











Assessment of climate change policies as part of the European Semester

Country Report Belgium

16 January 2015

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Ecologic Institute, Berlin and eclareon GmbH to DG Climate Action

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1 Short Summary

Due to its federal structure, Belgium has a complex and evolving division of competences with regard to climate and energy policies. The regions are the key players but the federal level still puts important framework conditions in place such as the framework in place to support renewable energies. This division of tasks leads to a complex landscape where each region has its own climate and energy strategy and launches its own initiatives. Due to the lack of consensus amongst the regions, there exists no internal burden sharing for the key climate and energy objectives between regions (i.e. non-ETS GHG emission reduction targets for 2013-2020; exact share of renewable energy per region; and split of the national energy efficiency target). On their own initiatives the regions fix their own targets but it is not clear whether these individual regional targets will be sufficient to meet the national target.

The Belgian non-ETS target under the Effort Sharing Decision (ESD) is -15% (compared to 2005) and non-ETS emissions were reduced by 8.4% between 2005 and 2013 which is above the interim target. According to the latest national projections submitted to the Commission and taking into account existing measures, the 2020 target is nonetheless expected to be missed by a margin of 11.2% points.

Federal and regional elections were hold in Belgium in 2014 and new governments entered into office. Each of these governments set up new priorities for the five years to come and new plans are currently being designed to translate these priorities into policy measures. In line with the EU recommendations the building and transport sector should be at the centre of climate and energy policies. Key development in 2014 include the approval of the Walloon Climate Decree (Jan 2014), the adoption of the draft Flemish Renewable Energy Action Plan (Oct 2014) and the further development of the integrated regional plan air-climate-energy within the Brussels region. The federal government and the three regions also published their Energy Efficiency Action Plan presenting their key measures in that area and focusing on the building sector.

2 Climate and energy policy priorities

The Belgian energy mix (gross inland consumption in 2011) is dominated by oil (42%), followed by natural gas (28%) and nuclear energy (20%). Renewable energy (4.2%) and solid fuels (5.2%) provide a limited share of total consumption (European Commission, 2011). Due to various factor (e.g. unexpected shutdown of three nuclear reactors, ageing of the existing gas power plants, high dependency on electricity import), Belgium is currently facing risks of blackouts in different part of the country (Elia, 2014). In order to face this challenge, the new federal government decided to extend the exploitation period of different nuclear reactors to 2025 at the maximum and a lot of attention has been be put on future energy policies.

As stressed by the EEA (2014) per capita GHG emissions and energy consumption are relatively high in Belgium compared to other EU Member States. Belgium belongs to the group of MS which did not manage to decrease their overall energy consumption in recent years. A study realised in 2009 (McKinsey) suggested that Belgium had an energy savings potential representing 29% of its businessas-usual scenario up to 2030. The largest potential savings are expected to be in buildings. Implementing measures to realise this potential, such as support to make the entire building stock comply with passive house energy standards or energy efficiency targets for lighting, appliances and heating, is estimated to create 20,000 jobs and would reduce Belgium's energy dependency. Emissions from transport are also a major challenge for Belgium and represent 21% of the country total GHG emissions in 2012. Indeed, while the vehicle fleet is relatively efficient in Belgium - due among other to the high number of company cars which maintain the efficiency of the Belgian fleet, the number of passenger-kilometres travelled is very high compared to the EU average and road congestion especially around Brussels is a major problem. Reconsidering the taxation structure and investing in public transport infrastructure could not only reduce emissions, but also address congestion problems and air pollution. It is estimated that tapping the full potential of the transport sector could create an additional 10,000 to 20,000 jobs until 2030 (EEA, 2014 and McKinsey, 2009).

In Belgium, energy and climate change policy is foremost a regional competence which leads to an unclear division of competences within the regions and between the federal and the regional authorities (e.g., lack of coherence between the different relevant administrative bodies responsible for the implementation of renewable energy policies). Accordingly, the regions of Flanders and Wallonia and the Brussels-Capital region pursue different adaptation and mitigation policies.

The National Climate Commission was created in order to coordinate the policies implemented at a regional level. Due to a lack of consensus between the regions, an internal burden-sharing of non-ETS targets for 2013–2020 as well as the share of renewable energies per region is planned but not decided yet and a follow-up plan to the 2009-2012 national climate plan is still missing. As a result, each region adopts its own strategies and policy instruments with only little coordination with the other regions. It is therefore not clear whether the individual regional targets add up to fulfil the national targets. The reshuffle of competences after the different State reform—the 6th State reform dates from 2011 – has also led to the discontinuation of policy instruments, for example for energy efficiency former national measures were not adequately replaced by regional ones. Agreeing on a burden sharing among the regions would provide a long-term framework and increase investment security (EEA, 2014).

Federal and regional elections were held on 25 May 2014 in Belgium. The results of these elections changes the Belgian political landscape as new governments entered into force in the three regions and at federal level. The sections below present the key changes with regard to climate and energy policy priorities following the new governments' formation.

Federal level

At **federal level** the new government is composed of the New Flemish Alliance Party (NVA), the Open Flemish Liberals and Democrats Party (Open VLD), the Christian-Democrats and Flemish Party (CD&V) and the Reform Movement (MR). Key elements of the governmental agreement on climate and energy policies include:

- the federal government will work with the regions in order to develop a new inter-federal energy pact which will give a common vision to the energy policy from the end of 2015;
- the federal government will aim to reach a consensus with the regions on the internal burdensharing of non-ETS targets for 2013–2020 as well as the share of renewable energies per region;
- the support to alternative transport modes including inland waterway transport;
- the improvement of the energy efficiency of existing gas power plants;
- the improvement of the energy efficiency of buildings owned by the federal government;
- the government plan to evaluate the need for a reform of the fiscal regime for the different energy types; and
- the "pique-nique tax" on plastic bags and other disposable utensils will be repealed as it is considered that it reached its objective (Premier.be, 2014).

Flanders

On 22 July 2014, a new Coalition Agreement for the period 2014-2019 was published by the new **Flemish government** (composed of the NVA, Open VLD and CD&V). Numerous points in the Agreement address the energy sector. The focus lies especially on energy efficiency in the housing sector in order to accomplish the European 2020 targets. In terms of renewable energy, for both electricity and heat, a simpler certificate system shall be introduced and measures will be taken to phase out certificate surplus in order to prepare for the full integration of renewables into the energy market. Also, the 'free of charge electricity' clause is now being abolished. This measure guaranteed a certain amount of free electricity for all Flemish households (100 kWh per household plus 100 kWh per family member). However as it did not achieve its environmental and social objectives, the government will instead focus on energy savings in the building sector. (Vlaanderen.be, 2014).

