BELGIUM

National renewable energy

action plan

pursuant to Directive 2009/28/EC

November 2010

Prepared by the Federal-Regional Energy Consultation Group CONCERE-ENOVER, comprising the following authorities:

Federal Authority:

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

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Flemish Region:

Flemish Energy Agency
Luc Peeters, Managing Director

Walloon Region:

Directorate-General for Regional Planning, Housing, Heritage and Energy
Energy and Sustainable Building Department
Dominique Simon, Inspector-General

Brussels Capital Region:

Brussels Institute for Management of the Environment
Jean-Pierre Hannequart, Director-General

Glossary

AATL: *Administration de l'Aménagement du Territoire et du Logement'* — Regional Planning and Housing Administration
BNSWEP: Belgian North Sea Wind Energy Platform
BRUGEL: *Commission de régulation pour l'énergie en Région de Bruxelles-Capitale* — Commission for the Regulation of Energy in the Brussels Capital Region
CBE: *Collèges des Bourgmestre et Echevins* — municipal councils
COBAT : Brussels Regional Planning Code
COBRACE : Brussels Air, Climate and Energy Code
Domanial concession: an administrative contract by which the granting authority permits a user the right to occupy temporarily and exclusively a parcel of public land for a specific purpose and in a sustainable manner; the revocable right is granted for a fixed term and is subject to a license fee.
COP: Coefficient of performance
CREG: *Commission de Régulation de l'Electricité et du Gaz* — Commission for Regulation of Electricity and Gas)
CWaPE: *Commission wallonne pour l'Energie* — Walloon Energy Commission)
CWATUPE: *Code Wallon de l'Aménagement du Territoire, de l'Urbanisme, de Patrimoine et de l'Energie* — Walloon Regional Planning, Urban Planning, Heritage and Energy Code
DSO: Distribution System Operators
Elia: Operator of the Belgian high voltage transmission network
PSE: Prospective Study on Electricity
FEDESCO: public-owned energy services company (ESCO) incorporated in March 2005 as a '*société anonyme de droit public*' (public limited company)
IBGE: *Institut Bruxellois de Gestion de l'Environnement* — Brussels Institute for Management of the Environment
IBGE: is the environment and energy administration for the Brussels Capital Region
M.B.: Moniteur Belge/Belgian State Gazette (official journal for publications)
BCR: Brussels Capital Region
RECAST EPBD: Recast European Directive on the Energy Performance of Buildings
RGIE: *Règlement Général sur les Installations Electriques* — General Regulation for Electrical Installations
WR : Walloon Region
RES: Renewable Energy Sources
Sibelga: Distribution network operator for electricity and natural gas for the 19 local authorities of the Brussels Capital Region
FPS: Federal Public Service
PSW: Public service of Wallonia
TRDE: *Technisch Reglement Distributie Elektriciteit* —Technical Regulation for the Distribution of Electricity
TSO: Transmission System Operators
MUMM: Management Unit of the North Sea Mathematical Models
FR: Flemish Region
Vlarea: *Vlaams Reglement inzake Afvalvoorkominge en beheer* — Flemish Regulation regarding Waste Prevention and Management)
VLIF: *Vlaams Landbouwinvesteringsfonds* — Flemish Agricultural Investment Fund)
VREG: *Vlaamse Reguleringsinstantie voor de Elektriciteits- en Gasmarkt* — Flemish Regulation Entity for the Electricity and Gas Market

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1. SUMMARY OF THE NATIONAL RENEWABLE ENERGY POLICY

1.1. The division of competences of 8 August 1980. — Loi spéciale de réformes institutionnelles (Special Institutional Reforms Act), M.B. of 15 August 1980.

Competences regarding energy policy are divided between the Federal Authority and the Regions.

The regional aspects of energy policy include:

(a) distribution and local transmission of electricity by means of grids with a nominal voltage of 70,000 volt or less;

(b) public distribution of gas;

(c) the use of coal mine methane and blast furnaces gas;

(d) district heating distribution networks;

(e) slag heap recovery;

(f) **new energy sources** with the exception of those relating to nuclear energy;

(g) energy recovery by industries and other users;

(h) rational use of energy.

The Federal Authority is competent for all matters which require uniform implementation on a national level due to their technical or economic indivisibility, in particular:

(i) the national infrastructure plan for the electricity sector;

(j) the nuclear fuel cycle;

(k) large-scale storage infrastructures, the transmission and production of energy;

(l) tariffs.

The Federal Authority is responsible for marine spaces that are under Belgian jurisdiction pursuant to the international law of the sea. Accordingly, the renewable energy installations in the North Sea are subject to federal competence.

1.2. Summary of the Belgian energy policy

Belgian authorities pursue a sustainable energy policy that takes into account the economic and social interests of the energy sector as well as the exhaustion of fossil resources and environmental concerns.

In this context, renewable energy sources contribute to achieving the following targets:

- reducing consumption of energy from fossil sources to safeguard future reserves;
- reducing greenhouse gas emissions;
- reducing the country's dependence on energy imports;
- minimising the impact of price fluctuations for energy from other sources;
- creating employment in the framework of an innovative economy;
- diversifying the available range of energy to improve the functioning of the energy market.

In the field of electricity generation, Belgium has set up a scheme of green certificates and guaranteed minimum prices to support the development of electricity generation from renewable sources.

At the federal level, this system is flanked by a series of measures aimed in particular at the deployment of offshore wind energy on the Belgian continental shelf (North Sea).

The Regions are also developing policy promoting green heating.

In order to support the establishment of units producing energy from renewable sources, the Regions have initiated schemes to provide investment grants for companies and premiums for individuals, while the Federal Authority has recourse to fiscal tools (tax deductions for companies and tax reductions for individuals).

To promote the development of biofuels in the transport sector, the Federal Authority has set up a scheme of tax exempt biofuel quotas and has introduced the mandatory use of biofuel in the fuel mix.

All of these measures are supported by widespread information, training and awareness campaigns to inform businesses as well as the general public and the various sector stakeholders.

As far as regulatory measures are concerned, renewable energy projects must comply with applicable environmental and urban planning provisions, in particular with authorisation requirements. However, for certain technologies specific, more flexible systems – based on the size of the installation are envisaged.

2. EXPECTED FINAL ENERGY CONSUMPTION: 2010-2020

Table 1: Expected gross final consumption in heating and cooling, electricity and transport up to 2020 taking into account the effects of energy efficiency and energy saving measures 2010-2020 (ktoe)

	2005	2010		2011		2012		2013		2014	
		Ref.	EE	Ref.	EE	Ref.	EE	Ref.	EE	Ref.	EE
1. Heating and cooling	21,804	21,804	21,804	21,804	21,804	21,804	21,804	21,804	21,804	21,804	21,804
2. Electricity	7,912	8,670	8,371	8,822	8,462	8,973	8,554	9,125	8,646	9,276	8,737
3. Transport	8,493	9,485	9,304	9,522	9,306	9,552	9,301	9,589	9,304	9,629	9,308
4. GFEC	**38,209**	**41,012**	**40,517**	**41,222**	**40,630**	**41,426**	**40,736**	**41,638**	**41,121**	**41,852**	**40,967**

	2015		2016		2017		2018		2019		2020	
	Ref.	EE	Ref.	EE	Ref.	EE	Ref.	EE	Ref.	EE	Ref.	EE
1. Heating and cooling	21,804	21,804	21,804	21,804	21,804	21,804	21,804	21,804	21,804	21,804	21,804	21,804
2. Electricity	9,428	8,829	9,539	8,968	9,651	9,108	9,762	9,247	9,874	9,387	9,985	9,526
3. Transport	9,661	9,306	9,591	9,187	9,530	9,077	9,463	8,963	9,399	8,852	9,333	8,740
4. GFEC	**42,057**	**41,076**	**42,119**	**41,116**	**42,189**	**41,164**	**43,055**	**41,207**	**42,321**	**41,254**	**42,386**	**41,301**

3. RENEWABLE ENERGY TARGETS AND TRAJECTORIES

3.1. National overall target

Table 2: National overall target for the share of energy from renewable sources in gross final consumption of energy in 2005 and 2020 (figures to be transcribed from Annex A, Part A to Directive 2009/28/EC)

(A) Share of energy from renewable sources in gross final consumption of energy in 2005 (S2005) (%)	2.20%
(B) Target of energy from renewable sources in gross final consumption of energy in 2020 (S2020) (%)	**13%**
(C) Expected total adjusted energy consumption in 2020 (from Table 1, last cell) (ktoe)	41,301
(D) Expected amount of energy from renewable sources corresponding to the 2020 target (calculated as B x C) (ktoe)	5,369

Table 3: 2020 target and estimated trajectory of energy from renewable sources in heating and cooling, electricity and transport (*)

%	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
RES Heating and Cooling	2.3%	3.5%	4.2%	4.7%	5.1%	5.9%	6.6%	7.5%	8.5%	9.6%	10.7%	11.9%
RES Electricity	2.7%	4.8%	6.2%	7.8%	9.5%	11.3%	12.7%	14.8%	16.5%	18.2%	19.6%	20.9%
RES Transport	0.0%	3.8%	3.8%	4.8%	4.8%	5.7%	5.8%	6.3%	6.5%	7.9%	9.0%	10.14%
Overall RES share	**2.2%**	**3.8%**	**4.4%**	**5.2%**	**5.8%**	**6.8%**	**7.5%**	**8.6%**	**9.5%**	**10.7%**	**11.9%**	**13.0%**
Of which from cooperation mechanism (*)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Surplus for cooperation mechanism (%) (*)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

(*) If it becomes apparent in the course of an interim report that targets will not be met on the domestic level, the cooperation mechanism may be resorted to.

As Part B of Annex 1 to the Directive	**2011-2012**	**2013-2014**	**2015-2016**	**2017-2018**		**2020**
	S2005 + 20% (S2020-S2005)*	*S2005 + 30%* (S2020-S2005)*	*S2005 + 45%* (S2020-S2005)*	*S2005 + 65%* (S2020-S2005)*		*S2020*
RES minimum trajectory (%)	4.36	5.44	7.06	9.22		13
RES minimum trajectory (ktoe)	1,773.78	2,232.79	2,901.38	3,797.30		5,370.17

Table 4a: Calculation table for the renewable energy contribution of each sector to final energy consumption (in ktoe)

	2005	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
A. Expected gross final consumption of RES for heating and cooling	490.6	766.4	910.2	1,015.1	1,120.0	1,277.3	1,434.6	1,644.4	1,854.2	2,098.9	2,343.7	**2,588.4**
B. Expected gross final consumption of electricity from RES	211.7	401.0	526.6	667.2	823.8	985.6	1,121.0	1,322.9	1,506.3	1,678.7	1,841.6	**1,988.0**
C. Expected final consumption of energy from RES in transport	16.4	352.9	356.1	441.9	445.9	534.1	540.7	548.5	558.0	642.4	721.1	798.0
D. Expected total RES consumption	**702.3**	**1,520.3**	**1,792.9**	**2,124.2**	**2,389.6**	**2,796.9**	**3,096.4**	**3,515.9**	**3,918.4**	**4,420.0**	**4,906.3**	**5,374.4**
E. Expected transfer of RES to other Member States	0	0	0	0	0	0	0	0	0	0	0	**0**
F. Expected transfer of RES from other regions or states	0	0	0	0	0	0	0	0	0	0	0	**0**
G. Expected RES consumption adjusted for target (D + F)	702.3	1,520.3	1,792.9	2,124.2	2,389.6	2,796.9	3,096.4	3,515.9	3,918.4	4,420.0	4,906.3	**5,374.4**

Table 4b: Calculation table for the renewable energy in transport share

(ktoe)	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
C. Expected RES consumption in transport	16.4	352.9	356.1	441.9	445.9	534.1	540.7	548.5	558.0	642.4	721.1	798.0
H. Expected RES electricity in road transport	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.7	7.4	10.2	13.4	16.6
I. Expected consumption of biofuels from wastes, residues, non-food cellulosic and ligno-cellulosic material in transport	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	22.0	50.6	57.1	63.4
J. Expected RES contribution to transport for the RES-T target: C + (2,5-1) x H + (2-1) x I	16.4	352.9	356.1	441.9	445.9	534.1	544.1	577.8	591.0	708.3	798.2	886.3

4. MEASURES FOR ACHIEVING THE TARGETS

4.1. Overview of all policies and measures to promote the use of energy from renewable resources

Table 5: **Overview of all policies and measures**

Name and reference of the measure	Type of measure R = regulatory FIN = financial NB = soft (non-binding)	Expected result BC = behavioural changes MW = installed capacity (MW; KTOE = energy produced/consumed (ktoe)	Targeted group and/now activity INV = investors USR = end users, ADM = public administration INST = installers, biofuel production TSO/DSO = transmission system operator/distribution system operator	EX = existing or PL = planned	Name and reference of the measure
1. Promotion of renewable energy					
1.1. Offshore wind-generated electricity					
Demarcation of a reserved zone for the implementation of offshore wind parks	R	MW	ADM	EX	2000>
Granting of domanial concessions	R	MW	INV	EX	2000>
Support for electricity generated from renewable sources (green certificates)	FIN	KTOE	INV	EX	2002>
System favourable for output gaps	FIN	KTOE	INV	EX	2009>
Contribution to the cabling costs	FIN	MW	INV	EX	2008>
1.2. Onshore electricity					
Green certificates mechanism with guaranteed minimum price	FIN	KTOE	INV	EX	2002>
Green electricity quotas	FIN	KTOE	Electricity providers	EX	2002>
Specific value of green certificates for photovoltaic energy (FR) Multiplying factor (WR)	FIN	KTOE	DSO	EX	2006>
Compensation principle for systems with an output of less than 10 kVA	FIN	KTOE	Producers	EX	2008
Granting of guaranteed origin labels	R	KTOE	INV	EX	2002>
Lifting of restrictions for wind parks in agricultural zone (FR)	R	MW	INV	EX	2009>
Action plans for the purchase of green electricity by public authorities	NB	BC	ADM	EX	2009>

1.3. Heating and cooling					
CHP certificates	FIN	KTOE	Electricity providers	EX	2005>
Support mechanism for green heating	FIN	KTOE	INV	PL	2009-2014
2. Promotion of investments in renewable energies					
Tax reduction for investments in renewable energies (individuals)	FIN	MW	INV	EX	2002>
Tax deduction for investments in renewable energies (companies)	FIN	MW	INV	EX	2004>
Tax reduction on the interest rate payable on loans, and tax reduction on interests paid on investments in renewable energies for housing (individuals)	FIN	MW	INV	EX	2009–2011
Financing by third-party investor FEDESCO	FIN	MW	ADM	EX	2007>
Premiums for the installation of renewable energies infrastructure	FIN	MW	Companies Individuals	EX	ongoing
Investments in agriculture (VLIF)	FIN	MW	Agricultural and horticultural sector	EX	ongoing
Intervention in connection costs for a renewable energy sources plant (FR)	FIN	MW	DSO	EX	2004>
Supplementary support granted to local authorities	FIN	MW	Local authorities	EX	2004>
Compulsory renewable energies (pre-)feasibility study for new buildings (> 1'000 m^2) and for fundamental renovations as of 5'000 m^2	R	BC	INV	EX	2008>
Subsidies for the realisation of particularly innovative and exemplary buildings	FIN	MW	Architects	EX	2007>
Premiums for heating networks	FIN	MW	INV	EX	2008>
LGO for the injection of biogas					
3. Promotion of renewable transmission					
3.1. Electric vehicles					
Tax reductions and premiums for electric vehicles and charging stations	FIN	BC	USR	EX	2010–2012
Exemplary role of public authorities	NB	BC	ADM	EX	2010>
3.2. Promotion of biofuels					
Mandatory blending of sustainable biofuels	R	KTOE	Oil corporations	EX	01/07/2009 - 30/06/2011
Authorisation to market non-standardised biofuels and pure rape seed oil	R	KTOE	Builders, distributors of oil products, farmers	EX	November 2006>
Tax exempt quotas for sustainable biofuels	FIN	BC	Oil corporations	EX	01/11/2006 – 30/09/2013
Exemption for pure rape seed oil	FIN	BC	Farmers	EX	March 2006>

4. Administrative simplification					
Unique federal interface for energy infrastructure permits	R	Administrative simplification	ADM	PL	In process
Circular on the establishment of wind parks	R	MW	Bodies issuing authorisations	EX	2001>
Wind parks in agricultural zones	R	MW	Bodies issuing authorisations	EX	2008>
Circular on the establishment of biogas plants	R	MW	Bodies issuing authorisations	EX	2006>
Working group on the coordination of policies and stakeholders in the field of biomethanisation	R, flanking measure		Agricultural cooperatives	EX	2009>
Permit exemption for solar panels	R	MW	INV	EX	2008>
5. Network access					
Development plans for electrical infrastructures (and PSE)	R	MW	INV, DSO		Every 3 years
Financing of BeProne platform on the grids reliability	NB		ADM, universities	EX	2009>
Priority network connection for plants generating electricity from renewable energy sources	R	KTOE	TSO, DSO	EX	2002>
Priority network access for plants generating electricity from renewable energy sources	R	KTOE	TSO, DSO	EX	2002>
Technical regulations for connecting decentralised plants in parallel on the distribution network	R	KTOE	INST	EX	2001>
Simple declaration for plants of less than 5 kW for single-phased connection or of less than 10 kW for three-phased connection	NB	MW	USR	EX	2009>
Development of smart grids (i.a., pilot projects)	R	MW	DSO	PL	2009>
6. Cooperation between the Federal Authority and the Regions					
Cooperation agreement with regard to energy consultation	R	Consultation	ADM	EX	1993>
Platform for the certification of installers	NB	Harmonisation	ADM	EX	2009>
Supplements to the GREP to determine the technical specifications for renewable plants (note 71*)	NB	Cooperation	ADM, INV	EX	07/10/2008>
7. Protection and information of consumers					
Information for citizens on renewable energies	NB	BC	USR	EX	ongoing
Support for bodies promoting renewable energies (examples: facilitators, service points, …)	NB	BC	General public	EX	ongoing
Government promotion campaigns (hotline, website, professional assistance, reviews, announcements, campaigns, flyers, tools, reference publications, …)	NB	BC	General public	EX	ongoing
Creating awareness among people working in the sector (technical seminars, examinations, technical brochures, …)	NB	BC	INV, architects	EX	ongoing
Training of installers for domestic RES plants (solar thermal and	Training	BC	INST	EX	2003>

photovoltaic energy)					
Create interest among the local stakeholders and citizens for wind energy projects (participative wind energy)	FIN, flanking measure	MW	Local authorities and individuals	EX	2008>
Creation of reference publications (good practice guides, vademecum, …)	NB	BC	INST	EX	ongoing
Publication of annual statistics: installed capacity, rates, quantity of renewable energies generated	NB	BC	ADM, public	EX	ongoing
8. Exemplary role of public authorities					
Special provisions to favour energy efficiency and renewable energies in public buildings, in particular by the Régie des Bâtiments (public buildings administration).	NV	BC, MW, KTOE	ADM	EX + PL	2008>
9. R & D, studies					
Environment Programme - Innovation 2	FIN	Know-how	Research centres	EX	2009
Studies to clarify and resolve difficulties encountered in the renewable energies chain in the BCR	NV	MW	INV	EX	ongoing
Feasibility study on heating networks	R, FIN	KTOE	ADM	EX	2009
Study on support for the production of green heating	NB	KTOE	ADM	EX	2010

**: note 71: In respect of Art. 235 of GREP and directed at bodies approved for the purposes of the conformity inspection of a low-voltage domestic photovoltaic installation of • 10 kVA – AC. 7/10/2008, Economy FPS, DG Energy, 3 pages.*

4.2. Specific measures to fulfil the requirements under Articles 13, 14, 16 and Articles 17 to 21 of Directive 2009/28/EC

4.2.1. Administrative procedures and spatial planning (Article 13(1) of Directive 2009/28/EC)

(a) List of national, and if applicable, regional legislation concerning authorisation, certification, licensing procedures and spatial planning applied to plants and associated transmission and distribution network infrastructure:

The competence for granting environmental permits and urban planning permits rests with the Regions in relation to their territories, and with the Federal Authority for marine spaces under Belgian competence. The Federal Authority also grants production authorisations for electricity production in excess of 25 MW.

The pertinent legislation is listed below, grouped according to the competent entities:

Federal authority:

Electricity generating installations in marine spaces

- Act of 29 April 1999 concerning the organisation of the electricity market;
- Royal Decree of 20 December 2000 concerning the conditions and the procedure for granting domanial concessions for the construction and operation of installations generating electricity from water, current or wind in marine spaces under Belgian jurisdiction in accordance international law of the sea;
- Act of 20 January 1999 on the protection of the marine environment in marine spaces under Belgian jurisdiction;
- Royal Decree of 7 September 2003 establishing the procedure for granting permits and authorisations required for the exercise of certain activities in marine spaces under Belgian jurisdiction;
- Royal Decree of 9 September 2003 specifying the rules for environmental impact assessment and application of the Act of 20 January 1999 on the protection of the marine environment in marine spaces under Belgian jurisdiction;
- Royal Decree of 16 July 2002 on the establishment of mechanisms to promote electricity generated from renewable energy sources.

