate matter (PM), organic gaseous compounds (OGCs) and carbon monoxide (CO) of 27 kton/year, 5 kton/year and 399 kton/year respectively by 2030 [3].
- For solid fuel boilers, (2015/1189/EU recital 8): -reduction of 10 ktin particulate matter, 14 ktin organic gaseous compounds, and 130 ktin carbon monoxide by 2030. [3]

Energy Labelling Directive (2010/30/EU)
- Allows the Commission to specify a mandatory energy label for energy-related products.
- The label shows energy efficiency in the use phase.
- Use of other essential resources/ information during use also shown.
- Manufacturers have to supply the label; dealers have to show it. [3]

Based on Energy Labelling Directive (2010/30/EU) the following regulations were adopted defining setting consumer information:
- Energy labelling of local space heaters defined in Commission Delegated Regulation (EU) 2015/1186.
- Energy labelling of solid fuel boilers defined in Commission Delegated Regulation (EU) 2015/1187. [3]

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3. Assessment of the state of the art of the regulations for BB in the Alpine Region

3.1 AUSTRIA

Title of the regulation	NEKP Nationaler Energie- und Klimaplan: *National Energy and Climate Plan* https://www.bmnt.gv.at/umwelt/klimaschutz/nekp-in-der-zielgeraden.html
Responsible authority	Federal Ministry for Sustainability and Tourism
Contact details from responsible authority:	Address: Stubenring 1, 1010 Wien Phone: (+43 1) 711 00 0 E-mail: service@bmnt.gv.at Web site: https://www.bmnt.gv.at/
Overall objectives of the regulation	The objectives of the National Energy and Climate Plan include savings in the building sector through renovation and renewable energy systems (minus 3 million tons GHG compared to 2016), transformation of transport systems (minus 7.2 million tons GHG compared to 2016) and a consistent decarbonization path in industry, agriculture, waste management and greenhouse gases (minus 4 million tons GHG compared to 2016). The share of renewable energy in total final energy consumption is also to rise to 46 to 50 percent by 2020. By 2030, electricity is to come entirely from renewable energy sources.
Timeframe	Adopted: 2021-2030
Specific objectives/priority areas	The objectives in the field of energy supply and use are in particular: - decarbonization - reducing carbon emissions - reducing the energy demand - increased production and use of renewable energy sources - energy efficiency - efficient energy conversion - secure energy supply - energy independency - flexible energy system - expanding the energy infrastructure in a socially and environmentally acceptable way - energy market integration - ensuring social cohesion - protecting consumers as final consumers of energy - research, innovation and competitiveness - ensuring effective competition in the energy market

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Detailed description of the regulation and background	Integrated national energy and climate plan for Austria in accordance with the Regulation (EU) 2018/1999 of the European Parliament and of the Council for the Energy Union and climate protection Content: 1. Overview and plan development process 2. National guidelines and goals - decarbonization - energy efficiency - secure energy supply - internal energy market - research, innovation and competitiveness 3. Politics and measures 4. analytical foundations
Overview of specific Measures	
Measure/Action:	**Description of Measure/Action:**
#mission2030 The Austrian Climate and Energy Strategy May 2018 (guideline)	Based on the new Austrian Climate and Energy Strategy - #mission2030 – published in May 2018 - the following goals for 2030 are decided by the Austrian government: 1. 36 % reduction of GHG-emissions until 2030, based on 2005, without nuclear energy 2. 100% electricity from renewable sources, on an annual balance 3. 45-50% end-energy from renewables (34 % until 2020, actual 33,5 %) 4. Main focus on transport and buildings 5. Rising the energy efficiency 6. Rising primary energy efficiency Targets until 2050: 1. Path until 100 % decarbonisation of the energy system, without nuclear energy 2. 100 % fossil free mobility https://mission2030.info/
National heat strategy	The national heat strategy should contribute to achieving the goals of #mission2030 in the building sector by 2030 and ensure a sustainable heat supply in Austria. For example, the aim is to double the renovation rate from currently less than 1% to an average of 2%. At the same time, fossil fuels must be gradually replaced by renewable energy sources. Fossil liquid energy sources are to be replaced in the heating market over the next 20 to 30 years. From 2020, fossil fuels will no longer be used in new constructions. In the building sector, greenhouse gas emissions are to be reduced by around 3 million tons of CO_2 equivalent by 2030. https://www.bmnt.gv.at/umwelt/energiewende/waermestrategie/Start-der-Online-Konsultation-zur-nationalen-Wärmestrategie.html
Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	This is strategy without binding measures Public consultation process is positive, but the reactions of climate researchers and NGO's to the NEKP shows a lot of potential for improvements

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Title of the regulation	**EEFFG – Energieeffizienzgesetz:** *Energy Efficiency Law* https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20008914
Responsible authority	Federal Ministry for Education, Science and Research
Contact details from responsible authority:	Address: Minoritenplatz 5, 1010 Wien Phone: +43 1 53120-0 E-mail: ministerium@bmbwf.gv.at Web site: www.bmbwf.gv.at
Overall objectives of the regulation	Improvement of the energy efficiency of Austria and the companies. 1. Improve the primary energy intensity by 25-30 % compared with 2015 2. Achieve zero-energy economic growth, i.e. economic growth with no extra demand for primary energy 3. Increase of the renovation rate of existing buildings 4. Switch to electromobility 5. Increase the end-use energy efficiency
Timeframe	Adopted: 2014 - 2020
Specific objectives/priority areas	Goals until the end of 2020: 1. to increase the efficiency of energy use by companies and households in Austria on a nationwide, cost-efficient basis, 2. to standardise national indicative targets for energy efficiency, 3. to define the federal government's role model effect in energy efficiency, 4. to strengthen the demand for energy services and other energy efficiency measures and to define the framework conditions for the quality of energy services on a nationwide basis, 5. Energy suppliers should improve the energy end-use efficiency, 6. via the promotion of energy efficiency a) to reduce the energy consumption and import and thus improve the supply security, b) to curb the demand for nuclear energy, c) to increase the share of renewable energy sources in the final energy consumption and to reduce the amount of climate-damaging emissions in a cost-effective manner, d) to promote the transition to a more energy-efficient economy, to accelerate technological innovations and to improve the competitiveness of Austrian industry by reducing energy consumption, e) Reduce energy costs for households and reduce energy poverty and thus contribute to the realisation of a cost-optimised, sustainable and secure energy supply.
Detailed description of the regulation and background	This law is referring to the Energy Efficiency Directive 2012/27/EU.

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Overview of specific Measures	
Measure/Action:	**Description of Measure/Action:**
National Energy Efficiency action plan (NEEAP)	Austria has set itself the target of a total energy consumption of 1.050PJ in 2020. The savings in end energy should be 290.304 TJ until 2020. In order to achieve this goal measures need be taken in the following categories: 1. Energy efficiency mandatory systems and alternative strategic measures 2. Energy audits and management systems 3. Availability of qualification, accreditation and certification systems 4. Energy services 5. Consumption metering and billing 6. Consumer information programs and training 7. Other horizontal measures to promote energy efficiency 8. Energy efficiency measures in buildings 9. Energy efficiency measures in public buildings 10. Energy efficiency measures in industry 11. Energy efficiency measures in the transport sector 12. Promotion of efficiency in heating and cooling 13. Energy conversion, transmission and distribution and load management https://www.monitoringstelle.at/fileadmin/i_m_at/pdf/NEEAP/NEEAP_2017.pdf
Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	there are too many savings on the market, therefore the market price for savings is less than 1 €ct/kWh a lot of bureaucratic work lower impact due to the recognition of "early actions" at the beginning