The **Flemish Climate Policy Plan 2013-2020** published in June 2013 Flanders is confirmed in the Coalition Agreement. The plan aims to reduce Flanders' non-ETS emissions by 15% until 2020 given that no internal burden sharing in Belgium has been decided yet. The new document sets the general policy framework for mitigation as well as adaptation actions in Flanders covering the sectors mobility,

buildings, agriculture, non-ETS industries, non-ETS energy sectors as well as waste management. In this context, particular attention has been devoted to the transport and buildings sectors, which are responsible for the largest share in the Flemish non-ETS GHG emissions. Funding for the implementation of the plan shall partly be covered by the newly established Flemish Climate Fund (Vlaamse Regering 2013).

Wallonia

In **Wallonia**, the Regional Policy Statement ("déclaration de politique régionale" or RPS) represents the governmental programme for the next five years (2014-2019). It was published in Jul 2014 by the governmental coalition gathering the Socialist Party (PS) and the Humanist Democratic Centre party (CDH). The Climate Decree and the associated Air-Climate-Energy plan are both mentioned and confirmed in the RPS (Wallonie, 2014).

The Climate Decree adopted in Jan 2014 sets the Walloon GHG emission reduction target for 2020 (-30% compared to 1990) and 2050 (-80% to 95% compared to 1990). It also establishes the "Air-Climate-Energy" plan which lists the specific measures that will allow the government to follow its budgetary emission pathway. The decree also establishes a framework in order to reach these objectives, mainly through the implementation of "emission budgets", to be defined for a period of five years. Moreover, the decree provides for an annual parliamentary control of the budget (Gouvernement wallon, 2013).In addition, a Walloon waste plan shall be published. Although the previous policy statement already foresaw the elaboration of a waste plan until 2014, no document was ever published by the region in this regard.

Following the RPS, a more detailed governmental plan was launched in Dec 2014: the Marshall Plan 4.0 ("Plan Marshall 4.0"). The objective of this plan is to refocus the priorities of the economic restructuring program initiated ten years ago around the digital and the circular economy. In addition to supporting the circular economy the government will also prioritise the energy efficiency in buildings and the control of the energy costs for individuals, businesses and non-profits. At this stage the government only published the outline of the plan and a more detailed version is expected for the spring 2015, after the consultation with the trade unions (Portail de la Wallonie, 2015).

Brussels

On 14 July 2014, the new **government of Brussels-Capital** presented its Regional Policy Statement, which covers the period 2014-2019. The government's priority is the creation of jobs through the creation of employment-training alliances as well as the conclusion of contracts for professional insertion. Prior to the election, on 12 Dec 2013, the previous government adopted a draft Regional Plan for Sustainable Development (Plan régional de développement durable - PRDD) and consulted with the public until March 2014. The PRDD proposes measures for mobility, spatial planning, infrastructure, environmental quality and housing. The overarching objectives are to make Brussels more attractive, more socially inclusive, more competitive from an economic perspective, more creative in terms of research and greener and more efficient in terms of energy and resource uses (be.brussels, 2014).

Next to the PRDD, the Brussels Code for air, climate and energy (COBRACE) was adopted on 2 May 2013. It introduced several new measures in order to meet the objectives of the Brussels-Capital region, namely the reduction of GHG emissions by 30% by 2025 compared to 1990. The Code strengthens the regulation on energy performance of buildings. It also provides for the creation of an Energy House (Maison de l'énergie), a support service for households which aims at promoting the efficient use of energy as well as the eco-construction. In addition, the Code provides for the improvement of air quality through measures promoting a higher environmental performance of vehicles. Finally, the Code sets specific standards in terms of air quality and GHG emissions.

Based on COBRACE and in line with the PRDD, the Brussels region is working on a new integrated regional plan air-climate-energy. This plan sets out 130 measures which should ensure that the objectives fixed by COBRACE are achieved. A draft plan was adopted in September 2013 and is currently being further developed (Bruxelles Environnement, 2014).

3 GHG trends and projections

Belgium reduced its total GHG emissions by 18% between 2005 and 2013. The share of GHG emissions not covered by the European Emission Trading Scheme (EU ETS) is around 61%, which is above the EU28 average (see Table 1).¹

Table 1 Key date on GHG emissions

		National data			EU28	
		2005	2011	2012	2013	2013
Total GHG emissions	Mt CO₂eq	142.1	120.1	116.5	116.9	4 539
Non-ETS emissions	Share in total emissions	61%	62%	63%	61%	58%

Source: EEA 2014a; EEA 2014c

By 2020, Belgium needs to reduce its emissions not covered by the EU ETS by 15% compared to 2005, according to the Effort Sharing Decision (ESD). The latest data for 2013 show that Belgium did not only meet but exceeded its annual allocation interim target under the ESD for the year 2013 by 6.8 percentage points (see figures in Table 2). However, the latest national projections indicate that the country may nonetheless miss its 2020 target by about 11.2 percentage points with existing measures (WEM) and by 10.6 percentage points with additional measures (WAM) (EEA 2014a). As is apparent in Figure 1.2 the projections start in 2010 and do not take recent developments into account.

Table 2 Non-ETS emission targets, trend and projections

		Compared to base year
2013	ESD interim target	– 1.6%
	ESD emissions	- 8.4%
2020	ESD target	– 15.0%
	ESD projections WEM	- 3.8%
	ESD projections WAM	- 4.4%

Source: EEA 2014a. Green indicates target met or exceeded, orange indicates a value below.

GHG are mainly emitted by direct fuel consumption (e.g. households for heat generation) followed by the transport sector and energy intensive industries (see Figure 1). Projections indicate that by 2020 emissions from the energy industry and energy use will be reduced compared to 2010 emissions but will stay rather stable compared to 2013 emissions. Transport emissions have been relatively stable since 2008 and are projected to remain stable.