Other electricity generating installations (onshore)

- Act of 29 April 1999 concerning the organisation of the electricity market;
- Royal Decree of 11 October 2000 on the granting of individual authorisations for the establishment of electricity generating installation.

Flemish Region:

General:

- Flemish Regional Planning Code, in force since 1 September 2009;
- Decree of 28 June 1985 on environmental permits;
- Order of the Flemish Government dated 6 February 1991 establishing the Flemish scheme of environmental permits (Vlarem I);

- Order of the Flemish Government dated 1 June 1995 concerning general and sectoral provisions relating to environmental safety (Vlarem II);
- Decree of 5 April 1995 containing general provisions on environmental policy;
- Order of the Flemish Government dated 10 December 2004 establishing the project categories which are subject to environmental impact assessment.

Biomass:

- Circular RO2006/01 on the assessment framework and ancillary conditions for establishing plants for fertiliser processing and biomethanisation.

Specifically for biomass waste:

- Decree of 2 July 1981 on waste prevention and management
- Order of the Flemish Government dated 5 December 2003 establishing the Flemish scheme for waste prevention and management (Vlarea).

Wind energy:

- Circular: EME/2006/01-RO2006/02 of 12 May 2006: Assessment framework and ancillary conditions for the establishment of wind turbines (large-scale);
- Circular LNE/2009/01 – RO/2009/01: Assessment framework for the establishment of small and medium-sized wind turbines;
- Report on environmental impacts for 20 or more wind turbines that have or may have a considerable impact on specific protected areas pursuant to the order of the Flemish Government establishing the project categories subject to environmental impact assessment.

Solar energy:

- Circular RO2008/02 - Solar panels integrated into pitched roofs of buildings and relation to regulations on land division authorisations, specific development plans and spatial implementation plans.

Distribution infrastructure

- Technical Regulation on the Distribution of Electricity - (TRDE) established by VREG.

Walloon Region:

General:

- Walloon Regional Planning, Urban Planning, Heritage and Energy Code (CWATUPE);
- Decree of 11 March 1999 on environmental permits;
- Order of 4 July 2002 specifying the list of projects subject to environmental impact studies and of classified activities;
- Decree of 27 June 1996 on waste;
- Order of 14 June 2001 promoting the exploitation of certain types of waste.

Wind energy:

- Reference framework for the establishment of wind parks in the Walloon Region dated 18 July 2002.

Brussels Capital Region:

- Brussels Regional Planning Code (COBAT);
- Ordinance of 5 June 1997 relating to environmental permits (OPE) and its modifications;
- Ordinance of 22 April 1999 specifying the list of Category 1A installations;
- Government Order of 4 March 1999 specifying the list of classified installations (1B, II and III);
- Government Order of 4 September 2008 determining the list of public utility installations for which environmental permits are issued by the Brussels Institute for Management of the Environment;
- Government Order of 28 May 2009 determining the composition of the application file for environmental permits;
- Technical regulations of network operators (Sibelga and Elia).

(b) Responsible Ministry(/ies)/authority(/ies) and their competences in the field

Federal Authority:

The Economy, SMEs, Self-Employed and Energy FPS, and the Commission for Electricity and Gas Regulation [CREG];

Health, Food Chain and Environment FPS, in close cooperation with the Management Unit of the North Sea Mathematical Models and the Scheldt Estuary (MUMM), the organisation responsible for environmental impact assessment.

Flemish Region:

Flemish Ministry of Environment, Nature and Culture, responsible in particular for environmental permits;

Flemish Agency for Regional Territory and Heritage, responsible for the regulation of planning permissions;

Flemish Regulation Entity for the Electricity and Gas Market [VREG], responsible for gas and electricity distribution networks;

Public Waste Agency of Flanders [OVAM], public-owned consulting company for environmental permits and waste management.

For urban planning permits:

- municipal councils;
- for public utility acts and works: the appointed official or the Minister.

For environmental permits: municipal councils or the Province.

Walloon Region:

The Directorate-General for Environment and Agriculture (DGO 3)

The Directorate-General for Regional Planning, Urban Planning, Heritage and Energy Code (DGO 4)

For urban planning permits:

- municipal councils;
- for public utility acts and works: the appointed official or the Minister.

For environmental permits: municipal councils.

For waste: the Department for Soil and Waste (DGO3).

The Walloon Energy Commission (CWaPE), Walloon regulator for the gas and electricity markets.

Brussels Capital Region:

As regards environment and energy:

- Brussels Institute for Management of the Environment [IBGE] — 'Brussels Environment';
- Commission for Regulation of Electricity in the Brussels Capital Region [BRUGEL];
- local authority administrations.

For regional and urban planning:

At the regional level:

- Regional Planning and Housing Administration (AATL);
- The appointed official (who is the authorised signatory on behalf of the Government for certain acts and works).

At the local level:

- local authority administrations;
- municipal councils (CBE).

(c) Revision foreseen with the view to take appropriate steps as described by Article 13(1) of Directive 2009/28/EC

Flemish Region:

The *Vlaams Agentschap Ruimte en Erfgoed* (Flemish Agency for Regional Territory and Heritage) is currently preparing suggestions for the elaboration of a regional planning policy framework for the application of renewable energy sources.

The division *Milieuvergunningen* (environmental permits) examines if the admissibility criteria provide sufficient guarantee against pollution and risks related to the use of turbines.

Walloon Region:

A CWATUPE evaluation procedure is under way. In the course of this evaluation the measures that must be undertaken to deal with the challenges of mobility and climate change will be investigated, in particular as regards simplifying and expediting procedures, and finding the right balance between regulation and individual freedom.

In July 2002 the Government initiated an update of the framework, which is to be completed by October 2010.

At the initiative of a working group created at the end of 2009, a specific regulatory frame for biomethanisation projects is currently being developed.

(d) Summary of the existing and planned measures at regional/local levels:

As a reminder, most measures in Belgium are taken on a regional level. Initiatives also exist on the level of the Provinces and of the local authorities, but they are not covered in the present plan.

Flemish Region:

Existing measures:

Biomass

- The burning of untreated wood scraps (or certified wool pellets) in wood-burning stoves to heat houses and workshops, in space heaters or similar equipment with a nominal thermal capacity of at most 300 kW is not a facility for the processing of waste pursuant to the exception stipulated in section 2.3.4 of Annex 1 of Vlarem I and is exempt from the requirement of an environmental permit.

- The Order of the Flemish Government dated 19 September 2008 has aligned the emission values for total dust emissions, SO_2, NO_x and CO_2 during the burning of biomass and biomass waste with the emission values for burning solid and liquid fossil fuels.

- Ministerial Order regarding the granting of an individual derogation from the prohibition provisions of Article 5.4.2 of the Order of the Flemish Government dated 5 December 2003 establishing the Flemish regulation for waste prevention and management (burning of animal fats).

Wind energy

- The Decree of 27 March 2009 on the adaptation of the Regional Planning Decree allows for wind turbines in rural areas to be authorised directly (without a spatial implementation plan [*ruimtelijk uitvoeringsplan*]).

Solar energy

- The exemption from obtaining a building permit for the installation of solar panels and boilers (except in certain protected regions or subject to specific provisions) is contained in Article 3 No. 5 of the Flemish Government Order dated 14 April 2000 on the determination (...) of works (...) that do not require a building permit.

- The generation of electricity from solar energy is not subject to an environmental permit in accordance with the exemption contained in section 12 of Vlarem I.

Walloon Region:

- Pursuant to CWATUPE, units recovering energy from biomass originating mainly from forestry exploitation residues and the first transformation of wood may be approved in forestry areas as incidental forestry activity.

- Pursuant to CWATUPE, biomethanisation units may be approved in agricultural zones as incidental agricultural activity, provided that such units use mainly animal slurries and crop residues from one or more agricultural activities.

- CWATUPE also provides that electricity or heat generating modules which directly supply any construction, installation or building located on the same premises and only use solar

energy are permitted regardless of the provisions of the sub-regional plan (*plan de secteur*), and in particular in agricultural zones.

- CWATUPE provides for a simplified permit procedure, including a waiver of the permit requirement in certain cases, for setting up one or more modules for the generation of electricity or heat that directly supply any construction, installation or building located on the same premises, using only renewable energy sources.

- It will be determined in the course of the update of the reference framework for the establishment of wind turbines if a strategy for the setting up of wind turbines can be established in addition to this update to exclude any uncertainties for potential investors. In this respect various avenues will be pursued, such as:

    (i) evaluation of the 'first come, first served' principle by determining selection dates for competing projects at fixed intervals (for example once per year per sub-region, which would permit a better assessment of the maximum potential and landscape perspectives);

    (ii) compiling a list of suitable sites for the setting up of wind turbines requiring a specific action by public authorities, complemented by an optimised reference framework for other sites.

Brussels Capital Region:

- Study on administrative duties resulting from legislation in the Brussels Capital Region[1] concerning the administrative simplification of applications for environmental permits;

- review of the form for environmental permit applications (defined by the 1994 Order, repealed by the Order of 28 May 2009) to simplify the form and to improve its legibility, and to develop an energy framework;

- review of the list of classified installations to introduce specific categories for the production of renewable energy (Order and Ordinance of 1999);

- exemption from authorisation for solar panels and boilers that cannot be seen from public property or are integrated into pitched roofs.

(e) Are there unnecessary obstacles or non-proportionate requirements detected related to authorisation, certification and licensing procedures applied to plants and associated transmission and distribution network infrastructure for the production of electricity, heating or cooling from renewable sources, and to the process of transformation of biomass into biofuels or other energy products? If so, what are they?

[1] This study falls within the frame of the European Plan 'Better Regulation', which aims to reduce by 25% the administrative duties required to grant permits and to promote the use of 'Best Available Technologies' (at the level of environmental impact) while taking their costs into account.

Federal Authority:

The analysis carried out in this field, in particular in the course of the transposition of Directive 2006/123/EC of 12 December 2006 on services in the internal market did not reveal any unnecessary obstacles or non-proportionate requirements.

Flemish Region:

No unnecessary obstacles or non-proportionate requirements were identified.

Walloon Region:

The obligation to register the principal network infrastructures for communication and transmission of fluids and energy in advance in the sectoral plan protracts application procedures for such infrastructures. In this regard it is intended to amend the regulation and to include a definition of a principal infrastructure in the field of energy transmission. This amendment will permit a more precise definition of this notion and thus reduce the need for registration in the sectoral plan.

According to the European definition of waste and the classification established by the Walloon Government Decree dated 24 January 2002 establishing a catalogue of wastes, certain types of wood, even though consisting of clean and healthy wood, are considered as waste.

The introduction of water into the soil during the use of heat pumps is subject to a strict reporting procedure on environmental impacts.

Brussels Capital Region:

The procedure to obtain an environmental permit for the useful application of waste is comparatively strict and complex. In the course of the transposition of Directive 2008/98/EC, the concerned authorisation services examine the possibility to simplify and clarify administrative procedures regarding waste and energy recovery with limited environmental impact.

(f) What level of administration (local, regional and national) is responsible for authorising, certifying and licensing renewable energy installations and for spatial planning? (If it depends on the type of installation, please specify). If more than one level is involved, how is coordination between the different levels managed? How will coordination between different responsible authorities be improved in the future?

Federal Authority:

The Federal Authority grants authorisations for the production of electricity in excess of 25 MW.

As regards authorisations for offshore energy production, see question b).

Regions:

As regards the granting of environmental permits, the Regions divide the installations considered as having a harmful effect on human beings and the environment in different categories (3) by virtue of the nature and relevance of their environmental impact.

For category 3 installations, a notice at local authority level suffices.

For category 2 installations an environmental permit, to be granted by the local authority, is required.

For category 1 installations and public utility installations a permit must be requested from the Permanent Representation of the Province or the Region (**Brussels Capital Region**).

If an environmental authorisation is required, in the **Walloon Region** and the **Brussels Capital Region** a procedure is initiated to obtain a 'single permit' which serves both as

environmental permit and as a building permit. In most cases, environmental authorisations are granted by the local authority.

In the **Brussels Capital Region** authorisations for derogations from urban planning regulations are granted by the Regional Planning and Housing Administration.

In the **Walloon Region** the municipal council is the competent authority, acting on advice of the appointed official, except in case of modules that produce electricity or heat from renewable energy sources and that supply any construction directly, as envisaged by Article 107; the consent of the appointed official is required in case of derogation from the sub-regional plan or from a regional urban planning regulation.

Flemish Region and Walloon Region:

For public utility projects (for example, electricity networks, pipelines, large or medium-sized wind turbines), authorisations must always be obtained from the regional urban planning official (one per province). For other projects, local authority administrations may grant the building permit.

(g) How is it ensured that comprehensive information on the processing of authorisation, certification and licensing applications and on assistance to applicants is made available? What information and assistance is available to potential applicants for new renewable energy installations on their applications?

Belgium has transposed Directive 2006/123/EC of 12 December 2006 on services in the internal market which includes a section on providing comprehensive information for authorisation procedures. This is done in addition to the existing communication through various channels: websites, ad hoc meetings, etc.

In general, every administrative entity responsible for the granting of an authorisation is also responsible for the dissemination of relevant information, in particular:

- explanation of the legislation on their websites;
- prior analysis of the project;
- analysis of the request and providing rectifying comments, if appropriate;
- information on the outcome of consultations with the concerned bodies.

In the different Regions, services were created to provide specific information on legal provisions and requests for authorisation. In addition, bodies promoting renewable energies have been established, where advisers provide information on authorisations to project promoters.

(h) How is horizontal coordination facilitated between different administrative bodies, responsible for the different parts of permit? How many procedural steps are needed to receive the final authorisation/license/permit? Is there a one-stop shop for coordinating all steps? Are timetables for processing applications communicated in advance? What is the average time for obtaining a decision for the application?

Federal Authority:

Energy generating installations in marine spaces:

Four authorisations are required for the installation of energy generating units located on offshore territory.

	Average duration of procedure
Domanial concession	1 year
Environmental permits and authorisations	6 months to 1 year
'Sea cable' permits	6 months to 1 year
Authorisations for cable-laying along public roads	6 months to 1 year

The above-mentioned Royal Decree of 20 December 2000 was amended in several instances in particular to simplify the procedure for granting domanial concessions for marine spaces, for example in the case of a marginal modification of the project.

The Royal Decrees of 20 December 2000 and 12 March 2002 provide for consultation among the concerned administrations with regard to the treatment of files on the granting of offshore domanial concessions and for authorisations to lay submarine cables.

The procedure for granting an environmental permit explicitly provides for the cooperation between the competent minister and the scientific body carrying out the study on the environmental impact (MUMM). The involved services reach an agreement on the handling of the file by the Directorate-General within the statutory time-limits.

The time schedules for the handling of applications for the different permits are derived from the applicable regulatory provisions.

The establishment of a one-stop shop within the frame of Directive 2006/123/EC is currently under consideration. Initial considerations on the submission of a single file have already taken place in the context of an extensive consultation process with the stakeholders conducted in 2008 (see http://www.printempsdelenvironnement.be). First results show that the introduction of a comprehensive single file — which would by definition be more voluminous and of greater complexity — might be counter-productive in comparison to the current situation, where the required authorisations follow each other in logical sequence.

Mention is also made of the existence of the *Belgian North Sea Wind Energy Platform* (BNSWEP), which serves in particular as platform for the exchange of ideas to eliminate obstacles to the development of offshore wind energy.

Other electricity generating installations (on land)

Individual authorisation files for the establishment of electricity generating installations on land are processed in a consultation procedure among the stakeholders, including in particular the TSO and the affected federal and regional authorities.

Under the current system the average period for granting these individual authorisations is between 6 months and 1 year. This is purely an indicative estimate since these periods depend also on factors on which the public authorities have little influence (e.g. the completeness of the files).

Generally speaking, a period of three years must be reasonably expected for the granting of all authorisations required for the establishment of individual power plants with a capacity or more than 25 MW. This period can be extended further due to various factors, such as the sequence in which the applicant must file the different permit applications.

The Royal Decree of 11 October 2000 mentioned above establishes a mandatory time-schedule for the processing of an individual authorisation request for production installations.

Flemish Region:

The processing time limits for urban development permits (*stedebouwkundige vergunning*) are contained in the Flemish Regional Planning Code.

The time limits for the processing of environmental permits are laid down in the VLAREM legislation. The declaration on the admissibility and comprehensiveness of an application for an environmental permit must be made within 15 calendar days after the filing of the application. The processing time-limit commences with the declaration of admissibility and comprehensiveness. Within a period of 105 calendar days the municipal council must decide on Category 2 applications. Within a period of 4 months the Permanent Representation must decide on Category 1 applications. This latter time-limit may be extended once by a period of 2 months. An appeal may be lodged against these decisions within a period of 30 calendar days with the Permanent Representation of the Province or with the Minister. The Permanent Representation must take a decision within 4 months after receipt of the appeal. This time-limit may be extended once for the period of 1 month. The Minister must decide within a period of 5 months after receipt of the recourse. This time-limit may also be extended once for the period of 1 month.

The application procedures for a building permit and for an environmental permit coincide (see Articles 4.7.3 et seq. of the Regional Planning Code).

Walloon Region:

Urban development permit (permis d'urbanisme):

If the urban development permit is to be granted by the local authority: declaration that the file is complete within 15 days; municipal council decision within a further 30 days. The time-limit may be extended by 45 days if the opinion of the appointed official and of other public services or if special publication measures are required.

If the urban development permit is to be granted by the appointed official: 60 days for projects with a limited impact (solar energy), 90 days for other projects and 130 days if the opinion of the Consultative Municipal Commission for Regional Planning or publication measures are required.

Environmental permits:

Declaration that file is complete: 20 days.

Generation of an assessment report: 70 days for Category 2 installations, 110 days for Category 1 installations.

Decision: 90 days for Category 2 installations, 140 days for Category 1 installations.

Single *permit* (single procedure for urban development permit and environmental permit)*:*

The decision must be taken within 90 days after the declaration that the file is complete is submitted for Category 2 installations, and within 140 days for Category 1 installations.

In any case, if the project involves the opening, modification or closing of a municipal road, the above-mentioned time limits are suspended by the time-limit required for the 'public roads' procedure.

Brussels Capital Region:

The environmental service of the local authority administration serves in principle as a single processing point for all administrative procedures. The time-limits for issuing environmental permits are listed below:

Category III	Immediately after processing the file
Category I.C	20 days after the complete file has been filed
Category II	At most 60 days (from the moment when the file is declared complete)
Category I.B	At most 160 days (idem)
Category I.A	At most 450 days (idem)

(i) Do authorisation procedures take account the specificities of the different renewable energy technologies? If so, please describe how. If they do not, do you envisage taking them into account in the future?

Federal Authority:

Electricity generating installations in marine spaces:

Due to their specific features, offshore energy-producing installations are currently subject to a specific authorisation system (see above).

Other electricity generating installations (on land)

Article 3 of the Royal Decree of 11 October 2000 defines the criteria for granting individual authorisations to establish power plants with a capacity of more than 25 MW.

These criteria do not specifically take the peculiarities of the different renewable energy technologies into account. However, these criteria include the need to 'establish a high efficiency chain based on the use of the best available technologies and marked by parsimonious use of the natural resources and control of specific emissions in order to observe the international obligations of Belgium, in particular of common European provisions on emissions from large-scale combustion plants.' (unofficial translation).

Flemish Region and Walloon Region

The rules on authorisations differ according to the technology and the capacity of the installation in question.

The installation of solar panels on the roofs of buildings for which no specific provision is made in land division authorisations, particular development plans (*plan particuliers d'aménagement*) and spatial implementation plans (*ruimelijke uitvoeringsplanne*), is entirely exempt from urban development authorisations with the exception of monuments or protected buildings listed in an architectural heritage inventory or located in protected villages or landscapes.

In the Walloon Region, the amendments to CWATUPE, introduced by the Decrees of 22 May 2008 and 30 April 2009, provide for simplified mechanisms, even an exemption from the requirement of an urban development permit, for the installation of renewable energy production units.

Thus, biomethanisation units and solar panels are now considered compatible with agricultural zones either as incidental agricultural activities or due to their reversible nature. The same applies to biomass units in forestry zones. Due to these amendments the number of cases where the appointed official must issue an exemption to permit realisation of such

project is reduced; accordingly the processing periods for authorisation applications are reduced. In addition, possibilities to derogate from the sub-regional plan for the installation of solar panels that are not integrated into a building have been included in CWATUPE.

For biomass projects, the same rules apply as for similar industrial projects.

The assessment criteria for the setting up of different types of projects are detailed in the specific documents, for example, the circular on large-scale wind turbines, building provisions for small-scale wind energy installations, the circular on biomethanisation.

Brussels Capital Region:

Authorisation procedures take into account the specific features of the installed energy-generating units, but not the characteristics of the renewable technologies.

(j) Are there specific procedures, for example simple notification, for small-scale, decentralised installations (such as solar panels on buildings or biomass boilers in buildings)? If so, what are the procedural steps? Are the rules publicly available to citizens? Where are these rules published? Is the introduction of simplified notification procedures planned in the future? If so, for which types of installation/system? (Is net metering possible?)

Federal Authority:

Installations with a capacity of 25 MW or less do not require any authorisation. Nevertheless they must be notified to the Energy Ministry and CREG.

Flemish Region:

Biomass boilers in buildings with a capacity of up to 300 kW do not require authorisation. Solar panels are almost always exempt from authorisation (except in certain classified areas or in certain protected landscape zones) .

