

Progress report:
Energy from renewable sources in Belgium 2011-2012

Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009

National compilation 20/12/2013

Prepared by the CONCERE-ENOVER State-Region Consultation Group for energy, which comprises the following authorities:

Federal Authority

Federal Public Service Economy, SMEs, Self-Employed and Energy, Directorate-General for Energy

Regional authorities

Flemish Region

Vlaams Energieagentschap

Walloon Region

Operational Directorate-General for Planning, Housing, Heritage and Energy; Department of Energy and Sustainable Building

Brussels-Capital Region

BIM/IBGE Brussels Institute of Environmental Management

Glossary

AATL: <i>Administration de l'Aménagement du Territoire et du Logement'</i> — Regional Planning and Housing Administration
BNSWEP: Belgian North Sea Wind Energy Platform
BRUGEL: <i>Commission de régulation pour l'énergie en Région de Bruxelles-Capitale</i> — Commission for the Regulation of Energy in the Brussels-Capital Region
CBE: <i>Collèges des Bourgmestre et Échevins</i> — municipal councils
COBAT: Brussels Regional Planning Code
COBRACE: Brussels Air, Climate and Energy Code
Public domain concession: an administrative contract by which the granting Authority allows a user temporarily and exclusively to occupy a piece of land in the public domain for a specific purpose, over the long term but on a precarious basis as the grant can be revoked and tenancy is subject to the payment of a fee.
COP: Coefficient of performance
CREG: <i>Commission de Régulation de l'Electricité et du Gaz</i> — Commission for Regulation of Electricity and Gas
CWAPE: <i>Commission wallonne pour l'Energie</i> — Walloon Energy Commission
CWATUPE: <i>Code Wallon de l'Aménagement du Territoire, de l'Urbanisme, de Patrimoine et de l'Energie</i> — Walloon Regional Planning, Urban Planning, Heritage and Energy Code
DSO: Distribution System Operators
Elia: Operator of the Belgian high voltage transmission system
PSE: Prospective Study on Electricity
FEDESCO: public energy services company (ESCO) created in March 2005 as a public limited company
BIM/IBGE: <i>Institut Bruxellois de Gestion de l'Environnement</i> — Brussels Institute of Environmental Management, the administrative body for the environment and energy in the Brussels-Capital Region
M.B.: Moniteur Belge (Belgian official gazette)
BCR: Brussels Capital Region
RECAST EPBD: Recast European Directive on the Energy Performance of Buildings
RGIE: <i>Règlement Général sur les Installations Electriques</i> — General Regulation for Electrical Installations
WR: Walloon Region
RES: Renewable Energy Sources
SIBELGA: operator of the electricity and natural gas distribution networks for the 19 municipalities in the Brussels-Capital Region
FPS: Federal Public Service
PSW: Public service of Wallonia
TRDE: <i>Technisch Reglement Distributie Elektriciteit</i> — Technical Regulation for the Distribution of Electricity
TSO: Transmission System Operators
MUMM: Management Unit of the North Sea Mathematical Models
FR: Flemish Region
Vlarea: <i>Vlaams Reglement inzake Afvalvoorkominge en beheer</i> — Flemish Regulation regarding Waste Prevention and Management)
VLIF: <i>Vlaams Landbouwinvesteringsfonds</i> — Flemish Agricultural Investment Fund)

[NL text]

SUMMARY OF NATIONAL POLICY ON RENEWABLE ENERGY

[NL text]

Sharing of responsibilities as of 8 August 1980, under the Special institutional reform act (MB: 15/08/1980)

Responsibility for energy policy is split between the Federal Authority and the Regions.

The regional aspects of energy include:

- distribution and local transmission of electricity through networks with a rated voltage of 70 000 volts or less;
- public distribution of gas;
- the use of coal gas and blast-furnace gas;
- district heating networks;
- reclamation of coal mine spoil
- new energy sources with the exception of those linked to nuclear energy;
- energy recovery by industry and other users;
- the rational use of energy.

The Federal Authority is responsible, however, for matters whose technical and economic indivisibility requires comparable implementation at national level, namely:

- (a) The national infrastructure plan for the electricity sector;
- (b) The nuclear fuel cycle;
- (c) Large-scale facilities for energy storage, transmission and production;
- (d) Tariffs.

Responsibility for areas of the sea over which Belgium has jurisdiction under international maritime law is vested in the Federal Authority. As a result, renewable energy installations in the North Sea are under federal control.

Summary of Belgian energy policy

The Belgian authorities operate a sustainable energy policy that takes into account not only economic and social energy concerns but also the depletion of fossil resources and environmental issues.

In this context, sustainable energy sources help to achieve the following objectives:

- cutting consumption of fossil fuels to guarantee reserves for the future;
- cutting greenhouse gas emissions;
- reducing the country's dependency on imported energy;
- minimising the impact of fluctuations in the price of other energy sources;
- creating jobs in an innovative economy;
- diversifying the range of energy products available in the interests of a more efficient energy market.

For energy production, Belgium has introduced a number of 'green' certification schemes and guaranteed minimum price schemes with a view to supporting the development of electricity production from renewable sources.

At Federal level, these are accompanied by a series of measures targeting the development of offshore wind farms on the Belgian continental shelf (North Sea).

The regions are also developing a policy to encourage 'green' heating.

Generally speaking, support for facilities producing energy from sustainable sources is given by the Federal Authority in the form of tax incentives (tax concessions for companies), while the regions have introduced investment incentive schemes for companies and grants for private individuals.

In the transport sector, in order to promote the development of biofuels, the Federal Authority has introduced a quota system of tax-exempt biofuels and made it mandatory to include a proportion of biofuels (currently 4%) in the fuel mix.

All these measures are underpinned by significant information, training and awareness-raising campaigns in order to inform business and industry, the general public and energy-sector stakeholders.

In regulatory terms, renewable energy projects must comply with the environmental and town-planning regulations in force, mainly as regards permits. Simplified schemes are nevertheless in place for some technologies depending on the size of the facility.

QUESTION 1: SECTORAL AND OVERALL SHARES AND ACTUAL CONSUMPTION OF RENEWABLE ENERGY IN THE PRECEDING TWO YEARS (N-1; N-2 E.G.: 2010 AND 2009) (ARTICLE 22(1)(A), OF DIRECTIVE 2009/28/EC).

Please fill in the actual shares and actual consumption of renewable energy for the preceding 2 years in the tables provided.

Table 1: The sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources

[NL table]

	2011	2012
	4.68%	6.64%
	8.83%	11.12%
	4.00%	4.46%
	5.17%	6.81%
	0.00%	0.00%
	0.00%	0.00%

[NL text]

[1] Share of renewable energy in heating and cooling: gross final consumption of energy from renewable sources for heating and cooling (as defined in Articles 5(1)(b) and 5(4) of Directive 2009/28/EC), divided by gross final consumption of energy for heating and cooling. The same methodology as in Table 3 of NREAPs applies.

[2] Share of renewable energy in electricity: gross final consumption of energy from renewable sources for electricity (as defined in Article 5(1)(a) and 5(3) of Directive 2009/28/EC), divided by total gross final consumption of electricity. The same methodology as in Table 3 of NREAPs applies.

[3] Share of renewable energy in transport: final energy from renewable sources consumed in transport (cf. Article 5(1)(c) and 5(5) of Directive 2009/28/EC) divided by the consumption in transport of 1) petrol, 2) diesel, 3) biofuels used in road and rail transport and 4) electricity in land transport (as reflected in row 3 of Table 1). The same methodology as in Table 3 of NREAPs applies.

[4] Share of renewable energy in gross final energy consumption. The same methodology as in Table 3 of NREAPs applies.

[5] In percentage points of overall RES share.

[6] In percentage points of overall RES share.

Table 1a: Calculation table for the renewable energy contribution of each sector to final energy consumption (ktoe)

[NL table]

	2009	2010
	947.9	1 309.8
	668.2	848.2
	364.5	372.8
	1 980.6	2 530.8
	0.0	0.0
	0.0	0.0
	1 980.6	2 530.8

1] Under Directive 2009/28/EC, Article 5(1), gas, electricity and hydrogen from renewable energy sources may be considered only once. Double counting is not allowed.

Table 1.b: Total actual contribution (installed capacity, gross electricity generation) from each renewable energy technology in Belgium to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity

[NL table]

	2011		2012	
	TOT		TOT	
	MW	GWh	MW	GWh
	1 426.0	379.0	1 424.0	371.7
	119.0	296.6	117.0	314.8
	9.0	18.8	9.0	20.4
	55.0	153.7	53.0	160.2
	55.0	124.1	55.0	134.2
	1 307.0		1 307.0	
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	1 391.0	1 169.6	2 581.0	2 148.3
	1 391.0	1 169.6	2 581.0	2 148.3
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	1 069.0	2 055.3	1 364.0	2 602.8
	911.0	3 652.8	874.0	4 348.0
	701.0	3 125.9	678.0	3 684.5
	129.0	526.9	141.0	663.5
	81.0	0.0	55.0	0.0
	4 797.000	7 256.685	6 243.000	9 470.795
	308.7	1 736.4	222.4	1 791.0

[NL text]

[1] Standardised in accordance with Directive 2009/28/EC and the Eurostat methodology.

[2] In accordance with the new Eurostat methodology.

[3] Only take into account forms of biomass that meet the sustainability criteria, see Directive 2009/28/EC, Article 5(1), final subparagraph.

Table 1c: Total actual contribution (final energy consumption) from each renewable energy technology in Belgium to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling (ktoe)

[NL table]

	TOT	TOT
Ktoe	2011	2012
	2.6	2.8
	14.4	15.3
	865.8	1 243.9
	820.0	1 179.8
	45.7	64.2
	0.0	0.0
	19.0	23.4
	0.0	0.0
	0.0	0.0
	0.0	0.0
	901.7	1 285.4
	0.0	0.0
	243.9	789.1

[1] Only take into account forms of biomass that meet the sustainability criteria, see Directive 2009/28/EC, Article 5(1), final subparagraph.

[2] Share of urban heating and/or cooling in total energy consumption for heating and cooling produced from sustainable energy sources (RES-CU).

[3] Share in total energy consumption for heating and cooling produced from sustainable energy sources.