¹ The European Environment Agency has developed a complex methodology to measure progress on the Non-ETS/ESD targets of all EU Member States. This report uses the figures derived on this basis. A detailed explanation and the underlying absolute amounts are contained in Annexes 1-3 of the EEA report No 6/2014 "Trends and projections in Europe 2014. Tracking progress towards Europe's climate and energy targets for 2020" available at http://www.eea.europa.eu/publications/trends-and-projections-in-europe-2014/

80 70 60 Mt CO₂ equivalent 50 **Energy supply** 40 **Energy use** 30 Transport Industrial proc. 20 Agriculture 10 Waste Int'l aviation 0 LULUCF 1990 1995 2000 2005 2010 -10

Figure 1 GHG trends and projections by sector

Source: EEA 2014a. Dashed lines indicate the WEM projection, dotted lines the WAM projection.

4 Policy development

This section covers significant developments made in key policy areas between January and December 2014. It does so through two different perspectives: 1) progress on the policies communicated under the National Reform Programme and 2) developments in the identified national priority sectors and policy areas.

4.1 Key policies as outlined by the National Reform Programme

Member States prepare National Reform Programmes (NRPs) each April outlining the country's progress and the key policies and measures to achieve targets under the EU 2020 Strategy. These key policies and measures are summarised in the following table and their current status is provided. Given the organisational structure of Belgium, the measures are grouped by government level.

Table 3 Key policies and measures as outlined by the NRP 2014

Cooperation Agreement between the three regions

Viapass – Road charging for Heavy Duty Vehicles and private vehicles		
Status in the NRP	The measure was adopted in Jan 2014 and implementation is foreseen for 2016.	
Status as per Dec 2014	According to the current planning, the system for lorries would be introduced in 2016. Viapass for private cars (vignette) will be introduced in 2016 at the earliest.	
Description of policy	Detailed information is provided in section 4.1.4.	

Flanders

Mobility Plan Flanders		
Status in the NRP	A draft of the plan was adopted on 25 Oct 2013, the formal adoption still has to take place.	
Status as per Dec 2014	The public consultation on the draft Mobility Plan ended on 12 Jan 2014and the different strategic advisory councils formulated their advice. The Mobility Plan was also discusses within the Flemish Parliament but has not been finalised at this stage.	
Description of policy	Reducing harm to the environment, independently of transport demand, is one of the 5strategic targets of the Mobility Plan. More concretely, the Flemish Region wants to reduce the GHG emissions of the transport sector by 16% by 2030 compared to 2005, meet the imposed emission ceilings for PM, NOx, VOC and SO ₂ and increase the share of renewable energy in transport fuels.	

Renewable Energy Action Plan 2020		
Status in the NRP	A draft of the plan was adopted on 25 Oct 2013, the formal adoption still has to take place.	
Status as per Dec 2014	Consultation on each of the action identified in the Renewable Energy Action Plan 2020 is ongoing.	
Description of policy	In Jan 2014, the government defined indicative production objectives for each renewable energy source with the overall objective to reach a share 10.5% renewable energy in total final energy consumption by 2020 – compared to 6% currently. The Renewable Energy Action Plan 2020 is setting the strategy to achieve this objective.	

'Combipremie' for energy renovation in Flanders		
Status in the NRP	In force since Jan 2014.	
Status as per Dec 2014	The Combipremie is retained for 2015 however in the future the premiums for energy saving investments will be phased out. A decision on that is expected for the first half of 2015 and changes should take effect on 1 Jan 2016. (Vlaanderen.be, 2015)	
Description of policy	Funding of combined renovation work in buildings (walls and windows). These combined renovations deliver more energy savings at lower costs than single measures or consecutive renovations.	
	Cumulative emission reductions within the period 2013-2020 were estimated to have reached: 283,800 tonnes of CO ₂ e.	
	The measure is financed by the Flemish Climate Fund for a total amount of 3.7 million EUR.	

Energy policy agreements with the energy intensive industry		
Status in the NRP	At the time of publication of the NRP this regulation in the notification procedure of the European Commission.	
Status as per Dec 2014	The Flemish Energy Agency and the Flemish government gave their final approval for the energy agreements with both companies covered under the EU ETS and those not covered for promoting energy efficiency in Flanders on 4 Apr 2014.	
Description of policy	The agreements cover the period 2015-2020 and are an important policy instrument to enhance energy efficiency of the energy intensive industry and provide opportunities for companies to grow. More information on these agreements is provided under section 4.1.2.	

Minimum share of renewable energy consumption in new buildings and buildings with important renovation		
Status in the NRP Will become effective as of 1 Jan 2014.		
Status as per Dec 2014	Is effective since 1 Jan 2014.	
Description of policy	This measure entered into force on the 1 Jan 2014 and cover housing buildings, offices and schools – public offices and schools were already covered by this scheme since 1 Jan 2013. The project developers can chose among various renewable energy source including: solar thermal photovoltaic panels, biomass, heat pump, district heating and cooling, participation in a project for production of renewable energy (external site). They can also combine various options in order to source at least 10 kWh/year per m² of used surface from renewable sources.	

Wallonia

Climate Decree in Wallonia		
Status in the NRP	Decree adopted on 20 Feb2014.	
Status as per Dec 2014	No further update.	
Description of policy	The Decree set GHG emission reduction targets for the short (-30% GHG emissions by 2020 compared to 1990) and long term (-80% to -95% GHG emissions by 2050 compared to 1990) and to develop the tools necessary to achieve these objectives.	
	The Decree makes it compulsory for subsequent Walloon governments to adopt a sustainable development strategy. It also defines the GHG reduction trajectory which will be based on "emissions budgets" covering 5 years period. The Air-Climate-Energy Plan2013-2020 was developed based on this Decree.	
	The Decree also requires subsequent Walloon governments to adopt a sectoral "Employment-Environment" Alliance within their first year of their coming into office.	

Qualiwatt		
Status in the NRP	Qualiwatt was passed in Jan 2014.	
Status as per Dec 2014	Qualiwatt entered into force on 1 Mar 2014 under a transition format. The full scheme is applicable since 1 Sep 2014.	
Description of policy	Qualiwatt is a new support scheme for photovoltaic installations of up to 10 kWp. It discussed under section 4.1.3.	

Additional support to the PIVERT green investment programme		
Status in the NRP	Extension of the programme.	
Status as per Dec 2014	The decision to allocate 300 million EUR to PIVERT was taken in 12 May 2014.	
Description of policy	The PIVERT green investment programme, to which 100 million EUR were already allocated in 2012, aims to support energy efficiency investments in social housings in Wallonia. More information is provided under section 4.1.2.	