Walloon Region:

The Decree of 19 April 2007 partially transposing Directive 2002/91/EC of the European Parliament and of the Council on the energy performance of the buildings (EPB) provides that the provisions contained in municipal development plans (*plans communaux d'aménagement*) and municipal urban planning regulations (règlements communaux d'urbanisme) of local authorities, as well as land subdivision plans and provisions, that prohibit the installation of solar panels are repealed, except with regard to buildings that have been included in the inventory of architectural heritage or protected classified buildings or buildings listed in the conservation list.

CWATUPE provides for a waiver of planning permission for the installation of one or more units producing energy or heat exclusively from solar energy, and which supply(/ies) directly any construction, installation or building located on the same premises, provided that certain technical requirements described in Article 262, No. 2 are met. This exemption does not apply to monuments or protected buildings that are listed in an architectural heritage inventory, or that are located in a protected village or rural landscape. If these technical requirements are not met, an abbreviated procedure for the installation of solar panels applies for which municipal councils are solely competent. In other words, authorisation may be granted without the local authority having to obtain in advance the opinion of the appointed official.

Brussels Capital Region:

Solar panels are not subject to environmental permits. Simplified granting procedures for environmental permits (Category I.C) will also soon be introduced for small-scale wind turbines and hydro power or geothermal installations as well as for low-capacity biomass installations.

(k) Where are the fees associated with applications for authorisation/licences/permits for new installations published? Are they related to the administrative costs of granting such permits? Is there any plan to revise these fees?

The costs of authorisation applications are very low (negligible in comparison to the costs of the project). The pertinent Belgian legislation is published in the *Moniteur Belge*.

Electricity-generating installations in marine spaces

MUMM, responsible for the environmental impact assessment, is entitled to remuneration for the assessment. The remuneration is calculated on the basis of the data provided in the application and includes compensation for administrative costs.

Other electricity-generating installations (on land)

According to the present scheme, a symbolic contribution must be paid into the account of CREG when the application is filed.

(l) Is official guidance available to local and regional administrative bodies in planning, designing, building and refurbishing industrial and residential areas to install equipments and systems using renewable energy sources in electricity and heating and cooling, including in district heating and cooling? If such official guidance is not available or insufficient, how and when will this need be addressed?

No official guidelines on this topic are available for local administrative bodies. For the Walloon Region, we may refer to the existence of the Energy Consultation Group at the UVCW (Union of Walloon Cities and Municipalities), the energy consultants in the local authorities and the public sector facilitators for energy wood.

(m) Are there specific trainings for case handlers of authorisation, certification and licensing procedures of renewable energy installations?

The Walloon Region subsidises the annual employment of one or more consultants for regional and urban planning, who deal among other things at the level of local authorities with administrative authorisations. The subsidy is granted subject to the condition that the consultant undergoing an annual training provided by the CPDT (*Conférence permanente de développement territorial* — Permanent Conference for Territorial Development) in cooperation with the ULB (Université libre de Bruxelles -— Brussels University), ULg-FUSAGx, (Université de Liège-Faculté universitaire des sciences agronomiques - Liège University - Faculty for Agricultural Sciences) and UCL (Université Catholique de Louvain - Catholic University of Louvain). The subject of one of these training modules is 'Sustainable Urban Planning and Energy - What is the Role of the Consultant?' -— a very successful module that is being expanded.

4.2.2. Technical specifications (Article 13(2) of Directive 2009/28/EC)

(a) To benefit from support schemes do renewable energy technologies need to meet certain quality standards? If so, which installations and what quality standards? Are there national, regional standards that go beyond European standards?

The federal and regional support mechanisms (tax reductions) for investments in renewable energy reflect the requirements of European and national norms. Other criteria based on quality and performance of the installations are also applied. In view of the numerous requirements and standards for each chain, it is impossible to list all of them.

Certification in compliance with international and European norms is required for onshore wind turbines.

This applies in particular to the granting of regional premiums for heat pumps for which the three Regions require compliance with the coefficient of performance (COP) of the European 'ecolabel'. In the same way, certain glass thermal solar collectors are eligible for regional premiums.

A Federal-Regional working group seeks to harmonise the requirements at a national level.

4.2.3. Buildings (Article 13(3) of Directive 2009/28/EC)

(a) Reference to existing national and regional legislation (if any) and summary of local legislation concerning the increase of the share of energy from renewable sources in the building sector

Though the three Regions are responsible for the transposition of the Directive on energy performance of buildings on their territory, certain aspects are nevertheless comparable.

For the calculation of the E-level the contribution of energy from renewable resources is taken into account:

1° active solar systems and other heating and electricity-generating systems that draw from renewable energy sources;

2° electricity and heat produced by a high efficiency CHP plant;

3° district or 'block' heating and cooling systems.

Furthermore, a feasibility study on the installation of systems generating energy from renewable sources is compulsory for buildings with more than 1'000 m^2 surface and for fundamental renovations.

Measures planned by the **Brussels Capital Region:**

The 2009-2014 Coalition Agreement establishes a share of 30% of green energy to apply to the energy consumption in newly built government buildings and seeks to strengthen the regulatory framework for promoting effective measures. This approach is based on three axes and includes indirect measures with regard to renewable energies:

- tightening of energy requirements for new buildings, having regard to the passive standard, and application of the low-energy standard for fundamental renovations by 2015;
- an energy management programme according to which owners of building surfaces in Brussels that cover more than 300 000 m^2 will be obliged to establish an energy cadastre among other things;
- a compulsory energy audit for large-scale energy consumers in the industrial and service sector (buildings of more than 3 500 m^2) at the time of the renewal of the environmental permit.

(b) Responsible Ministry (/ies)/authority(/ies):

In the Flemish Region: *Vlaams Energieagentschap* (Flemish Energy Agency).

In the Walloon Region: Department of Energy and Sustainable Housing of the Directorate-General for Regional Development, Housing, Heritage and Energy (DGO4) of the Public Service of Wallonia (PSW).

In the Brussels Capital Region: Ministry for Environment, Energy, Water Policy, Urban Rejuvenation, Fire Fighting, Emergency Medical Assistance and Housing. The responsible authority is 'Brussels Environment' — IBGE.

(c) Revision of rules, if any, planned by: [31 December 2012]

A revision of the EPB framework decree will become necessary upon the implementation of the new European Directive on the energy performance of buildings ('RECAST EPBD').

In the Brussels Capital Region a draft framework ordinance, the 'Brussels Air, Climate and Energy Code (COBRACE)' will be submitted in 2010. This draft ordinance will develop a legal framework for the measures to be taken by the Brussels Government and will also seek to simplify legislation on the quality of air, air pollution, energy and the climate.

(d) Summary of the existing and planned measures at regional/local levels: (if any).

As a reminder, since the competence in matters relating to buildings is regional (chapter 1), all the measures relating to buildings are indicated in the other sections.

(e) Are there minimum levels for the use of renewable energy use in building regulations and codes? In which geographical areas and what are these requirements? (Please summarise.) In particular, what measures have been built into these codes to ensure the share of renewable energy used in the building sector will increase? What are the future plans related to these requirements/measures?

In none of the three Regions a minimum level for the consumption of energy from renewable sources exists. In the Flemish Region a study on the feasibility of such an obligation and the level that is to be attained, is under way.

(f) What is the projected increase of renewable energy use in buildings until 2020?

Currently, Belgium does not dispose of any information allowing for the completion of Table 6. This work will be carried out in the context of the follow-up on the Plan.

(g) Have obligations for minimum levels of renewable energy in new and newly refurbished buildings been considered in national policy? If so, what are these levels? If not, how will the appropriateness of this policy option be explored by 2015?

In none of the three Regions there is currently an obligation to resort to a minimum level of energy produced from renewable sources.

However, in the Flemish Region a study on the feasibility of such an obligation and the level that is to be attained is under way.

In the **Walloon Region** the EPB Decree contains an obligation to install thermal solar sensors for the production of domestic hot water on any new or fundamentally renovated building. However, this measure is not yet in force and will be reviewed upon implementation of the new European Directive on energy performance of buildings (RECAST EPBD), in

combination with the present RES Directive.

(h) Please describe plans for ensuring the exemplary role of public buildings at national, regional and local level by using renewable energy installations or becoming zero energy buildings from 2012 onwards? (Please take into account the requirements under the EPBD).

The **Federal Authority as well as the three Regions** have launched projects to promote the exemplary role of the public authorities by using installations for the production of energy from renewable sources in their buildings or by constructing passive buildings.

FEDESCO: acts as third-party investor in particular for the installation of photovoltaic panels on public buildings.

In **Flemish Region** an action plan was launched in 2006 containing targets and specific measures with regard to energy saving and the use of renewable energies in public sector buildings.

In the framework of the first Employment-Energy Alliance, the **Walloon Region** intends to implement a comprehensive energy management strategy for the public administration to be applied in building belonging to regional and local authorities (including public interest bodies). Living up to its exemplary role, the Walloon Region will apply as early as 2012 these norms to all public buildings and to the granting of subsidies, endowments or any other form of support for investments into real estate which the Region provides to other public or similar bodies. Reference is also made to the audit procedure currently under way of regional public buildings (with a size of > 2 000 m^2) to establish an energy cadastre for public buildings, and to an investment programme to implement the recommendations of these audits.

In the **Brussels Capital Region** the Brussels public authorities will be obliged to progressively increase the share of green energy consumed in newly built public buildings to 30%.

(i) How are energy efficient renewable technologies in buildings promoted? (Such measures may concern biomass boilers, heat pumps and solar thermal equipment fulfilling eco-label requirements or other standards developed at national or Community level [cf. Article 13(6)]).

The QUEST quality centre was founded in 2006 with the support of the **Flemish Region**. Quest is responsible for the development, implementation and operational management of a professional quality system for domestic renewable energy generating schemes such as solar thermal energy, solar panels and heat pumps.

The **Walloon Region** has implemented a network of facilitators (see question 4.2.4) and a scheme of financial incentives to promote the integration of high-quality RES into buildings in line with European legislation and, in the case of solar thermal energy, by requiring the employment of an installer approved by the Region.

The *energy premiums* granted by the **Brussels Capital Region** require compliance with technical specifications based on national and European norms (see 4.2.2). These technical specifications will be reviewed annually at the time when the premiums are to be revised. The recognition and/or implementation of clear norms[2]/labels to assess the quality of the material and/or the fuel will have to be considered as soon as possible. The Brussels Capital Region of Brussels also has a 'Renewable Energy Facilitator' and supports many partners who are actively involved in the promotion of renewable energies and eco-friendly

[2] Technical product approval.

construction.

4.2.4. Information provisions (Article 14(1), 14(2), and 14(4) of Directive 2009/28/EC)

The **regional** authorities play the principal role in providing information on facilities and renewable energy in general, on district heating, certification of installers and information pertaining thereto. In general, this information goes hand in hand with creating awareness for the rational use of energy. Specific platforms seek to harmonise the certification of installers and the coordination for residential and non-residential buildings among the three Regions.

The **local** authorities (towns and municipalities, provinces) will also develop awareness programmes with regard to renewables in time.

The Regions as well as the Finance FPS (federal level) provide information on the conditions for granting support, on the types and levels of support available to consumers and professionals for investments in renewable energies. A Federal-Regional working group seeks to improve the coherence between tax deductions and regional premiums.

Federal:

http://economie.fgov.be/fr/consommateurs/Energie/index.jsp
http://koba.minfin.fgov.be/commande/form/commande1.php?clan=f

Flemish Region: http://www.energiesparen.be

Walloon Region: http://energie.wallonie.be

Brussels Capital Region: http://www.ibgebim.be/Templates/Home.aspx?langtype=2060

(a) Reference to existing national and/or regional legislation (if any) concerning information requirements according to Article 14 of Directive 2009/28/EC:

In general:

- Publication obligation of the administration.

- Obligation to make environment-related information, including information on factors such as energy, available to the public.

Federal Authority:

Royal Decree of 3 April 2003 concerning the supply bills for electricity and gas.

Regions:

- Obligation to state specific information on the cost of green certificates on the bills (Walloon Region).

- Application of the EPB means for buildings with a surface of at least 1000 m² that a feasibility study on the potential installation of systems for the production of energy from renewable sources is required, which in itself provides information for promoters.

(b) Responsible body(/ies) for dissemination of information:

The Justice FPS is responsible for the publication of legal provisions in the *Moniteur Belge*. The federal administrations also furnish information, in particular by means of their websites and information campaigns.

In addition, **every Region** is responsible for the dissemination of information to the public and to professionals on energy (Flemish Energy Agency in the **Flemish Region**; Directorate-General for Regional Planning, Housing, Heritage and Energy in the **Walloon Region**; Brussels Institute for Management of the Environment in the **Brussels Capital Region**).

The economic sectors and professionals are also informed by professional associations and unions, of which several are subsidised by the authorities. The regulators and TSO/DSO also provide information.

(c) Summary of the existing and planned measures at regional/local levels (if any):

See lit.d).

(d1) Please indicate how information is made available on supporting measures for using renewable energy sources in electricity, heating and cooling and in transport to all relevant actors (consumers, builders, installers, architects, suppliers of relevant equipment and vehicles).

Fiscal supporting measures (solar thermal systems or solar panels, biomass boilers, green loans, biofuels): by means of pamphlets (distributed free of charge by mail, by infoshops, at industrial fairs and shows) and downloads from the website of the Finance FPS. Relevant information is also contained in the explanatory documents to the tax return forms (updated annually). Finally, a call centre was set up, and information campaigns are organised on a regular basis.

Green certificates systems: websites of the regulatory bodies and the regional and federal energy administrations.

Regional premiums for investments in renewable energies: by means of energy service points, facilitators, permanent training and information centres, brochures and guides for professionals engaged in the sector, specific associations (active in the field of renewable energies in general, biogas, cogeneration, wind energy, sustainable construction, biomass, biofuels, ...) and by information campaigns (radio transmissions, posters, distribution of information brochures, online postings, etc.).

These instruments target different groups: individuals, installers, businesses, the agricultural sector, etc.

The operators of the distribution systems for gas and electricity, as a mandatory public service imposed by the authorities, are responsible for the administrative management of certain ‘energy premiums’; pertinent information is available on their websites.

(d.2) Who is responsible for the adequacy and the publishing of this information?

The administrations responsible for energy and financial affairs, listed under lit. b).

(d.3) Are there specific information resources for the different target groups, such as end consumers, builders, property managers, property agents, installers, architects, farmers, suppliers of equipment using renewable energy sources, public administration?

The specific information resources offered by the authorities focus on:

- Individuals;
- professionals (businesses);
- the service and industrial sectors;
- the collective housing sector;
- associations.

However, the sectors are most often specifically informed by their sector-specific associations (architects, notaries, local authorities, trade unions, petroleum federations, ...).

(d.4) Are there information campaigns or permanent information centres in the present, or planned in the future?

- Permanent information centres: The Renewable Energy House in the Brussels Capital Region, energy service points, facilitators, Kamp C, *Centrum Duurzaam Bouwen* (centre for sustainable construction), DiffuSER, etc.;
- websites with hotline services, FAQ, advisory services, personalised email responses, event and training schedules, information on premiums, newsletters, newsletters, etc.;
- media campaigns, presence at industrial fairs and shows, etc.;
- educational documents aimed at schools,
- publications (brochures, press reports, …) aimed at the general public;
- support for various associations engaged in the promotion of renewable energies and which provide education and advice, launch projects, free conferences, contact the media, provide technical support for civic initiatives, do field work, conduct training measures, etc.;
- directories of installers (approved), etc.;
- …

Furthermore, the three regions support the production of TV and radio programs such as the '*la météo renouvable*' (weather forecast for renewable energies), which forecasts the weekly solar and wind energy potentials on the basis of the meteorological conditions of that week, and lend media presence to them by means of information providers addressing the public at large.

The **Walloon Region** has set up a system of 'Guichets de l'Energie' (energy service points).

The **Walloon Region** and the **Brussels Capital Region** bear the costs of the topic-specific 'facilitators' for each sector. Facilitators provide general guidance on existing technologies, equipment suppliers, existing financial assistance and related administrative procedures and on the advance dimensioning of the renewable energy generation systems. In addition, a facilitator can provide a technical opinion in the various stadia of a renewable energy project, such as reviewing feasibility studies, technical specifications, cost estimates, etc. A facilitator also organises seminars and conducts site visits.

On its website, **the Brussels Capital Region** also offers tools such as information brochures, vademecums, success stories, technical guides, model technical specifications, etc., addressed at professionals. This Region also organises a competition, where professionals can win pre-feasibility audits. In Brussels, the 'House of Renewable Energies' is open to the public. It is geared towards the specific interests of the public at large and of the key players of the building sector (architects, building contractors, …).

*Planned measures (examples in the **Brussels Capital Region:***

- increase information campaigns and technical assistance for consumers;
- identify the key players to be involved and the ways and means of communication to be privileged, in order to communicate efficiently with the sector;
- support for group-buy schemes for renewable energy generation systems;
- exemplary role of public authority buildings in the field of energy consumption (passive and very-low energy standards).

(e) Who is responsible for publishing information on the net benefits, costs and energy efficiency of equipment and systems using renewable energy sources for heating, cooling and electricity?

The websites of the Regions offer various simulators/calculators and/or technical notes for the assessment of the benefits and cost effectiveness of systems and equipments using renewable energy sources.

Publication of information on costs and energy efficiency is largely the responsibility of equipment suppliers and private businesses installing such equipment.

Brussels Environment-IBGE intends to monitor systems using renewable energy sources in its territory in order to be able to distribute such information among the inhabitants of Brussels.

(f) How is guidance for planners and architects provided to help them to properly consider the optimal combination of renewable energy sources, high efficiency technologies and district heating and cooling when planning, designing, building and renovating industrial or residential areas? Who is responsible for that?

In the context of the EPB regulation, tools for a pre-feasibility analysis of large-scale solar investments are posted online, such as 'PEB-on-web', a new encoding software for forms intended for architects and EPB advisers. Calculators are also available online to estimate the costs and benefits of photovoltaic and CHP installations, to calculate their dimensions and to search for available subsidies.

Furthermore, Directive 2009/28/ED will impose minimum levels for the use of renewable energies in construction work after 2014. Guidelines will be made available in due time.

The various facilitators annually organise several seminaries on the rational use of energy in buildings and on techniques for the integration of renewable energies aimed at developers and architects.

The **Flemish Region** promotes a CO_2-neutral balance for business premises by means of conditions linked to the granting of subsidies for the development of business premises.

As regards the **Walloon Region**, mention is made of the principle of compensation for the environmental impact of new industrial sites.

For the last three years, the **Brussels Capital Region** has been organising an annual competition '*Bâtiment exemplaire*' (Exemplary Building), where the construction of particularly innovative and exemplary buildings, in particular with regard to energy consumption, can demonstrated and subsidised. The buildings that have won the competition will be demonstrated on the internet by means of a module that is currently being developed. This module will provide access to the presentation, summary and technical brochures of the buildings.

(g.1) Please describe the existing and planned information, awareness raising programmes for citizens on the benefits and practicalities of developing and using energy from renewable sources.

Existing programmes (examples):

In the different Regions, many websites provide information and tools to raise awareness about renewable energies.

Awareness programmes are also launched by associations subsidised by the public authorities: the weather forecast for renewable energies, the 'solariometer', 'Day of the Green House', radio spots, billboard posters, magazines ('*Ma Ville, Notre Planète*' — My Town, Our Planet), animation for children (the 'Solar Kiosk', 'Frimo', 'With energy everyone gains'), etc.

In the **Flemish Region** a campaign was launched in 2008: 'Green energy isn't science fiction', to make information accessible to citizens and to support local authorities. A different campaign aims at 'climatic neighbourhoods', where groups of households (several hundreds in 2009-2010) undertake to reduce their greenhouse gas emission by 8% for a period of 6 months.

In the **Walloon Region** a campaign on the energy performance of buildings is under way.

In the **Brussels Capital Region**, IBGE organises a cycle of annual conferences (interactive workshops) on energy for citizens. In the context of these specialist conferences visits on the topic of renewable energies are also organised. The *'Ateliers de la rue Voot*' (workshops of Voot Road) organise information sessions on renewable energies, in particular on solar energy, and offer participants who wish to do so the opportunity to build their own solar panels (technical vademecum, agency).

Training programmes organised by various organisations:

- The 'Espace Formation Petites et Moyennes Entreprises (EFPME)' (training centre for small and medium-sized enterprises) offers a certificate training course for installers of solar thermal panels (BruSolTherm) and photovoltaic panels. See also section 4.2.5.

- The training courses 'Energy manager' and 'Energy adviser in the residential sector' include a training module dedicated to the integration of renewable energies into buildings.

Initiatives to be developed:

- campaign aimed to support energy from renewable sources, part of the overall energy/climate package;

- adaptation/intensification of the services for citizens (private/public, paying/free, …) to achieve enhanced efficiency;

- leaflet presenting the differences between photovoltaic and thermal solar energy and their respective advantages in the context of the solar kiosk;

- awareness campaign in small-scale collective housing and schools, etc.

(g.2) What is the role of regional and local actors in designing and managing these programmes?

In the three regions, the local authorities and provinces develop their own programmes, in particular for group purchases of renewable energy products, the granting of premiums, information campaigns, etc.