Table 1d: Total actual contribution from each renewable energy technology in Belgium to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport sector (ktoe)

[NL table]

	2011	2012
	48.0	48.0
	0.0	0.0
	0.0	0.0
	290.1	298.0

	0.0	0.0
	51.9	52.7
	0.0	0.0
	26.4	26.8
	0.0	0.0
	26.4	26.8
	0.0	0.0
	0.0	0.0
	364.5	372.8

[1] Biofuels named in Directive 2009/28/EC, Article 21(2).

[2] Share in the total quantity of bioethanol/bio-ETBE.

[3] Biofuels named in Directive 2009/28/EC, Article 21(2).

[4] Share in the total quantity of biodiesel.

[5] Biofuels named in Directive 2009/28/EC, Article 21(2).

QUESTION 2: MEASURES TAKEN IN THE PRECEDING TWO YEARS AND/OR PLANNED AT NATIONAL LEVEL TO PROMOTE THE GROWTH OF ENERGY FROM RENEWABLE SOURCES, TAKING INTO ACCOUNT THE INDICATIVE TRAJECTORY FOR ACHIEVING THE NATIONAL RES TARGETS AS OUTLINED IN YOUR NATIONAL RENEWABLE ENERGY ACTION PLAN (ARTICLE 22(1)A) OF DIRECTIVE 2009/28/EC).

Table 2: Overview of all policies and measures

**Type of measure:*

FIN = financial measures

REG = regulatory measure

NB = non-binding measure

***Expected results:*

GV/MC = behavioural change

KTOE = energy generated or consumed

MW = installed capacity

**** Targeted persons and/or activities:*

INV = investors

INST = installers or producers

ADM = public administration

GEB/UTIL = end users, public

MIX = stakeholders

[NL table]

Name and reference of the measure	Type of measure*	Expected result**	Targeted group and or activity***	Existing or planned****	Start and end dates of the measure
Federal Authority					
[NL text]					
Flemish Region					
[NL text]					
Walloon Region					
GCs: quotas for 2010-2012	FIN/REG	MW	INV	Existing	2010-2012
GCs: setting of quotas post-2012 (2012-2016)	FIN/REG	MW	INV	Existing	2012>
Complete overhaul of the GC grant system	FIN/REG	MW	INV	Planned	2012
SOLTHERM Decree	REG	MC	INV/UTIL	Existing	End 2010
Boiler & heat network grants	FIN/REF	MW	UTIL	Existing	Ongoing & reinforcement in 2012
Biomass boiler grant	FIN/REG	MC/MW	INV/UTIL	Existing	2011-2012
Wind: production target for 2020	NB	MW	INV	Existing	2012>
Wind: map of potential	REG	MW	ADM/INV	Existing	Ongoing
Biometh platform	REG	MC	INV	Existing	2011
Study biometh/biogas	NB	MC	ADM	Existing	2011
Biomass sustainability criteria	REG	MC	ADM/INV	Existing	2011>
PV: degressive support for new facilities	FIN/REG	KTOE	INV	Existing	2011>
Geothermal: 3 pilot projects and map of potential	REG	MW	ADM/INV	Existing	2011-2012
Brussels-Capital Region					
1. Single contact point for professional project managers	NB	MC/MW	INV/UTIL/INST	Existing	2011>
2. <i>Energiehuis/Maison de l'Energie</i> (energy-saving household scheme)	NB	MC/MW	INV/UTIL/INST	Planned/existing	2011>
3. Simplification of eligibility criteria for energy grants	REG/FIN	MC/MW	INV/ADM	Existing	2011>
4. Simplification of the management of energy grant files	REG	MC	INV	Existing	2011>
5. Revised calculation of GCs for PV energy	REG/FIN	MC/MW	INV/ADM	Existing	Mid-2011>
6. Simplification of the procedure for certifying installations and awarding GCs	REG	MC	ADM	Existing	Mid-2011>
7. Setting GC quotas up to 2025 and stabiliser mechanisms	REG	MW/KTOE	INV	Existing	End 2012>
8. Support framework for the incorporation of biomethane into the SIBELGA network	REG	MW/KTOE	INV	Existing	Mid-2011>
9. Monitoring studies on PV, ST and heat pump installations	NB/REG	MC	ADM/INST	Existing	2011-2012
10. Introduction of installer	REG	MC	INST	Planned/existing	2011>

certification					
11. Appointment of a wind power expert	NB	MC/MW	ADM/INV	Existing	Mid-2011>
12. Launch of a wind measurement campaign	NB/REG	MC/MW	ADM/INV	Existing	Mid-2011>
13. Study of potential, biomass and heat networks	NB	MC	ADM	Existing	2010-2011
14. Changes to the law to include sustainability criteria for biomass	REG	MC	ADM/INV	Existing	Mid-2011>
15. Air quality study on biomass-fuelled heating systems	NB/REG	MC	ADM/INV	Existing	2011-2012
16. Adaptation of the EPB calculation method for biomass	REG	MC/MW	ADM/INV	Existing	Mid-2011>
17. Addition of a 'zero energy' criterion for projects seeking funding under BATEX 2012	NB	MC/MW	ARCH/INV	Existing	2012>
18. Introduction of a 'sustainable building' labelling system (standard)	NB	MC/MW	ARCH/INV/UTIL	Planned /existing	2011>

Federal Authority

[NL text]

Flemish Region

[NL text]

Walloon Region

1. Green certificates

From 1 March 2012: increase in green certificate quotas for the period 2013 to 2016 (target date 2020).

All electricity suppliers are required to submit a quota of green certificates set by the government to CWAPE every quarter. This is expressed as a percentage representing the ratio of the number of green certificates to be produced to the number of MWh of electricity supplied to end consumers in Wallonia. The quotas are scaled as follows:

2003	3%	2010 (1st quarter) / end 2010	10% / 11.75%
2004	4%	2011	13.5%
2005	5%	2012	15.75%
2006	6%	2013	19.4%
2007	7%	2014	23.1%
2008	8%	2015	30.4%
2009	9%	2016	37.9%

Green certificates: a complete overhaul of the system for awarding GCs is under consideration

2. Solar thermal (ST)

- Appointment of a Facilitator for large-scale solar thermal systems

The Facilitator's remit is part of the Walloon Region's energy policy. Its main aim is to encourage demand for collective solar water heaters and large-scale systems by raising awareness amongst target groups and by helping with the design and monitoring of new projects in Wallonia – without seeking to usurp the design consultant's role – and by providing project designers, consultants, etc., with relevant information on the installation of large-scale solar water-heating systems (chiefly in the tertiary and collective housing sectors).

- Inspection of solar thermal installations

To ensure that installations are of the requisite quality and professionally installed, it is essential to be able to carry out on-the-spot quality checks of solar water-heating systems. For this reason the Walloon Region embarked in 2011 on a campaign of solar thermal system inspections.

3. Grants

Introduction of more generous grants for boilers supplying a heat network, to be increased in 2012: grants for boilers or cogeneration equipment supplying the network are continued and increased if linked to a network supplying at least three separate buildings and four housing units at an agreed rate per m of the network (capped).

Grants for biomass boilers: grants are for automatic feed boilers compliant with standard NBN EN 303 5 class 3 and having a thermal efficiency of 80% or more (until May 2011) and 85% or more (from June 2011).

4. Biomass

- Creation of an administrative platform bringing together the various stakeholders and government bodies involved in building a biomethanation unit (see the question relating to the reduction of administrative barriers);
- Study of the biomethanation sector to identify all barriers to development in the biomethanation and biogas sector: publication of a Green Paper summarising these, and of a 'frequently asked questions' document;
- Study of the theoretical potential of biomass resources in the Walloon Region which might be used for producing bioenergy;
- Mapping of players in the bioenergy field to highlight activities in the sector and its dynamism;
- Participation in exhibitions with a view to informing various groups about the opportunities provided by bioenergy;
- Continuation of life cycle analysis work, to assess the trajectory which resources must follow in order to be sustainable, and also to increase the energy efficiency of

- resource exploitation (INOVABIOM, large-scale LCA project comparing combustion/materials);
- Introduction of monitoring for all wood-fired heating systems with a heat network at least 200 metres in length and initial consumption – before connection to the network – of at least 500 000 kWh/year;
- Participation in the ENERBIOM project (an INTERREG project).

This project seeks to identify and disseminate agricultural production pathways for biomass energy, taking account of a range of agro-environmental factors, with a view to developing sustainable production in areas subject to major environmental constraints (semi-mountainous areas, water catchments, NATURA 2000 areas, etc.) typical of the 'Grande Région' (Wallonia, Grand Duchy of Luxembourg, Rhineland Palatinate, Saarland, Lorraine).

The following measures have been taken in pursuit of this objective:

- Inventorying and selection of pathways guaranteeing good economic performance from a low level of inputs, for species identified as being of key importance;
- Implementation and validation of these alternatives within a cross-border reference network;
- Ascertaining the value of these biomass fuels within a range of sectors (biomethanation, combustion, bioethanol, etc.);
- On this basis, ascertaining the agricultural development potential of these crops in the Grande Région and their anticipated environmental impact.

The ultimate aim is to publicise these pathways and good practices in the partner regions, so that agricultural cultivation of these energy plants can be developed in perfect harmony with the land and the environment.

In 2012, the three (public/private-sector) working groups of the Biomass Unit drew up reports which will be used by the Walloon Government to prepare its strategy on biomass energy.

This strategy (still being drafted) must meet the following imperatives:

- It must quantify more precisely the proportion which energy biomass, home-grown and imported, might reasonably contribute to the renewable energy mix by 2020;
- This contribution must:
 - o avoid any unreasonable diversion of biomass flows currently used for food and materials into energy use;
 - o respect the constraints connected with soil quality and soil improvers, and those connected with waste;
 - o avoid the environmental dumping of potential flows originating abroad or intended for export;
- The strategy must look in detail at ways of developing the potential of agricultural sectors identified by Valbiom, and estimate the scale of the (economic and behavioural) cost entailed in realising that potential.

5. Support for new heat networks

Specific funding has been given to ongoing projects for the development of district heating. This will make it possible to identify points needing attention, difficulties encountered when projects are being carried through, technical barriers, etc. The aim is to put the

growth in know-how to direct use. Examples include a subsidy for a heat network in a rural municipality in Wallonia (Malempré) and an industrial estate (les Plénesses).