Brussels

The integrated regional plan air-climate-energy		
Status in the NRP	A draft of the plan was adopted on 26 Sep 2013 and its environmental impact was being assessed at the time of the NRC.	
Status as per Dec 2014	No further update.	
Description of policy	The plan contains 130 actions grouped in 9 axis which should ensure that the objectives fixed by COBRACE are achieved (Bruxelles Environnement, 2014).	

4.2 National policy priorities

The below sub-sections provide updates on key existing and new policies in priority sectors and policy areas of relevance to the energy and climate targets under the Europe 2020 strategy². Each sector or policy area contains information on the most important policy instruments in operation or development.

4.2.1 Environmental Taxation

In Belgium, the implicit tax rate on energy is significantly below the EU average (EUR 173) at EUR 102 per ton of oil equivalent in 2012 (Eurostat, tsdcc360). The share of environmental tax revenues in overall tax revenue was 4.8% in 2012 and therefore the second lowest in the EU (Eurostat, ten00064). When comparing environmental tax revenues with GDP, Belgium is still the sixth lowest in the EU with 2.2% in 2012 (with the average at 2.4%) (Eurostat, ten00065).

Institutional complexity in Belgium hinders the implementation of a comprehensive environmental fiscal policy (FGTB Wallonne, 2011). Following the recommendation of the European Commission, the Belgian government started a process of shifting fiscal and parafiscal charges from labour to other tax bases. In line with the recommendation the potential of environmental taxes is also being studied at federal and regional level. At federal level the key change in terms of environmental taxation is the abolishment of the subsidies for biofuels in 2014. In its government programme, the new federal

² The Consortium jointly with DG Clima identified these based on identified challenges in Country Profiles (EEA, 2014), share of sectors in total GHG emissions, and Country Specific Recommendations (2014). DG Clima has identified additional relevant issues to be reviewed for some or all Member States, including country specific energy challenges.

government also announced its intention to repeal the environmental tax on plastic bags and other disposable utensils (the so-called "pique-nique tax") as it is considered that it reached its objectives (NPR, 2014 and Premier.be, 2014).

Following the 6th State reform, the regions have received new competencies in the field of taxations and are currently analysing how to adapt their tax regimes. During 2014, the efforts to green the tax regimes were mainly done in the area of transport and are thus discussed in more details in section 4.1.4.

4.2.2 Energy Efficiency

Within the EU28, Belgium has an above average energy-intensive economy and ranks as the thirteenth most energy-intensive economy. Energy intensity declined by 11% from 2005 to 2012 (Eurostat, tsdec360), while final energy consumption stayed constant between 2005 and 2012. This stagnation is mainly due to rising energy consumption in the industry and service sector and declining energy consumption in the residential, agricultural and transport sectors. Thus, Belgium belongs to the seven MS that were not able decrease their consumption at all (Eurostat, tsdpc320). Belgium is currently not on track towards its indicative EU energy efficiency target of 18% reduction of primary energy compared to the projected gross inland energy consumption (EEA 2014a).

The competences for energy policy are split between the federal and the regional level. The federal level is responsible for the "matters which, on account of their technical and economic indivisibility, must be dealt with on an equal basis at national level" (Energie Wallonie, 2006), in other words matters that need a coordinated approach at national level. This encompasses: the nuclear policy, the large stock infrastructure and the offshore wind energy production. The regions are in charge of all the other competencies and are therefore the ones leading the policies on energy efficiency and renewable energy (Elia, 2014a and FPS Economy, SMEs, Self-employed and Energy). It should also be noted that since 19 Feb 2014, the energy and housing competences were transferred from the Walloon provinces to the Walloon Region.

In line with the EU Energy Efficiency Directive (EED), Belgium had to submit its **third Energy Efficiency Action Plan** by 30 Apr 2014. Each region developed its own plan and the three documents were submitted to the European Commission together with a presentation of the key development at federal level. In line with the Directive, the Action Plan presents the key measures put in place by the EU Member States to implement the EED. Based on its existing and future energy efficiency measures Belgium plans to reduce primary energy consumption by 18% compared to the projected gross inland energy consumption(excluding non-energy uses) according to Primes 2007 baseline modelling (Belgian Energy Efficiency Action Plan, 2014). Although the responsibility to meet this objective lies within the regions, there exist no regional repartition of the target.

Flanders

As described in the third Flemish Energy Efficiency Action Plan, the Flemish government launched a series of new initiatives to support energy efficiency in buildings. The two measures which received the most support from the Flemish Climate Fund are also related to **energy efficiency in homes**. For example, the first one concerns a large renovation premium for social housing (7.9 million EUR). The second measure is the "combipremium" supporting combined renovation work in buildings (walls and windows). 3.7 million EUR has been allocated to that second measure. These measures add up to the large Energy Renovation Programme 2020 launched in 2020. Despite the launch of these two measures in early 2014, the Flemish government announced that in the future the premiums for energy saving investments will be phased out. Since 1 Dec 2014 the renovation premium changes its format into a tax deduction scheme. The support stays the same but instead of a premium, Wonen-Vlaanderen, the agency in charge of the programme, provides the beneficiaries with an equivalent tax deduction (Wonen Vlaanderen, 2014). The Combipremie is retained for 2015 but a decision on its future is expected for the first half of 2015 and changes should take effect on 1 Jan 2016 (Vlaanderen.be, 2015).

In addition, the Flemish government increased its support to the test programme "Building renovation: innovation in energy-efficient renovation" (Proeftuin "Woningrenovatie: innovatie bij energiezuinig verbouwen"), which is managed by the Flemish Agency for Innovation by Science and Technology (IWT). With a budget of 5 million EUR the objective is to test innovative energy efficiency renovation approaches in real-life housings representative of the Flemish real estate (IWT, 2013 and Vlaanderen is energie, 2014). In parallel the Energy Renovation Programme launched in 2007 and aiming to ensure that by 2020 all existing homes have insulated roofs and that all single glazing and outdated boilers have been replaced with high efficiency ones is still being implemented.