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Title of the regulation	ÖSG – Ökostromgesetz: *Green Electricity Law* https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20007386
Responsible authority	Federal Ministry for Education, Science and Research
Contact details from responsible authority:	Address: Minoritenplatz 5, 1010 Wien Phone: +43 1 53120-0 E-mail: ministerium@bmbwf.gv.at Web site: www.bmbwf.gv.at; www.oem-ag.at
Overall objectives of the regulation	Funding of electricity generation from renewable energy sources.
Timeframe	Adopted: 2012; should be replaced by a new Renewable Energy Expansion Act (Erneuerbare Energien Ausbaugesetz)
Specific objectives/priority areas	1. Promotion of the production of green electricity through fixed prices; 2. Promotion of the construction or revitalisation of certain plants through investment subsidies; 3. Granting of operating cost surcharges for green electricity plants based on liquid biomass or biogas.
Detailed description of the regulation and background	Directive 2009/28/EC on the use of energy from renewable sources Directive 2009/72/EC concerning common rules for the internal market in electricity Directive 2006/32/EC on energy end-use efficiency and energy services
Overview of specific Measures	
Measure/Action:	**Description of Measure/Action:**
Biomasse-Grundgesetz: Biomass Basic Law	Draft for a new Biomass Basic Law: Like the Green Electricity Amendment, the Act includes green electricity plants for solid biomass, whose subsidy period and feed-in tariffs expire or have expired in 2017, 2018 and 2019. For these plants, the provinces will provide subsidies for 3 years. The regulations for follow-up tariffs for current green electricity must be applied and expert opinions taken into account. https://www.bmnt.gv.at/service/presse/umwelt/2019/Biomasse--Grundsatzgesetz-geht-in-Begutachtung.html
Erneuerbaren Ausbau Gesetz: Renewable Energies Expansion Act	Development of the Renewable Energies Expansion Act 2020: The aim is to reduce greenhouse gas emissions, expand renewable energy, increase energy and resource efficiency, promote clean technologies and increase the competitiveness of Austria as a business location. Austria must reduce greenhouse gases by 36 percent by 2030 compared to 2005. https://www.bmnt.gv.at/umwelt/energiewende/erneuerbare_energie/Erarbeitung-des-Erneuerbaren-Ausbau-Gesetz-beschlossen.html
Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	Work in progress, at the moment a "draft" is available, has to be completed and decided by the new government. ÖSG: to much limited budget for wind, hydro and biomass blocs the effort on the market, a lot of projects are ready developed and cannot be realized in case of limited feed-in tariffs

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Title of the regulation	**KSG – Klimaschutzgesetz 2011:** *Climate Protection Act* https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20007500
Responsible authority	Federal Ministry for Sustainability and Tourism
Contact details from responsible authority:	Address: Stubenring 1, 1010 Wien Phone: (+43 1) 711 00 0 E-mail: service@bmnt.gv.at Web site: https://www.bmnt.gv.at/
Overall objectives of the regulation	Coordinated implementation of effective climate protection measures.
Timeframe	Adoption: 2011
Specific objectives/priority areas	1. Compliance with maximum quantities of greenhouse gas emissions 2. Development of effective climate protection measures
Detailed description of the regulation and background	Content is written above.

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action		ALL

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	General regulation, now specific measures

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Title of the regulation	**ElWOG 2010 - Elektrizitätswirtschafts- und -organisationsgesetz 2010:** *Electricity Industry and Organisation Act* https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20007045
Responsible authority	Federal Ministry for Digitalisation and Economics
Contact details from responsible authority:	Address: 1010 Wien, Stubenring 1 Phone: (+43) 1 711 00-0 E-mail: service@bmdw.gv.at Web site: https://www.bmdw.gv.at/public.html
Overall objectives of the regulation	Organization in the field of the electricity industry.
Timeframe	Adoption: 2010
Specific objectives/priority areas	1. to provide the Austrian population and economy with low-cost, high-quality electricity; 2. to create a market organisation for the electricity industry in accordance with EU primary law and the principles of the internal electricity market 3. to make sustainable use of the potential of cogeneration and cogeneration technologies as a means of saving energy and ensuring security of supply; 4. to sustainably increase and guarantee the security of networks and supplies by creating appropriate framework conditions; 5. to support the further development of electricity generation from renewable energy sources and to guarantee access to the electricity grid from renewable sources; 6. to compensate for public service obligations in the general interest imposed on electricity undertakings relating to security, including security of supply, regularity, quality and price of supplies and environmental protection. 7. to take the public interest in the supply of electrical energy into account, in particular from indigenous renewable resources, when evaluating infrastructure projects.
Detailed description of the regulation and background	The Regulation 2009/713/EC for establishing an Agency for the Cooperation of Energy Regulators is taken into account. 1. Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC 2. Directive 2004/8/EC on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC 3. Directive 2006/32/EC on energy end-use efficiency and energy services 4. implemented Directive 2008/27/EC on the promotion of energy from renewable sources 5.the provisions laid down in Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 6. as set out in Regulation (EU) No 1227/2011 on the integrity and transparency of the wholesale energy market

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Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action		Market actors in electricity infrastructure, grid lines and energy production
Pros and cons of regulation		
Please describe positive and negative aspects of the regulation as perceived by the partner.	Pros: clear regulation of roles and their responsibility in the electricity sector	

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Title of the regulation	ROG - Raumordnungsgesetz - *Regional Development Act*
Responsible authority	All Provinces at their own responsibility
Contact details from responsible authority:	Address: Phone: E-mail: Web site:
Overall objectives of the regulation	Regulation of the spatial planning and land usage
Timeframe	Adoption: different in every province
Specific objectives/priority areas	The proactive management of an area in order to ensure the best possible use and protection of the habitat, taking into account natural conditions, environmental protection requirements and the foreseeable economic, social and cultural needs of its inhabitants and the free development of personality in the community, the safeguarding of life-supporting requirements, in particular for the preservation of the physical and mental health of the population, in particular protection against noise, vibrations, air, water and soil pollution and against the risk of traffic accidents.
Detailed description of the regulation and background	Regulation of the expansion of industrial and settlement areas, avoidance of urban sprawl
Overview of specific Measures	
Measure/Action:	**Description of Measure/Action:**
ÖREK-Partnerschaft Energieraumplanung: ÖREK-Partnership Energy Spatial Planning	The objectives of the ÖREK partnership are the development and dissemination of know-how in energy spatial planning, awareness raising with regard to the climate relevance of spatial planning measures and the design of framework conditions. The implementation partnership is intended to point out options for action in spatial planning with a focus on long-term climate protection. Of central importance is the spatial planning design of energy-optimised spatial structures in order to reduce the overall energy consumption and thus the greenhouse gas pollution caused by housing estates as well as industrial and commercial locations. This represents an important contribution to the achievement of Austria's climate and energy goals. Spatial planning can make its contribution to securing important regional renewable energy resources and to the management of spatial requirements. https://www.oerok.gv.at/raum-region/oesterreichisches-raumentwicklungskonzept/oerek-2011/oerek-partnerschaften/abgeschlossene-partnerschaften/energieraumplanung.html
Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	

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Title of the regulation	"Immissionsschutzgesetz – Luft"- *Air Immission Control Law* https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10011027
Responsible authority	Federal Ministry for Sustainability and Tourism
Contact details from responsible authority:	Address: Stubenring 1, 1010 Wien Phone: (+43 1) 711 00 0 E-mail: service@bmnt.gv.at Web site: https://www.bmnt.gv.at/
Overall objectives of the regulation	1. Reducing emissions 2. Reducing harmful effects on human health 3. Measuring air quality
Timeframe	Adoption: 1997
Specific objectives/priority areas	1. the permanent protection of human heath, animal and plant population, their symbioses, habitats and their interactions as well as cultural and material assets against harmful air pollutants and the protection of humans against air pollutants which pose an unacceptable burden 2. the precautionary reduction of immissions of air pollutants, and 3. the maintenance of the best air quality compatible with sustainable development in areas with better air quality values and the improvement of air quality through appropriate measures in areas with lower air quality values. In order to achieve these objectives, a set of instruments shall be established in particular for the precautionary reduction of immissions of air pollutants, for the reduction of anthropogenic emissions and immissions of air pollutants.
Detailed description of the regulation and background	Council Directive 1996/62/EC on ambient air quality assessment and management Council Directive 1999/30/EC relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action	Definition of limit values for emissions	ALL