4.2.5. Certification of installers (Article 14(3) of Directive 2009/28/EC)

(a) Reference to existing national and/or regional legislation (if any) concerning certification or equivalent qualification schemes for installers according to Article 14(3) of Directive 2009/28/EC.

Currently the Regions, who are competent for this matter, do not have any legislation in place for a certification or qualification system as envisaged in Article 14 of the Directive.

Such measures are currently being prepared.

However, in the **Walloon Region** a system of official approval exists for installers of solar thermal systems[3] as well as acknowledged training for solar photovoltaic systems.

(b) Responsible body(/ies) for setting up and authorising certification/qualification schemes by 2012 for installers of small-scale biomass boilers and stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps.

The regional administrations in charge of energy are responsible for setting up such certification/qualification systems. The Regions may entrust the implementation of certain certification/qualification aspects to specialist organisations.

[3] *Soltherm* approval – Order of the Walloon Government of 27 November 2003.

(c) Are such certification/qualification schemes already in place? If so, please describe.

The **Flemish Region** intends to continue the development of the QUEST association and its quality label to define, in cooperation with the Flemish administration, the quality requirements for installers and equipment.

In the **Walloon Region** the approval of installers of solar thermal systems, by means of the *Soltherm* programme, is in effect since 2004.

To obtain this approval, installers must:

- undergo training in a centre recognised by the Region and successfully complete the final skills assessment examination;
- follow a supplementary technical training of 8 hours with a supplier;
- be admitted to the profession in accordance with federal regulations on this matter.

Similar training is available for installers of solar photovoltaic systems. This training course was developed in consultation with the Walloon administration and is recognized on the basis of an agreement signed by the responsible officials of the training centres and the Walloon administration.

In the **Brussels Capital Region** the training courses provided to solar system installers by EFPME[4] are recognized by the Walloon administration.

(d) Is information on these schemes publicly available? Are lists of certified or qualified installers published? If so, where? Are other schemes accepted as equivalent to the national/regional scheme?

The **Walloon and Brussels Regions** publish on their websites lists of installers of solar systems (thermal and photovoltaic) who have been approved and/or who have undergone recognised training. In the Flemish Region, the QUEST association publishes the certification procedures, conditions and recognitions on the website: http://www.questforquality.be

(e) Summary of the existing and planned measures at regional/local levels (where relevant):

The three Regions are represented in a working group (CONCERE installers) that seeks to develop a national quality regulation/certification for installers.

This working group compiles a report describing the process to implement Article 14(3) in the different Regions.

In particular, the report will include the following:

- the national action plan for the implementation of the Directive;
- communication with the sector-specific associations, know-how centres, installers, training centres and consumers
- support by the know-how centres, sector-specific federations and know-how centres for the development of a reference framework for the training;
- European and Belgian benchmark regulations;

[4] *Espace Formation pour les Petites et Moyennes Entreprises* (Training centre for small and medium-sized enterprises).

- planning, division of tasks and responsibilities.

This report will be delivered in 2010.

4.2.6. Electricity infrastructure development (Article 16(1) and Article 16(3) of Directive 2009/28/EC)

(a) Reference to existing legislation concerning requirements related to the energy grids:

Federal authorities are competent for large-scale infrastructures for storage, transport and energy production, in this case the electricity transmission network (operated by Elia).

The Regions are competent for the distribution and local transmission of electricity by means of networks with a nominal voltage of 70 kV or less (with the exception of renewables installations installed in the sea — offshore wind energy or others). The Regions are also competent for renewable energies and the rational use of energy.

The legislative provisions issued by the Federal Authority and the Regions are listed below:

Federal Authority:

- Act of 29 April 1999 concerning the organisation of the electricity market, hereafter referred to as 'Electricity Act'.

- Royal decree of 19 December 2002 establishing a technical regulation for the operation of and access to a transmission system for electricity, hereafter referred to as 'Technical Regulation';

- Royal Decree of 3 April 2003 concerning the supply bills for electricity and gas;

- Royal Decree of 20 December 2007 on the procedure for the drawing up, approval and publication of the development plan for the electricity transmission system;

- Royal Decree of 8 June 2007 concerning the rules for determining and controlling the total income — including the equitable margin, the general tariff structure, the balance between costs and revenues, as well as the basic principles and procedures for proposing and adopting tariffs, and for reporting and controlling cost by the national electricity transmission system operator;

- Royal Decree of 2 September 2008 concerning the rules for determining and controlling the total income — including the equitable margin, the general tariff structure, the balance between costs and revenues, as well as the basic principles and procedures for proposing and adopting tariffs, and for reporting and controlling cost by the national electricity distribution system operator;

- Royal Decree of 30 March 2009 concerning deviations of production outputs for wind-powered electricity production facilities in offshore areas.

- Act of 10 March 1925 on the supply of electric energy;

- Royal Decree of 26 November 1973 concerning the highway permits provided for in the Act of 10 March 1925;

- Royal Decree of 27 August 1925 concerning declarations of public utility;

- Royal Decree of 11 October 11 2000 establishing the criteria and the procedure for granting authorisation prior to the construction of direct lines.

- Royal Decree of 12 March 2002 on provisions for the laying of electricity cables that enter the territorial sea or national territory or that are placed or used for the exploration of the continental shelf, the exploitation of mineral resources and other non-living resources thereof or for activities of artificial islands, installations or structures under Belgian jurisdiction.

Flemish Region:

- Decree of 17 July 2000 concerning the organisation of the electricity market;

    - Article 7, § 1 of the Electricity Decree: 'The operator of the network is responsible for the exploitation, maintenance and development of the distribution network. In this respect, the operator of the network is responsible in particular for: (3°) ensuring a sufficient capacity for the distribution of electricity. These tasks are stipulated in the Technical Regulation for the Distribution of Electricity (TRDE) further to Articles 8 and 14 of the Electricity Decree.'

- Technical Regulation for the Distribution of Electricity of 21 January 2010, Article II.1.1.2. (unofficial translation): 'The investment plan shall include a detailed estimate of the necessary distribution capacity requirements with an indication of the underlying hypotheses, and make reference to the investment programme (programme for the establishment of new distribution networks and strengthening of the distribution network, programme for the underground installation of connections, etc.) proposed by the distribution system operator in order to fulfil these needs.'

- Article II.1.1.4 TRDE: 'VREG analyses the investment plans and assesses if the distribution system operator is undertaking the necessary steps to accomplish the task referred to in Article 7, § 1, 3° of the Electricity Decree, i.e. to maintain a sufficient capacity for the distribution of electricity via its distribution system. VREG transmits its recommendations to the distribution system operator and to CREG.'

Walloon Region:

- Decree of 12 April 1999 concerning the organisation of the electricity market and its successive modifications;

- Walloon Regional Planning, Urban Planning, Heritage and Energy Code;

- Order of the Walloon Government dated 24 May 2007 on the revision of the technical regulation for the management of, and access to, electricity distribution networks in the Walloon Region;

- Order of the Walloon Government dated 24 May 2007 on the revision of the technical regulation for the management of, and access to, local electricity transmission networks in the Walloon Region;

- Order of the Walloon Government dated 30 March 2006 on public service obligations in the electricity market;

- Order of the Walloon Government dated 30 November 2006 on promoting electricity from renewable energy sources or CHP.

Brussels Capital Region:

- Ordinance concerning the organisation of the electricity market in the Brussels Capital Region of 19 July 2001;

- The Ordinance of 1 April 2004, on the organisation of the gas market in the Brussels Capital Region, concerning highway charges with regard to gas and electricity and modifying the Ordinance of 19 July 2001, outlines the basic legislation in the field of electricity in the Brussels region.

- Technical Regulation on Electricity for the operator of the regional transmission system (Order of the Brussels Capital Region Government dated 13 July 2006)

- Technical Regulation on Electricity for the operator of the distribution system (Order of the Brussels Capital Region Government dated 13 July 2006)

(b) How is it ensured that transmission and distribution grids will be developed with a view to integrating the targeted amount of renewable electricity while maintaining the secure operation of the electricity system? How is this requirement included in the transmission and distribution operator's periodical network planning?

Transmission grids:

The transmission system operator [ELIA] must establish a development plan for the transmission network in cooperation with the Directorate-General for Energy and the Federal Planning Bureau. This development plan covers a period of 10 years and must be adapted every 4 years. It is approved by the Federal Minister responsible for energy matters, after consultation with CREG.

This development plan takes into account the prospective study initiated by the Directorate-General of Energy in cooperation with the Federal Planning Bureau. This long-term study serves in particular to define 'the orientations in the choice of primary energy sources to ensure an appropriate diversification of fuels, to promote the use of renewables and to integrate the environmental constraints defined by the Regions.'

Furthermore, Belgium is — together with France, Germany, the Netherlands and Luxemburg — a member of the *Pentalateral Energy Forum*. Ministerial meetings are held on a regular basis in the framework of this forum and two support groups are currently operational:

- Support Group I: Optimising available interconnections and allocation measures;

- Support Group II: Safeguarding supplies and development of interconnections.

More specifically, these activities have led in June 2007 to the signing of a Letter of Intent by the Ministers and the stakeholders on the connection of the markets and safeguarding supplies from Central and Eastern Europe.

Belgium also actively participates in matters relating to the *North Seas Countries Offshore Grid Initiative*. This initiative seeks in particular to ensure a coordinated development of network infrastructures (offshore and onshore), bearing in mind the expected significant development of offshore wind energy in the European Union.

Local distribution and transmission grids:

The Regions, who are competent in this matter, specify in their regulations that the network operators must draw up plans for the adaptation of the network. These plans have a specified term of validity and are approved and monitored by the regulators. In the course of this monitoring, the regulators ensure that the network is developed in a way that gives due consideration to the existing or planned decentralised production units.

(c) What will be the role of intelligent networks, information technology tools and storage facilities? How will their development be ensured?

ELIA, the transmission system operator, already disposes of a smart grid. In fact, the ELIA network is a supervised mesh network that can be operated remotely (thus permitting load shedding in case of grid congestions). The network is also capable of bidirectional flows of energy and is equipped with metering systems based on 15 minute intervals. In addition, network balancing is done by means of a control panel, which makes it possible to manage the supply side as well as on the demand side (see below).

For distribution network operators the development of intelligent networks is an important mechanism to ensure dynamic control of the balance between decentralised production and local consumption.

In developing an intelligent network, the distribution network operator also extends the scope of his metering and monitoring mechanism to its own benefit. Thus the operator is at all times aware of the actual load, the voltage level and the balance between phases in a particular zone and can take steps to optimise its operation. If necessary, capacity can be reduced, even selective load shedding can take place, by remote operation. In case of a failure, the affected subscribers can be identified precisely, and adequate measures can be taken. With this information the operator is thus in a position to improve its operation of the entire network and to develop realistic plans. This information will prove to be essential to the large-scale development of a decentralised energy production.

The intelligent operation of the electricity grid, supplemented by consumption and production data in real time, will lead to a better adjustment of the production and consumption of electricity, which in turn has the following advantages:

- decrease of voltage peaks at the key points of the grid;
- decrease of consumption peaks;
- avoidance of breakdowns due to overloads;
- integration of intermittent decentralised productions.

Initiatives were launched or are about to be launched to study the various challenges in connection with the transition to intelligent networks. A consultation process between the different stakeholders is under way.

In the **Walloon Region**, network operators are currently assessing the efficiency of the various mechanisms that enable them on the one hand to obtain the required information on the voltage and the direction of energy flows at different points of the network, and on the other hand to ensure a balance between decentralised production and consumption. Participation in the framework of European projects should enable them to benefit from European experiences in this field. Ores (DSO) is a partner in European projects such as the *Ecogrid* project on the Danish island of Bornholm. Furthermore, Item 5 of the 'Marshall Plan

2.Green' provides for the adoption of a research programme on intelligent technologies for the operation of electricity networks and to promote command of these technologies among network operators. A budget of EUR 6.8 million has been set aside for this action.

It should be noted that the various Belgian entities have also expressed their political support.

As regards intelligent meters, Belgium is in line with the framework established by Directive 2009/72/EC of the European Parliament and the Council of 13 July 2009 concerning common rules for the internal market in electricity. This Directive recommends introducing 'intelligent metering systems or networks' to encourage energy efficiency and decentralised production.

This same Directive allows for the installation of such intelligent meters subject to an economic evaluation of the entire costs and benefits for the market and consumers. It should also be noted that the target to provide 80% of the clients with such meters is subject to a favourable evaluation of the system.

(d) Is the reinforcement of the interconnection capacity with neighbouring countries planned? If so, which interconnectors, for which capacity, and by when?

A number of investments seeking to reinforce Belgian interconnection capacity with neighbouring countries have already been approved. In recent years, the transmission system operator has realised in particular the following investments:

- reinforcement of the Avelin (FR) — Avelgem (BE) connection (in operation since November 2005);
- installation of a phase-shift transformer at Monceau and transition of the Jamiolle-Monceau supply line to 220 kV (in operation since January 2007);
- installation of 3 phase-shift transformers on the northern border (in operation since 2008).

Other interconnection investments are currently being considered:

- development of an electrical power supply line between Belgium and the United Kingdom (Nemo, ± 1 GW, 2016-2019);
- reinforcement of interconnections with Luxembourg (CREOS);
- installation of an electrical power supply line for a direct connection between Belgium and Germany.

(e) How is the acceleration of grid infrastructure authorisation procedures addressed? What is the current state and average time for getting approval? How will it be improved? (Please refer to current status and legislation, bottlenecks detected and plans to streamline procedure with timeframe for implementation and expected results.)

The transmission grid:

The construction of electricity transmission network elements involves a number of rather strict administrative authorisations in particular with regard to urban planning law (declaration of public utility, revision of the local development plan, environmental permit, highway permit, ...). A federal task force was set up to consider — in cooperation with the regional authorities

— the means to simplify the procedures for granting authorisations on the administrative side or even to set up a one-stop shop with a centre of expertise.

On average the construction of a new connection takes 7 to 10 years from its conception to its commissioning. In the course of this process various permits and authorisations must be obtained.

Distribution grid and local transmission grid:

Flemish Region:

The 2009-2014 Coalition Agreement of the Flemish Government states as key focus that good service goes hand in hand with the expedited granting of authorisations.

For large projects, a project group and a project manager are appointed. These have a clearly defined assignment and mandate to ensure the proper execution of the project.

Upon implementation of the new regional planning decree, an incentive measure will be launched which provides that for a period of two years approvals for general interest projects will be granted according to the procedure applicable to private projects. This measure may possibly be extended after evaluation.

Walloon Region:

The above-mentioned adaptation plans must make provision for requests for adaptations/extensions of networks. The specific procedure for implementing such adaptations/extensions is contained in Article 25 of the Technical Regulation for the Distribution Network.

A similar provision, applicable to the local transmission network, is contained in Article 253 of the Technical Regulation for the Local Transmission Network.

A bottleneck with regard to the adaptation of the network may possibly occur in the context of regional planning procedures (see Section 4.1.2).

Brussels Capital Region:

On or under all squares, roads, waterways and canals that are part of the public domain Sibelga, as distribution system operator in the Brussels Capital Region, is entitled (see Federal Act of 10 March 1925 on the supply of electric energy and the Brussels ordinances concerning the organisation of the markets for electricity and gas) to perform works to install overhead or underground supply lines, or to maintain them in proper condition.

The installation of an infrastructure element does not require authorisation. However, the works required to achieve this aim do require advance authorisation. Furthermore, a supplementary authorisation may be required due to the specific nature of the work. For network expansion, the distribution system operator estimates a maximum period of 180 days.

(f) How is coordination between grid infrastructure approval and other administrative planning procedures ensured?

Federal legislation provides for a consultation process among all concerned parties, be it on an overall national level (e.g., territorial planning) or on a more specific level (administration of a concerned area).

(g) Are priority connection rights or reserved connection capacities provided for new installations producing electricity from renewable energy sources?

The system of priority connection granted to units producing renewable energy, both on the level of conducting assessments and on the connection level, is established by regulations.

Federal Authority:

- Articles 79 §2 and 94 §2 of the Royal Decree of 19 December 2002.

Flemish Region:

- Article 19, §3 of the Decree of 5 March 2004 encouraging the production of electricity from renewable energy sources.

Walloon Region:

- Article 13 of the Decree of 12 April 2001 concerning the organisation of the regional electricity market, Articles 77, 86, 95 and 237 of the Technical Regulation for Distribution Networks and Articles 84, 100, 113, 173 of the Technical Regulation for Local Transmission Networks.

Brussels Capital Region:

- Article 89 of the Decree of the Brussels Capital Region Government dated 13 July 2006, approving the technical regulation for the operation of the electricity distribution network in the Brussels Capital Region.

(h) Are any renewable installations ready to come online but not connected due to capacity limitations of the grid? If so, what steps are taken to resolve this and by when is it expected to be solved?

Currently, we do not have any case of this type in Belgium. In practice a promoter seeking to build a production unit may not commence construction works without obtaining advance assurance that his production unit can be connected.

However, unfortunately certain local congestion problems may prevent in the short run the connection of installations producing renewable energy.

As regards the future development of wind turbine projects under a domanial concession on the Belgian continental shelf, an extension of the existing terrestrial network will become necessary. The Stevin project for the extension of the 380kV network from Eeklo to Zeebrugge seeks to respond to this challenge. Following the compilation of an environmental impact assessment plan (MER plan), the procedure to register this connection in the regional development plan (GRUP) was launched at the end of 2009. This connection should become operational in the course of 2014-2015.

(i) Are the rules on cost sharing and bearing of network technical adaptations set up and published by transmission and distribution system operators? If so, where? How is it ensured that these rules are based on objective, transparent and non-discriminatory criteria? Are there special rules for producers located in peripheral regions and regions with low population density?

The costs for technical adaptations are reflected in the tariffs. The latter are within the exclusive competence of the Federal Authority.

The tariffs are proposed by the network operators and approved by the federal regulator, CREG. The tariffs are published on the latter's website[5].

Article 12ter of the Electricity Act provides that tariffs must be non-discriminatory and transparent.

The Royal Decrees of 8 June 2007 (Art. 20) and of 2 September 2008 (Art. 24 and 25) also define the rules for publishing the tariffs. These must be published on the websites of CREG and the concerned network operators.

In the **Flemish Region**, the connection costs are limited to the costs of linking up to the nearest network of sufficient voltage, even if the network operator requests connection at another place or voltage (Art. 19 of the Decree of 5 March 2004 on green electricity).

At this stage it does not appear opportune to develop special rules in Belgium, a densely populated country, for producers located in peripheral regions or regions with a low population density.

(j) Please describe how the costs of connection and technical adaptation are attributed to producers and/or transmission and/or distribution system operators. How are transmission and distribution system operators able to recover these investment costs? Is any modification of these cost bearing rules planned in the future? What changes do you envisage and what results are expected?

The costs of connection and technical adaptation are carried by the system operator. The connection tariffs are published on the website of CREG; the parameters for determining these tariffs are also available there.

The tariff proposals of the network operators must be guided by the principle of cost reflectivity. CREG approves these proposals in particular on the basis of budget control and ensures the application of 'real' costs.

The Belgian legislator has established different tariffs and several categories of customers to ensure that consumers themselves are responsible for the costs they generate. Within these categories there is a form of mutualisation of the costs.

No revision of the tariff principles is envisaged at this stage. Nevertheless, CREG in cooperation with the network operators, is in the process of identifying the costs caused by these new connections to ensure that they are correctly calculated and charged. CREG recently published a study on the possible abolition of, or exemption from, injection tariffs (applicable for distribution) for renewable energy producing installations and quality CHP installations. The results are currently being analysed.

(k) Are there rules for sharing the costs between initially and subsequently connected producers? If not, how are the benefits for subsequently connected producers taken into account?

Currently there are no rules on the sharing of costs between initially and subsequently connected producers.

5 http://www.creg.be.

(l) How will it be ensured that transmission and distribution system operators provide new producers wishing to be connected with the necessary information on costs, a precise timetable for processing their requests and an indicative timetable for their grid connection?

The transmission grid:

Pursuant to Article 79 of the Technical Regulation (**federal** level), the transmission system operator is required to accord priority treatment to requests for exploratory assessments on units producing energy from renewable sources. Article 88 of the same regulation obliges the network operator to include certain technical elements in its exploratory assessments (e.g., estimates of the time and costs involved, ...).

Articles 94 and 100 of the Technical Regulation state that in treating and assessing connection applications, the priority granted to installations using renewable energy sources must be taken into consideration.

This regulation also establishes a time schedule for the procedure to deal with connection applications.

The distribution grid:

Flemish Region:

The '*Aansluitingscode van het Technisch Reglement voor Distributie van Elektriciteit*' (Connection Code of the Technical Regulation for the distribution of electricity) specifies that applicants must be informed within 30 or 40 working days (depending on the voltage level of the grid to which they are to be connected) about the outcome and, as the case may be, receive an offer containing the connection conditions and schedule. The offer following the request for connection must be detailed and based on the tariffs published by the distribution system operator.

For installations with a capacity of more than 5 MVA, the Connection Code provides that the applicant may demand connection within 18 weeks. Only under these exceptional conditions, and subject to the provision of reasons, the distribution system operator may derogate from this timeframe (Article III/3.3.27§ TRDE).