6. Call for 'collective heating' projects

A call for collective heating projects for public service housing associations is under way. It will offer public service housing associations the chance to replace a group of individual boilers in their properties with a biomass-fuelled collective heating system. Dwellings receiving the heat may be publicly owned or may be private homes and other public or private buildings. This project, with an estimated budget of EUR 4 million, is an initiative of the *Alliance Emploi-Environnement*.

7. Wind

The Walloon Government has agreed a full revision of its policy on wind power, setting itself the ambitious target of generating 3 800 gigawatts of electricity per hour from wind by 2020, following a progressive annual trajectory. To that end, three tools have been put in place:

- a) the reference framework: this was adopted by the Walloon Government in July 2013 and aims to:
 - ✓ Guarantee a good quality of life for the public
 - ✓ Protect biodiversity
 - ✓ Preserve the countryside
 - ✓ Encourage participation by local authorities and the public
- b) sectoral conditions
- c) plans for a new decree, to include a map of wind farm sites.

8. Photovoltaic

For low-power installations (<10kWc), the system of green certificate support is being changed. It will be replaced by a new system called Quali watt, which should prevent any risk of installations being over-profitable, allow better control over the sector's development, simplify support and improve its transparency and make installations more reliable.

9. Geothermal

In July 2011 the Walloon Government confirmed its policy plans for a framework of incentives to encourage the development of deep geothermal. It is funding three pilot projects, the first two of which have already been selected:

- a first low-energy deep geothermal project, harnessing potential in the Mons area for a collective urban heating system using a heat network;
- a second moderate-energy deep geothermal pilot project for electricity production, perhaps to be combined with heat distribution through a heat network;
- a third pilot project of geological research to obtain as broad a picture as possible of the area under consideration.

Work to develop deep geothermal is being (and will be) pursued in a number of areas:

- studies of obstacles to deep geothermal;
- ascertaining the potential for geothermal in Wallonia;

- developing a framework of incentives appropriate to deep geothermal;
- developing a legal framework appropriate to deep geothermal.

Brussels-Capital Region

1. Energy-saving guidance for project managers

Creation in 2011 of a single contact point for professional project managers

Professionals can now contact a sustainable building facilitator service, which is responsible for providing a global response to questions asked by professional project managers (front office) and answering specific questions on renewable energies, cogeneration and energy-efficient design (back office).

Establishment of the *Energiehuis/Maison de l'Énergie* energy-saving household scheme for private individuals

Households wishing to carry out energy-saving retrofitting work and invest in renewable energy will be supported by six local structures set up gradually from mid-2013 and supported by BIM/IBGE as part of the *Energiehuis/Maison de l'Énergie* energy-saving household scheme. The scheme will be fully operational from early 2014.

2. Energy grants

Simpler eligibility criteria for energy grants

The administrative criteria determining eligibility for energy grants were reviewed and simplified in 2011, and grants are now means-tested. The lower a household's income, the more it receives for investment in energy efficiency or renewable energy.

Simpler management of energy grant applications

From 1 January 2012, grants have been managed entirely by BIM/IBGE whereas previously they were managed jointly by the distribution system operator (SIBELGA) and BIM/IBGE. Reducing the number of players and having grant applications processed solely by BIM/IBGE has led to more efficient administrative management. BIM/IBGE has also concluded a specific memorandum of understanding with the Ministry for the Brussels-Capital Region, which pays out the energy grants. As of 2012 this has enabled grant payments to be made more quickly.

3. Green certificates

To encourage the generation of green electricity in the Brussels-Capital Region, a system of green certificates was introduced by the Order of 19 July 2001 on the organisation of the electricity market in the Brussels-Capital Region (Article 28(2)).

Under this system, firstly, over a 10-year period a green certificate (valid for 5 years) is issued by BRUGEL¹ to the operator of a green electricity generating facility for every saving of 217 kg in CO₂ emissions which its facility makes compared with benchmark facilities. The number of green certificates issued in this way depends on the facility's output, production and fuel type.

Secondly, electricity suppliers in the Brussels-Capital Region are obliged to submit a certain number ('quota') of green certificates to BRUGEL. Otherwise they must pay a fine of EUR 100 for every green certificate not submitted. This quota is a percentage of the MWh of electricity supplied by the supplier in the Brussels-Capital Region during the year in question. To meet their obligation, suppliers therefore have to buy green certificates from producers of green electricity, and/or produce it themselves.

Operators of green electricity-generating facilities can therefore trade the green certificates they receive from BRUGEL, selling them on to the supplier who offers the best price.

During 2011-2012 the Brussels-Capital Region continued its efforts to streamline the existing green certificate system.

Revised calculation of green certificates for photovoltaic energy

The operation of the green certificates market was analysed in 2010, in the light of a twofold problem:

- the issue of certificates did not properly reflect changes in the cost of producing PV electricity; and
- the system yield was not the same (small facility = highly profitable), large-scale facility = not profitable enough).

This analysis led to a new decree in 2011 by the Government of the Brussels-Capital Region which introduced a mechanism for granting green certificates which adjusts automatically to the cost of PV energy production, by applying a coefficient derived from the following four parameters:

- average unit cost for a PV system;
- financial investment incentives;
- the price at which electricity is purchased by the network;
- resale price of green certificates on the market.

The coefficient is calculated, using these four parameters as measured by the regulator BRUGEL, in such a way as to guarantee a payback time of a maximum of seven years. This coefficient will be adjusted, if necessary, on 1 January of each year but may also be adjusted in the course of the year. The Decree allows for this adjustment part-way through the year if changes in the parameters lead to a change in the number of green certificates needed to maintain a payback time of seven years or less which is 20% or more than the number normally issued.

¹ BRUGEL (BRUxelles Gaz Electricité) is the energy regulator for the Brussels-Capital Region. This public-interest body oversees the gas and electricity market and monitors compliance with laws and regulations. Issuing green certificates is one of its responsibilities.

This mechanism has significantly reduced windfall effects and the slow-down in the expansion of PV energy in the Brussels region, by keeping costs closer to economic trends on the ground (higher or lower PV panel prices, for example). It also offers long-term prospects: whenever they invest and whatever the value of the four market parameters, producers who generate electricity from PV panels are guaranteed enough green certificates to achieve a payback time of no more than seven years. Lastly, this mechanism offers an important guarantee: the initial award is maintained for 10 years, even if the parameters change during that time. Investors are very keen, when taking a decision on the basis of an economic calculation, to ensure that the conditions will not change half-way through the term of their investment.

Legal reference: 26 May 2011 – Decree of the Government of the Brussels-Capital Region amending the Decree of the Government of the Brussels-Capital Region of 6 May 2004 on the promotion of green electricity and quality cogeneration (MB: 20/06/2011).

Simplification of administrative procedures

With effect from 2011, for PV facilities under 10 kVA:

- the certification inspection visit has been scrapped, and
- meter readings for the award of green certificates must be submitted annually instead of every four years as before.

2012 also saw the introduction, for all installations, of a computerised procedure and an electronic portal for the management of facilities generating green electricity (issuing of green certificates).

Legal reference: 26 May 2011 – Decree of the Government of the Brussels-Capital Region amending the Decree of the Government of the Brussels-Capital Region of 6 May 2004 on the promotion of green electricity and quality cogeneration (MB: 20/06/2011).

Setting of green certificate quotas for 2013-2025

It is mandatory for electricity suppliers to submit a quota of green certificates to BRUGEL (see above). This quota is increased year on year, to support the production of green electricity in the Region. In 2012 quotas were set for the period 2013-2025 as shown below. Setting quotas through to 2025 offers a long-term perspective to a sector which needs a significant length of time to develop and maximise its investment returns.

[insert graphic: as per original (p. 31) but replace commas with stops]

Legal reference: 29 November 2012 – Decree of the Brussels-Capital Region Government setting the green certificate quotas for 2013 and subsequent years (MB: 13/12/2012).

Quotas and stabiliser mechanism for the green certificate market

While the market by 2025 needs to be as transparent as possible, it is hard to know exactly how many green certificates will actually be in circulation at that time. The number of quotas imposed nevertheless needs to be close enough to the number of quotas awarded, to ensure that the market is balanced and prices remain stable.

In order to remedy a situation in which the number of certificates issued might exceed the quotas required, pushing down prices to the detriment of investors, the Decree provides in this case for a rebalancing of the market in subsequent years: the minister responsible for energy may, if so advised by BRUGEL, increase the quota for subsequent years (starting in year 'n+1') by the number of surplus green certificates identified for the current year (year 'n'). The minister may also, again if so advised by BRUGEL, increase the quotas for large-scale projects, i.e. those justifying the award of more than 25 000 green certificates per year, for the project's start-up year and subsequent years.

Legal reference: 29 November 2012 – Decree of the Government of the Brussels-Capital Region setting the green certificate quotas for 2013 and subsequent years (MB: 13/12/2012).

Discernible results already?

The figure below suggests that these green certificate reforms have been especially beneficial to PV energy in the Brussels-Capital Region. Since 2011 this sector has seen steady growth. Investment in large-scale PV installations has also proliferated since 2011, given that the automatic adjustment mechanism enables installations of all sizes to achieve a payback time of no more than seven years.

Photovoltaic installations brought on-stream in Brussels (kWc) – source BRUGEL

[insert graphic : as per original (p. 32) but '20-août 2013 ' → '20 August 2013']

4. Support for biogas incorporated into the natural gas grid

In 2011 the Brussels-Capital Region took a first step towards supporting biomethane. In an amendment to the Order on the organisation of its gas market, the Region included a chapter designed to promote biomethane. In practice this change to the legal framework opens the way for a system of subsidies for the production or incorporation of biomethane into a natural gas distribution grid, available to producers of gas from renewable sources based in Brussels. Previously, only biogas used to generate green electricity qualified for production aids in the form of green certificates. This new mechanism, which complements the green certificates system, should encourage the emergence of other sectors such as biogas production and its incorporation into the natural gas grid, without mandatory production of green electricity.

Legal reference: 20 July 2011 – Order amending the Order of 1 April 2004 on the organisation of the gas market in the Brussels-Capital Region (MB: 10/08/2011).