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	Definition of limit values for emissions

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Title of the regulation	**Bundesluftreinhaltegesetz:** *Federal Clean Air Act* https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20002155
Responsible authority	Federal Ministry for Sustainability and Tourism
Contact details from responsible authority:	Address: Stubenring 1, 1010 Wien Phone: (+43 1) 711 00 0 E-mail: service@bmnt.gv.at Web site: https://www.bmnt.gv.at/
Overall objectives of the regulation	Regulation of incineration of (biomass) materials outside of combustion systems
Timeframe	Adoption: 2002
Specific objectives/priority areas	The aim of this Federal Act is to preserve the natural composition of air to an extent that is compatible with 1. the permanent protection of human health and well-being, 2. the protection of the life of animals and plants, and 3. the protection of things in their properties which are valuable to human beings as far as possible.
Detailed description of the regulation and background	1. In all his actions and omissions, everyone is obliged to ensure that the natural composition of the air is not altered by air pollutants such as particles, gases, vapours, odorous substances and aerosols, to an extent contrary to the objective of this Federal Act. 2. Impairment and nuisance to third parties by smoke and unpleasant odours shall be avoided as far as this is possible according to the state of the art. Only slight development of odours and smoke shall not be regarded as impairment or nuisance. 3. Emissions of air pollutants which are covered by an air pollution control permit or which result from proper agricultural management are excluded.

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action	Definition of limit values for emissions	Operators of boilers

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	Definition of limit values for emissions

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Title of the regulation	**Emissionsschutzgesetz für Kesselanlagen:** *Emission protection law for boiler plants* https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20008506
Responsible authority	Federal Ministry for Digitisation and Economics
Contact details from responsible authority:	Address: 1010 Wien, Stubenring 1 Phone: (+43) 1 711 00-0 E-mail: service@bmdw.gv.at Web site: https://www.bmdw.gv.at/public.html
Overall objectives of the regulation	Integrated prevention and reduction of emissions from steam boiler plants.
Timeframe	Adoption: 2013
Specific objectives/priority areas	1. the emissions into air, water and soil which can be avoided according to the state of the art are avoided, and 2. unavoidable emissions into the air are distributed rapidly and effectively as it is state of the art to keep the immission load on the goods to be protected as low as possible, and 3. danger or stress is avoided and 4. environmental pollution is avoided in accordance with the regulations adopted for this purpose and the provisions of this act. (2) The equipment used to limit emissions into the air, the furnaces and burners or combustion chambers and their accessories shall be designed, tested and installed in a way that ensures their reliable functioning. (3) The height of the chimneys shall be determined taking into account the location of the plant as well as the meteorological and topographical conditions in such a way that health and the environment are protected.
Detailed description of the regulation and background	Improvement of the air quality, reduction of emissions, protection of inhabitants

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action	Definition of limit values for emissions	Companies, operators of steam boilers

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	Definition of limit values for emissions

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3.2 ITALY

Title of the regulation	*Agreement of the Padano Basin*
Responsible authority	Ministry of the Environment and the regions: Lombardy, Piedmont, Emilia-Romagna and Veneto
Contact details from responsible authority:	Address: Phone: E-mail: Web site: www.minambiente.it
Overall objectives of the regulation	**Agreement of the Padano Basin**: implementing coordinated actions between the regions of the Po river basin to reduce the impact of domestic combustion of wood on air quality.
Timeframe	Every 6 months, recognition of the progress of the commitments.
Specific objectives/priority areas	The territories of the 4 regions involved, with intervention priority for areas of overcoming fine particles and Benzo (a) pyrene.
Detailed description of us of the regulation and background	With reference to biomass appliances, it prohibits the use and installation of the most polluting devices, based on an environmental classification (Stars) developed by the Ministry of the Environment (Decree 186/2017).

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action	Please refer to Article 2 of the Agreement.	Domestic biomass appliances and boilers.

Pros and cons of regulation	
	Pros: acceleration of technological turnover Cons: non-recognition of the renewability of biomasses, without a correct distinction between types of generators and the relative real performances (quantity and quality of harmful emissions)

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3.2.1 LOMBARDY REGION

Title of the regulation	*Regional plan for air quality measures*
Responsible authority	Lombardy Region
Contact details from responsible authority:	Address: Piazza Città di Lombardia 1 Milano Phone: 02 6765 5461 E-mail: gian_luca_gurrieri@regione.lombardia.it Web site: https://www.regione.lombardia.it/wps/portal/istituzionale/HP/DettaglioServizio/servizi-e-informazioni/Cittadini/Tutela-ambientale/Qualita-della-aria/piano-regionale-degli-interventi-per-la-qualita-dell-aria
Overall objectives of the regulation	The use of biomass for heating in the Lombardy Region is regulated by regional law n. 24/2006 and by a resolution of the regional administration (Regional plan for air quality measures) These rules prohibit the installation and use of biomass stoves if they are not of high quality. The different quality classes, based on the maximum emission values, are defined in the ministerial decree n.186 / 2017 for each category of stove or biomass boiler. Furthermore, it is forbidden to use non-certified pellets.
Timeframe	The Air Quality Plan was approved in 2013 and was updated in 2017
Specific objectives/priority areas	Lombardy Region has introduced limits on the use of biomass for heating to reduce polluting emissions. These limits apply throughout the regional territory
Detailed description of us of the regulation and background	Prohibition for installing, throughout the region: - generators no less than 3 stars starting from 10/1 2018; - generators no less than 4 stars starting from 1/1/2020. The biomass generators installed before 01.10.2018 can be kept in operation if: - belonging to at least the 2 Star class starting from 1/10/2018; - belonging to at least 3 Star class starting from 1/1/2020. Ban on financing the installation of plants wood biomass thermal in regional measures aimed at energy efficiency, with the exception of the plants built in the alpine area classified as C2, in accordance with the D.R.R. n. 2605/2011 Prohibition, from October 1 to March 31 of each year, of outdoor combustion of plant debris in areas below 300 meters above sea level

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action		

Pros and cons of regulation	
	The Lombardy Region is aware of the importance of biomass and the need to limit the consumption of fossil energy sources. However, the need to improve air quality requires limiting the combustion of biomass, especially in small plants.