Walloon Region:

Tariff-related aspects are a matter of federal competence and are published on the website of the federal regulator (CREG). The time-limits are specified by the technical regulations (issued by the network operators in cooperation with CWaPE).

Brussels Capital Region:

The Commission for the Regulation of Energy in the Brussels Capital Region [Brugel[6]] is entrusted with the general task to monitor and verify the application of the ordinances and decrees relating to the liberalised electricity and gas market (Article 30, §2 of the Ordinance of 19 July 2001, amended by the Ordinances of 1 April 2004, 14 December 2006 and 4 September 2008) concerning the organisation of the electricity market in the Brussels Capital Region, and of which Article 19 stipulates that distribution system operators and transmission system operators must publish the tariffs in force for the relevant systems on

6 http://www.brugel.be.

their websites.

4.2.7. Electricity network operation (Article 16 (2) and Article 16(7) and (8) of Directive 2009/28/EC)

(a) How is the transmission and distribution of electricity from renewable energy sources guaranteed by transmission and distribution system operators? Is priority or guaranteed access ensured?

The transmission grid:

The guidelines defining the manner by which priority is accorded in practice to installations producing energy from renewable sources are defined in the technical regulation (**federal** level).

Article 319 states by way of general principle that a network operator must grant priority to production units using renewable energy sources as far as possible and having regard to the need to secure supplies.

Moreover, the technical regulation specifies that, bearing in mind the need to secure energy supplies, priority must be accorded to installations based on renewable energy sources with regard to:

- treatment of requests for exploration studies (Art.79);
- treatment and examination of connection applications (Art. 94 and 100);
- management of congestions (Art. 265);
- coordination of the dispatch of production units (Art. 268).

The distribution grid:

Flemish Region:

The regulation does not contain a distribution guarantee, but the distributor has limited means to prevent distribution. Only installations with 2.5 MVA or more can be disconnected under certain circumstances in an N-1 situation to ensure network stability. An N-1 situation is caused when a component of the distribution is defective, and when in this situation the network supply is compensated by another route on the network.

The Technical Regulation for the Distribution of Electricity contains a provision in the section 'Congestion control' applicable to ELIA (ELIA, i.a. exploits networks of 20-70 kV).

Having regard to the priority rights of quality CHP installations and of installations using renewable energy sources, distribution network operators take the measures at their disposal to manage the electricity flows on the distribution system in a secure, reliable and efficient manner.

So far, no analogous provisions for networks of less than 20 kV are in place, for the following reasons:

- at this stage there is no congestion problem;
- in case problems arise, they arise at voltages of less than 20 kV and between CHP installations and renewable energy sources installations; therefore it doesn't make sense to accord a general priority to all of these systems. If a congestion problem becomes apparent, priority rules based on other criteria will have to be implemented.

Walloon Region:

When connection studies need to be carried out on the distribution level, consultations take place between the concerned network operator and the transmission operator. A system of priority access as described above exists.

Brussels Capital Region:

Article 89 of the Technical Regulation 'Electricity' for the distribution network operator in the Brussels Region[7] provides that as far as possible, while ensuring continuing supplies, priority is to be given to the processing of applications for connection, for capacity reserves or for the execution of connection works, if such applications relate to CHP installations or the production of electricity from renewable energy sources or from waste and energy recovered from industrial processes.

(b) How is it ensured that transmission system operators, when dispatching electricity generating installations give priority to those using renewable energy sources?

The **federal** technical regulation provides that a coordination contract for the dispatch of production units (CIPU contract) must be concluded between the producers and the transmission system operator. This agreement contains the provisions regarding the revision plan, the allocation of production units, the production plan of the production units and the daily access programmes. By this exchange of information the network operator can ensure that the available production means are sufficient to guarantee, both long-term and more immediately in real time, a permanent balance between electricity supply and demand. During these various phases the network operator must give priority to production installations using renewable energy sources or CHP units. In practice, the network operator will ensure, if required in a specific situation (e.g. for maintenance on a network segment), that restrictions on renewable energy producing units will be imposed only as a last resort.

Furthermore, to optimally accomplish its task to ensure security, reliability and efficiency of the net, the transmission system operator has supplementary means including contracted and non-contracted reserves.

- Contracted reserves: the auxiliary services with regard to frequency and voltage adjustment are organised in the scope of a competition procedure set up by the transmission system operator. All electricity-producing installations, including those operating on the basis of renewable energy sources, who comply with the technical requirements specified and published by the transmission system operator, may take part in it. These auxiliary services also take into account the possibility of interrupting services to customers.

- Non-contracted reserves: in the scope of the CIPU contract producers must make the adjustable load from their production units available (the unused load increases and the adjustable capacity drops) one day before injection (day-ahead). Remuneration can be freely determined by the producers.

On the basis of this information, the transmission system operator draws up a merit order curve to enable the selection of the most democratic production units for activation in real time when the need arises.

[7] Order of the Brussels Capital Region Government approving the technical regulation for operating the electricity distribution system in the Brussels Capital Region of 13 July 2006.

Renewable energy sources production units, to the extent that they can be operated remotely, are included in this merit order. In practice, these are rarely ranked in a useful range, due to the support measures from which they can benefit and which make them economically less interesting, in particular in the case of downwards adjustment, than conventional producers.

(c) How are grid and market-related operational measures taken in order to minimise the curtailment of electricity from renewable sources of energy? What kind of measures are planned and when is implementation expected?

In addition to the aforementioned mechanisms and measures, a certain number of initiatives have been implemented to allow for a greater deployment of the production of energy from renewable sources:

- creation of a power exchange for *day-ahead* capacity[8];
- setting up the market coupling of the energy exchanges Belpex, Powernext and APX to enable the optimal use of the daily available cross-border capacities;
- creation of an '*intra-day hub'* to effect bilateral exchanges between ARPs (Access Responsible Parties);
- setting up – within Belpex – of a platform for the exchange of Walloon and Flemish green certificates.

The extension of the market coupling with other countries is currently under consideration.

Furthermore, the federal regulation provides for a supplementary support measure for offshore wind parks called 'production deviation'. This measure aims to support parties responsible for maintaining the grid balance, who have included such wind park(s) in their portfolio, by tempering the unpredictability of capacities derived from such wind parks. This 'production deviation' mechanism for offshore wind energy provides that the system operator has to compensate, by sale or purchase, the difference between the notified injection (announced the previous day) and the actual injection to the extent that the production deviation does not exceed 30%. Electricity within this category is purchased by the network operator (in case the actual production is below the expected production) or sold (in the case of an overestimate of the production) to the producer at a price close to market conditions (BELPEX -10% respectively BELPEX +10%). These purchases or sales are neutralised for the purpose of calculating the grid imbalance by the responsible parties. If the production deviation exceeds 30%, surpluses or shortfalls exceeding 30% are taken into consideration for the calculation of the ARB imbalance. Thus the network operator applies the usual imbalance tariff to the difference between the quantity of energy actually injected (without considering the part of energy within the 30% slice) and quantity of energy actually taken off by the ARP in question.

(d) Is the energy regulatory authority informed about these measures? Does it have the competence to monitor and enforce implementation of these measures?

CREG, in particular, is responsible for verifying the application of the technical regulation and the tariffs. It may - upon providing reasons - require the system operator to provide the necessary information to enable it to perform its task (Articles 23 and 26 of the Electricity Act).

8 http://www.belpex.be.

(e) Are plants generating electricity from renewable energy sources integrated in the electricity market? Could you please describe how? What are their obligations regarding participation in the electricity market?

Plants generating electricity from renewable energy sources are fully integrated in the electricity market. The producers sell the electricity — regardless of its production method — to the energy suppliers, which in turn provide it to their end customers.

Regard should be had at this stage to the system of green certificates which provide support for renewable sources electricity generation chains. 'Renewable producers' receive green certificates corresponding to their individual production of renewable energies. Suppliers are obliged to present each year a quota of green certificates to the regulator. Thus they are obliged to buy such certificates from the producers. This support system is based on the positive discrimination of renewable energy production installations (this system is explained in detail in section 4.3). Mention must also be made of the 'production gap' mechanism for offshore wind parks (see above).

(f) What are the rules for charging transmission and distribution tariffs to generators of electricity from renewable energy sources?

The current status with regard to energy injected in the transmission system is that:

- connection tariffs do not vary according to whether the produced energy is from a classical or renewable source;
- there are no access or ancillary services tariffs;
- imbalance tariffs, aimed at parties responsible for balancing, are identical, regardless of the nature of the production plant of that party, except for the 'production deviation' mechanism for offshore wind parks.

The recent CREG study mentioned above (question 4.2.6.j) addresses the issue of access tariffs for electricity production from renewable sources, either connected to the transmission system or the distribution system. As indicated, this study is currently subject to analysis.

4.2.8. Biogas integration into the natural gas network (Article 16(7) and Article 16(9) and (10) of Directive 2009/28/EC)

(a) How is it ensured that the charging of transmission and distribution tariffs does not discriminate against gas from renewable sources?

CREG is entrusted with the task of ensuring the absence of any tariff discrimination, in particular with regard to the gas from renewable sources.

(b) Has any assessment been carried out on the need to extend the gas network infrastructure to facilitate the integration of gas from renewable sources? What is the result? If not, will there be such an assessment?

In view of the marginal or perhaps insignificant impact that potential future biogas production plants will have on the grid, at least for an initial period, there is currently no need for an overall assessment. The assessment of the projects is carried out on a case-by-case basis, having regard to the development state of the local infrastructures and the existing provisions regarding extension of the network.

An overall assessment would make sense in the context of the implementation of an overall plan with ambitious targets that would have a significant impact on the end consumption of gas, for example the development of new applications (e.g. gas fuel and district heating systems).

(c) Are technical rules on network connection and connection tariffs for biogas published? Where are these rules published?

Technical rules are being developed in consultation between the regulators and the Synergrid and ARGB federations. They will be published by the network operators and may be reinforced by being added to the technical regulation.

4.2.9. District heating and cooling infrastructure development (Article 16(11) of Directive 2009/28/EC)

(a) Please provide an assessment of the need for new district heating and cooling infrastructure using renewable energy sources and contributing to the 2020 target. Are there plans to promote such infrastructures in the future? What are the expected contributions of large biomass, solar and geothermal facilities to the district heating and cooling systems?

District heating is currently not widely used in Belgium. Studies to assess the potential of district heating systems fuelled with residual heat from cogeneration (biomass) and geothermal energy are currently under way.

An analysis of the priority zones, based on volume and the current and expected consumption of heat, is also under way. A specific analysis focuses on the specific possibilities in connection with urban restoration projects, the construction of large horticultural complexes or the development of office or industrial zones. In the first instance, these are pilot projects, and a support mechanism for renewable heat to feed district heating systems is envisaged.

4.2.10. Biofuels and other bioliquids — sustainability criteria and verification of compliance (Articles 17 to 21 of Directive 2009/28/EC)

(a) How will the sustainability criteria for biofuels and bioliquids be implemented at national level?

The sustainability criteria for biofuels and bioliquids will be implemented by means of a Royal Decree issued under the Act on Product Standards (Act of 21 December 1998). This decree will amend the Decree of 4 March 2005 on the names and characteristics of biofuels.

The Flemish Government, by Decree of 5 March 2004 on promoting electricity generation from renewable energy sources (Art. 15), has also imposed sustainability requirements for bioliquids. The decree will also impose, as supplementary conditions, the sustainability criteria of Directive 2008/28/EC in full.

In the Walloon Region, certification of green electricity generation sites is subject to compliance with specific requirements with regard to the renewability characteristic and the traceability of biomass input. Biomass input is considered to be renewable if the consumed biomass is deemed to be equivalent to the biomass regenerated.

The above is of course subject to further information becoming available with regard to the issue of if, and to what extent, the impact of indirect land use change (ILUC) must be taken into consideration.

(b) How will it be ensured that biofuels and bioliquids that are counted towards the national renewable target, towards national renewable energy obligations and/or are eligible for financial support comply with the sustainability criteria set out in Article 17(2) to (5) of Directive 2009/28/EC. (Will there be a national institution/body responsible for monitoring/verifying compliance with the criteria?)

Compliance of biofuels and bioliquids with sustainability criteria will be verified by independent bodies on the basis of a European quality system such as the one developed by CEN TC 383. The independent bodies responsible for the verification can be accredited in Belgium (BELAC procedure). The independent control bodies will be required to report to the authorities on a regular basis. They will present monitoring reports such as conformity assessment lists (certificates) generated and issued to biofuel producers. The oil corporations must keep the *conformity assessment* (certificate) regarding the sustainability of biofuels, corresponding to the quantities used in the mix, and make them regularly available to the authorities for inspection.

(c) If a national authority/body will monitor the fulfilment of the criteria, does such a national authority/body already exist? If so, please specify. If not, when is it envisaged to be established?

Federal Authority: the Directorate-General for the Environment of the Health, Food Chain Safety and Environment Federal Public Service is responsible for the implementation of, and compliance with the sustainability criteria.

Flemish Region: VREG is responsible for monitoring compliance with the sustainability criteria in respect of solid and liquid biomass for the generation of energy. It is already now based on audits performed by internationally renowned audit companies.

Walloon region: CWaPE is responsible for monitoring compliance with the biomass sustainability criteria.

Brussels Capital Region: BRUGEL is responsible for monitoring compliance with the biomass sustainability criteria.

(d) Please provide information on the existence of national law on land zoning and national land register verifying compliance with Article 17(3) to (5) of Directive 2009/28/EC. How can economic operators access this information?

Flemish Region: Information on territorial characteristics is available by means of the regional development plans (official designation of a certain area) as well as through the *Agentschap Geografische Informatie Vlaanderen* (Flemish Geographic Information Agency). By means of an online application, the public can monitor the various characteristics on land parcel level.

Walloon Region: The Nature Conservation Act of 12 July 1973, amended by the Natura 2000 Decree of 28 November 2001, outlines the general regulatory framework for the protected zones. Numerous texts on the legislation with regard to the protection of sites (nature reserves, forest reserves, wetland of biological significance, etc.) are also available.

(e) As far as protected areas are concerned, please provide information under which national, European or international protection regime they are classified.

The protected zones are classified according to the Natura 2000 network (EU Birds Directive, EU Habitats Directive), the Ramsar Convention and the Bern Convention.

The different protection statuses pursuant to the Nature Conservation Act concern nature reserves, state nature reserves, forest reserves, wetlands of biological interest, underground caves of scientific interest, Ramsar sites (wetlands of international importance) and Natura 2000 sites.

(f) What is the procedure for changing the status of land? Who monitors and reports at national level on land status changes? How often are the land zoning registers updated (monthly, annual, bi-annually, etc.)?

In the **Flemish Region**, the Regional Planning Decree (18 May 1999) establishes regional development implementation plans (RUP) on three levels of responsibility. Before the Flemish Government takes a final decision on a regional development implementation plan on regional level, every citizen or association has the opportunity to submit comments, objections or opinions.

This can be done in the scope of a public inquiry, which lasts two months and takes place after the provisional establishment of the plan by the Flemish Government. The provisional establishment by the Government is published in the *Moniteur Belge*. The pending and announced inquiries are also published on the website ttp://www.ruimtelijkeordening.be. The final adoption of the plan by Government decision is also published in the *Moniteur Belge*. Fifteen days later, the new allocations and urban planning provisions enter into force. From this moment on, the regional plan no longer applies to this area.

In accordance with Article 2.2.2 of the Flemish Regional Planning Code each implementation plan contains an overview of the provisions that conflict with the plan and are repealed. In accordance with Article 5.1.1, every local authority is obliged to set up a register of the plans, to update them, to make them available and to issue excerpts in accordance with the provisions of this code.

(g) How is compliance with good agro-environmental practices and other cross-compliance requirements (required by Article 17(6) of Directive 2009/28/EC) ensured and verified at national level?

In the **Flemish Region** the Agricultural and Fishing Agency is responsible for monitoring compliance with the requirements (operating requirements, good agro-environmental condition of the agricultural area, permanent grassland). Farmers receiving direct support must observe these conditions and make sure that the production of agricultural raw materials for biofuel production of biofuels takes place according to the imposed standards and requirements. If they fail to do so, the support may be reduced or even cancelled.

The *Mestbank* (fertiliser bank) supervises the compulsory treatment of waste in the Flemish Region, and the *Milieu-Inspectie* (environmental inspection) supervises observance of the exploitation requirements by approved biomethanisation plants.

In the **Walloon Region**, the *Directions des Surfaces Agricoles* (Directorate for agricultural areas) of the Department for Public Aids (DG03) is responsible for verifying the admissibility of applications. Compliance with the rules and constraints, including the standards of good agricultural and environmental conditions, is verified by the Directorate for Controls. Furthermore, onsite checks of second pillar grants (IRCD + Bio + MAE) are carried out by the Directorate for Controls of the Police and Controls Department (DPC).

(h) Do you intend to help develop voluntary 'certification' scheme(s) for biofuel and bioliquid sustainability as described in the second subparagraph of Article 18(4) of Directive 2009/28/EC? If so, how?

Belgium participates in the CEN TC 383 working groups in the context of developing a European quality system. Other systems may be recognised to the extent that they have the same effects and guarantees as the European quality system that is being developed. European agricultural raw materials are considered as compliant with the eco-conditionality requirements established in the CAP framework. There are no plans to develop further rules for such raw materials.

In the **Flemish Region**, VREG currently applies a certification system for all imported biomass flows (solid and liquid biomass) on the basis of audit reports compiled by internationally renowned firms.

4.3. Support schemes to promote the use of energy from renewable resources in electricity applied by the Member State or a group of Member States

Regulation

(a) What is the legal basis for this obligation/target?

The Federal Authority and the Regions have set up systems of tradable certificates to promote the generation of electricity from renewable sources in line with the competences assigned to them.

Although largely similar, in particular with regard to the underlying notions (systems of tradable certificates with varying support levels according to the applied technology), the systems developed by each of these entities present certain specific features.

The table below summarises the main characteristics of these mechanisms:

Characteristics	Federal Authority	Flemish Region	Walloon Region	BCR
Issuing body	CREG	VREG	CWAPE	Brugel
Eligible technologies	Offshore wind energy	All*	All*	All*
Accounting unit for green certificates	Produced MWh	Produced MWh	Avoided CO_2 emissions[9]	Avoided CO_2 emissions[10]
Period for which certificate is granted	Entire service life of installation	Entire service life of installation	15 years	10 years
Number of certificates granted	1 certificate/ produced MWh	1 certificate/ produced MWh	Number of certificates/variable saved TCO_2 according to technology	Number of certificates/variable saved TCO_2 according to technology
Duration of certificate life (banking)	5 years	5 years	5 years	5 years
Fine (EUR/lacking certificate)	/	125[11]	100	100
Who has to fulfil the quota obligation?	/	Suppliers	Suppliers and DSO	Suppliers
Guaranteed minimum prices	Variable according to technology	Variable according to technology	Identical	/
Duration of benefits under guaranteed minimum price scheme	20 years (offshore wind energy) or 10 years (other installations)	10 years (except photovoltaic, 20 years[12])	15 years	/
Recognition of certificates	Federal, Flemish, Walloon and Brussels certificates	Flemish certificates	Walloon certificates	Brussels and Walloon certificates

* Except offshore wind energy (federal competence) and with certain variants according to the Regions. By way of example, quality CHP units are eligible under the green certificate schemes organised by the Walloon Region and the Brussels Capital Region, while they benefit from a specific scheme in the Flemish Region.

[9] By general principle, a green certificate corresponds to a quantity of 456 kg of avoided CO_2. However, for certain technologies multiplying factors are applied. Thus a green certificate is only granted if the electricity production chain generates a minimum carbon dioxide saving of 10% compared to carbon dioxide emissions, as defined and published annually by CWaPE, from conventional electricity generation by modern reference installations.

[10] By general principle, a green certificate corresponds to a quantity of 217 kg of avoided CO_2. However, for certain technologies multiplying factors are applied.

[11] EUR 100 per lacking certificate as of 2015.

[12] 15 years for installations established from 1 January 2013 onwards.

The support schemes are governed by the following legal instruments:

Federal Authority:

- Act of 29 April 1999 concerning the organisation of the electricity market;
- Royal Decree of 16 July 2002 concerning the establishment of mechanisms to promote electricity generated from renewable energy sources;
- Royal Decree of 30 March 2009 concerning deviations of production outputs for wind-powered electricity production facilities in offshore areas.

Flemish Region:

- Decree of 17 July 2000 concerning the organisation of the electricity market (Electricity Decree);
- Decree of the Flemish Government dated 5 March 2004 on promoting electricity generation from renewable energy sources.

Walloon Region:

- Decree of 12 April 2001 concerning the organisation of the electricity market;
- Decree of the Walloon Government dated 30 November 2006 on promoting electricity from renewable energy sources or CHP.

Brussels Capital Region:

- Ordinance of 19 July 2001 concerning the organisation of the electricity market in the Brussels Capital Region;
- Decree of 29 March 2007 fixing the quotas for green certificates for 2008 and the following years.

(b) Are there any technology-specific targets?

No, but the support varies on according to the additional costs of the various technologies.

(c) What are the concrete obligations/targets per year (per technology)?

See question (a), Section 'Tradable certificates' (below).

(d) Who has to fulfil the obligation?

See question (b), Section 'Tradable certificates' (below).

(e) What is the consequence of non-fulfilment?