5. Quality of installations

Introduction and launch of monitoring studies (PV and solar thermal installations, heat pumps)

These monitoring exercises (in 2011 and 2012) will give the Region a better idea of the operating conditions needed for these installations to function to best effect.

Installer certification

A first round of tendering, lasting six months, sought to establish a general framework for certification, based on the views of 30 or so stakeholders drawn from professionals in the renewables industry and training.

A new round was launched in 2012 to define standard formats for course materials and examination standards, common to all technologies and all the Regions, and a list of minimum training content, harmonised across the various technologies.

Following this exercise, a number of calls for tender were issued, one for each technology, with the specific aim of developing course materials and examination standards.

A further joint call for tender was issued to select the Certifying Authority, the entity common to all three Regions, which will handle installer certification applications.

At the same time, the Region has been involved in the Build Up Skills project, part of which deals with installer training.

6. Wind

Wind power expert

As part of work on wind energy, data were collected, wind measurements taken, and support given to bodies undertaking pilot projects. In 2012 the wind power expert was brought in to look at 35 projects, 15 of which progressed as far as the stage of preliminary feasibility studies, looking into the actual potential of a small wind farm on a specific site in the Brussels-Capital Region. These preliminary feasibility studies concluded, however, that small wind farms (> 30 years) would not be very viable in the Brussels-Capital Region. An additional wind measurement study is needed to confirm or refute these initial findings.

Measurement campaign

Plans for a measurement campaign were drawn up in 2012. The aim is to determine scientifically which areas in the Brussels-Capital Region have the best potential for wind energy generation, on both a large and a small scale. This study will start in 2013.

7. Biomass and heat networks

Study of biomass and heat network potential

In 2010 and 2011 two closely related studies demonstrated the difficulty of realising the potential of biomass in Brussels. Given the air quality standards that have to be maintained, fume scrubbers are essential. These would nevertheless seem to be an unlikely option for small-scale installations. One study therefore thought it might be feasible to have bigger biomass-fuelled heating plants connected to heat networks. Regrettably, at this stage, such installations do not appear to be economically viable in the Brussels-Capital Region.

Sustainability criteria for biomass

In 2011 new regional provisions were adopted, transposing the requirements of Directive 2009/28/EC regarding the sustainability of biofuels.

Legal reference: 26 May 2011 – Decree of the Government of the Brussels-Capital Region amending the Decree of the Government of the Brussels-Capital Region of 6 May 2004 on the promotion of green electricity and quality cogeneration (MB: 20/06/2011).

[NL text]

8. Concept of the ‘nearly zero-energy building’ (NZEB)

EPB calculation method

The method for calculating the EPB, common to all three Regions and adopted in 2007 for new buildings, used a primary energy factor of 1 for the conversion of biomass, the same as the factor for natural gas or domestic heating oil. The result is that it is impossible to achieve a near-zero level of primary energy by using biomass. This is contrary to the recast European EPB Directive, which regards biomass as a renewable fuel which can, just like solar, geothermal or wind, enable a building to consume virtually zero energy.

In 2011 the Brussels-Capital Region adjusted the primary energy factor for biomass to 0.32. Biomass cannot aspire to a factor of zero like solar, geothermal or wind, given the primary energy consumption needed to grow, process and transport this form of fuel (life cycle analysis).

Since the EPB certification introduced in 2011 bases its calculation method on that developed for new buildings, this adjustment will lead to energy performance certificates showing primary energy consumption levels close to 0 kWh when biomass is used.

Legal reference: 5 May 2011 – Decree of the Government of the Brussels-Capital Region amending various decrees implementing the Order of 7 June 2007 on the energy performance and interior climate of buildings (MB: 14/09/2011).

2012 Call for ‘Exemplary Building’ projects

To test the concept of the nearly zero-energy building with a view to incorporating it into the regulations by 2020, the Brussels-Capital Region, in its 2012 call for ‘Exemplary Building’ projects (submissions are voluntary) added the stipulation that the buildings’ energy consumption should be as close as possible to zero. Candidates put forward interesting solutions which combined high energy efficiency (low consumption) with the use of renewables. The 2013 call repeated this NZEB stipulation, which had been so successful the year before.

Sustainable building certification/labelling system

To promote sustainable building it is important to have an assessment tool that is objective, unambiguous, accessible to all, and allows genuinely sustainable buildings to be distinguished from the rest. This assessment tool must also be advanced enough to ‘rate’ the latest efforts, often the most difficult, in an adequate way. Lastly, the assessment tool

must be able to track technological developments, favouring research and development and technical innovation in the field of sustainable construction.

Following the feasibility study on an assessment tool of this kind, commissioned in 2008, the Brussels-Capital Region called in 2011 for tenders for the design of a new body of sustainable building criteria based on the best tools available. A first version was submitted for public consultation in 2012 with a view to preparing a second version which was then tested, twice, on real buildings in cooperation with the two other Regions. The final version of the assessment tool has been available since September 2013.

If the value of renewable energy is to be recognised, it is important that this assessment method should judge how far renewables contribute to making a building truly sustainable. Moreover, the importance of the 'energy' dimension in all aspects of the debate on sustainable building is likely to highlight the efforts needed to achieve zero energy and thus the beneficial impact of renewable energy. These considerations have been incorporated into the body of sustainable building criteria that has been developed.

QUESTION 2A: PLEASE DESCRIBE THE PROGRESS MADE IN EVALUATING AND IMPROVING ADMINISTRATIVE PROCEDURES TO REMOVE REGULATORY AND NON-REGULATORY BARRIERS TO THE DEVELOPMENT OF RENEWABLE ENERGY (ARTICLE 22(1)E) OF DIRECTIVE 2009/28/EC).

Federal Authority

[NL text]

Flemish Region

[NL text]

Walloon Region

1. Inter-administrative working group on biomethanation

This inter-administrative group includes the administrations competent in respect of each aspect of biomethanation:

- DGO4-Land Planning, for building permits,
- DGO3-Environment, for operating licences and environmental permits,
- DGO3-Agriculture, for farming installations,
- DGO3-Waste, for installations that use waste (farming and agro-industrial), status of digestate,
- DGO4-Energy, since biogas is used for energy production (fuel, electricity and/or heat).

The aim is greater ease of administration so that biomethanation can also help us to meet our renewable energy targets.

This working group has been replaced by three broader groups (with competence for regulatory matters, the economy, research, employment, forests, agriculture, waste, etc.). These groups have members in the offices of the various ministers concerned, responsible for recording, for all biomass resource sectors, current and optimum development conditions, administrative conditions for development – including obstacles and impediments (and aspects that are sacrosanct) – and conditions for the application of the sustainability criteria.

Write-up and commissioning, by the departments concerned, of studies on the various improvements proposed by the working groups and a first legislative proposal in 2013 (creation of class 3 for small farm-based biomethanation units).

2. Wind power reference framework

The Walloon Government has updated the reference framework for the siting of wind farms in the Walloon Region, adopting new sectoral conditions for the development of wind power. It is currently working on a new decree based on the following principles:

- Development of a land-use policy consistent with the Region's sustainable development objectives;
- Use of landscapes and natural spaces in conformity with the European Landscape Convention;
- Encouraging public participation in projects to develop renewable energy (wind, biomass, energy wood, etc.), through appropriate structures such as cooperatives;

- Working in the medium term to increase the network's capacity by enabling all the decentralised energy sources needed for us to meet our European objectives to be connected to it.

This decree will give the sector a long-term view which it must have if it is to develop satisfactorily.

Brussels-Capital Region

1. Energy grants

Simpler eligibility criteria for energy grants

The administrative criteria determining eligibility for energy grants were reviewed and simplified in 2011, and grants are now means-tested. The lower a household's income, the more it receives for investment in energy efficiency or renewable energy.

Simpler management of energy grant applications

From 1 January 2012, grants have been managed entirely by BIM/IBGE whereas previously they were managed jointly by the distribution system operator (SIBELGA) and BIM/IBGE. Reducing the number of players and having grant applications processed solely by BIM/IBGE has led to more efficient administrative management. BIM/IBGE has also concluded a specific memorandum of understanding with the Ministry for the Brussels-Capital Region, which pays out the energy grants. As of 2012 this has enabled grant payments to be made more quickly.

2. Green certificates

With effect from 2011, for PV facilities under 10 kVA:

- the certification visit has been scrapped, and
- meter readings for the award of green certificates must be submitted annually instead of every four years as before.

2012 also saw the introduction, for all installations, of a computerised procedure and an electronic portal for the management of facilities generating green electricity (issuing of green certificates).

Legal reference: 26 May 2011 – Decree of the Government of the Brussels-Capital Region amending the Decree of the Government of the Brussels-Capital Region of 6 May 2004 on the promotion of green electricity and quality cogeneration (MB: 20/06/2011).

3. Calculation of EPB

The method for calculating the EPB, common to all three Regions and adopted in 2007 for new buildings, used a primary energy factor of 1 for the conversion of biomass, the same as the factor for natural gas or domestic heating oil. The result is that it is impossible to achieve a near-zero level of primary energy by using biomass. This is contrary to the recast

European EPB Directive, which regards biomass as a renewable fuel which can, just like solar, geothermal or wind, enable a building to consume virtually zero energy.

In 2011 the Brussels-Capital Region adjusted the primary energy factor for biomass to 0.32. Biomass cannot aspire to a factor of zero like solar, geothermal or wind, given the primary energy consumption needed to grow, process and transport this form of fuel (life cycle analysis).

Since the EPB certification introduced in 2011 bases its calculation method on that developed for new buildings, this adjustment will produce energy performance certificates showing primary energy consumption levels close to 0 kWh when biomass is used.

Legal reference: 5 May 2011 – Decree of the Government of the Brussels-Capital Region amending various decrees implementing the Order of 7 June 2007 on the energy performance and interior climate of buildings (MB: 14/09/2011).

QUESTION 2B: PLEASE DESCRIBE MEASURES TAKEN TO ENSURE THE TRANSMISSION AND DISTRIBUTION OF ELECTRICITY PRODUCED FROM RENEWABLE ENERGY SOURCES AND IMPROVE THE FRAMEWORK OF RULES FOR BEARING AND SHARING OF COSTS RELATED TO GRID CONNECTIONS AND GRID REINFORCEMENTS (ARTICLE 22(1)F) OF DIRECTIVE 2009/28/EC).