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3.2.2 VENETO REGION

Title of the regulation	Agreement of the Padano (Po river) Basin, signed by the Ministry of the Environment and Veneto, Emilia Romagna, Lombardy and Piedmont Regions, implementing coordinated actions between the regions of the Po river basin to reduce the impact of domestic wood combustion on air quality (Veneto Region Deliberation n. 836, 6 June 2017)
Responsible authority	Regione Veneto
Contact details from responsible authority:	Address: Palazzo Linetti, Calle Priuli, Venezia Phone: +39 041 2792442 E-mail: ambiente@pec.regione.veneto.it Web site: http://www.regione.veneto.it/web/guest/area-tutela-e-sviluppo-del-territorio
Overall objectives of the regulation	Interregional measures complementing regional air quality improvement plans to combat PM10 air pollution in Padano Basin
Timeframe	2017-2025
Specific objectives/priority areas	Temporary and homogeneous measures to improve air quality and to combat local pollution
Detailed description of us of the regulation and background	See Veneto Region Deliberation n. 836/2017: "Approval of the new Programme Agreement for coordinated and joint adoption of clean-up measures to improve air quality in the Po Basin". https://bur.regione.veneto.it/BurvServices/pubblica/DettaglioDgr.aspx?id=347278 See Ministry of the Environment Decree 186/2017 classification: "regulation of requirements, procedures and competences to release solid fuel biomass generators certification" http://www.gazzettaufficiale.it/eli/gu/2017/12/18/294/sg/pdf

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Limitation in using obsolete domestic biomass appliances --	Municipal ordinances prohibiting the use of biomass domestic appliances: – below DM 186/207 2-star class in the period October-March – 3-star class when the daily limit value for PM10 is exceeding for several days	Citizens resident in Veneto Municipalities acceding to the "New Program Agreement"
prohibition for installation of new appliances under 4-star class	Municipal ordinances prohibiting the installation of new appliances under 3-star class	Citizens resident in Veneto Municipalities acceding to the "New Program Agreement"

Pros and cons of regulation	

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3.2.3 TRENTO AUTONOMOUS PROVINCE

Title of the regulation	**DPP 2 agosto 2017, n. 13-66Leg:** *Modifications and additions to the d.P.P. 13 July 2009, n. 11-13/Leg, regarding: "Regulatory provisions on sustainable construction to implement Title IV of Provincial Law 4 March 2008, n. 1 (Urban planning and territorial governance)", Annex A, art. 7*
Responsible authority	Autonomous Province of Trento, Provincial Agency for Water Resources and Energy – APRIE
Contact details from responsible authority:	Address: Piazza Fiera, 3 – IT-38122 Trento Phone: +39 0461-497310 E-mail: aprie@provincia.tn.it Web site: http://www.energia.provincia.tn.it/
Overall objectives of the regulation	Modification and update of the regulatory provisions on sustainable construction to implement Title IV of the provincial law 4 March 2008, n. 1 (Urban planning and territorial government)
Timeframe	08.08.2017
Specific objectives/priority areas	Modification and updating of regulatory provisions on: – sustainable construction – buildings energy certification – building energy refurbishment – heating system efficiency requirements – acoustics experts
Detailed description of us of the regulation and background	A biomass heating plant installation is allowed only by providing a nominal thermal efficiency corresponding to minimum classes specified in the following standards: – Solid fuel stoves: UNI EN 13240 – wood pellets domestic heating: UNI EN 14785 – Thermocookers: UNI EN 12815 – Solid fuel inserts: UNI EN 13229 – Slow-release appliances: UNI EN 15250 – Pellet burners: UNI EN 15270 For biomass boilers, whichever is the overall intervention: – on the existing building – and / or on the plant – for a new building it is mandatory to install UNI EN 303-5 5-class generators, even when the only intervention consists in replacing an existing generator with a biomass boiler (regardless of fuel and power).

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	For 5-class boilers, the standard calculates the minimum efficiency percentage by the following formulas, depending from the nominal heating power Qn: – Qn ≤ 100kW: (87 + log Qn)% – Qn > 100kW: – 89% (fixed value)

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action		

Pros and cons of regulation	

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3.4 FRANCE

Title of the regulation	*Thermal regulations for buildings RT 2012*	
Responsible authority	Ministry in charge of Housing	
Contact details from responsible authority:	Direction Régionale de l'Environnement, de l'Aménagement et du Logement 5 place Jules Ferry 69006 Lyon 69453 Lyon CEDEX 06 Tel: +33 (0) 4 26 28 60 00 http://www.auvergne-rhone-alpes.developpement-durable.gouv.fr/coordonnees-et-plans-d-acces-des-implantations-a9122.html	
Overall objectives of the regulation	Establish rules and standards to be respected in the construction and renovation of buildings to contribute to national energy saving objectives and achieve a given level of energy performance and thermal comfort https://www.cohesion-territoires.gouv.fr/rt2012	
Timeframe	since January 1st, 2013 The thermal regulations are regularly updated (previous update: 2005)	
Specific objectives/priority areas	The 2012 RT applies to building permits submitted since 1 January 2013. It requires the use of renewable energy for new homes. Wood heating makes it possible to meet this obligation. The current regulatory labels for new construction (E+C- Labels) measure the energy performance but also the greenhouse gas balance of the construction project. Wood is particularly well taken into account since it easily makes it possible to reach levels equivalent to passive or even positive energy buildings, while having a very good carbon footprint. The regulatory texts and in particular the decree of October 26th, 2010, relating to the thermal characteristics and energy performance requirements of new buildings, determine precisely how wood heating is applied.	
Detailed description of us of the regulation and background	Wood boilers are taken into account whether in individual residential, collective or tertiary sectors; the inclusion of independent wood heating appliances in individual houses requires, however, an application sheet dated November 18th 2013, the modalities of which must be respected in order to meet the renewable energy requirement of 5 kWh/m²/year of the 2012 RS. https://www.flammeverte.org/conseils-pratiques/chauffage-au-bois-RT-2012	
Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Application sheet dated November 18th 2013 on independent wood-burning heating appliances in single-family and adjoining houses, in accordance with the	This RT2012 application sheet sets out the installation procedures for appliances depending on whether or not they have a manual and automatic adjustment device according to the indoor temperature; each appliance can only heat directly a useful area of	New individual and adjoining houses

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decree dated October 26th, 2010	100 m^2	
Local rules in the prefectural decrees on the perimeters of the Atmospheric Protection Plans (PPA)	Some areas that are highly sensitive to PM10 pollution may use stricter local rules that restrict the most polluting uses of existing individual wood heating, as new appliances are subject to regulations that already guarantee low emissions Example of the Arve Valley PPP: prohibition of auxiliary heating of non-efficient appliances during pollution peaks; strengthening of maintenance compliance control; definitive prohibition of open fireplaces and old appliances in 2022; obligation to upgrade non-efficient appliances at the time of property transfers	Old (before 2002) and open individual wood-burning appliances

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	Guarantees the use of wood energy in accordance with the most recent construction methods, in order to give a good place to this renewable energy essential to the French energy mix

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Title of the regulation	*Green Flame (Flamme Verte)*
Responsible authority	Renewable Energy Union.
Contact details from responsible authority:	**www.enr.fr (SER)**
Overall objectives of the regulation	Green Flame is a quality label to guarantee and standardize the energy and environmental performance of independent wood heating appliances: closed fireplaces/inserts, wood and pellet stoves and stoves as well as domestic boilers, with the support of UNICLIMA (union of climate engineering companies). To obtain the Green Flame label, the performance of each piece of equipment is controlled in laboratories accredited according to ISO/IEC 17025 and notified by the European Commission, whose tests also give access to the CE marking. This label is supported by ADEME (Agence nationale de l'Environnement et de la Maîtrise de l'Energie) as part of its contribution to - The National Renewable Energy Action Plan (2009-2020), submitted to the European Commission: target of 9 million wood-heated homes with constant wood consumption, or 7.4 Moe (Million TOE) - The National Health and Environment Plan 3 (PNSE3) 2015-2019 for the reduction of emissions from domestic wood heating installations https://www.flammeverte.org/
Timeframe	The Green Flame label was launched in 2000 by domestic appliance manufacturers to promote the use of wood by heating appliances that are efficient in terms of energy efficiency and pollutant emissions. Continuous application; the level of performance increases over time (today, Green Flame 7 Stars) thanks to the progress of manufacturers
Specific objectives/priority areas	Guarantee of respect for values for: - Energy efficiency in %. - Emissions of CO, PM10, VOC and NOx For example, the requirements of the label increased as follows, between 2000 and 2018, for independent devices: - For energy efficiency: +35 points - For CO emissions: from 1% to a maximum of 0.15%. - For PM10: from 500 to 50 mg/Nm3 to 13% 02
Detailed description of us of the regulation and background	These are manufacturers who voluntarily apply to have their appliances awarded the label, which is required for certain public subsidies and is a sign of quality for the consumer
Overview of specific Measures NOT SUBJECTED	
Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	The only sign of quality that carries out performance checks on equipment on the French market, the label makes it possible to provide a quality guarantee on an extremely diversified offer, especially since in 2017, the 12 control laboratories are intercomparing their protocols to reduce differences in the interpretation of measurements. As many foreign-made devices do not have a label, ADEME maintains a database of devices considered equivalent to the Green Flame label