See question (g), Section 'Tradable certificates' (below).

(f) Is there any mechanism to supervise fulfilment?

The regional regulatory bodies are essentially responsible for verifying compliance with the quota obligation imposed on suppliers in line with the modalities defined by regional legislation.

CREG is also responsible for the follow-up on the federal mechanism of green certificates.

(g) Is there any mechanism to modify obligations/targets?

See question (f), Section 'Financial support' (below).

Financial support

For any scheme you use, please give a detailed description answering the following questions.

(a) What is the name and a short description of the scheme?

The following financial support schemes were introduced for the benefit of installations producing electricity from renewable energy sources:

- support for production schemes (essentially the tradable certificates schemes and related provisions);
- support for investment schemes.

Support for production (tradable green certificates)

In summary, the tradable certificates schemes established by the Federal Authority and the Regions are based:

- in the case of offshore wind energy, on an obligation of the transmission system operator (Elia) to buy the certificates at a minimum price set by federal legislation and on an obligation of sell these certificates on the regional markets[13]:
- in the case of the **Flemish Region** and the **Walloon Region**, on the combination of compulsory quotas imposed on suppliers and on minimum feed-in price guarantees imposed on the DSO (Flemish Region) or on the LTSO (Walloon Region);
- in the case of the **Brussels Capital Region**, on an obligation imposed on electricity suppliers to observe a certain quota of green certificates.

The details of these mechanisms are presented above (Section 'Regulation') and below.

As already stated above, a system of tolerances for production deviations applicable to installations generating electricity from wind in marine spaces (see above, question 4.2.7.c) has been introduced at the federal level.

Support for investment

The Federal Authority and the Regions have developed their own investment support schemes to promote the generation of electricity from renewable sources.

Federal Authority:

Contribution to the financing of connection costs for offshore wind parks:

The transmission system operator is obliged to finance one third of the costs of the submarine cable up to a maximum amount of EUR 25 million for a project of 216 MW or more. If the project involves less than 216 MW, the financial contribution of EUR 25 millions is reduced proportionally.

[13] This measure applies only if the certificate is recognized by one of the Regions (see question (a), Section 'Regulation').

Tax reduction on energy-saving investments for individuals (including green loans):

The Federal Authority has set up a scheme of tax reductions for individuals to support certain energy-saving investments. These fiscal provisions also include specific investments aimed at producing energy from renewable energy sources. For 2010 incomes, this tax reduction amounts to 40% of the costs up to a maximum amount of EUR 2 770 per year and residence, except for solar energy installations (photovoltaic and solar thermal), for which the ceiling is EUR 3 600. The remainder of the costs can be transferred to the next three fiscal years[14].

Furthermore, this scheme is flanked by an interest-rate subsidy of 1.5% and a tax reduction of 40% on the residual interest on loans taken out for such investments (green loans). Among others conditions, the capital borrowed in the framework of the green loan must amount to at least EUR 1 250, subject to a ceiling of EUR 15 000[15].

Tax deduction for investments for the benefit of companies

Companies also benefit from a tax deduction for certain investments in renewable energy. The tax deduction rate lies between 13.5% and 20.5% depending on the average development of the consumer price index.

The tax deduction applies to the following investments in the production of energy from renewable energy sources:

- radiation collector systems for direct or diffuse sunlight;
- the use of wind energy;
- hydro power plants for a maximum power production of 1 MW;
- the production of energy from waste incineration;
- the use of gas from anaerobic fermentation of waste;
- heat pumps.

Flemish Region:

Support for ecological investments (ecologiesteun):

Companies can benefit from a premium for investments in the production of energy from renewable energy sources. For small and medium-sized enterprises, the subsidy is at most 40% of the admissible additional costs, and at most 20% for large enterprises. The admissible additional costs vary according to technology:

- 10% for wind energy (more than 1.5 MW);
- 50% for biomass, biogas and CHP generation plants;
- 10% for photovoltaic solar panels.

[14] Provided that the residence had been occupied for at least 5 years before the works started.

[15] These amounts apply per calendar year, per residence and per borrower.

Walloon Region:

Investment premium (and exemption from property tax): Companies benefit from a premium for investments in the production of energy from renewable energy sources. For small and medium-sized enterprises, the subsidy is at most 50% of the admissible additional costs, and at most 20-30% for large enterprises (depending on their geographic location). The admissible additional costs vary according to technology:

Furthermore, the Walloon Region has introduced a *system of advance granting of green certificates* for installations with a developable net capacity of 10 kW or less. This advance is subject to conditions and must be applied for with, and approved by, CWaPE. The green certificates granted in advance correspond to the estimated number of green certificates that will be granted over a production period of 5 years, with a maximum of 40 green certificates.

Brussels Capital Region:

The 'energy premiums' support project promoters in acquiring installations for the production of energy from renewable energy sources.

For photovoltaic solar panels, and within the authorised limits, the premium in the year 2010 amounts to EUR 1 per installed Watt peak[16]. The premium is limited to 30% of the invoice amount (including VAT).

For other renewable energy production systems[17] that generate electricity, the scheme grants — only to companies of the service and industrial sectors — premiums equivalent to 30% of the invoice. Only installations exploiting energy from renewable energies sources intended primarily to provide energy for the building or the company's operations are affected.

As regards collective housing, services and the industrial sector, 'energy premiums' for feasibility studies on installations using renewable energy sources can also be granted. The premium amounts to 50% of their costs.

Grants for economic expansion: this support measure seeks to support the regional economy. Within authorised limits, the investment support varies depending on the size of the company.

(b) Is it a voluntary or obligatory scheme?

Support for production (tradable green certificates)

See questions (a) and (b), Section 'Tradable certificates' (below).

Support for investment

Voluntary.

[16] This premium is subject to the condition that the building complies with the 'passive' standard (< 15 kWh/m^2 p.a.) for new buildings, and the 'low energy' standard (< 60 kWh/m^2 p.a.) for renovated buildings according the PHPP calculation method (2007 version or more recent).

[17] The renewable energy must comply with the definition of Article 2 of Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable energy sources.

(c) Who manages the scheme?

Support for production (tradable green certificates)

The regulatory bodies established by the concerned entities are responsible for the management and follow-up of their specific schemes. The regulatory bodies listed in the following:

	Federal Authority	Flemish Region	Walloon Region	BCR
Regulatory bodies	CREG	VREG	CWAPE	Brugel

Support for investment

Federal Authority:

- *Contribution to the financing of the connection costs for offshore wind parks:* the executive organ is the transmission system operator, and CREG is the monitoring authority;
- *Tax reduction for energy-saving investments for the benefit of individuals (including green loans):* Finance FPS;
- *Tax deduction for investment for the benefit of companies:* Finance FPS.

Flemish Region:

Support for ecological investments (ecologiesteun): *Agentschap Ondernemen* (Flanders Enterprise).

Walloon Region:

Investment premium: Administration of Economic Affairs (DGO6).

Brussels Capital Region:

- '*Energy premiums*': joint management by IBGE (service and industry sectors, collective housing) and Sibelga[18] (individuals).
- *Grants for economic expansion*: regional economic affairs and employment administration (Ministry of the Region of Brussels Capital).

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

Support for production (tradable green certificates)

The green certificate schemes are self-sustained by the electricity sector; its costs are borne in the final instance by the consumers.

[18] Sibelga is sole operator of the distribution systems for electricity and natural gas in the Brussels Capital Region: www.sibelga.be.

The systems of guaranteed minimum prices are financed by a surcharge applied to the electricity transmission tariffs (Federal Authority) or to the tariffs for the distribution/local transmission of electricity (Regions).

In the case of the federal and Flemish mechanism, only the net balance between the purchase price for the green certificate paid by the TSO/DSO and the selling price on the market is financed by this surcharge.

Support for investment

Federal Authority:

Contribution to the financing of the connection costs for offshore wind parks: The transmission system operator's contribution to the connection costs for offshore parks is financed by a surcharge applied to the transmission tariffs.

Flemish Region:

Support for ecological investments (ecologiesteun): availability of financing in this case is ensured by resorting to a mechanism with a call for projects. The selection of the winning projects is done by reference to ecological performance factors.

Walloon Region:

Investment premiums: these premiums are guaranteed for one year (1 January to 31 December) or until the budget is spent. The budget for the premiums is set on an annual basis. The premiums are guaranteed for one year or until the budget is spent. In this case, a notice is published in the newspapers.

Brussels Capital Region:

Investment premiums: these premiums are guaranteed for one year (1 January to 31 December) or until the budget is spent. No other measure was taken to ensure budget availability.

Grants for economic expansion: the availability of the budget is guaranteed for 1 year. No other specific measure was taken to ensure budget availability.

(e) How is long-term security and reliability addressed by the scheme?

Support for production (tradable green certificates)

The green certificate schemes and related provisions set up at the different public authority levels ensure a long-term availability:

Characteristics	Federal Authority	Flemish Region	Walloon Region	BCR
Issuing body	CREG	VREG	CWaPE	Brugel
Period for which certificate is granted	Entire service life of installation	Entire service life of installation	15 years	10 years
Duration of benefits under guaranteed minimum price scheme	20 years (offshore wind energy) or 10 years (other installations)	10 years (except photovoltaic, 20 years[19])	15 years	/

[19] 15 years for installations established from 1 January 2013 onwards.

Support for investment

No specific measures are taken in this regard, except for a specific provision intended to safeguard — under certain circumstances — investments in offshore wind energy projects[20].

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

Support for production (tradable green certificates)

No periodic revision is anticipated.

Nevertheless, a number of mechanisms were set up to ensure regular feedback. This opens the way for possible adjustments of the existing schemes. In addition to this follow-up, the following measures should be mentioned:

- In the **Flemish Region**: A study is carried out every 3 years to estimate the need for exploitation support to ensure the acceptable profitability of projects. The next evaluation is planned for 2012.

- In the **Walloon Region**: Every 3 years CWaPE must carry out a detailed analysis of the technical and economic characteristics of the different electricity production chains. CWaPE also conducts an annual assessment of the functioning of the market in green certificates and compiles projections on the development of new medium-term installations (5 years).

- In the **Brussels Capital Region** a consideration of the functioning of the market in green certificates is planned in 2010 to render investments in large-scale installations using renewable energy sources more easily more profitable.

Support for investment

Federal Authority:

Contribution to the financing of connection costs for offshore wind parks: No periodic revision is anticipated. This measure complements the range of measures established by the Federal Authority to support the development of offshore wind energy on the Belgian continental shelf. As such it is followed up by CREG[21].

Tax reduction for energy-saving investments for the benefit of individuals (including green loans): The system of fiscal aids can be reviewed in every financial year. For example, the scheme for individuals was reviewed and improved on several occasions since its implementation in 2002.

To ensure a better follow-up on the measure, the standard tax return form for individuals was modified by Royal Decree of 8 March 2010.

A regular consultation process between the federal authorities and the regional authorities — who are in principle competent for matters of renewable energies and the rational use of energy — on fiscal aspects of energy issues takes place in the frame of the Federal-Regional Energy Consultation Group (CONCERE/ENOVER).

[20] Article 7, §4 of the Electricity Law.

[21] Article 23, §2 No. 12 of the Electricity Act.

Finally, a number of opinions submitted by federal advisory bodies contain suggestions that may contribute to a refinement of this fiscal system[22].

Tax deduction for investments granted to companies: The system of fiscal aids can be reviewed in every financial year. However, this measure has not been adapted for several years.

Flemish Region:

Support for ecological investments (ecologiesteun): the list of eligible technologies and additional costs subject to review before any call for projects (3 times per year).

Walloon Region:

Investment premium: no periodic revision is anticipated. The scheme has been reviewed and improved on several occasions since its entry in force.

Brussels Capital Region:

Energy premium: the system is revised and optimised annually, both with regard to technical requirements and the financing. Periodic statistics are used as an information feed-back mechanism.

Grants for economic expansion: the scheme is reviewed annually, in particular on the basis of statistics generated annually by the Directorate for Aids to Companies of the Ministry of the Brussels Capital Region.

(g) Does support differ according to technology?

Support for production (tradable green certificates)

See questions (c) and (f), Section 'Tradable certificates' (below).

Support for investment

Federal Authority:

Contribution to the financing of connection costs for offshore wind parks: Only offshore wind parks may benefit from this measure.

Tax reduction for energy-saving investments granted to individuals (including green loans): In 2010, the tax reduction rate is 40% regardless of the eligible investment under consideration. The annual ceiling is EUR 2 770 except for solar energy installations (photovoltaic and solar thermal), for which the ceiling is EUR 3 600.

Regarding the generation of electricity from renewable energy sources, only the installation of photovoltaic panels is subject to a tax reduction for energy-saving investments and eligible for green loans.

Tax deduction for investments granted to companies: The support level does not vary according to technology.

[22] Noteworthy are in particular the opinion on 'greening' the tax system in the context of sustainable development (Federal Council for Sustainable Development, 2009), th opinion on tax reductions for energy-saving investments (Federal Council for Sustainable Development, 2009) and the report '*La politique fiscale et l'environnement*' — Fiscal policy and the environment (High Council of Finance, 2009).

Flemish Region:

Support for ecological investments (ecologiesteun): the support varies according to technology (see question (a), Section 'Regulation', above).

Walloon Region:

Investment premium: the gross rate of the premium does not vary according to technology, but the additional costs vary according to technology (see question (a), Section 'Regulation').

Brussels Capital Region:

Energy premiums: the support varies according to technology (see question (a), Section 'Regulation').

Grants for economic expansion: the support does not vary according to the technologies.

(h) What are the expected impacts in terms of energy production?

Increased production of electricity from renewable sources of energy.

(i) Is support conditional on meeting energy efficiency criteria?

Support for production (tradable green certificates)

The granting of green certificates (Federal Authority) for the production from offshore wind parks does not depend on compliance with energy efficiency criteria. However, a criterion with regard to the use of the best available technology is applied when granting domanial concessions at sea.

In the **Walloon Region** and in the **Brussels Capital Region**, green certificates are granted subject to a criterion of environmental performance, i.e. a CO_2 saving of 10% respectively 5% in comparison to reference installations.

In the **Flemish Region**, the support depends on the net energy production, calculated as the difference between the energy production and the energy consumption required for the operation of the installation. For the calculation of the net energy production of installations operating on biomass, the energy required for the treatment and transport of the biomass is taken into account.

Since 1 January 2010 the installation of solar panels only benefits from the minimum support by means of green certificates if the roof is sufficiently.

Support for investment

Federal Authority:

Contribution to the financing of connection costs for offshore wind parks: Eligibility for this benefit does not depend on compliance with any energy efficiency criterion.

Tax reduction for energy-saving investments for the benefit of individuals (including green loans): See Section 4.2.2, response to question (a) on technical specifications (above).

Tax deduction on investment costs for companies: Eligibility for this support measure does not depend on compliance with any energy efficiency criterion.

Flemish Region:

Support for ecological investments (ecologiesteun): this support measure does not actually require compliance with energy efficiency criteria. Still, the classification of potential

candidates and selection of the winners is done by applying an environmental performance criterion, which takes the ecological benefits of the different projects into account.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

Support for production (tradable green certificates)

Existing measures (see question (a), Section 'Regulation') (above).

Support for investment

Existing measures.

Federal Authority:

Contribution to the financing of connection costs for offshore wind parks:

- Act of 29 April 1999 concerning the organisation of the electricity market.

Tax reduction on energy-saving investments for individuals (including green loans):

- Income Tax Code 1992 (Art. 145-24);
- Economic Recovery Act of 27 March 2009.

Tax deduction on investment costs for companies

- Income Tax Code 1992 (Art. 69).

Flemish Region:

Support for ecological investments (ecologiesteun):

- Decree of 31 January 2003 on economic aid policy;
- Decree of the Flemish Government dated 16 May 2007 granting aids to companies for ecological investments undertaken in the Flemish Region.

Walloon Region:

Investment premium

- Decree of 11 March 2004 on incentives to promote environmental protection environment and the sustainable use of energy;
- Decree of the Walloon Government dated 2 December 2004 implementing the Decree of 11 March 2004 on incentives to promote environmental protection and the sustainable use of energy.

Brussels Capital Region:

- Triennial scheme.

(k) Is it a planned scheme? When would it be operational?

Support for production (tradable green certificates)

Operational schemes.

Support for investment

Operational schemes.

(l) What start and end dates (duration) are set for the whole scheme?

Support for production (tradable green certificates)

	Federal Authority	Flemish Region	Walloon Region	BCR
Start date	2002	2002	2003	2005
End date	/	/	/	/

Support for investment

	Federal Authority*			Flemish Region	Walloon Region	BCR**	
	RI[23]	DF	CRO	Ecological support	Investment premium	PE	AEE
Start date	2002	2004	2009	1990	2004	2000	
End date	/	/	/	/	/	/	/

* RI = tax reduction for individuals (and green loans); DF = tax deduction for companies; CRO: contribution to the financing of connection costs for offshore wind parks.

** PE: energy premium; AEE: grants for economic expansion.

(m) Are there maximum or minimum sizes of systems which are eligible?

Support for production (tradable green certificates)

In the **Walloon Region** and in the **Brussels Capital Region**, the grant of green certificates for the generation of electricity from hydroelectric plants is conditional on the size of the installation.

	Federal Authority	Flemish Region	Walloon Region	BCR
Maximum size	/	/	20 MW	10 MW

Furthermore the support measure may vary depending on the size of the concerned installations.

Support for investment

Federal Authority:

Contribution to the financing of connection costs for offshore wind parks: No. The contribution to the financing of the connection costs for offshore parks is in any event limited to an amount depending on the size of the offshore wind park.

Tax reduction on energy-saving investments for individuals (including green loans): No. In 2010, the level of the tax reduction is in any case limited to an amount depending on the type of investment carried out (see question (a), Section 'Financial support', above).

Tax deduction on investment costs for companies: No.

[23] Interest rate subsidy for loans for energy-saving investments applies to all loans concluded between 1 January 2009 and 31 December 2011.

Flemish Region:

Support for ecological investments (ecologiesteun): No.

Walloon Region:

Investment premium: No. In any event, the minimum investment amount eligible was fixed at EUR 25 000 excluding VAT. Furthermore, the grant is limited to EUR 1.5 million over a period of 4 years for small producers of green energy.

Brussels Capital Region:

Energy premiums: No.

Grants for economic expansion: No.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

Generally speaking, the support schemes for production and investment are coexistent and can be granted cumulatively. In the same way, the investment support schemes set up by the Federal Authority can be cumulated with the regional schemes.

Support for production (tradable green certificates)

The guaranteed minimum price scheme established by the Federal Authority is compatible — but not cumulative — with the green certificate schemes in place in the Regions. It is an additional alternative support mechanism for the sale of green certificates offered to producers of electricity from renewable sources.

The generation of electricity from renewable sources by installations located on offshore territory is in any case subject to the exclusive jurisdiction of the federal legislator. Pursuant to federal legislation producers/the transmission system operator may trade 'offshore' green certificates on the markets organised by the Region. However, to date the Regions have not yet recognised these certificates.

Support for investment

Federal Authority:

Generally speaking, the cumulation of support schemes for investments set up at the federal level is allowed, provided the project complies with the ad hoc eligibility criteria.

Contribution to the financing of connection costs for offshore wind parks: This support can be granted cumulatively with the other support for offshore wind energy set up by the Federal Authority.

Tax reduction on energy-saving investments for individuals (including green loans): These fiscal measures set up at the federal level are compatible and can be granted cumulatively with the support mechanisms set up at the regional, provincial, community, etc. levels.

Tax deduction on investment costs for companies: These fiscal measures set up at the federal level are compatible and can be granted cumulatively with the support mechanisms set up at the regional, provincial, community, etc. levels.

In the three Regions, investment grants cannot be cumulated.

(o) Are there regional/local systems? If so, please detail using the same criteria.

The support mechanisms set up at the federal level and at the regional level were mentioned below and above. Furthermore, these systems can coexist, as the case may be, with a certain premiums granted by the provinces and/or the local authorities.

Specific questions on financial support for investment**:**

(a) What is granted by the scheme? (Subsidies, capital grants, low interest loans, tax exemptions or reductions, tax refunds)

Federal Authority:

Contribution to the financing of connection costs for offshore wind parks: comparable to a subsidy.

Tax reduction on energy-saving investments for individuals (including green loans): subsidy (green loans).

Tax deduction on investment costs for companies: tax deduction.

The investment grants provided by the Regions are subsidies.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

Federal Authority:

Contribution to the financing of connection costs for offshore wind parks: holders of a domanial marine concession.

Tax reduction on energy-saving investments for individuals (including green loans): In the context of electricity generation from renewable energy sources, only photovoltaic panels are subject to a tax reduction for energy-saving investments and eligible for green loans.

Tax deduction on investment costs for companies: In the context of electricity generation from renewable energy sources, investments in photovoltaic panels, wind turbines and hydro power plants (with a maximum capacity of 1MW) entitle companies to tax deductions.

Flemish Region and Walloon Region:

Investment premium: only companies in the eligible sectors may benefit from this scheme. All energy production chains based on renewable energy sources are eligible[24].

Brussels Capital Region:

Energy premiums: this scheme is available to everyone. All energy production chains based on renewable energy sources are eligible.

Grants for economic expansion: only companies and self-employed professionals may benefit from this scheme. The benefits under this scheme are limited — as regards production of electricity from renewable sources — to the installation of photovoltaic panels.