On 4 Apr 2014, the Flemish Energy Agency (Vlaams Energieagentschap) announced that the Flemish Government gave its final approval for the **energy agreements** with companies for promoting energy efficiency in Flanders during the period 2015-2020. The energy agreements are an important policy instrument to enhance energy efficiency of the energy intensive industry and provide opportunities for non-tradable and tradable emission companies to grow. The purpose of the energy agreements with non-tradable emission companies is to assist the Flemish Government with achieving the goals set in the Mitigation Plan 2013-2020. These voluntary agreements target companies with energy consumption of more than 0.1 PJ per year. The companies have to commit to:

- undergo an energy audit every four years;
- develop and implement a detailed energy plan based on the audit;
- yearly reporting to the official verification office about energy consumption and the implementation or research of profitable energy efficiency measures; and
- implement a series of energy management measures (e.g. development of an energy management plan and appointment of an energy coordinator)

In exchange to these engagements the Flemish Region commits to not develop additional obligations in terms of energy efficiency and GHG emissions (unless it is imposed by the EU). The objective of these agreements is to improve the energy efficiency of the participants by 1% per year. With this measure the Flemish government aims to save 4.325 GWh by 2020 (Vlaanderen is energie a, 2014 and Vlaanderen is energie, 2014).

Wallonia

The Walloon contribution to the third Energy Efficiency Action Plan has a wider scope than its previous plans. It contains measures to improve energy efficiency in the production, distribution as well as the transport of electricity. In previous plans, the focus was only on final consumption. Regarding the Energy Performance of Buildings, the new Energy Efficiency Action Plan also includes refurbishment in existing buildings, whereas the previous versions were more focusing on new buildings or important renovation works. The key elements of the Walloon energy efficiency policy are described below.

In 2014, the Walloon government started to work on the definition of a **new roadmap for requirements of the energy performance of buildings** for the period 2014-2020. This roadmap is based on the existing legislation but will integrate the milestones fixed by the Energy Performance of Building Directive (EPBD), the Renewable Energy Directive (RED) and the EED. Key elements of the roadmap include: by 2015, installation of at least one renewable energy technology within all new buildings and by 2020 at least 50% of the energy consumed by the building must be sourced from renewable energies installed within the building (Belgian Energy Efficiency Action Plan, 2014).

Within the framework of the **PIVERT Green investment programme**, the Walloon Government awarded 300 million EUR to public housing companies for carrying out energy renovation works of housings in the Walloon region on 12 May 2014. In 2012, 100 million EUR had already been allocated for the energy refurbishment of social housings. In total, these measures will allow the renovation of 12,000 housing units. The buildings to be refurbished will be selected through a call for proposals addressed to all public housing societies. The selected dwellings will be the one with the highest potential for energy consumption reduction. The financial support per housing amounts to at least 10,000 EUR, maximum 60,000 EUR. In order to be eligible, the energy-saving works have to

represent at least 60% of the investment. The remaining share of the budget must be linked to the salubrity and/or security of the housing unit (Gouvernement wallon, 2014).

In 2014, the Walloon government (the Walloon Agency for Air and Climate, the Energy Ministry and the Environment Ministry) launched the **second generation of Branch Agreements** – covering the period 2014-2020. Branch agreements are voluntary agreements between the Walloon government and the energy intensive industrial sectors (represented by their federations). The industrial players commit to improve their energy efficiency and decrease their GHG emissions in exchange of different advantages (e.g. the regional public authorities agreed not to impose any additional regulatory measures on the contracting companies regarding energy or GHG emissions covered by the sectoral agreement; the participating businesses also have a 75% subsidy on their energy audit). The previous Branch Agreements covered 173 businesses and 203 production sites – representing 90% of the Walloon industry. It led to a 16.5% improvement of the energy efficiency of the Walloon industry and a 19.3% decrease of its GHG emissions (Portail de l'énergie en Wallonie, 2014).

In order to encourage households to reduce their energy consumption, the Walloon government introduced a **new, progressive electricity tariff scheme** ("Tarification progressive, solidaire et familiale" - TPSF) on the 17 Jan 2014. The TPSF aims to increase the price of electricity of households as their electricity consumption increases. Indeed, under the previous Walloon electricity pricing scheme, the price of electricity decreases according to the amount of electricity consumed. For a consumption of 600 kWh, the average electricity price amounts to 0.33 EUR per kWh, whereas it amounts to 0.19 EUR per kWh for a consumption of 10,000 kWh. The new tariff scheme is based on a fixed allocation of electricity consumption per household type and will lead to a decrease of the electricity bill for 64% targeted households. This measure, allowing the most efficient households to pay less for their electricity, was supposed to be introduced on 1 January 2015 but it has been postponed to 1 Jan 2017 following the feedback from the energy regulators and distributors (LaLibre.be, 2014). The policy will neither apply to households heating with electricity or via a heat pump nor to business customers (Gouvernement wallon, 2014a).

Brussels

At the level of the **Brussels region**, the key policies are maintained and exposed in the third Energy Efficiency Action Plan of the Brussels region. The energy premium scheme has been confirmed for 2015 on the 11 Dec 2014 with a budget of 22 million EUR. The energy premiums cover a large spectrum of investments aiming at improving the energy efficiency of buildings. The investments are grouped in six categories including: premium for energy audit and studies, insulation and ventilation, efficient heating, use of renewable energies, high performance energy investment and efficient domestic appliances (Bruxelles Environnement, 2014a).

In line with the EED, Brussels will also develop a study to evaluate the co-generation and heating and cooling potential of the region. This was launched in Sep 2014 and will be submitted to the European Commission together with the Flemish and Walloon study on the 31 Dec 2015. As mentioned in the Efficiency Action Plan of the Brussels region, 94 gas co-generation plants were certified or in the process of being certified in Jun 2013. These installations represented a capacity close to 29,000 kW. According to a study realised in 2006, the full cogeneration potential of the region could be as high as 110 MW. Other studies revealed that the development of urban heating and cooling network was not a priority for the Brussels region. The potential development of biomass was also considered as less advantageous than other measures such as building insulation (Belgian Energy Efficiency Action Plan, 2014).

4.2.3 Renewable Energy

The share of renewables in gross final energy consumption was 6.8% in 2012, which is above the indicative 2012 target of 4.4% set out by the Renewable Energy Directive (RED). The average annual growth rate was 16.5% between 2005 and 2012. Thus, an annual growth rate of 9.9% is needed between 2013 and 2020 to reach Belgium's 2020 target of 13% (EEA 2014a). The share of renewable electricity generation in final electricity consumption more than quadrupled from 2.4% to 11.1%

between 2005 and 2012, while the share of renewable heating almost doubled from 3.4% to 6.6% (Eurostat, SHARES 2014).