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Title of the regulation	*Regulation of Classified Installations for the Protection of the Environment (ICPE), due to the nuisances or significant risks of soil pollution or accidents they present* **Item 2910. Combustion, excluding installations covered by headings 2770, 2771, 2971 or 2931**
Responsible authority	Ministry of Ecological and Solidarity Transition
Contact details from responsible authority:	Direction Régionale de l'Environnement, de l'Aménagement et du Logement 5 place Jules Ferry 69006 Lyon 69453 Lyon CEDEX 06 Tel : 04 26 28 60 00 http://www.auvergne-rhone-alpes.developpement-durable.gouv.fr/coordonnees-et-plans-d-acces-des-implantations-a9122.html
Overall objectives of the regulation	Integrated approach to the prevention of risks related to the activity of public and private installations vis-à-vis: - the convenience of the neighborhood; - public health, safety, security, sanitation; - agriculture; - environmental protection; - the rational use of energy; - heritage conservation. The activity of these installations is subject to a State license: the license is always issued by the same authority (the inspection of classified installations) and regulates all the risks concerned: explosion, waste, discharges into water, air, soil... This regulation reflects the Integrated Pollution Prevention and Control (IPPC) Directive 2008/1/EC and the SEVESO Directive 82/501/EEC. 7,000 IPPC installations and 1200 Seveso installations exist in France. In the absence of the permit, the operator of the installation is liable to administrative and/or criminal fines.
Timeframe	Continuous regulation since 1810 The first French regulations date back to the imperial decree of 15 October 1810. These regulations have continuously improved and adapted to the evolution of the activities and the risks they may represent. Main benchmarks: The law of December 19th 1917: creation of the simple declaration regime. The law of July 19th 1976 became the legal basis for the industrial environment in France and established the integrated approach to risks The law of July 30th 2003, following the explosion of the AZF plant in Toulouse in 2001, strengthens risk prevention and the inspection control system for classified installations
Specific objectives/priority areas	Each installation is classified in a nomenclature organized into headings defined in relation to the substances handled or the activities present on the installation, which determines the obligations to which it is subject, in descending order of the level of risk (authorization, registration or declaration

	systems) https://aida.ineris.fr/liste_documents/1/18028/1 The ICPE regulation applies to combustion plants with a capacity exceeding 1 MW under heading 2910 https://aida.ineris.fr/consultation_document/10767
Detailed description of us of the regulation and background	See the practical sheet https://www.service-public.fr/professionnels-entreprises/vosdroits/F33414 See the official website of the ICPE: http://www.installationsclassees.developpement-durable.gouv.fr/Historique.html

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
BPI heading 2910, Prefectural authorization scheme for each installation	The operator must apply for a permit before any commissioning, demonstrating the acceptability of the risk: impact and hazard assessment. After a public inquiry, the prefect may authorize or refuse the operation. The authorization is only definitively issued after the implementation of the measures specified in the prefectural authorization order.	Installations that present serious risks or nuisances for the environment. Does not apply to installations using biomass
BPI heading 2910, Registration regime *Simplified authorization on the basis of a list of general requirements to be met, which are specific to the activity, but which are not "tailor-made" to the installation as in the authorization scheme*	The operator must apply for a permit before commissioning, justifying that he complies with the technical measures to prevent risks and nuisances defined in the order of general prescriptions for his activity. A public consultation notice must be posted at the town hall and on the installation site for at least 4 weeks and published in 2 newspapers distributed in the department(s) concerned and on the prefecture's website. After consulting the public, the prefect may authorize or refuse the operation by prefectural decree.	This procedure applies: - installations burning biomass of agricultural and forestry origin or related sawmill products and mechanical scrap from raw wood processing with a capacity of between 20 and 50 MW - installations burning industrial vegetable waste incinerated on site and demolition and construction wood waste with a capacity of between 1 and 50 MW
BPI item 2910, Reporting regime *This is a simple action to inform the State services about the commissioning of a low-polluting or low-danger installation*	However, this BPI must comply with general environmental requirements defined by ministerial or prefectural decree. The operator must submit his declaration to the prefecture before commissioning and obtain proof of deposit. For the information of the public, the proof of filing is made available on the website of the prefecture for a minimum period of 3 years. The installation is subject to periodic	This procedure applies: - installations burning biomass of agricultural and forestry origin or related sawmill products and mechanical scrap from raw wood processing with a capacity of between 1 and 20 MW

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	inspections, in particular following nuisances, incidents and complaints.	

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	These regulations are directly responsible for the progress made in reducing industrial air pollution. This sector of activity has historically reduced its emissions the earliest and fastest. Its effectiveness is due in particular to the fact that it is accompanied by a monitoring, control and sanctions system based on a body of specialized inspectors

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Title of the regulation	*Prohibition of open fireplaces use in the Arve Valley Atmosphere Protection Plan area*
Responsible authority	Préfecture de la Haute-Savoie
Contact details from responsible authority:	Préfecture de la Haute-Savoie Pôle administratif des installations classées 3, rue Paul Guiton 74000 Annecy 04.50.08.09.24 04.50.08.09.25 04.50.08.09.26 http://www.haute-savoie.gouv.fr/Outils/Horaires-et-coordonnees/Direction-departementale-de-la-protection-des-populations-DDPP
Overall objectives of the regulation	To forbid the use of open fireplace in 2022 in the Arve Valley, in order to decrease significantly PM emission due to biomass burning.
Timeframe	The regulation has been issued in December 3rd 2019 and the prohibition will apply from January 1st 2022.
Specific objectives/priority areas	The Arve Valley is an alpine valley exposed to PM pollution during winter time, due to wood burning emission. The main goal is to decrease significantly local PM emission during winter and to reach EU regulation on PM air concentration. The regulation will apply only in the Arve Valley area (which is covered by an Atmosphere Protection Plan).
Detailed description of us of the regulation and background	The regulation has been issued in the Arve Valley Atmosphere Protection Plan (APP) context: the area is subject to PM pollution (monitored concentrations are above the EU limits until 2017) due to biomass burning during winter time. The Plan combine regulation, incentives, communication and financial measures, in order to decrease pollutants emissions in the valley. The open fireplaces prohibition is one of the regulation measures of the Plan. During the prior APP (2011-2016), the use of open fireplaces was prohibited during pollution episode, to households with a substitutive heating system (no control system was set up). The regulation contents the prohibition of open fireplaces use anytime of the year and to any household or companies (including hotels and restaurants) in the Arve Valley. The expression “open fireplaces” concerns any wood-burning appliances without fireplace enclosing system. The consequences of non-compliance may be fine (penalty) payment, obligation to stop the fireplace and obligation to finance the replacement of the fireplace.

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Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Wood Air Fund (FAB)	Incentive measure: the Fab is aimed to grant financial support to household who replace inefficient appliances before the prohibition begins.	Household with main residence in the Arve Valley.
Companies Air Fund (FAE)	Incentive measure: the FAE is aimed to grant financial support to companies that replace inefficient heating appliances (including open fire places in hotels and restaurant) before the prohibition begins.	Companies with PM emission in the CCPMB area (other area of the Arve Valley have specific FAE, with specific requirements, which are not described here).
Title of the action		

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	The positive aspect of the regulation is the settlement of an effective solution to reduce BB emission due to inefficient fireplaces (which are also known for their negative impacts on inside air quality). The lack of way and means of control, to make sure the regulation is applied, is a current default of the measure.