[24] Eligibility also extends to quality CHP and to investments with the aim of saving energy in production processes.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

Federal Authority:

Contribution to the financing of connection costs for offshore wind parks: The transmission system operator intervenes at the time when the investments are carried out.

Tax reduction on energy-saving investments for individuals (including green loans): Applications may be filed once per year at the time of the filing of the annual tax return.

Tax deduction on investment costs for companies: Applications may be filed once per year at the time of the filing of the annual tax return.

Flemish Region:

Support for ecological investments (ecologiesteun): at every call for projects (3 times per year).

Walloon Region:

Investment premiums: applications can be received and granted at any time.

Brussels Capital Region:

Energy premiums: applications can be received and granted at any time.

Grants for economic expansion: applications can be received and granted at any time.

Specific questions for tradable certificates:

(a) Is there an obliged share of electricity produced from renewable sources in the total supply?

The following quotas of green certificates must be observed by the suppliers:

	Federal Authority	Flemish Region	Walloon Region*	BCR*
2010	/	5.25%	11.25%	2.75%
2011	/	6%	13.5%	3%
2012	/	7%	15.75%	3.25%
2013	/	8%	To be determined	To be determined
2014	/	9%	To be determined	To be determined
2015	/	10%	To be determined	To be determined
2016	/	10.5%	To be determined	To be determined
2017	/	11%	To be determined	To be determined
2018	/	11.5%	To be determined	To be determined
2019	/	12%	To be determined	To be determined
2020	/	12.5%	To be determined	To be determined
2021	/	13%	To be determined	To be determined

*: The green certification schemes organised by the Walloon Region and the Brussels Capital Region, based on CO_2 emission savings, include the production of electricity from quality CHP units.

(b) Who has the obligation?

The suppliers of electricity and, for the Walloon Region, the suppliers of electricity and the DSO.

(c) Are there technology-specific bands?

Yes. The differentiation variable for production support (depending on the technology) differs according to the concerned entity:

	Federal Authority	Flemish Region	Walloon Region	BCR
Differentiation variable	Guaranteed minimum prices	Guaranteed minimum prices	Number of granted green certificates	Number of granted green certificates

(d) Which technologies are covered by the scheme?

	Federal Authority	Flemish Region	Walloon Region	BCR
Technology concerned	Offshore wind energy	All*	All*	All*

Except offshore wind energy (federal competence) and with certain variants according to the Regions.

(e) Is international trade in certificates allowed? What are the conditions?

No.

(f) Is there a floor bottom price?

The Federal Authority and the **Flemish and Walloon Regions** have linked a system of guaranteed minimum prices to their green certificate schemes.

The table below illustrates the features of the different guaranteed minimum price schemes.

	Federal Authority	Flemish Region	Walloon Region	BCR
Unit	EUR/MWh	EUR/green certificate	EUR/green certificate	/
Offshore wind energy (<216 MW)	107	/	/	/
Offshore wind energy (>216 MW)	90	/	/	/
Onshore wind energy	50	90	65	/
Photovoltaic	150	350[25]	65	/
Hydro power	50	95	65	/
Biomass	20	90	65	/
Biogas (biomass waste)	20	90	65	/
Geothermal energy	50	90	65	/
Energy from waves and tides	20	90	/	/
Landfill gas	20	60	65	/
Biogas (wastewater treatment)	20	60	65	/
Others	/	/	65	/

[25] This amount is reduced by EUR 20 for installations established as of 2013, and by EUR 40 for installations established as of 2014.

(g) Is there a penalty for non-fulfilment?

A fine is imposed on suppliers who do not fulfil their compulsory quota as determined by the concerned regional legislation.

	Federal Authority	Flemish Region	Walloon Region	BCR
Fine	/	EUR 125 / lacking certificate*	EUR 100 / lacking certificate	EUR 100 / lacking certificate

* EUR 100 per lacking certificate as of 2015.

(h) What is the average price for certificates? Is it made public? Where?

The regional regulators are responsible for the follow-up on their markets for green certificates. The information on the average prices observed is available on their websites, which are the following:

- http://www.vreg.be for the Flemish Region;
- http://www.cwape.be for the Walloon Region;
- http://www.brugel.be for the Brussels Capital Region.

In recent years the average price levels for green certificates on the different regional markets were approximately as follows:

	Federal Authority*	Flemish Region	Walloon Region	BCR
Price level (EUR/certificate)	/	105 – 110	86 – 90	91

* See federal scheme for guaranteed minimum prices.

Furthermore Belpex also fulfils the role of an exchange platform for Flemish and Walloon green certificates. The website www.belpex.be provides information on the prices achieved on this platform.

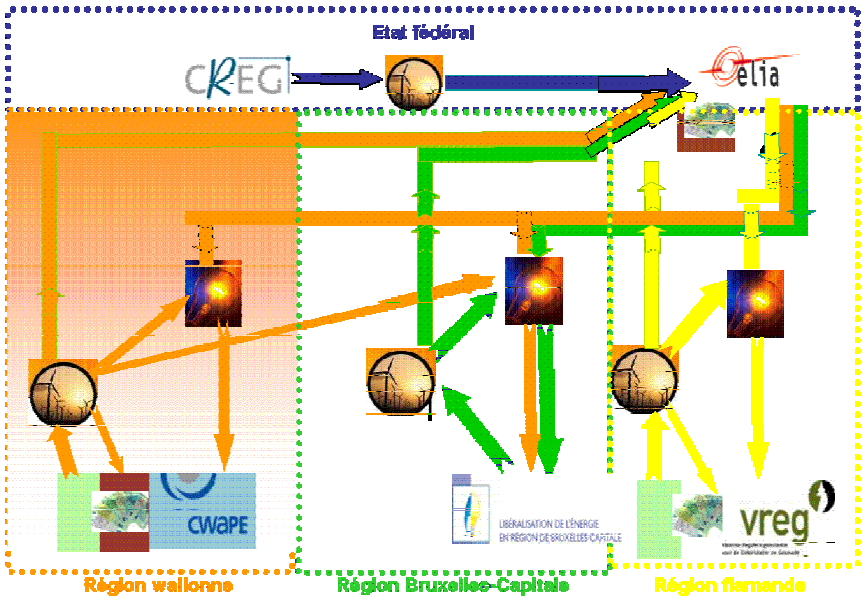
(i) What is the trading scheme for certificates?

While there is currently no international trade allowed on the Belgian market for green certificates, a certain number of transfers of green certificates between the Belgian entities have taken place by means of the following mechanisms:

- federal buy-back obligation for regional certificates imposed on the transmission system operator at a price previously determined by the federal legislator (see question (f));
- federal resale obligation for regional certificates imposed on the transmission system operator on the regional green certificate markets;
- recognition of Walloon green certificates by the Brussels Capital Region in order to fulfil the compulsory Brussels quota.

In this respect it must be noted that in the Flemish region, the Flemish green certificates (*groenestroomcertificaat*) coexist with CHP certificates (*WKK certificaat*). These schemes operate each according to a specific and autonomous system (fines, quota, …). The Walloon and the Brussels regions adopted a different approach. In these two Regions the green certificates, based on CO_2 emissions, are valid for installations generating electricity from renewable sources as well as for quality CHP plants.

The following illustration describes the different green certificate flows that can be observed currently in Belgium.



Legend

	Producer of electricity from renewable source	CWaPE	Regulator y body		Suppliers	elia	Transmission system operator
	Guaranteed minimum prices						

	Federal green certificate		Flemish green certificate		Walloon green certificate		Brussels green certificate

(j) How long can a plant participate in the scheme?

The duration of validity of green certificates varies according to the concerned entity:

	Federal Authority	Flemish Region	Walloon Region	BCR
Duration of validity	Entire service life of installation (offshore)*	Entire service life of installation*	15 years	10 years

Although the Federal Authority and the Flemish Region have not limited the duration of validity of the green certificates, they have limited the duration of the benefits from the guaranteed minimum buy-back prices that are in place. These limits are set out below:

- Federal Authority: 20 years for offshore wind turbines (10 years for other installations);
- Flemish Region 10 years (except photovoltaic: 20 years[26]).

26 15 years for installations established from 1 January 2013 onwards.

4.4. Support schemes to promote the use of energy from renewable resources in heating and cooling applied by the Member State or a group of Member States

In the **Flemish Region** and in **Walloon Region**, a support programme for heating is under consideration.

Regulation

There is at this stage no regulation providing any target or obligation regarding the use of energy produced from renewable sources in heating and cooling.

Financial support

Investment grant

The mechanism for tax deductions of the Federal Authority and the support schemes for investment established in each of the three Regions for plants producing renewable energy (see question 4.3) apply to the support for plants producing renewable heating as well.

(a) How are the support schemes for electricity from renewable energy sources adapted to encourage the use of CHP from renewable energy sources.

Green certificates

In the **Flemish Region**, the system of green certificates for CHP has some significant differences:

- A CHP certificate is granted for 1000 kWh in saved energy compared to separate production.
- There is no partial reduction for large-scale consumers.
- The market value is around EUR 40, and the fine is EUR 45 for the absence of a certificate.
- The CHP certificates decrease in value: They have a maximum value during the first 4 years, with a linear reduction to 0 after approximately 10 years.
- The minimum support is EUR 27 for installations connected to the distribution system.
- The quota increases up to 5.23% in 2012 and remains constant thereafter.

See question 4.3 for a detailed description of the green certificate mechanisms in the **Walloon Region and in the Brussels Capital Region**.

In the **Walloon Region**, the green certificate mechanism — established to support the production of renewable electricity — is intended to support CHP (on the basis of natural gas or renewable sources). For CHP installations on the basis of renewable sources, the recovery of useful heat (drying processes, heat networks) is calculated into the rate for the granting of green certificates.

In the **Brussels Capital Region**, green certificates (GC) may be granted for CHP energy after certification of the installation by BRUGEL and for installations that are not older than 10 years. The granting of GCs is spread over a period of 10 years, and the GCs remain valid for 5 years. For every tranche of 217 kg in avoided CO_2 (compared to the reference installations), 1 green certificate is issued.

The financial measures in support of the operation of heating or cooling installations fuelled by renewable energy sources are limited to green certificates issued for quality biomass

CHP installations. No green certificates are issued for the production of green heat. These installations obtain green certificates because they produce green electricity.

Tax reduction on energy-saving investments for individuals (including green loans):

Tax reduction for individuals for biomass boilers, heat pumps and solar thermal panels (Income Tax Code 1992, Art. 145-24), interest rate subsidies and tax reductions for the residual interest on loans for the exclusive financing of such investments (Economic Recovery Act of 27 February 2009).

Tax deduction on investment costs for companies

Companies can benefit from tax deductions for heat and electricity generating installations based on renewable sources.

Investment grants

In the three Regions, the system of grants for investments supports installations generating electricity or heat and quality CHP plants (see 4.3. 2). The premiums granted for small-scale systems are described in Section (c).

(b) What support schemes are in place to encourage the use of district heating and cooling using renewable energy sources?

In the **Walloon Region and the Brussels Capital Region** a premium is granted for investments in a heating network.

In the **Walloon Region** the total amount of the premium may not exceed EUR 15 000 when several installations are combined to supply a centralised heating system. This premium cannot be combined with the premiums for biomass boilers. For the heating network, a premium of EUR 60 per running meter — excluding the connecting pipes of substations and pipes contained in buildings — is granted for installing and connecting heating pipelines to the centralised heat generating plant.

In the **Brussels Capital Region** this premium covers up to 30% of the investment and is available to the services and industrial sectors as well as for collective housing.

(c) What support schemes are in place to encourage the use of small-scale heating and cooling from renewable energy sources?

a. What is the name and a short description of the scheme?

Tax reduction on energy-saving investments for individuals (including green loans):

The following investments with the purpose of using heating and cooling from renewable energy sources are eligible for this benefit:

- automatic feed wood-fired boilers;
- heat pumps;
- solar thermal panels.

An interest rate subsidy of 1.5% and a tax reduction of 40% on the residual interest on loans taken out for such investments (green loans) are granted for such investments.

These 2 systems have been described extensively under Section 4.3 (above).

Premiums by the network operators **in the Flemish Region** (for heat pumps, solar water boilers); the *Soltherm* premium, *Energy Fund* premiums and energy premiums in the **Walloon Region**, and energy premiums in the **Brussels Capital Region**.

b. Is it a voluntary or obligatory scheme?

Energy premiums are available on voluntary basis.

c. Who manages the scheme?

In the **Flemish Region**, these premiums are granted by the distribution system operators. In the **Walloon Region**, the premiums for 'renewables' systems are granted directly by the regional administration (DGO4), and **in the Brussels Capital Region**, the energy premiums are jointly managed by Brussels Environment-IBGE and the distribution system operator.

d. What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

In the **Flemish Region**, network operators must achieve a saving in primary energy by means of these premiums. This saving is fixed annually.

In the **Walloon Region and in the Brussels Capital Region**, the *energy premiums* are subject to annual budgetary reconsideration; they are guaranteed for the period of one year or until the budget is spent. In this case a notice is published in the newspapers.

e. How is long-term security and reliability addressed by the scheme?

In the long term, there are no specific measures to ensure the *energy premiums* scheme.

f. Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

In the **Flemish Region** the premiums are revised annually.

In the **Walloon Region** the *Soltherm* premium is not subject to periodic revision, while the scheme for premiums from the *Energy Fund* is reviewed biennially.

In the **Brussels Capital Region** *the system of energy premiums* is revised and has been optimised each year, both with regard to technical requirements and its financing.

g. Does support differ according to technology?

Yes, support differs according to technology. Moreover, the three Regions do not necessarily support the same technologies — see lit. o.

h. What are the expected impacts in terms of energy production?

In the Walloon Region, a study to assess the impact on added value and employment is in progress.

i. Is support conditional on meeting energy efficiency criteria?

See lit. o.

j. Is it an existing measure? Could you please indicate national legislation regulating it?

In the **Flemish Region**: Decree of the Flemish Government dated 2 March 2007 concerning the obligations of the public service to promote the rational use of energy.

In the **Walloon Region**:

- *for the Soltherm premium*: Decree of the Walloon Government dated 27 November 2003 to grant a premium for the installation of a solar water heating system;
- *for Energy Fund premiums:* Ministerial Decree of 22 March 2010 concerning the modalities and the procedure for granting premiums aimed at promoting the rational use of energy.

In the **Brussels Capital Region** the *energy premiums* are outlined in a 'three-year programme for the rational use of electricity and gas for the benefit of final users other than local authorities'.

k. Is it a planned scheme? When would it be operational?

This scheme is already operational.

l. What start and end dates (duration) are set for the whole scheme?

Start date: 2001, no end date is fixed.

Are there maximum or minimum sizes of systems which are eligible?

See the description of the individual premiums.

n. Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

The regional grants are not cumulative. Consequently, a project promoter (as far as it a company or a self-employed professional) must choose between an *energy premium* and a *grant for economic expansion*. However, it should be noted that the federal measures (tax reduction) can be combined with the regional support measures (premiums).

o. Who can benefit from this scheme? Is it specified for certain technology(/ies)?

The regional *energy premiums* are available for all buildings erected on the territory of the Region in question. In the three Regions, premium systems were set up to support small-scale systems.

Heat pumps:

In the three Regions, premiums are granted for heat pumps installed in existing buildings. For new buildings there is no longer a heat pump premium, but the E-level premium takes the contribution of the heat pump into consideration.

Reversible heat pumps which are used for cooling buildings are not eligible for this premium.

In the **Flemish Region**: For existing buildings, the premium amounts to EUR 210 per kVA compressor capacity (min. EUR 850, max. EUR 1 680).

In the **Walloon Region**: For existing residences, a premium of EUR 1 500 is granted when a heat pump is installed for heating purposes, and a premium of EUR 2 250 is granted when an integrated heat pump system (space heating/domestic hot water) is installed. The residence must have an overall thermal insulation level K of 45 or less or must be certified as

'*Construire avec l'énergie*' (Building with energy). In addition, the residence may not be equipped with an electric heating system, except as exclusive heating for bathrooms or showers.

In the **Brussels Capital Region,** per housing unit a premium for heat pump systems of EUR 1 500 per installation (lump sum) is granted, and in the case of an integrated heat pump system (space heating/domestic hot water), a premium of EUR 2 250 per installation (lump sum) is granted per housing unit. Alternatively, a premium of EUR 750 per installation (lump sum) is granted for the installation of a heat pump for the generation of domestic hot water. Only heat pumps air/water, water/water and brine/water are eligible for the regional premium and subject to compliance with the performance requirements of the European ecolabel.

Solar water heating systems:

In the Flemish Region:

For the existing residences, the premium amounts to EUR 75 per m² (min. EUR 525 – max. EUR 1 500).

For new residences, if the E-level is less than 60, a premium of EUR 300 is granted for the installation of a solar water heating system.

In the Walloon Region:

The (lump sum) premium amounts to EUR 1 500 for an individual installation with a 2 - 4 m² optical surface, to which a supplementary amount of EUR 100 per additional m^2 is added. The total amount of the premium for a single installation may not exceed EUR 6 000.

For new residences the system is under review to take the E-level premium into account.

In the Brussels Capital Region:

The premium for solar water heating systems amounts to EUR 3 000 per installation with a surface of 2 - 4 m^2 to which a supplementary amount of EUR 200 per m^2 is added for every m^2 by which the sensor surface exceeds 4 m². The amount allocated under this premium scheme is limited in any event to 30% of the invoice for the supply and installation of the solar water heating system. The *energy premiums* for solar thermal energy are subject to the following conditions:

- Installations with the exclusive purpose to heat private non-communal swimming pools are not eligible for a premium.
- Only glazed sensors or similar (sensors with vacuum tubes) are eligible for such a premium.
- The installation must be arranged to face as far as possible in the direction SOUTH (0°) with a maximum angle of 90° to the east or to the west.
- The installation of a meter to measure the energy production of the sensors is compulsory. This energy meter must be capable of dual billing: for the energy produced by the sensor and stored in the boiler, and for any energy possibly transmitted to the sensor.
- The thermal resistance coefficient R of the boiler insulation must be 2 m²K/W or higher.

Biomass boiler premium

In the **Walloon Region** a premium is granted at the time of the installation for biomass boilers that operate with automatic feed only and that comply with the requirements of NBN EN 305, with an efficiency of more than 80% calculated according to this standard. If the boiler runs on 2 fuels, only natural gas is permitted.

The amount of the premium is calculated on the basis of the boiler capacity and is limited to 50% of the invoiced amount, however, limited to EUR 15000 per installation. When several boilers are connected to the same heating cycle, only one premium is granted. The amount of the premium is calculated according to their combined capacity.

In **Brussels Capital Region**, any renewable energy production project in the services or industrial sector is eligible for a premium equivalent to 30% of the invested amount.

p. Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

Applications can be received at any time and are granted continuously.

(d) What support schemes are in place to encourage the use of heating and cooling from renewable energy sources in industrial application?

Tax deduction on investment costs for companies

As indicated above, companies may also benefit from a tax deduction for certain investments in renewable energies (for solar radiation collector systems, the use of wind energy, reduced capacity hydro power plants, generation of energy from waste). The tax deduction rate is between 13.5% and 20.5% depending on the average development of the consumer price index.

This system has been described extensively in Section 4.3 (above).

In the **Flemish Region**, the grants accorded by network operators to companies are the same as those for individuals. Nevertheless, the support levels may differ. The system of investment grants also finances the use of green heating in industrial applications (see Section 4.3.b) above).

In the **Walloon Region**, the following aids are granted to companies (private law legal persons):

As regards the overall audit of installations (production processes and buildings) and the implementation of RUE and RES studies: the AMURE programme (Walloon Government Decree of 2002) covers 50% of the consultants' fees.

As regards investments:

The system of investment grants also finances the use of green heating in industrial applications (see Section 4.3.b) above).

Soltherm premium for solar water heating: the amount of the grant makes it more suitable for residential applications, but it is also available to companies, thus SME and VSB.

Premium for energy audit systems: The AMURE programme covers 50% of the costs for the setting up of energy audit systems by means of which the industrial processes and buildings can be traced with reference to relevant energy indicators.

Grants for product approvals: the AMURE programme covers 50% of the approval fees for energy-saving products.

With the exception of the energy premiums, economic grants and green certificates explained to above, there are currently no other regional financial support measures at the level of the **Brussels Capital Region.**

4.5. Support schemes to promote the use of energy from renewable resources in transport applied by the Member State or a group of Member States

Several aid schemes to promote renewable energies are available in Belgium. The first concerns biofuels by means of a tax-exempt quota and mandatory incorporation.

The second relates to electric vehicles via the Act of 22 December 2009 and the Policy Act of 23 December 2009.

Regulation: Act on the mandatory blending of biofuels

(a) What is the legal basis for this obligation/target?

The legal basis is the Act on the mandatory blending of biofuels in fossil fuels for consumption. This act was published on 22 July 2009 and complemented by a Royal Decree published on 10 August 2009 and a Ministerial Decree published on 30 November 2009.

(b) Are there any technology-specific targets?

No.

(c) What are the concrete obligations/targets per year (per technology)?