[NL text]

Flemish Region

[NL text]

Walloon Region

In the Walloon Region the general rule is that priority is given to connecting production facilities that use renewable energy, to high-quality and/or high-efficiency cogeneration units, and/or to units which produce electricity from waste and fuels recovered from industrial processes.

Connection, incorporation, and investment in network infrastructure are all part of this priority.

- **Connection:**

Policy studies (RTTL² - Article 84; RTD³ - Article 72) and applications for connection (RTTL - Article 100; RTD - Article 81) concerning these facilities must be given priority over other applications being considered by the network operator. The work of connecting these facilities (RTTL – Article 113; RTD - Article 90) also has priority, at least over non-urgent work, i.e. work which, if postponed, will not endanger people or raise a risk of real and immediate damage to existing installations. For conformity tests on the connection, there is a simplified procedure for the installations concerned, provided they are standardised and have a capacity of less than 25 MW (RTTL - Article 117).

- **Production / incorporation:**

Network congestion is managed with due consideration for the priority to be given to production facilities that use renewable energy and high-quality and/or high-efficiency cogeneration units, and units which produce electricity from waste and fuels recovered from industrial processes (RTTL - Article 173).

Small-scale installations of less than 10 kVA connected to the low voltage network qualify for energy 'credits' for the difference between the energy they withdraw and the energy they inject, for each period between (annual) meter readings. In practice, more than

²**Walloon Government Order** of 26 January 2012 concerning the revision of the technical rules for managing the local electricity transmission network in the Walloon Region (RTTL) and access thereto.

⁴**Walloon Government Order** of 3 March 2011 approving the technical rules for managing the electricity distribution networks in the Walloon Region (RTD) and access thereto.

120 000 installations in the Walloon Region use this simplified support mechanism. Most of these are photovoltaic energy producers.

At present there is no incorporation tariff for small-scale facilities of less than 10 kVA using the network.

- **Investment:**

The general principle is that producers pay for the equipment needed to connect their facilities to the network operator's transformer station, and the network operator pays the 'upstream' costs – network transformer station and network reinforcement.

In order to be able to check that scheduled works will be adequate to meet actual demand for connections, the network operator must, when drawing up his adaptation plan (= investment), describe the latest known situation (updated quarterly) in respect of incorporation capacities and studies commissioned by aspiring producers, (RTTL and RTD - Article. 28). TSOs and DSOs must also exchange all relevant information (RTTL - Article 28; RTD - Article 228) and must cooperate on matters of investment, as regards both the technical solutions adopted and completion times.

The regulator (CWAPE) approves and oversees the content and adequacy of the works described in adaptation plans. If it identifies an area of inadequacy, CWAPE may require the network operator to make the investments needed for it to comply with its statutory obligations (DWe⁴ - Article 15), including its obligations regarding the incorporation of renewables.

The transmission system operator (TSO) must submit quarterly reports on incorporation capacities at transformer stations.

When the network operator cannot in the short or medium term guarantee the network's ability to take all the production delivered to it, a flexible-access connection agreement may be concluded. A number of these agreements have been activated in the last two years.

Brussels-Capital Region

In line with the national plan, the Brussels-Capital Region applies the principle of 'credits' for all decentralised energy-generating installations of 5 kW or less. Specifically, the electricity produced, up to the amount of electricity consumed, is 'credited' at the highest price (electricity purchase price), which increases profitability and simplifies administration (no need for a contract for reselling the surplus electricity produced through the network).

However, even for small-scale electricity-generating installations (< 5 kW), the producer must install a bidirectional meter, in order to know exactly how much electricity is consumed and how much is fed into the network. In the Brussels-Capital Region, the meter does not therefore 'run backwards': a mathematical calculation using the two readings from the bidirectional meter determines whether the producer is due a 'credit'. This

⁴ DWe: Decree of 12 April 2001 on the organisation of the regional electricity market.

method makes for better administration of the electricity distribution network and accurate costing of this kind of support measure (the party 'in credit' does not pay network costs).

There are no costs in the Brussels-Capital Region for electricity incorporation into the network, regardless of the decentralised unit's capacity.

In 2011 and 2012 there were no measures specifically concerning the incorporation of electricity from installations using renewable energy. There is no particular need for such measures. The electricity grid for the Brussels-Capital Region is in fact densely meshed. This configuration makes it easier for the network to receive injections of green electricity from decentralised production units.

That being the case, it was not necessary in either 2011 or 2012 to change the rules on licensing procedures for infrastructure of this kind.

As regards the transmission and distribution of electricity from renewables, the Brussels-Capital Region has jurisdiction over the distribution system operator (DSO) and the regional transmission system operator (TSO)⁵. Bearing in mind the changes made in 2011 (see the section in italics below) and the existing rules, the Order on the organisation of the electricity market provides as follows:

1. Regional transmission system operator:

Article 5(1)(8). *To that end, the regional transmission system operator shall perform the following tasks: when inviting bids from production facilities, it shall give priority to high-quality cogeneration units or units using renewable forms of energy or waste;*

Article 5(4). *The regional transmission system operator shall not discriminate in any way between network users or categories of network users and shall treat in confidence all personal and commercially sensitive data with which it becomes acquainted in the course of its duties.*

Article 5(5). *The regional transmission system operator may refuse access to the network only if it does not have the necessary capacity or if the applicant does not satisfy the technical requirements set out in the network's rules referred to in Article 9c. Without prejudice to the general obligations on substantiation laid down in the Act of 29 July 1991 on formal substantiation of administrative acts, decisions to refuse access shall be substantiated and based on objective and technically and economically sound criteria.*

2. Distribution system operator:

Article 7(2). *The distribution system operator shall not discriminate in any way between network users or categories of network users and shall treat in confidence all personal and commercially sensitive data with which it becomes acquainted in the course of its duties.*

⁵ The Brussels-Capital Region has not taken any measures on TSOs because transport (in the EU sense) is a federal responsibility. For an overview of competences see: http://economie.fgov.be/fr/consommateurs/Energie/Politique_energetique/Contexte_Belge/concertation_Etat_Regions_matiere_en_ergie/#.UnDQ0iLpr.g.

Article 7(3). *The distribution system operator may refuse access to the network only if it does not have the necessary capacity or if the applicant does not satisfy the technical requirements set out in the network's rules referred to in Article 9c. Decisions to refuse access shall be substantiated and based on objective and technically and economically sound criteria.*

Legal reference: 20 July 2011 – Order amending the Order of 19 July 2001 on the organisation of the electricity market in the Brussels-Capital Region (MB: 10/08/2011).

As regards the sharing of costs for adaptation of the network, the DSO for the Brussels-Capital Region operates in accordance with a regulated model. By definition, costs are built into the tariffs. These tariffs are set using a 'cost-reflective' method, that is to say, they must reflect actual costs. In 2011 and 2012, the setting of tariffs was a federal responsibility managed by CREG. The tariffs are published and available (see below).

The rules for connection to and adaptation of the network are set out in the technical regulations. These are in the public domain and available⁶. The relevant technical regulation stipulates:

Article 65(1). *Connections of production units, including those using renewable forms of energy, cogeneration units, units generating electricity from waste and fuels recovered from industrial processes, as well as decentralised production units, shall, as regards technical aspects, comply with the technical rules of Synergrid C 10/11⁷ entitled 'Technical rules for the connection of decentralised production facilities operating in parallel on the distribution network'.*

Article 65(2). *The distribution system operator may set special rules for connections prompted by specific local features of the distribution network, if these are necessary and substantiated.*

Article 96(1). *Connection costs shall be invoiced to the applicant on the basis of the applicable tariffs⁸, unless the applicant is a supplier or is acting, under the terms of Article 47, on behalf of a supplier, in which case the costs shall be invoiced to the owner of the installations connected or for which connection has been requested.*

Should connection require the network to be extended or reinforced, the technical regulation stipulates:

Article 94(4). *If the connection capacity requested is greater than 56 kVA or if the distribution system operator considers that a low voltage connection is feasible only if the distribution network is extended or reinforced, the procedure for the exploratory study shall be the same as for high voltage connections.*

As regards the review of the framework and rules for the bearing and sharing of costs (Article 16(3) of Directive 2009/28), envisaged in Article 16(4), no special measures were taken in 2011 and 2012.

⁶ http://www.sibelga.be/uploads/assets/93/fr/1273406128190-Technisch_Reglement_FR_E_20060510.pdf.

⁷ http://www.synergrid.be/download.cfm?fileId=C10-11_FR_120604.pdf.

⁸ <http://www.sibelga.be/en/connections-and-meters/new-connection-electricity-with-meter>.

As regards the tariffs for energy transmission and distribution, these are currently a federal responsibility, overseen by CREG⁹. This independent watchdog ensures that tariffs are non-discriminatory.

As regards extension of the gas grid in the Brussels-Capital Region, it should be noted that penetration of the gas grid here is close to 100 %. All points in the Region are already connected to the natural gas grid or are close to a natural gas distribution pipe, so connection does not require pipe installation to extend the network but simply the addition of a connector pipe. The subject is an interesting one, but it does not appear that any specific measures were deemed necessary in 2011 and 2012.

References:

- SIBELGA technical regulation:
<http://www.sibelga.be/uploads/assets/93/fr/1273406128190-Technisch Reglement FR E 20060510.pdf>;
- Technical rules of Synergrid C 10/11:
<http://www.synergrid.be/download.cfm?fileId=C10-11 FR 120604.pdf>;
- SIBELGA connection tariffs:
<http://www.sibelga.be/en/connections-and-meters/new-connection-electricity-with-meter>.

⁹ CREG: Commission for Electricity and Gas Regulation.

QUESTION 3: PLEASE DESCRIBE THE SUPPORT SCHEMES AND OTHER MEASURES CURRENTLY IN PLACE THAT ARE APPLIED TO PROMOTE ENERGY FROM RENEWABLE SOURCES AND REPORT ON ANY DEVELOPMENTS IN THE MEASURES USED WITH RESPECT TO THOSE SET OUT IN YOUR NATIONAL RENEWABLE ENERGY ACTION PLAN (ARTICLE 22(1)(B) OF DIRECTIVE 2009/28/EC).