In Belgium renewable energy policy is primarily a regional competence, apart from offshore wind energy and hydro power which are governed at federal level. The main mechanism to support renewable energies is a quota system that requires energy suppliers to cover a share of their supply from renewable sources. The only quotas managed at federal level are the ones from offshore wind energy. For the rest, each region defines its own specifications and certificates are not tradable between the regions. In all regions, wind, solar, biogas, biomass and hydro power are eligible, but only in Brussels and Flanders geothermal energy is also included (EEA, 2014). The geographic location of the grid connection determines from which region the electricity producer receives green certificates. The conditions and amount of green certificates distributed per MWh also differs from one region to the other. This quota system is associated with a feed-in-tariff which guarantees a minimum price for the green certificates associated with renewable energy production. The feed-in-tariffs are the same in Wallonia and Brussels but differ in Flanders.

In addition to the quota system, the regions have developed other policies to encourage the development of renewable energies. Key developments in the last years are described below for each region.

Flanders

In Flanders, the government is working with the Flemish Energy Agency on a new **Renewable Energy Action Plan 2020** and on the development of a longer term strategy for 2030 and 2050. In Jan 2014, the government defined indicative production objectives for each renewable energy source with the overall objective to reach a share of 10.5% renewable energy by 2020 – compared to 6% currently. The Renewable Energy Action Plan 2020 is setting the strategy to achieve this objective. This plan is composed of 16 actions grouped in 5 clusters (1. A shared responsibility; 2. The need for smart grids; 3. Support to different sources and technologies; 4. Ensure investment security; 5. Define an innovation strategy). Consultation on each of these actions is ongoing (Vlaanderen is energie, 2014b).

In line with the **Flemish Renewable Heat Action Plan** published in 2011, a strong growth of green heat will be required in order to reach the 10.5% objective. Hence, the Flemish government has developed two schemes to support green heat. On the one hand the Flemish region provides financial support to companies and other entities developing new projects in the field of renewable heat, utilisation of waste heat or injection of bio-methane since 2011. Both companies and other entities can submit proposals for projects with a capacity of more than 1MW – other conditions apply to waste heat and bio-methane projects. Two calls per year are issued by the Flemish government and the latest one, which will close on 4 Feb 2015, has a budget of 8 million EUR (Agentschap Ondernemen, 2014). On the other hand the Flemish government has introduced a mandatory scheme of heat power certificates in 2013 in order to support the production of green heat (Vlaanderen is energie, 2014c and VREG, 2015).

Another important measure to support renewable energy is the new requirements for new buildings and buildings undergoing important renovation to cover a **minimum share of all energy consumption from renewable sources**. This measure entered into force on the 1 Jan 2014 and covers homes, offices and schools – public offices and schools were already covered by this scheme since 1 Jan 2013. The project developers can chose among various renewable energy source including: solar thermal, photovoltaic panels, biomass, heat pump, district heating and cooling, participation in a project for production of renewable energy (external site). They can also combine various options in order to source at least 10 kWh/year per m² of used surface from renewable sources (Vlaanderen.be, 2014b).

Wallonia

In line with its air-climate-energy plan, the Walloon government wants to source 20% of its energy consumption from renewable energy sources by 2020 and reach an annual production of renewable

electricity of 8,000 GWh by 2020. Almost half of this (i.e. 3,800 GWh) would be produced by large wind energy plants and a quarter from photovoltaic (i.e. 1,250 GWh). As presented in the previous semester report, the Walloon regulatory authority CWaPE believes that there is a real risk that the wind energy objective cannot be achieved. Since the last semester report no key development have been identified with regard to the finalisation of the roadmap. However the government states on its website that despite an important slowing down of the annual growth in wind energy in the last years (i.e. from 58% in 2010 to 5% in 2013), the number of projects in the pipeline should still be sufficient to reach the 3,800 GWh/year objective (Portail de l'énergie en Wallonie, 2014a).

Other initiatives have been launched to **support the wind energy sector**. The draft Order relating to the establishment of wind farms in Wallonia was passed in 1st reading in Jan 2013. This Order revises the wind farm authorisation procedure in Wallonia and organises wind farm development around a call for proposals process broken down into thirty "lots" covering the Walloon territory. New conditions for the development of wind farms were also passed in Feb 2013. This text was modified again in Aug 2013 based on the feedback provided by the local authorities. New minimum requirements for the distance between turbines and houses reduce the authorised areas for wind turbines to only 37,000 ha (2.2% of Wallonia) instead of 52,000 ha (3.1% of the territory) as planned in the first version of the terms of reference (Gouvernement wallon, 2013b). These new measures confirm the will of the Walloon government to enhance the development of the wind sector and thus put an end to the period of uncertainty which undermined progress so far. Recent studies estimate that this could generate 16,000 "wind energy jobs" by 2030 and contribute to up to 3 billion EUR to the Belgian GDP (Gouvernement wallon, 2013a).

With regard to its support to **solar photovoltaic energy**, the Walloon government had to reorganise its support scheme as the overflow of green certificates on the market linked to photovoltaic support led to the devaluation of the price of green certificates. In 2011, the government decided to stop the allocation of green certificates for small photovoltaic installations of less than or equal to 10 kW from April 2013 onwards. On 2 Oct 2014, the Walloon Government approved the reduction of the duration of green certificates from 15 to 10 years for small photovoltaic systems implemented between 2008 and 1 December 2011. This measure affects 79,000 PV installations in total. The reduction of the allocation period for green certificates will allow the reduction of their number on the market by 12 to 13 million between 2018 and 2027. This measure shall thus generate savings amounting to over 780 million EUR for all Walloon electricity consumers who cover the costs of the certificate scheme. In addition, the Government has committed to maintain a minimum of 7% rate of return for project developers who have invested in PV projects. However, many PV owners have announced their intention to challenge the decree in court. PV owners argue that the investments they made were based on an income calculated over 15 years (Gouvernement wallon, 2014b).