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3.5 GERMANY

Title of the regulation	**Bundes-Immissionsschutzgesetz (**BImSchG**)** *Federal Immission Protection Law*
Responsible authority	National Ministry for the Environment
Contact details from responsible authority:	
Overall objectives of the regulation	Laws and Regulation to prevent negative environmental effects with focus on air, excessive noise, shocks etc. The law is the most comprehensive environmental law in Germany. It regulates all type of pollution and negative environmental effects.
Timeframe	The Laws were approved in 1974 and last updated in 2019
Specific objectives/priority areas	No limitations
Detailed description of use of the regulation and background	PM-Emissions produced by small wood heating systems (ovens/chimneys) are in Germany higher than by cars and heavy trucks. Therefore, the federal ministries have decided to tackle this issue by setting up maximum PM-Emission levels according to the age of the related installations in buildings. The specific regulations related to older wood heating systems are detailed according to the type of the system, the pm and co-emissions, the age and the efficiency level. Depending on these factors, a replacement or modernization is obliged to the households. Content: First part: General provisions (§§ 1 - 3) Part Two: Construction and Operation of Facilities (§§ 4 - 31a) Third part: nature of installations, substances, articles, fuels, lubricants; Greenhouse gas reduction for fuels (§§ 32 - 37f) Part Four: Condition and operation of vehicles, construction and modification of roads and railways (§§ 38 - 43) Part Five: Monitoring and Improvement of Air Quality, Clean Air Planning, Noise Reduction Plans (§§ 44 - 47) Sixth part: Noise reduction planning (§§ 47a - 47f) Seventh part: common rules (Sections 48 - 65) Eighth part: Final provisions (§§ 66 - 73)

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Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Feinstaub-verordnung (PM-Regulation)	PM-Emission-Levels (entire BB-Heating System) 1) Installations before 2010 = 0,15 gram per cubic meter 2) Installations from 2010 - 2014 = 0,075 gram per cubic meter 3) Installations after 2015 = 0,04 gram per cubic meter	All type of installations in public and private buildings.
General Emission Regulation	1) Space-Heater DIN EN 13240 BImSchV – Level 1: 2000 mg/m³ CO, 75 mg/m³ Dust/PM BImSchV – Level 2: 1250 mg/m³ CO, 40 mg/m³ Dust/PM Efficiency > 73% 2) Inserts DIN EN 13229 BImSchV – Level 1: 2000 mg/m³ CO, 75 mg/m³ Dust/PM BImSchV – Level 2: 1250 mg/m³ CO, 40 mg/m³ Dust/PM Efficiency > 75% 3) Heating Stoves DIN EN 12815 BImSchV – Level 1: 3500 mg/m³ CO, 75 mg/m³ Dust/PM BImSchV – Level 2: 1500 mg/m³ CO, 40 mg/m³ Dust/PM Efficiency > 75% 4) Pellet stove ohne Wassertasche nach DIN EN 14785 BImSchV – Level 1: 400 mg/m³ CO, 50 mg/m³ Dust/PM BImSchV – Level 2: 250 mg/m³ CO, 30 mg/m³ Dust/PM Efficiency > 85% 5) Pellet stove mit Wassertasche nach DIN EN 14785 BImSchV – Level 1: 400 mg/m³ CO, 30 mg/m³ Dust/PM BImSchV – Level 2: 250 mg/m³ CO, 20 mg/m³ Dust/PM Efficiency > 90% 6) Free-Standing Heat producing appliances EN 13240 7) Non-Free Standing Heat producing appliances EN 13229	All type of installations in public and private buildings.

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Pros and cons of regulation	
	Background: The national regulation is part of various initiatives by the federal government to reduce emissions in Germany. As private chimneys, wood burners and tile stoves/ovens are very important in the context of reduction of PM and CO-emissions, the related aspects of the laws are clearly obligating the owners to install new or modernize their existing not-efficient wood heating systems (chimneys/ fireplace inserts/tile stoves, etc.). Pros: + The law has a very positive impact. The emissions of private biomass burning systems have been reduced by 50% in the last 10 years! Cons: - Main problem of the regulation is the lack of awareness of the public and the related controls of the implementation. Additional Aspect: However, there are related national financial support programs to enable private households to invest in the modernization of the old/existing systems.

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3.6 SLOVENIA

Title of the regulation	*Energy Act (EZ-1)*
Responsible authority	Ministry for Infrastructure
Contact details from responsible authority:	Address: Langusova ulica 4, 1000 Ljubljana Phone: +386 (0) 1 478 80 00 E-mail: gp.mzi@gov.si Web site: https://www.gov.si/drzavni-organi/ministrstva/ministrstvo-za-infrastrukturo/
Overall objectives of the regulation	This law sets out the principles of energy policy, the rules of operation of the energy market, the ways and forms of performing utilities in the field of energy, the principles and measures for achieving security of energy supply, for increasing energy efficiency and saving and for increasing the use of energy from renewable sources , defines the conditions for the operation of energy installations, regulates the powers, organization and operation of the Energy Agency (hereinafter: the Agency) and the competences of other bodies performing tasks under this Act. The purpose of the law is to ensure a competitive, secure, reliable and affordable supply of energy and energy services while respecting the principles of sustainable development.
Timeframe	Adopted: 24.02.2014
Specific objectives/priority areas	The objectives in the field of energy supply and use are in particular: - secure energy supply - ensuring effective competition in the energy market - competitiveness in carrying out non-market activities - efficient energy conversion - reducing energy use - energy efficiency - energy efficiency - increased production and use of renewable energy sources - the transition to a low-carbon society using low-carbon energy technologies - the provision of energy services - ensuring social cohesion - protecting consumers as final consumers of energy - ensuring effective control over the implementation of the provisions of this Act

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Detailed description of the regulation and background	It is the umbrella law on energy in Slovenia. The law contains 557 articles. Content: First part: General provisions, Fundamental principles, Energy policy Second part: Electricity Part Three: Natural Gas Part Four: Heat and other energy gases from complete distribution systems Part Five: Energy efficiency and renewable energy Part Six: Energy Agency Part Seven: Inspection Part Eight: Energy infrastructure Part Nine: Other common provisions Part Ten: Carbon dioxide transport Part Eleven: Penal provisions Part Twelve: Transitional and final provisions

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action	Energy concept of Slovenia (1) The Energy Concept of Slovenia (hereinafter referred to as the EIR) is a basic development document representing the national energy program and adopted by a resolution of the National Assembly of the Republic of Slovenia (hereinafter: the National Government) at the proposal of the Government of the Republic of Slovenia (hereinafter: the Government). choir). (2) The EIR establishes, on the basis of projections of the country's economic, environmental and social development, and on the basis of international commitments made, the objectives of a secure, sustainable and competitive energy supply for the next 20 years and for approximately 40 years. (3) The EIR provides: - energy balance projection and mode of energy supply and management, based on the country's 20-year development projection, taking into account technological, environmental and geopolitical directions of development - the country's goals in energy supply and management - the measures necessary to achieve the objectives referred to in the previous indent - renewable energy obligations - indicators according to the related energy policy objectives of the program budget of the Republic of	