[NL text]

RES aid schemes		Aid per unit		Total	
		2011		2012	
Walloon Region					
Electricity production					
Instrument	Obligation/quota (%)	13.50%		15.75%	
	Penalty (EUR/unit)	100.00		100.00	
	Min. guaranteed (EUR/unit)	65.00		65.00	
	Average cost of certificate (EUR)	81.99		74.10	
	Total GC cost (EUR)	200 343 958.80		358 985 675.10	
Investment aids					
Biomethanation	average EUR/unit	3 307 814.67	9 923 444.00	1 078 046.00	5 390 230.00
Biomass boilers	average EUR/unit	67 708.15	541 665.18	111 956.82	1 567 395.52
Fossil cogeneration	average EUR/unit	81 902.66	491 415.93	175 802.70	1 054 816.20
High wind	average EUR/unit	2 185 475.00	6 556 425.00	5 905 518.67	17 716 556.00
Hydroelectricity	average EUR/unit	1 017 176.00	3 051 528.00	104 747.01	418 988.03
Heat pumps	average EUR/unit	21 292.32	212 923.24	80 299.86	1 365 097.63
Low wind	average EUR/unit	27 298.96	109 195.83	25 500.00	25 500.00
Photovoltaic	average EUR/unit	96 199.83	27 705 549.93	108 572.44	7 382 926.24
Solar thermal	average EUR/unit	20 218.68	141 530.78	9 626.00	57 756.00
Investment grants					
Heat pump (ECS)	EUR/unit	750.00	113 850.00	750.00	419 900.00
Biomass boilers	average EUR/unit	1 750.00	1 041 370.00	1 750.00	1 215 000.00
Heat pump (heating)	average EUR/unit	1 750.00	1 028 425.00	1 750.00	1 215 000.00
Solar thermal	average EUR/unit	2 052.66	4 544 599.86	2 194.08	1 851 800.00

Tax concessions and reductions are not shown.

Brussels-Capital Region

Investment aids	2011		2012	
	No of applications	Total (EUR)	No of applications	Total (EUR)
Cogeneration natural gas*	34	965 480	23	399 757
Cogeneration RES*			2	19 559
PV	28	889 735	15	478 524
Heat pumps	16	25 491	13	43 980
ST	147	568 377	127	438 320
Energy savings	19 107	15 237 544	13 696	15 092 104
TOTAL	19 332	17 686 627	13 876	16 472 244

* For 2011, the SIBELGA database does not distinguish between cogeneration using gas and cogeneration using rapeseed oil.

Green certificates	Unit	2011	2012
Obligation/quota (%)	%	3.00	3.25
Penalty	EUR per GC not submitted	100	100
Guaranteed minimum price	EUR per GC	65	65
Average certificate price	EUR per GC	83.80	85.30
Issued for cogeneration natural gas	GC	31 554	48 396
Issued to PV installations	GC	35 538	34 453
Issued for cogeneration biogas	GC	13 359	11 686
Issued for cogeneration rapeseed oil	GC	2 918	2 639
Total issued	GC	83 370	97 174
Total cost GC	EUR	6 986 212	8 288 924

Flemish Region

[NL text]

Table 3a: Summary of all Belgian measures:

[NL tables and title]

Federal Authority

[NL text]

Flemish Region

[NL text]

Walloon Region

1. The main legal bases under which these various support schemes are organised are:

- Decree of 12 April 2001 on the organisation of the regional electricity market;
- Walloon Government Decree of 30 November 2006 on the promotion of electricity produced from renewable energy sources or by cogeneration.
- Walloon Government Decree of 30 March 2006 on public service obligations in the electricity market.

2. Support for investment

- Investment grants (and exemption from the *précompte immobilier*, or advance property tax):

Businesses can claim a grant for investments in energy production from renewables. The level of subsidy is 50% of the eligible extra cost for small and medium-sized enterprises and 20 to 30% for large enterprises (depending on their geographical location). The eligible extra cost varies from one technology to another.

The scheme has been reviewed and optimised several times since it was introduced.

- Energy grants for private individuals

Residents of Wallonia can claim grants for the installation of biomass-fuelled boilers and solar heating panels, after the work has been done.

3. Support for production

Photovoltaic

From 1 December 2009 the Walloon Region has operated a system under which green certificates are issued in advance for facilities with a net developable capacity of 10 kW or less.

Applications for this advance, to which conditions are attached, must be submitted to and approved by CWAPE.

The number of green certificates issued in advance is the estimated number of certificates which will be received *over a five-year production period*. It may not exceed 40.

On 24 November 2011 the Walloon Government adopted an amending decree setting new rules for the award of green certificates to PV installations of less than 10 kW, applicable from 1 December 2011.

The system is to be scaled down in successive stages, in accordance with a set timetable.

1/ Up to 30 November 2011: for each MWh of electricity produced, between 7 and 5 green certificates will be issued, depending on the capacity of the installation, over a 15-year period.

2/ From 1 December 2011 to 31 March 2012: for each MWh of electricity produced, between 7 and 5 green certificates will be issued, depending on the capacity of the installation, over a 10-year period.

3/ From 1 April 2012 to 31 August 2012: generous numbers of GCs will be issued in the first few years, reducing degressively depending on the age of the installation, over a time span of 10 years. The number of GCs received during the issue period per MWh produced per year will be 50.

4/ From 1 September 2012 to 31 March 2013: generous numbers of GCs will be issued in the first few years, reducing degressively depending on the age of the installation, over a time span of 10 years. The number of GCs received during the issue period per MWh produced per year will be 50.

Every three years, and for the first time in 2014, the Walloon Government will set new annual quotas so that a total period of eight years is covered at all times.

A number of mechanisms have also been put in place to guarantee regular feedback as a basis for possible adjustments to existing schemes. In addition to this monitoring by the regulatory bodies, CWAPE must undertake a detailed analysis, every three years, of the technical and economic characteristics of the different electricity production sectors.

CWAPE must also carry out an annual assessment of how the green certificate market is performing and draw up projections for the development of new medium-term installations (five years), presented in a special annual report.

Administrative simplification

From 1 October 2010, for PV solar installations with a capacity of 10 kW or less, a number of procedures – operating requests, applications for ‘credits’ for the difference between electricity withdrawn from and injected into the distribution network, and advance applications for green certificates – can be dealt with in a single application which is sent to a ‘one-stop shop’.

These installations do not, moreover, need a licence.

Brussels-Capital Region

In essence, existing support mechanisms in the Brussels-Capital Region described in the national plan remain in place, though the conditions under which aid is given have been reviewed and adjusted. The section below describes these mechanisms and the measures which the Brussels-Capital Region is taking to adjust or supplement them.

1. Energy grants

Simpler eligibility criteria for energy grants

The administrative criteria determining eligibility for energy grants were reviewed and simplified in 2011, and grants are now means-tested. The lower a household’s income, the more it receives for investment in energy efficiency or renewable energy.

Simpler management of energy grant applications

From 1 January 2012, grants have been managed entirely by BIM/IBGE whereas previously they were managed jointly by the distribution system operator (SIBELGA) and BIM/IBGE. Reducing the number of players and having grant applications processed solely by BIM/IBGE has led to more efficient administrative management. BIM/IBGE has also concluded a specific memorandum of understanding with the Ministry for the Brussels-Capital Region, which pays out the energy grants. As of 2012 this has enabled grant payments to be made more quickly.

2. Green certificates

To encourage the generation of green electricity in the Brussels-Capital Region, a system of green certificates was introduced by the Order of 19 July 2001 on the organisation of the electricity market in the Brussels-Capital Region (Article 28(2)).

Under this system, firstly, over a 10-year period a green certificate (valid for 5 years) is issued by BRUGEL¹⁰ to the operator of a green electricity generating facility for every saving of 217 kg in CO₂ emissions which its facility makes compared with benchmark facilities. The number of green certificates issued in this way depends on the facility's output, production and fuel type.

Secondly, electricity suppliers in the Brussels-Capital Region are obliged to submit a certain number ('quota') of green certificates to BRUGEL. Otherwise they must pay a fine of EUR 100 for every green certificate not submitted. This quota is a percentage of the MWh of electricity supplied by the supplier in the Brussels-Capital Region during the year in question. To meet their obligation, suppliers therefore have to buy green certificates from producers of green electricity, and/or produce it themselves.

Operators of green electricity-generating facilities can therefore trade the green certificates they receive from BRUGEL, selling them on to the supplier who offers the best price.

During 2011-2012 the Brussels-Capital Region continued its efforts to streamline the existing green certificate system.

Revised calculation of green certificates for photovoltaic energy

The operation of the green certificates market was analysed in 2010, in the light of a twofold problem:

- the issue of certificates did not properly reflect changes in the cost of producing PV electricity; and
- the system yield was not the same (small facility = highly profitable), large-scale facility = not profitable enough).

This analysis led to a new Decree in 2011 by the Brussels-Capital Region Government which introduced a mechanism for granting green certificates which adjusts automatically to the cost of PV energy production, by applying a coefficient derived from the following four parameters:

- average unit cost for a PV system;
- financial investment incentives;
- the price at which electricity is purchased by the network;
- resale price of green certificates on the market.

The coefficient is calculated, using these four parameters as measured by the regulator BRUGEL, in such a way as to guarantee a payback time of a maximum of seven years. This coefficient will be adjusted, if necessary, on 1 January of each year but may also be adjusted in the course of the year. The Decree allows for this adjustment part-way through the year if changes in the parameters lead to a change in the number of green certificates needed to maintain a payback time of seven years or less which is 20% or more than the number normally issued.

¹⁰ BRUGEL (BRUxelles Gaz ELectricité) is the energy regulator for the Brussels-Capital Region. This public-interest body oversees the gas and electricity market and monitors compliance with laws and regulations. Issuing green certificates is one of its responsibilities.