In order to compensate for this change of legislation, the Walloon government implemented a new support scheme for photovoltaic installations of up of to 10 kWp, called the **Qualiwatt** scheme. Qualiwatt entered into force on 1 Mar 2014 under a transition format. The full scheme was supposed to enter into force on 1 Sep 2014 but it has been postponed to the 1 Jan 2015 (LaLibre.be, 2014). The basic principle of Qualiwatt is to subsidy small PV installations during five years and to guarantee the full repayment of the installation within eight years. The subsidy combines with the amount of power produced and displayed on the backwards running meter (i.e. in this process called net metering PV kilowatthours fed into the grid are rewarded with the electricity price consumers pay per kWh) offers a return rate of 5% to private owners over the lifetime of their installations (based on a minimum of 20 years). The scheme also envisages additional support for households with insecure incomes and reinforces the quality criteria of the eligible PV installations (Portail de l'énergie en Wallonie, 2014b). Qualiwatt should allow supporting 12,000 new PV plants per year (National Reform Programme 2014, 2014).

Several calls for proposals were also initiated with the objective to achieve the renewable energy objectives, including:

a "biomass" call for projects with a budget of 1.2 million EUR initiated in Jan 2014;

- a call for test projects in the area of micro-bio-methanisation also initiated in Dec 2013 (400 000 EUR budget); and
- a "collective boiler room" call for projects intended for public service homes (4 million EUR budget).

No major development regarding the support for renewable heat and cooling have been identified in Wallonia.

Brussels

No major development regarding the support for renewable energies has been identified in the region of Brussels capital.

Investment barriers

As the analysis above shows, one of the key **investment barriers** for renewable energy in Belgium is the uncertainty of the existing support mechanisms. Both in Flanders and Wallonia the support schemes have undergone revisions sometimes with retroactive effect on existing plants (e.g. changes in the support to photovoltaic energy in Wallonia and introduction of a grid injection fee in Flanders for new and existing photovoltaic systems up to 10 kWp in early 2013³). These decisions contributed to a decrease in investor confidence in the photovoltaic sector and tarnished the image of renewable energies. In addition, systematic delay in some political decisions led to some investment plans being cancelled, jeopardising the realisation of projects for which a permit has already been approved. In addition to these political barriers, the 2014 Keep on Track report (Spitzley, et al., 2014) identifies a series of administrative barriers including:

- the complexity of administrative procedure (with different permitting procedures in Flanders and change of political priorities for the wind energy sector in Wallonia);
- the lack of coordination between decision-making levels, thereby leading to conflicting decisions impairing the development of certain RES technologies;
- the high environment constrains imposed to wind energy, biomass or hydro projects. As shown above some measures have been taken to clarify the procedure for the wind energy projects in Wallonia; and
- the juridical uncertainty surrounding the permit procedures. Permits delivered for wind energy projects in Wallonia are nearly systematically challenged at the Council of State by citizen associations, which leads to the abortion of numerous project.

4.2.4 Transport

GHG emissions as well as energy consumption from transport have increased between 1990 and 2012 but exhibited a slight downwards trend between 2005 and 2012. Also, the proportion of transport GHG emissions among Belgium's total emissions has steadily increased since 1990 to 21% in 2012 (Eurostat, tsdcc210 and tsdpc320).

Average emissions for newly registered cars are low in Belgium with a level of $124 \text{ CO}_2\text{/km}$ in 2013. This value is the tenth lowest in the EU but has decreased by only 20% between 2005 and 2013, which is at a rate again lower than the EU average of 22% (Eurostat, tsdtr450). Fuel taxation in Belgium is above EU average. The road fuel excise duties on petrol are the eighth highest among EU MS, while the excise duties on diesel are slightly above EU average (EEA 2014b).

³ The grid injection fee entered into force in Jan 2013 for a period of three years and applied to new and existing PV systems of up to 10 kWp that are benefiting from the net-metering scheme. Depending on the grid operator, a fixed fee amounting to 66 EUR/kW AC on average per year will apply to all PV systems. Following a complaint from the Flemish PV Association PV Vlaanderen, the Brussels Court of Appeal ruled in November 2013 that this grid fee was discriminating and that there was no legally-approved calculation methodology behind it.

Belgium has a registration tax, which is close to the EU average, and a company car tax that is based on CO₂ emissions. However, significant differences prevail between regions because taxation of vehicles is a regional competence. The Walloon Region penalises cars that emit more than 145g CO₂/km, while the Flanders region has a registration tax that is partly based on CO₂ emissions (ACEA 2014; CE Delft 2012). Currently the Eurovignette is in place for HDVs but a distance-based toll system for vehicles above 3.5 tones will be implemented by 2016 (CE Delft 2012).

Federal level

Competences for transport policy are split between the federal level and the regions. The federal government is in charge of the promotion of renewable energy sources in the transport sector. The existing quota for biofuel is in place since 2009 and it obliges providers of petrol or diesel fuels to ensure that 4% of the annual fuel sale is biofuel. (Spitzley, et al., 2014).

Cooperation Agreement between the three regions

In Jan 2014 a Political Agreement was signed by the three regions with the objective to reform the regional road tax system through the **Viapass project**. The agreement envisages the introduction of an intelligent kilometre charging system for HDVs (i.e. trucks with a Maximum Authorised Mass of more than 3.5 tonnes) and an electronic road vignette for light vehicles. The agreement also provides for a reform of the road taxes, which will in time be based on the environmental specifications of the vehicle. The implementation of the kilometre charging system for HDVs is foreseen for 2016 while the vignette for light vehicles will be introduced in 2016 at the earliest (Viapass, 2015).

The objectives of the kilometre charge include, among other things, (i) to have the freight transport contribute to the costs for the investments in, and the maintenance of, the roads in a fair manner, (ii) to improve the mobility on the Belgian territory by inciting transport companies to make use of their freight capacity more efficiently, (iii) to contribute to the improvement of the environmental performance of the transport system. The Viapass project also fits in with the planned reform of the road tax. The revenues will in principle be reinvested in the improvement of the road infrastructure and of the mobility in general, among other things (National Reform Programme 2014, 2014).

In parallel the regions are also running a pilot project for a kilometre charge for private cars in the suburban zone around Brussels. The pilot projects involved 1,000 vehicles and is based on an onboard GPS with different charges depending on the time of the day, the road used and the vehicle type. The goal of this pilot project is to examine what behavioural effect could the introduction of a kilometre charge for light vehicles have on motorists. This project does not imply that a decision by regarding the introduction of a kilometre charge for private cars will be taken in the short or medium term (Van Apeldoorn, 2013).