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	Slovenia	
Title of the action	Comprehensive National Energy and Climate Plan (1) In accordance with Article 3 of Regulation 2018/1999 / EU, a comprehensive national energy and climate plan (hereinafter referred to as NEPN) shall be prepared by the ministry responsible for energy and submitted to the Government for adoption. (2) Projects and measures identified in the NEPN are in the public interest from an energy and climate policy perspective.	
National Energy Efficiency action plan (NEEAP)	Issued by the Ministry of Infrastructure in May 2015, it set Slovene 2020 national target for improving EE by 20 %. Measures to increase the efficiency of DHS are listed among the types of energy service and energy efficiency measures for achieving energy savings by liable entities (energy suppliers' obligations). The development of small DHS using wood biomass is encouraging. Amongst the main measures for promoting CHP, efficient DHC and other energy-efficient heating and cooling systems it is mentioned that improvements to DHS to be made by liable entities can also be included as eligible measures in terms of energy suppliers' obligations to achieve energy savings. There is also co-financing programme for the construction of DHS using wood biomass which enables the allocation of grants for the co-financing of projects for district heating using wood biomass (DHWB). Financial incentives are intended for investments in new DHWB systems and micro-systems, as well as the expansion of existing DHWB systems and the construction of new boiler rooms containing wood biomass boilers as a source for existing DH. The programme started in the framework of Operational Programme for Environmental and Transport Infrastructure Development 2007–2013 and is continued under the Operational Programme for the Implementation of European Cohesion Policy 2014–2020 (OP-EKP), which, besides 14 MEUR EU funds, ensured 2,5 MEUR for related investment activities. New additional measures for the support of DHS within measure for efficient heating and cooling encompass: • Preparation of Heating and cooling strategy with support for local planning (heat maps, etc.); • Stabile financing of the CHP support scheme;	

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	• EKO fund subsidies for sustainable development and increase of competitiveness of DHS (new connections, RES sources, excess heat, heat storages, etc.). The average annual losses at distribution in 2018 were estimated at 14,6 % of gross heat generated thus being 1,1% lower than in 2012. In general trends of reducing losses in DHS demonstrate positive impact of improvement measures.	
National Renewable energy action plan (NREAP)	Slovene NREAP for the period 2010-2020 was published in July 2010 with an update dated of June 2017, but this renewal has not been officially accepted yet. The following major DHS related measures are defined: (1) As part of innovative systems for local energy supply subsidies for DHS using wood biomass and geothermal energy are defined where public tenders for financing DHWB and for promoting systems of DH using geothermal energy were envisaged. (2) As additional policies and measures (a) introduction of support scheme - system of feed-in incentives was accepted to hook up/produce heat from RES resulted in development of CHP systems and (b) Obligatory shares of RES in DHS shall be set in the Energy Act (Share_RES >=20 %; Share_RES + Share_CHP >= 80 %). NREAP promotes that the Rules on efficient energy use in buildings, setting out that connection to DHS operating on RES is one of means of gradual transition from fossil fuels to RES in heating all kinds of buildings. One of the guidelines (as part of the abovementioned Rules) promoted exclusive use of RES or CHP or district heating in all new buildings with offtake of more than 250 kW (from 2012 on). (3) Provision of urban planning guidelines for planning systems using RES in the built environment (by ministry responsible of the environment and spatial planning). The action plan also includes technical specifications for the required standards of quality for wood biomass boilers, which are part of DHS. The need for drawing up the Guidance for planning RES is set out. This guidance shall ensure that obligatory local energy concepts will enforce to incorporate the best combination of RES, high-efficiency technology and DHC in planning, designing, constructing and renewing industrial or residential areas.	

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	In order to promote DHC infrastructure development, NREAP envisaged sub-programme of the National Energy Programme, which would formulate, adopt and implement intensive development strategies for local energy, relying on high-efficiency CHP, RES and DHC systems. One of the operational objectives was the construction of new DHS, based exclusively on high-efficiency CHP or RES and waste heat from industrial processes from 2012 on.	
GHG mitigation action plan	Operational programme of GHG emissions reduction till 2020 (Operativni program ukrepov zmanjšanja emisij toplogrednih plinov do leta 2020) which was published in December 2014 stresses the role of DHS in relation to air quality and reduction GHG emissions only in the following manner: (1) individual heating systems are not encouraged if they replace DHS; (2) possible prioritisation of DH in areas with an adopted decree on the air quality plan; (3) when designing incentives for the heating sector in buildings and settlements, DH has the highest priority order of heat supply according to the energy source.	

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	The key proposed changes to the existing law: In the area of planning and key decision-making by the state: - Slovenia's energy concept, which will replace the current National Energy Program, will be a shorter strategic document with key development orientations for 40 years. - The local energy concept will be a key document in the field of local energy development and will have to be harmonized with the spatial planning document of the municipality. This will make the spatial deployment of new renewable energy production faster. In the field of electricity and gas: - High standards for consumer protection are being introduced. - a change of electricity or gas supplier will be possible within 21 days. - change of supplier will be possible without a contractual penalty even before the expiry of the period for which the contract was concluded, if it has already been one year since the conclusion of the contract. - protection of vulnerable customers is also being introduced. Disconnection of vulnerable customers will not

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	occur in the event of a threat to life or health. In the field of heat supply: - The rules for establishing smaller, local district heating systems are being simplified. In the case of more than 100 households, heat prices remain regulated in the future. In the field of energy efficiency: - 3% of the floor area of public buildings will need to be rehabilitated each year, which will stimulate new jobs while delivering savings in public expenditure. In the field of renewable energy: - the support scheme for the production of electricity from renewable energy sources remains a fundamental instrument for the promotion of renewable energy sources but is changing so that only those new devices that produce the lowest cost energy will be incentivized. Therefore, uncontrolled growth will be prevented, as we have seen in the past in the case of photovoltaic power plants. The government will determine what technologies will be promoted and to what extent. In the field of energy infrastructure: - The procedures for obtaining all necessary permits for the construction of energy infrastructure are simplified, which will reduce investment. In the area of electricity and gas market regulation: - The Energy Agency of the Republic of Slovenia will continue to act as a market regulator, - ensuring the legal separation of the national regulatory authority from all public and private entities, - independent and autonomous functioning of the regulatory body shall be ensured, independent of any political authority. <u>Benefits for the citizens</u> - Greater legal transparency is introduced, and thus indirectly legal certainty for the citizen. - increase in power and influence and on the other hand protection of the consumer or. the end client. - The new Energy Act lays the foundations for the development of a reliable, competitive and sustainable Slovenian energy policy.

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Title of the regulation	*Decree on the emission of substances into the atmosphere from small combustion plants*
Responsible authority	Ministry of the Environment and Spatial Planning
Contact details from responsible authority:	Address: Dunajska cesta 48, 1000 Ljubljana Phone: +386 (0) 1 478 71 16 E-mail: gp.mop@gov.si Web site: https://www.gov.si/drzavni-organi/ministrstva/ministrstvo-za-okolje-in-prostor/o-ministrstvu-za-okolje-in-prostor/
Overall objectives of the regulation	This Regulation provides for small combustion plants (hereinafter: combustion plants): - fuel to be used in combustion plants, - evaluation of emissions of substances in flue gases, - emission limit values for substances from combustion plants, - measures to reduce emissions of substances into the air.
Timeframe	Adopted: 18.7.2019
Specific objectives/priority areas	It defines: - type of fuels - Evaluation of emissions of substances - Limit values for emissions of substances - Measures to reduce air emissions of substances - Supervision - Criminal provisions - Transitional and final provisions
Detailed description of the regulation and background	It contains 34 articles, divided into 8 chapters: Content: I. General provisions - content - use - expressions II. Use of fuels in combustion plants - combustion plants for space heating and hot water - combustion plants for technological processes - measurement of pollutants in residues III. Evaluation of emissions of substances - use of emission limit values of substances - the nitrogen content of the liquid fuel - mixed and combined combustion plants

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- measurements on new combustion plants before placing on the market

IV. Emission limit values of substances for combustion plants
- Emission limit values of substances for solid fuel combustion plants used for heating and hot water
- emission limit values of substances for solid fuel combustion plants for technological processes
- emission limit values of substances for liquid fuel combustion plants used for heating and hot water
- Emission limit values of substances for gaseous fuel combustion plants used for heating and hot water

V. Measures to reduce air emissions
- - Use of flue gas treatment plants
- - Flue gas release
- - Use of a stove or open fireplace
- Heat storage tank
- Operational monitoring of emissions for combustion plants

VI. Supervision
Inspection

VII. Criminal provisions
Criminal provisions are defined for the operator and for the supplier of the combustion plant.

VIII. Transitional and final provisions
Defines adaptation of the combustion plants using solid fuels or liquid fuel or gaseous fuel, limit values for heaters and boilers according to Regulation 2015/1185 and Regulation 2015/1189, the placing of heaters and boilers on the market according to Regulation 2015/1185 / EU and in Regulation 2015/1189 / EU, degraded environment, proceedings in progress, performing pre-market measurements, termination and entry into force.