This mechanism has significantly reduced windfall effects and the slow-down in the expansion of PV energy in the Brussels region, by keeping costs closer to economic trends on the ground (higher or lower PV panel prices, for example). It also offers long-term prospects: whenever they invest and whatever the value of the four market parameters, producers who generate electricity from PV panels are guaranteed enough green certificates to achieve a payback time of no more than seven years. Lastly, this mechanism offers an important guarantee: the initial award is maintained for 10 years, even if the parameters change during that time. Investors are very keen, when taking a decision on the basis of an economic calculation, to ensure that the conditions will not change half-way through the term of their investment.

Legal reference: 26 May 2011 – Decree of the Government of the Brussels-Capital Region amending the Decree of the Government of the Brussels-Capital Region of 6 May 2004 on the promotion of green electricity and quality cogeneration (MB: 20/06/2011).

Simplification of administrative procedures

With effect from 2011, for PV facilities under 10 kVA:

- the certification inspection visit has been scrapped, and
- meter readings for the award of green certificates must be submitted annually instead of every four years as before.

2012 also saw the introduction, for all installations, of a computerised procedure and an electronic portal for the management of facilities generating green electricity (issuing of green certificates).

Legal reference: 26 May 2011 – Decree of the Government of the Brussels-Capital Region amending the Decree of the Government of the Brussels-Capital Region of 6 May 2004 on the promotion of green electricity and quality cogeneration (MB: 20/06/2011).

Setting of green certificate quotas for 2013-2025

It is mandatory for electricity suppliers to submit a quota of green certificates to BRUGEL (see above). This quota is increased year on year, to support the production of green electricity in the Region. In 2012 quotas were set for the period 2013-2025 as shown below. Setting quotas through to 2025 offers a long-term perspective to a sector which needs a significant length of time to develop and maximise its investment returns.

[insert graphic: as per original (p. 31) but replace commas with stops]

Legal reference: 29 November 2012 – Decree of the Government of the Brussels-Capital Region setting the green certificate quotas for 2013 and subsequent years (MB: 13/12/2012).

Quotas and stabiliser mechanism for the green certificate market

While the market by 2025 needs to be as transparent as possible, it is hard to know exactly how many green certificates will actually be in circulation at that time. The number of quotas imposed nevertheless needs to be close enough to the number of quotas awarded, to ensure that the market is balanced and prices remain stable.

In order to remedy a situation in which the number of certificates issued might exceed the quotas required, pushing down prices to the detriment of investors, the Decree provides in this case for a rebalancing of the market in subsequent years: the minister responsible for energy may, if so advised by BRUGEL, increase the quota for subsequent years (starting in year 'n+1') by the number of surplus green certificates identified for the current year (year 'n'). The minister may also, again if so advised by BRUGEL, increase the quotas for large-scale projects, i.e. those justifying the award of more than 25 000 green certificates per year, for the project's start-up year and subsequent years.

Legal reference: 29 November 2012 – Decree of the Government of the Brussels-Capital Region setting the green certificate quotas for 2013 and subsequent years (MB: 13/12/2012).

Discernible results already?

The figure below suggests that these green certificate reforms have been especially beneficial to PV energy in the Brussels-Capital Region. Since 2011 this sector has seen steady growth. Investment in large-scale PV installations has also proliferated since 2011, given that the automatic adjustment mechanism enables installations of all sizes to achieve a payback time of no more than seven years.

Photovoltaic installations brought on-stream in Brussels (kWc) – source BRUGEL

[insert graphic : as per original (p. 32) but '20-août 2013 ' → '20 August 2013']

3. Support for biogas incorporated into the natural gas grid

In 2011 the Brussels-Capital Region took a first step towards supporting biomethane. In an amendment to the Order on the organisation of its gas market, the Region included a chapter designed to promote biomethane. In practice this change to the legal framework opens the way for a system of subsidies for the production or incorporation of biomethane into a natural gas distribution grid, available to producers of gas from renewable sources based in Brussels. Previously, only biogas used to generate green electricity qualified for production aids in the form of green certificates. This new mechanism, which complements the green certificates system, should encourage the emergence of other sectors such as biogas production and its incorporation into the natural gas grid, without mandatory production of green electricity.

Legal reference: 20 July 2011 – Order amending the Order of 1 April 2004 on the organisation of the gas market in the Brussels-Capital Region (MB: 10/08/2011).

QUESTION 3A: PLEASE PROVIDE INFORMATION ON HOW SUPPORTED ELECTRICITY IS ALLOCATED TO FINAL CUSTOMERS FOR PURPOSES OF ARTICLE 3(6) OF DIRECTIVE 2003/54/EC (ARTICLE 22(1)(B) OF DIRECTIVE 2009/28/EC).

[NL text]

Flemish Region

[NL text]

Walloon Region

Electricity is allocated to end consumers receiving a subsidy in exactly the same way as to those not receiving a subsidy, as there is absolutely no link between the system of support for renewable energy production (Directive 2009/28/EC) and the requirement to be transparent in providing information on energy sources (Directive 2003/54/EC).

The guarantee of origin provided for sustainable electricity and cogeneration is a simple traceability instrument; it allows, after commercial exchanges, each sustainable and cogeneration MWh to be clearly and unequivocally allocated to a given consumer. As a result, electricity consumers can choose the electricity mix they wish (100% sustainable, 50% sustainable, 0% sustainable) from the different suppliers who are encouraged to offer these choices.

All consumers in the same category (in terms of quantity of electricity consumed) also contribute equally to the financing of subsidies.

For invoices, the Walloon Region applies federal law which requires the energy mix to be shown on electricity bills.

Brussels-Capital Region

Invoicing

The Brussels-Capital Region applies the relevant federal law on invoicing.

Legal reference: 3 April 2003 – Royal Decree on invoices for the supply of electricity and gas.

Green electricity supplier's licence

The Brussels-Capital Region has introduced a system enabling electricity suppliers to be officially labelled 'green suppliers' if they so wish. This is specific to Brussels.

Legal reference: 19 July 2001 – Order on the organisation of the electricity market in Brussels-Capital Region (Article 21(1) and (2) and Article 2(33)).

QUESTION 4: PLEASE PROVIDE INFORMATION ON HOW, WHERE APPLICABLE, SUPPORT SCHEMES HAVE BEEN STRUCTURED TO TAKE INTO ACCOUNT RES APPLICATIONS THAT GIVE ADDITIONAL BENEFITS. BUT MAY ALSO HAVE HIGHER COSTS, INCLUDING BIOFUELS MADE FROM WASTES, RESIDUES, NON-FOOD CELLULOSIC MATERIAL AND LIGNO-CELLULOSIC MATERIAL (ARTICLE 22(1)(C) OF DIRECTIVE 2009/28/EC)

[NL text]

Federal Authority

[NL text]

Flemish Region

[NL text]

Walloon Region

As regards electricity production, in order to balance out the maturity of these sectors and the level of support given to each, a weighting is applied to determine the green certificate award rate. A table reflecting the current weightings is shown below.

Sectors (and total installation power)	Award rate (GC/MWh)	Min. guaranteed level of support (EUR/MWh)	Max. theoretical level of support (EUR/MWh)
Cogeneration, Fossil (< 20 MW)	0.1 – 0.4	6.5 – 25	10 – 40
Biomass (< 20 MW)	0.1 – 1	6.5 – 65	10 – 100
Hydropower (< 20 MW)	1	65	100
Wind	1	65	100
Cogeneration, Biomass (< 5 MW)	0.1 – 2	6.5 – 130	10 – 200
Photovoltaic (< 10 kWc)	6 – 7	390 – 455	600 – 700
Photovoltaic (10 - 250 kWc)	1.2 – 6	160 – 390	170 – 600
Photovoltaic (> 250 kWc)	1 – 4.1	65 – 265	150 – 408

A system of production aids to complement the green certificates system has been devised for producers of green electricity generated in the Walloon Region using promising but still emerging technologies identified by the Government, after consultation with CWAPE.

Once it has CWAPE's opinion, the Government decides how much will be paid for each kWh produced by the installations in question. The amount can vary depending on the renewable energy source, the technology used, the installation's capacity, its location and the quantity of carbon dioxide avoided.

QUESTION 5: PLEASE PROVIDE INFORMATION ON THE FUNCTIONING OF THE SYSTEM OF GUARANTEES OF ORIGIN FOR ELECTRICITY AND HEATING AND COOLING FROM RES, AND THE MEASURES TAKEN TO ENSURE RELIABILITY AND PROTECTION AGAINST FRAUD OF THE SYSTEM (ARTICLE 22(1)(D) OF DIRECTIVE 2009/28/EC).

Flemish Region

[NL text]

Walloon Region

In the Walloon region, the disclosure mechanism for electricity from renewable sources (RES-E) and electricity produced from cogeneration units (CHP) is based entirely on guarantees of origin. No other proof of green status is accepted, and no electricity produced from a renewable source or by 'cogeneration' units can be sold if the relevant guarantees of origin have been cancelled. Imports and exports of guarantees of origin from Member States that have implemented the rules of the European Energy Certificate System (EECS) developed by the Association of Issuing Bodies (AIB) are accepted unconditionally.

➤ Guarantee of origin

Electricity produced from certified sustainable or cogeneration units (CHP) receives guarantees of origin, whether these units are subsidised or not. Only electricity which is sold, usually after injection into the network or, more rarely, directly at the production site, requires guarantees of origin. Only the net electricity produced qualifies for a guarantee of origin. A guarantee of origin is presented in the form of RE-GO, CHP-GO, or RE-GO *and* CHP-GO.

CWAPE, the market regulator for the Walloon Region, is the issuing body. The system is run entirely from CWAPE's electronic records, and every quarter, guarantees of origin are granted to producers on the basis of quarterly production reports. These guarantees of origin are granted in accordance with the EECS regulations. They are then traded in Member States which apply the EECS regulations. There is no record of any import or export request from a non-EECS Member State.

The green certificate (a subsidy mechanism) and the guarantee of origin (for fuel mix disclosure) are completely separate. Their use is exclusively limited to the objectives they pursue in order to avoid double counting or incorrect use. The guarantee of origin can be used only for disclosure purposes. Cancellation of a guarantee of origin in no way affects the validity of the green certificate for the purposes of meeting the quota, and vice-versa.

➤ Fuel mix disclosure

The rules on FMD are applied under Article 11(2)(3) of the Walloon Government Decree of 30 March 2006 on public service obligations in the electricity market, which requires electricity suppliers to show, in their contracts and bills, the origin of the energy supplied in the previous year.