Flanders

Next to the Viapass project, each region has its own Mobility Plan which defines the key objectives of the government at the horizon 2020. In Flanders a new Mobility Plan is under development for several years. The public consultation closed in Jan 2014 and its results were discussed within the Flemish Parliament together with the advices of different agencies. The final version of the plan has not been published at this stage but it will set up the strategy to reach sustainable mobility in the short (2020) and medium term (2030) (Vlaanderen.be, 2014a). In its draft version, the plan sets out 7 objectives to be reached by 2030 under the cluster environment friendly mobility, including among other:

- decrease the GHG emission from the transport sector by 16.6% compared to 2005;
- decrease the air polluting traffic emissions in line with the international objectives; and
- increase the share of renewable energy within the transport fuel in line with the EU objectives (Departement Mobiliteit en Openbare Werken, 2013).

In addition the Flemish Region takes, within its competences, different actions within the framework of the pilot project Mobility budget that are intended to make the commuter traffic more sustainable. The

mobility budget is an alternative for, or an addition to, the company car and allows the worker to choose the means of transport that suit his or her needs within a budget that has been set by the employer.

Wallonia

In **Wallonia**, the new government committed to develop a new regional mobility plan in its government declaration (Wallonie, 2014). The government will also continue its plan Cycling Wallonia ("Walloniecyclable") which was launched under the previous government. The objective of this plan is to considerably increase the share of cycling in the daily travels. A recent report (ProVelo and TML, 2014) estimated that if the government wants cycling to reach 10% of the modal split by 2030, close to 4 million EUR would be needed in various investment. This would lead to important co-benefits in terms of saved lives (prevention of 350 deaths/year by 2030 or an economy of 700 million EUR for the society) and health impact (300 million EUR). In addition, thanks to the 80,000 cyclist commuters, around 50 million EUR of savings could be done on the exploitation costs of public transport. In terms of economic impact, it is estimated the intense use of bike could lead to the creation of 2,100 jobs in the biking sector by 2030 leading to an annual turnover of 600 million EUR by 2030 under this proactive scenario (ProVelo and TML, 2014).

In Wallonia, the key changes in terms of transport policy in 2014 include the taking over of the responsibility for the circulation tax, road tax and "Eurovignette" from 1 January 2014. The price of the eurovignette varies from 750 EUR to 1,550 EUR for vehicles registered in Belgium and from 8 EUR /day to 1,550 EUR for vehicles registered outside Belgium. In addition it is worth noting that on 1 Jan 2014, the Walloon government repealed the existing ecobonus for clean vehicles. However, as mentioned above, it was replaced by an ecomalus penalising the cars emitting more than 145 gCO₂/km. This ecomalus is based on the emission level of each vehicle and can vary from 100 EUR to 2,500 EUR. This ecomalus also applied for vehicles registered by companies. The commercial vehicles are excluded (Belgian Energy Efficiency Action Plan, 2014).

On 15 May 2014, the Walloon government published a Decree confirming the support to the transport modes alternative to the road. This reinforces the subsidies which were already in place. Key changes include a larger support for container transport by inland waterway (i.e. subsidy of 36 EUR per 40 foot container instead of 24 EUR) and a larger support for the modernisation of the inland waterway fleet (i.e. subsidy of 50% for the investment in alternative engines and emission reduction systems for traditional engines) (Portail de Wallonie, 2014a).

Brussels

The **government of the Brussels region** integrated mobility in its Regional Plan for Sustainable Development with the objective to propose a vision combining on one hand the different transport modes and on the other one the structuring role of transport networks for the other urban policies. The key components and objectives of this plan are:

- the improvement of the quality of mobility node and of their inter-modality;
- the support to active mobility modes (i.e. cycling should reach 12% of the modal split by 2020 and walking should reach 30%); and
- the rationale decrease of the use of private cars in line of the plan IRIS 2 (Bruxelles Mobilité, 2011) which aims at decreasing the distance accomplished by private cars by 20% by 2018 compared to 2001. The regional ambition is to achieve a 50% decrease (both in distance and GHG emissions) by 2040.

Policy progress against Country Specific Recommendations (CSRs) issued 2013

The EU Commission provides Country Specific Recommendations (CSRs) for each MS for consideration and endorsement by the European Council. The recommendations are designed to address the major challenges in relation to the targets of the EU 2020 Strategy. In the following table, the CSRs relevant for climate change and energy are listed, and their progress towards their implementation is assessed.

Existing CSRs	Progress
Improve the balance and fairness of the overall tax system and prepare a comprehensive tax reform that will among other phase out environmentally harmful subsidies	In line with the recommendation the potential of environmental taxes is being studied at federal and regional level. At federal level the key change in terms of environmental taxation is the abolishment of the subsidies for biofuels in 2014. Following the 6 th State reform, the regions have received new competencies in the field of taxations and are currently analysing how to adapt their tax system and integrate the recommendation made by the Commission.
Ensure that the 2020 targets for reducing GHG emissions from non-ETS activities are met, in particular as regards buildings and transport.	Different measures have been put in place to encourage the reduction of GHG emission in the building and transport sector. In the building sector this is mainly in line with the requirement of the EPBD. In the transport sector, Wallonia committed to decrease its sectoral GHG emissions by 16% by 2030 compared to 2005 while Brussels committed to decrease the emissions from private cars by 50% by 2050 compared to 2001. The expected publication of the Flemish Mobility Plan should provide a better indication the region's ambition and target.
Make sure that the contribution of transport is aligned with the objective of reducing road congestion.	The different Belgian governments made good progress with regard to this recommendation. The Viapass project should lead to the establishment of a kilometre-based charging system which should contribute to the improvement of the environmental performance of the transport system and indirectly encourage modal shift. In addition the regions have developed different mobility plans clearly encouraging alternatives to road transport. Examples include: • Alternatives to company cars in Flanders; • Support to cycling and establishment of ecomalus in Wallonia; • Support to active mobility mode and ambitious objective to decrease the use of private cars by 20% by 2018 compared to 2001.
Agree on a clear distribution of efforts and burdens between the federal and regional entities.	Belgium did not progress with regard to this objective as there are currently no agreement on the internal burden sharing of the following objectives: non-ETS targets for 2013-2020; share of renewable energy per region; and energy efficiency target.

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