This Decree has three annexes:
Annex 1: Calculation of flue gas heat losses
Annex 2: Limit values for the content of hazardous substances in biomass residues
Annex 3: Emission limit values for substances in one-room combustion plants

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Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action	**Use of flue gas treatment plants**	Combustion plant operator
Title of the action	**Flue gas release** The operator of the combustion plant must ensure that flue gas is released into the environment only through the appropriate flue gas system.	Combustion plant operator
Title of the action	**Use of a stove or open fireplace** At start of operation, submit a declaration of performance in accordance with the requirements for non-compliance with the emission limit values of the substance into the air and the achievement of thermal efficiency.	Supplier of a stove or open fireplace
Title of the action	**Heat storage tank** Indoor and domestic water heating appliances, other than one-room heating appliances, with a rated thermal output of 4 kW or more and with a liquid heat transfer device that have been installed and put into service after April 1, 2011 and uses natural wood as fuel of all forms, wood residues or briquettes from biomass, must have a water heat storage tank of at least 12 liters per liter of fuel filling space. The water tank must also have a capacity of at least 55 liters per kW of the rated heat output of the combustion plant.	Combustion plant operator

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Title of the action	**Operational monitoring of emissions for combustion plants** Defines first measurements and periodic measurements of emissions of substances on combustion plants.	Combustion plant operator
Pros and cons of regulation		
Please describe positive and negative aspects of the regulation as perceived by the partner.	Only those solid fuel combustion plants that meet the emission limit values set out in Article 11 of the Regulation may be installed and sold. However, Article 25 of the Regulation (for already installed stoves) is also respected. For solid fuel combustion plants, the date 1.1.2020, when the European Regulation enters into force, transposes the requirements for the sale and production of solid fuel combustion plants to EU level (allowable emissions). Emphasis in the new Regulation is on emissions from solid fuel stoves and on the new distribution of rated heat output (all fuels up to 1MW).	

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Title of the regulation	*Decree on the inspection, cleaning and measurement of small combustion units*
Responsible authority	Ministry of the Environment and Spatial Planning
Contact details from responsible authority:	Address: Dunajska cesta 48, 1000 Ljubljana Phone: +386 (0) 1 478 71 16 E-mail: gp.mop@gov.si Web site: https://www.gov.si/drzavni-organi/ministrstva/ministrstvo-za-okolje-in-prostor/o-ministrstvu-za-okolje-in-prostor/
Overall objectives of the regulation	This Regulation defines the content and the manner in which the chimney sweep service is to be provided, the time limits for them and the record of the chimney sweep, and the control of inspections over the fulfillment of the obligations of chimney companies, chimney sweeps and users of chimney sweep services.
Timeframe	21.12.2017
Specific objectives/priority areas	It defines the chimney sweeping services and the inspection of devices.
Detailed description of the regulation and background	The Decree contains 44 Articles, divided into 6 chapters: • General provision (content, type of devices, expressions) • Chimney sweeping services • Inspection of devices (basic provision for device inspection, the content of the first inspection, the scope of the first inspection, record of the first inspection, the content of the periodic inspection, the scope of the periodic inspection, record of the periodic inspection, the content of the extraordinary inspection, the scope of the extraordinary inspection, record of the extraordinary inspection, emergency inspection, taking a sample to evaluate the use of illicit fuel in a small combustion plant, small combustion plant not in use and small combustion plant deleted from the chimney sweep record, cleaning devices, general provisions for measurement of emissions of substances and thermal losses by flue gases, carry out measurements of emissions of substances, measuring point and equipment, first measurements, periodic measurements and extraordinary measurements of flue gas emissions, record of measurements, quality of fuel on small solid fuel combustion plants, periodic measurements of emissions of substances into the air and heat losses from flue gases from small gas fired combustion plants) • Surveillance (powers, measures) • Criminal provisions

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	• Transitional and final provisions

Overview of specific Measures		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action Responsibilities of the Inspection responsible for the environment	Inspection responsible for the environment has the following powers and responsibilities: 1. Orders the chimney company to enter the data in the record of the chimney services 2. Orders a ban on the services to the chimney sweep company 3. Orders the elimination of deficiencies 4. Orders an extraordinary review and extraordinary measurements of emissions of flue gas substances 5. Orders the chimney sweep user to carry out more often regular inspection, more frequent cleaning and more frequent measurements 6. Orders the ban on the use of illicit fuel 7. Orders the ban on the use of a small combustion plant in case of exceeding the emissions of substances with flue gases, which poses a high risk of intoxication	Chimney companies, chimney sweep users
Title of the action The Inspection responsible for	The Inspection responsible for protection against natural and other disasters has the	Chimney companies, chimney sweep users

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protection against natural and other disasters	following powers and responsibilities: 1. Orders that the defects be rectified 2. Orders the carrying out of emergency inspection and general cleaning 3. Orders the chimney sweep service user to carry out regular inspection and cleaning more frequently	
Title of the action		

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	Very detailed instructions on inspection procedures described in annexes to the Decree: Annex 1: Groups of disadvantages Annex 2: The scope of the first inspection Annex 3: Mandatory contents of the records Annex 4: The format of the records Annex 5: The scope of the regular inspection Annex 6: Inspections for small combustion plants in regular operation Annex 7: Scope of regular cleaning service Annex 8: The methods and the scope of measurements

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Title of the regulation	*Rules on the requirements for the installation of combustion units*
Responsible authority	Ministry for Infrastructure
Contact details from responsible authority:	Address: Langusova ulica 4, 1000 Ljubljana Phone: +386 (0) 1 478 80 00 E-mail: gp.mzi@gov.si Web site: https://www.gov.si/drzavni-organi/ministrstva/ministrstvo-za-infrastrukturo/
Overall objectives of the regulation	This Rules lays down requirements for the installation of combustion, flue and associated ventilation devices in buildings or parts thereof, thereby meeting construction requirements for fire safety, human health and environmental protection, and energy conservation.
Timeframe	11. 11. 2013
Specific objectives/priority areas	It defines the requirements for the installation of combustion devices. This Regulation applies to the design and construction of new buildings and the reconstruction and maintenance of existing buildings.
Detailed description of the regulation and background	The Rules has 12 Articles on installation of combustion devices (if burned with liquid or gaseous fuel, in living or non-living areas, about air supply to rooms with combustion plants etc.).

Overview of specific Measures NOT SUBJECTED		
Measure/Action:	**Description of Measure/Action:**	**Target group:**
Title of the action		

Pros and cons of regulation	
Please describe positive and negative aspects of the regulation as perceived by the partner.	When designing and installing devices, the requirements of the technical guideline of the Slovenian Fire Protection Association 407: Fire Safety in the Design, Installation and Use of Combustion and Chimney Devices must also be complied with in order to meet the requirements for the proper installation of combustion plants referred to in this Rules. In rooms with air-dependent combustion plants, CO sensors must be installed in accordance with this Regulation by 1 January 2017 at the latest.

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[4] LIFE14 GIE/DE/000490. Residential wood burning – environmental impact and sustainable solutions. Deutsche Umwelthilfe, 2016.

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