Under Article 43(2) of the Walloon Government Decree of 30 March 2006 on public service obligations in the electricity market, electricity suppliers must inform CWAPE, by 31 March of each year, of the origin of the electricity that they have supplied in the previous year. CWAPE checks this information and prepares an annual report from its findings. The fuel mix calculation is based exclusively on cancelled guarantees of origin (RE-GO and/or CHP-GO) and suppliers' declarations relating to fossil and fissile energy. To avoid any double counting of sustainable energy, the sustainable share is deducted from the residual fuel mix calculation for the producer's generating capacity. For electricity bought on the stock exchange, the Belgian fuel mix calculated in the context of the RE-DISS project (EPED Platform) is used.

CWAPE uses data provided by the distribution system operators and transmission system operators to establish the amount of electricity delivered by each supplier. Based on these data, the suppliers declare the total amount of electricity sold for each of their products.

Guarantees of origin are used in the monthly checks on the proportion of energy from sustainable sources or sustainable cogeneration units in the fuel mix to be attributed to each withdrawal point. Suppliers may also cancel the guarantees of origin for their contracts that are not stamped as green but include electricity produced from sustainable or cogeneration units. The monthly and annual totals are aggregated to determine annual disclosure.

Guarantees of origin are cancelled exclusively by electricity suppliers who have a licence, largely to strengthen competition on the energy market. End consumers are not therefore allowed to cancel guarantees of origin intended for their own use. Autoproducers are legally obliged to cancel their RE-GOs or CHP-GOs in proportion to their consumption. These mechanisms ensure a match between RE and CHP attributes and physical energy.

References:

- *Walloon Government Decree on public service obligations in the electricity market, 30 March 2006, <http://wallex.wallonie.be/index.php?doc=8986>*
- *Ministerial Decree establishing the method for determining the primary energy sources used to produce electricity, 13 December 2006 – (MB: 22/12/2006, p. 73884), <http://wallex.wallonie.be/index.php?doc=9393>*
- *Decree on the organisation of the regional electricity market, 12 April 2001, <http://wallex.wallonie.be/index.php?doc=9075>*

Brussels-Capital Region

In the Brussels-Capital Region, BRUGEL, the local regulator for the electricity and gas markets, is responsible for granting guarantees of origin and managing the mechanism.

BRUGEL has been a member of the Association of Issuing Bodies (AIB) since September 2008, and joined the AIB international Hub in December 2008.

The AIB promotes the use of a standardised system based on a harmonised environment, structures and procedures to guarantee the reliability of international energy certificate systems. This standardised system is known as EECs (European Energy Certificate System)

and is detailed in the EECs Principles and Rules of Operation (PRO) and supporting documents.

Registration with the AIB, compliance with the PRO and interfacing with other members through the Hub ensure that the procedures for granting, trading and cancelling guarantees of origin are reliable and transparent.

Legal references:

20 July 2011 – Order amending the Order of 1 April 2004 on the organisation of the gas market in the Brussels-Capital Region (MB: 10/08/2011).

26 May 2011 – Decree of the Government of the Brussels-Capital Region amending the Decree of the Government of the Brussels-Capital Region of 6 May 2004 on the promotion of green electricity and quality cogeneration (MB: 20/06/2011).

QUESTION 6: PLEASE DESCRIBE THE DEVELOPMENTS IN THE PRECEDING 2 YEARS IN THE AVAILABILITY AND USE OF BIOMASS RESOURCES FOR ENERGY PURPOSES (ARTICLE 22(1)(G) OF DIRECTIVE 2009/28/EC)

It is suggested that Tables 4 and 4a are used to provide more detailed information on biomass supply.

Table 4: Biomass supply for energy use

* Amount of raw material if possible in m³ for biomass from forestry and in tonnes for biomass from agriculture and fishery and biomass from waste.

** The definition of this biomass category should be understood in line with table 7 of part 4.6.1 of Commission Decision C (2009) 5174 final establishing a template for National Renewable Energy Action Plans under Directive 2009/28/EC.

[NL table]

Table 4a: Domestic agricultural land use for the production of energy crops (ha)

[NL table]

QUESTION 7: PLEASE PROVIDE INFORMATION ON ANY CHANGES IN COMMODITY PRICES AND LAND USE IN YOUR MEMBER STATE IN THE PRECEDING 2 YEARS ASSOCIATED WITH INCREASED USE OF BIOMASS AND OTHER FORMS OF ENERGY FROM RENEWABLE SOURCES. PLEASE PROVIDE, WHERE AVAILABLE, REFERENCES TO RELEVANT DOCUMENTATION ON THESE IMPACTS IN YOUR COUNTRY (ARTICLE 22(1)(H) OF DIRECTIVE 2009/28/EC).

When assessing commodity price impacts, it is suggested that the following commodities at least are considered: common food and feed crops, energy wood, pellets.

Federal Authority

[NL text]

Flemish Region

[NL text]

QUESTION 8: PLEASE DESCRIBE THE DEVELOPMENT AND SHARE OF BIOFUELS MADE FROM WASTES, RESIDUES, NON-FOOD CELLULOSIC MATERIAL AND LIGNO-CELLULOSIC MATERIAL (ARTICLE 22(1)(I) OF DIRECTIVE 2009/28/EC).

Table 5: Production and consumption of Article 21(2) biofuels (ktoe)

Article 21(2) biofuels [1]	2011	2012
Production – Fuel type X (please specify)	0	0
Consumption – Fuel type X (please specify)	0	0
Total production of Art. 21(2) biofuels [1]	0	0
Total consumption of Art. 21(2) biofuels [1]	0	0
% share of Art. 21(2) biofuels from total consumption of RES-T	0	0

[1] Biofuels from wastes, residues, non-food cellulosic material and ligno-cellulosic material.

QUESTION 9: PLEASE PROVIDE INFORMATION ON THE ESTIMATED IMPACTS OF THE PRODUCTION OF BIOFUELS AND BIOLIQUIDS ON BIODIVERSITY, WATER RESOURCES, WATER QUALITY AND SOIL QUALITY IN YOUR COUNTRY IN THE PRECEDING 2 YEARS. PLEASE PROVIDE INFORMATION ON HOW THESE IMPACTS WERE ASSESSED, WITH REFERENCES TO RELEVANT DOCUMENTATION ON THESE IMPACTS WITHIN YOUR COUNTRY (*ARTICLE 22(1)(J) OF DIRECTIVE 2009/28/EC*).

[NL text]

QUESTION 10: PLEASE ESTIMATE NET GREENHOUSE GAS EMISSION SAVINGS DUE TO THE USE OF ENERGY FROM RENEWABLE SOURCES (ARTICLE 22(1)(K) OF DIRECTIVE 2009/28/EC).

For the calculation of net greenhouse gas emission savings from the use of renewable energy, the following methodology is suggested:

For biofuels: In accordance with Article 22(2) of Directive 2009/28/EC. Valbiom

For electricity and heat it is suggested that the EU-wide fossil fuel comparators for electricity and heat as set out in the report on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling¹¹ are used, if no later estimates are available.

If a Member State chooses not to use the suggested methodology for estimating net greenhouse gas emission savings, please describe what other methodology has been used to estimate these savings.

Table 6: Estimated GHG emission savings from the use of renewable energy (t CO₂eq)

[NL table]

	TOT	TOT
	2011	2012
	9 080 157	10 506 315
	4 993 590	6 102 208
	3 604 362	3 910 661
	482 205	493 445

¹¹ For report see:

http://ec.europa.eu/energy/renewables/transparency_platform/doc/2010_report/com_2010_0011_3_report.pdf.

QUESTION 11: PLEASE REPORT ON (FOR THE PRECEDING 2 YEARS) AND ESTIMATE (FOR THE FOLLOWING YEARS UP TO 2020) THE EXCESS/DEFICIT PRODUCTION OF ENERGY FROM RENEWABLE SOURCES COMPARED TO THE INDICATIVE TRAJECTORY WHICH COULD BE TRANSFERRED TO/IMPORTED FROM OTHER MEMBER STATES AND/OR THIRD COUNTRIES, AS WELL AS ESTIMATED POTENTIAL FOR JOINT PROJECTS UNTIL 2020 (ARTICLE 22(1)(L),(M) OF DIRECTIVE 2009/28/EC).

Table 7: Actual and estimated excess and/or deficit (-) production of renewable energy compared to the indicative trajectory which could be transferred to/from other Member States and/or third countries in Belgium (ktoe)^{12, 13}

[NL table]

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	0	0	0	0	0	0	0	0	0	0

¹² Please use actual figures to report on the excess production in the two years preceding submission of the report, and estimates for the following years up to 2020. In each report Member State may correct the data of previous reports.

¹³ When filling in the table, for deficit production please mark the production shortfall using negative numbers (e.g. -x ktoe).

QUESTION 11A: PLEASE PROVIDE DETAILS OF STATISTICAL TRANSFERS, JOINT PROJECTS AND JOINT SUPPORT SCHEME DECISION RULES.

[NL text]

QUESTION 12: PLEASE PROVIDE INFORMATION ON HOW THE SHARE FOR BIODEGRADABLE WASTE IN WASTE USED FOR PRODUCING ENERGY HAS BEEN ESTIMATED, AND WHAT STEPS HAVE BEEN TAKEN TO IMPROVE AND VERIFY SUCH ESTIMATES (ARTICLE 22(1)(N) OF DIRECTIVE 2009/28/EC)

[NL text]

Flemish Region

[NL text]

Walloon Region

The biodegradable organic fraction of incinerated waste is estimated to be 47% of total municipal waste. The LHV of the organic waste fraction is estimated to be 4.24 GJ/t. The fraction of primary energy deemed to be renewable is 511 GWh.

(Reference: ICEDD, *bilan énergie 2013*)

Brussels-Capital Region

The waste incinerator at Neder-Over-Heembeek is attached to a (45 MW) turbine. This combined facility processed about 496 000 tonnes of household waste in 2012 (mainly 'white bags' from the Brussels-Capital Region) which an analysis of waste bin contents shows to be 53% organic. In 2012, this facility thus generated about 67.5 GWh of green electricity.

The Brussels-Capital Region has not taken any special measures on the basis of these data.