Article 4, § 1 of the Act states that any registered oil company offering petrol and/or diesel products for consumption must also — in the same calendar year — offer a quantity of 4% v/v of sustainable biofuels for consumption; FAME (fatty acid methyl ester) at a rate of at least 4% v/v of the quantity of diesel products offered for consumption, and bioethanol, pure or in the form of bio-ETBE, at a rate of at least 4% v/v of the quantity of petrol products offered for consumption.

(d) Who has to fulfil the obligation?

Mandatory blending of biofuels applies to any registered oil corporation offering petrol and/or diesel products for consumption.

(e) What is the consequence of non-fulfilment?

Any registered oil company that does not observe the fixed percentage will be subject to an administrative fine of EUR 900 per 1000 l at 15°C of biofuel that was not mixed into the annual quantity of petrol or diesel products offered for consumption.

(f) Is there any mechanism to supervise fulfilment?

The Royal Decree states that the Directorate General for Energy is responsible for the verification of the incorporated biofuel quantities, while the Directorate-General for the Environment is responsible for verifying the sustainability of the incorporated biofuels. The Ministerial Decree published on 30 November 2009 defines the forms that any registered oil company must complete before the administration can verify the proper application of the law.

(g) Is there any mechanism to modify obligations/targets?

The act entered into force on 1 July 2009 and will cease to be in force on 30 June 2011. It can be extended and modified by Royal Decree deliberated in the Council of Ministers.

Financial support

For any scheme you use, please give a detailed description answering the following questions.

(h) What is the name and a short description of the scheme?

The Budget Act of 10 June 10 2006 deals with tax exemptions for biofuels: it is a scheme of state aid leading to a reduced rate of excise duty for petrol containing at least 7% v/v of bio-ethanol (pure or in the form of ETBE) and diesel containing at least 5% v/v of FAME. These excise duty rates are applied if the biofuels originate from a production unit approved by the Belgian state.

(i) Is it a voluntary or obligatory scheme?

It is a voluntary scheme.

(j) Who manages the scheme?

The Approval Commission for Biofuels is responsible for supervising the system. The approved units must submit activity reports to the Commission on an annual basis. The biomass supply sources, the countries of origin of such sources and compliance with biofuel specifications are analysed. The supplies used by the companies are compared to those contained in their application files, on which their approval and the granting of a production quota was based. The findings from the Approval Commission's Report are submitted to the Council of Ministers for adoption.

(k) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

Due to an increase of the excise duty on fossil fuel, it is a 'budget neutral' measure.

(l) How is long-term security and reliability addressed by the scheme?

Not relevant.

(m) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The tax-exempt quotas will be granted until September 2013. Approved production units have to submit an annual report to the Approval Commission for Biofuels to show that they have actually complied with the selection criteria due to which they benefitted from the exemption.

(n) Does support differ according to technology?

The support does not differ according to technology, however, it differs according to the type of product.

It is an exemption from excise duty for the 'bio' portion contained fuel. This leads to a differentiated excise duty rate for diesel containing FAME and petrol containing bioethanol.

An exemption from excise duty for pure rape-seed oil originating from the own production of a farmer or from a cooperative which markets directly to the end user without intermediary is also provides for in the Royal Decree of 10 March 2005. However, this is a marginal market.

(o) What are the expected impacts in terms of energy production?

Biofuel production is ensured by seven approved units and for the volume of the tax-exempt quotas.

(p) Is support conditional on meeting energy efficiency criteria?

The procedure for selecting the approved units is established on the basis of various criteria, in particular the manufacturing process with the best energy efficiency. From this point of view, the approved units are performing.

(q) Is it an existing measure? Could you please indicate national legislation regulating it?

The measure is in force since June 2006 and is regulated by the Budget Act concerning biofuels (10 June 2006).

(r) Is it a planned scheme? When would it be operational?

This scheme is operational since June 2006 (see response k).

(s) What start and end dates (duration) are set for the whole scheme?

This scheme started on 1 November 2006 and will end on 30 September 2013.

(t) Are there maximum or minimum sizes of systems which are eligible?

The following volumes for the tax-exempt quotas were defined: 1 235 500 m^3 for bioethanol and 2 185 000 m^3 for FAME.

(u) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

No.

(v) Are there regional/local systems? If so, please detail using the same criteria.

No.

Specific questions for **financial support for investment:**

(w) What is granted by the scheme? (Subsidies, capital grants, low interest loans, tax exemptions or reductions, tax refunds)

In respect of biofuels an exemption from excise duty is granted for the biofuel part contained in fossil fuels.

In respect of electric vehicles, the charging station benefit from an increased investment deduction rate of 15.5%. Furthermore, a tax deduction rate of 40% of the value of an outside electrical charging station (max. EUR 180) is also available. A tax reduction for the purchase of electric cars was also introduced. The latter amounts to 30% of the acquisition value, subject to a maximum amount of EUR 6 500.

(x) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

Oil companies who include biofuels from approved production units in their mix benefit from an excise duty exemption.

An investment support system and tax reductions for electric vehicles is available to individuals and companies.

(y) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The tax reductions for charging stations and electric vehicles apply for a period of 2 years as of 1 January 2010.

Specific questions for **tendering**:

(z) What is the frequency and size of the tenders?

A tender procedure for approval of the biofuel volumes specified in the quota was launched in 2006.

(aa) Which technologies are specified?

The tender relates to the production of biofuel.

(bb) Is it integrated with grid development? Not relevant.

(cc) What are the concrete obligations/targets per year (per fuel or technology)?

Biofuels: Any registered oil company that offers petrol and/or diesel for consumption must also include a quantity of sustainable biofuel for consumption in its fuel mix. The quantity of biofuel must be 4% v/v or more of the quantity of fossil fuel offered for consumption. In the medium term Belgium intends to increase this percentage to achieve its targets in the field of renewable transport, however, taking into account technical constraints (fuel quality standards). In the medium term, Belgium intends to increase the mandatory share of biofuels in fossil fuel, bearing in mind the Commission's report expected in 2012 on the impact of biofuels on different aspects of sustainability. Furthermore, the various bodies intend to specify exactly the share of electric vehicles and biofuels produced from waste, residues and ligno-cellulosic matter.

Electric vehicles will certainly contribute to a small degree to the target for a renewable transport sector by 2020, but for the time being, no national figure has been determined.

Flemish Region: The Flemish government wants to stimulate ecological transport by encouraging taxi associations to use hybrid cars and to render the buses of the *De Lijn* bus company's car park more eco-friendly by developing a network of charging stations for electric vehicles. The Region is also developing a plan for biofuels, supporting the development of fourth generation fuels. The Flemish government will introduce a kilometre-based road levy for road transport from 2013 onwards. For private vehicles an intelligent kilometre-based road levy is envisaged, which will be calculated with reference to the features of the car, the place and time of commuting.

Walloon Region: In its statement of regional policy, the Walloon Government stated its desire to contribute to the development of biofuels of the second generation. This was to be implemented by requiring new production units must comply from now on with the sustainability criteria established by the Renewable Energies Directive, and furthermore, by facilitating, in cooperation with the competent levels, the setting up of a real market for such fuels in Belgium to ensure the viability of the investments.

Brussels Capital Region: The aim of the mobility policy of the Brussels Capital Region is to achieve a reduction of 20% (compared to 2001) in traffic emissions. This is to be achieved by developing public transport, by promoting alternative means of commuting other than the individual use of cars, such as walking or cycling, or even by encouraging the sector to use new, non-polluting vehicles. Since 2009, the 'Villo!' program makes 2 500 bicycles in 180 stations available for self-service. In 2011, the Region plans to implement an E-CAMBIO pilot project in Brussels. This will entail expanding the current CAMBIO car-sharing service to electric vehicles.

(dd) Is there differentiation of the support according to fuel types or technologies? Is there any specific support to biofuels which meet the criteria of Article 21(2) of the Directive?

No specific support for such 'second generation' biofuels is currently envisaged by Belgian legislation.

4.6. Specific measures for the promotion of the use of energy from biomass

4.6.1. Biomass supply: both domestic and trade

Table 7a: Estimated biomass regional supply in 2020

Sector of origin	*Amount of domestic resource (ktonnes)*	*Imported (ktonnes)*		*Exported EU/Non-EU (ktonnes)*	*Net amount (ktonnes)*	*Primary energy production (ktoe)*
		EU	*Non-EU*			
A) Biomass from forestry, of which:	**1,166.68**	**904.58**	**49.48**	**0,00**	**2,120.31**	**818.07**
1. direct supply of wood biomass from forests and other wooded land for energy generation	532.17	0.00	0.00	0.00	532.17	211.54
2. indirect supply of wood biomass for energy production	633.98	904.58	49.48	0.00	1'588.14	602.83
B) Biomass from agriculture and fisheries	**1,835.35**	**74.40**	**33.26**	**0.00**	**1,913.01**	**87.39**
1. Agricultural crops and fishery products	30.00	0,00	33.26	0.00	33.26	29.42
2. By-products and residues	1'805.35	74.40	0.00	0.00	1,879.75	57.88
C) Biomass from waste	**2,125.34**	**152.90**	**0.00**	**0.00**	**2,010.14**	**473.79**
1. Biodegradable fraction of municipal solid waste	1,528.50	152.90	0.00	0.00	1,681.30	311.33
2. Biodegradable fraction of industrial waste (including paper, cardboard, pallets)	248.66	0,00	0,00	0.00	248.66	46.38
3. Sewage sludge	80.17	0.00	0,00	0.00	80.17	10.09

Table 7b: Estimated biomass regional supply in 2015 and 2020

Sector of origin	2015		2020	
	Amount of domestic resource	Primary energy production	Amount of domestic resource	Primary energy production
	(ktonnes)	(ktoe)	(ktonnes)	(ktoe)
A) Biomass from forestry, of which:	**1,892.78**	**732.03**	**2,227.631**	**868.59**
1. direct supply of wood biomass from forests and other wooded land for energy generation	572.3	226.1	572.3	225.1
2. indirect supply of wood biomass for energy production	1,320.48	505.93	1'655.331	643.49
B) Biomass from agriculture and fisheries	**1,0571.5**	**1,669.5**	**8,855.6**	**1,030.3**
1. Agricultural crops and fishery products	8,110.7	221.6	3,404.7	489.8
2. By-products and residues	2,460.8	1,447.9	5,450.9	540.5
C) Biomass from waste	**2,401**	**561.4**	**3,225.7**	**535.8**
1. Biodegradable fraction of municipal solid waste	1,751.6	413.5	2,263.7	369.6
2. Biodegradable fraction of industrial waste (including paper, cardboard, pallets)	558.3	138.4	868	155.8
3. Sewage sludge	91.1	9.5	94	10.4

Table 8: Current agricultural land use for production of crops dedicated to energy in 2006

Agricultural land use for production of dedicated energy crops	Surface (ha)
1. Land used for short rotation trees (willows, poplars)	0
2. Land used for other energy crops such as grasses (*reed* canary grass, switch grass, Miscanthus), sorghum	0

4.6.2. Measures to increase biomass availability, taking into account other biomass users (agriculture and forest-based sectors)

- **Mobilisation of new biomass sources**

(ee) Please specify how much land is degraded.

In the zones intended for farming and forestry no significant degraded spaces need to be reported.

(ff) Please specify how much unused arable land there is.

Flemish Region: 2 600 ha (2009).

Walloon Region: 12 319 ha (2008).

(gg) Are any measures planned to encourage unused arable land, degraded land, etc. to be used for energy purposes?

The support for renewable energy sources creates new possibilities for using energy crops. Furthermore, there are forestry research and demonstration projects for forestry (short rotation) and other biomass plants under way, which also focus on the phyto-remediation of degraded land.

(hh) Is energy use of certain already available primary material (such as animal manure) planned?

The establishment for energy purposes can be reinforced by the improved collection of waste flows and of available residual waste. Furthermore, the improved use of biomass, liquefied by fermentation, in combination with manure and compost processing, offers an interesting perspective.

The establishment of biomass for such applications is encouraged by granting support for biomass energy projects (support for investments and green certificates).

A detailed inventory of biomass was established with the aim to make biomass flows available for energy generation.

(ii) Is there any specific policy promoting the production and use of biogas? What type of uses are promoted?

The use of biogas is promoted mainly for electricity generation purposes by means of support for green certificates. The introduction for the generation of heat is supported by investment subsidies.

In the **Walloon Region** a decree was recently adopted (in the first reading) on labels of guaranteed origin for renewable gas fed into the network.

(jj) What measures are planned to improve forest management techniques in order to maximise the extraction of biomass from the forest in a sustainable way? How will forest management be improved in order to increase future growth? What

measures are planned to maximise the extraction of existing biomass that can already be put into practice?

The forest areas in Belgium are currently almost entirely managed in a sustainable manner. The focus is on the sustainable development of forests and on the sustainable use of wood in the longest possible chain (the materials are first used, then recycled and finally used for energy purposes), while taking into account an analysis of the life cycles of the different recovery mechanisms. For this reason the additional energetic potential of domestic forests is rather limited.

Nevertheless additional possibilities remain to implement a more efficient use of wood (residual flows) resulting from the management of road shoulders, nature reserves, parks and gardens. The service entities responsible for forest management stimulate these possibilities by the establishment of forest management plans.

- **Impact on other sectors:**

(kk) How will the impact of energy use of biomass on other sectors based on agriculture and forestry be monitored? What are these impacts? (If possible, please provide information also on quantitative effects.) Is the monitoring of these impacts planned in the future?

In the Flemish Region and in the Walloon Region the available biomass is inventoried.

In the Flemish Region this biomass inventory serves to determine which flows are to be taken into consideration for industrial applications, for recycling and for energy generation. The flows that are reserved for industrial application or for recycling do not benefit from subsidies for the generation of green electricity or heating. Recent studies show that there is no negative effect from harmful emissions, provided that sufficient investments in measures to reduce emissions are undertaken.

(ll) What kind of development is expected in other sectors based on agriculture and forest that could have an impact on the energy use? (E.g., could improved efficiency/productivity increase or decrease the amount of by-products available for energy use?)

There are a number of developments that may cause an increase of the available biomass, even in a small measure: improved use of residual flows (agriculture), short rotation crops, whether on degraded land or not, improved use of wood residues from road shoulders, parks, nature reserves and gardens.

4.7. *Planned use of statistical transfers between Member States and planned participation in joint projects with other Member States and third countries*

4.7.1. Procedural aspects

(mm) Describe the national procedures (step by step) established or to be established, for arranging a statistical transfer or joint project (including responsible bodies and contact points).

In December 2009 Belgium published its *forecast document* indicating that it wanted to implement internally the largest portion of its 13% target. This remains the firm intention. The document does not exclude the possibility to call upon the flexibility mechanisms for at most 0.5%.

Belgium has not yet developed a specific procedure regarding the organisation of statistical transfers or of joint projects.

In view of the uncertainty concerning the effective establishment of the flexibility schemes, Belgium will do everything necessary to implement the target of 13% internally. If the circumstances are of such a nature that it transpires from an interim report that the targets will not be achieved internally, it may still be decided to resort to the cooperation mechanisms. Belgium will follow developments regarding cooperation projects closely. It will cooperate closely with the European working groups in this field to contribute to the development of a common approach. On the other hand, it will also be necessary to prepare the implementation of efficient administrative, legislative and organisation procedures, if on the basis of, for example, an analysis of the social cost compared to the benefits, it is decided that such mechanisms are to be used.

(nn) Describe the means by which private entities can propose and take part in joint projects either with Member States or third countries.

See question (a).

(oo) Give the criteria for determining when statistical transfers or joint projects shall be used.

See question (a).

(pp) What is going to be the mechanism to involve other interested Member States in a joint project?

See question (a).

(qq) Are you willing to participate in joint projects in other Member States? How much installed capacity/electricity or heat produced per year are you planning to support? How do you plan to provide support schemes for such projects?

See question (a).

4.7.2. Estimated excess production of renewable energy compared to the indicative trajectory which could be transferred to other Member States

Belgium does not anticipate any excess production.

4.7.3. Estimated potential for joint projects

(rr) In which sectors can you offer renewable energy use development in your territory for the purpose of joint projects?

See question 4.7.1.(a).

(ss) Has the technology to be developed been specified? How much installed capacity/electricity or heat produced per year?

See question 4.7.1.(a).

(tt) How will sites for joint projects be identified? For example, can local and regional authorities or promoters recommend sites? Or can any project participate regardless its location?

See question 4.7.1.(a).

(uu) Are you aware of the potential for joint projects in other Member States or in third countries? (In which sector? How much capacity? What is the planned support? For which technologies?)

See question 4.7.1.(a).

(vv) Do you have any preference to support certain technologies? If so, which?

See question 4.7.1.(a).

4.7.4. Estimated demand for renewable energy to be satisfied by means other than domestic production

Table 9: Estimated excess and/or deficit production of renewable energy compared to the indicative trajectory which could be transferred to/from other Member States

(ktoe)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimated excess in forecast document	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Estimated excess in regional action plan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Estimated deficit in forecast document	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Estimated deficit in regional action plan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

5. Assessments

5.1. Total contribution expected of each renewable energy technology to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity, heating and cooling and transport

Table 10a: Estimation of total contribution expected from each renewable energy technology to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity 2010-2014

	2005		2010		2011		2012		2013		2014	
	MW	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**
Hydro	108.15	350.4	112.3	362.2	114.5	368.3	116.1	372.8	117.7	377.3	125.7	384.0
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar	2.05	1.04	350.0	304.0	428.1	369.9	485.1	417.9	542.1	466.0	627.6	538.1
photovoltaic	*2.05*	*1.04*	*350.0*	*304.0*	*428.1*	*369.9*	*485.1*	*417.9*	*542.1*	*466.0*	*627.6*	*538.1*
concentrated solar power	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Wind	190.2	319.6	733.2	990.5	1,016.2	1,745.5	1,222.7	2,866.2	1,429.7	4,171.9	1,738.9	5,281.5
Biomass	340.0		617.6	3,006.9	762.3	3,640.5	867.9	4,102.9	973.5	4,565.3	1,131.8	5,258.8
solid	*270.0*	*1,521.0*	*498.4*	*2,579.9*	*617.4*	*3,131.7*	*704.3*	*3,534.4*	*791.1*	*3,937.1*	*921.4*	*4,541.1*
biogas	*57.0*	*235.0*	*105.6*	*393.3*	*131.0*	*475.8*	*149.5*	*536.0*	*168.0*	*596.2*	*195.8*	*686.5*
bioliquids	*13.0*	*35.0*	*13.6*	*33.7*	*13.9*	*33.0*	*14.1*	*32.5*	*14.4*	*31.9*	*14.7*	*31.2*
TOTAL	**300.4**	**671.04**	**1,813.2**	**4,663.6**	**2,321.1**	**6,124.2**	**2,691.7**	**7,759.8**	**3,062.4**	**9,580.5**	**3,618.4**	**11,462.4**

Table 10b: Estimation of total contribution expected from each renewable energy technology to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity 2015-2020

	2015		2016		2017		2018		2019		2020	
	MW	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**
Hydro	122.5	390.7	125.7	399.7	128.9	408.6	132.6	419.1	136.3	429.5	140.0	440.0
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	3.5	22.3	3.5	25.7	3.5	29.1
Solar	713.1	610.2	827.1	706.4	941.0	802.5	1,074.0	914.7	1,207.0	1,026.8	1,340.0	1,139.0
photovoltaic	*713.1*	*610.2*	*827.1*	*706.4*	*941.0*	*802.5*	*1,074.0*	*914.7*	*1,207.0*	*1,026.8*	*1,340.0*	*1,139.0*
concentrated solar power	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Wind	2,048.6	6,084.1	2,461.6	7,402.5	2,874.6	8,505.0	3,356.4	9,286.3	3,838.2	9,975.7	4,320.0	10,474.0
Biomass	1,290.2	5,952.4	1,501.3	6,877.1	1,712.5	7,801.9	1,958.8	8,880.8	2,205.2	9,959.6	2,451.5	11,'038.5
solid	*1,051.7*	*5,145.1*	*1,225.4*	*5,950.5*	*1,399.1*	*6,755.8*	*1,601.7*	*7,695.4*	*1,804.4*	*8,635.0*	*2,007.0*	*9,574.6*
biogas	*223.5*	*776.8*	*260.5*	*897.3*	*297.5*	*1,017.7*	*340.7*	*1,158.1*	*383.8*	*1,298.6*	*427.0*	*1,439.1*
bioliquids	*15.0*	*30.4*	*15.5*	*29.4*	*15.9*	*28.4*	*16.5*	*27.2*	*17.0*	*26.0*	*17.5*	*24.8*
TOTAL	**4,174.3**	**13,037.4**	**4,915.6**	**15,385.7**	**5,656.9**	**17,518.0**	**6,525.3**	**19,523.1**	**7,390.1**	**21,417.4**	**8,255.0**	**23,120.6**

Table 11: Estimation of total contribution (final energy consumption31) expected from each renewable energy technology in [Member State] to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling 2010-2020

(ktoe)	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Geothermal	2.8	3.2	3.4	3.5	3.7	3.9	4.1	4.4	4.7	5.0	5.4	5.7
Solar	3.33	29.0	42.4	52.2	61.9	76.6	91.2	110.8	130.3	153.1	175.9	198.7
Biomass	477.4	682.1	788.7	866.6	944.4	1,061.1	1,177.9	1,333.5	1,489.2	1,670.8	1,852.4	2,034
solid	*475.5*	*669.0*	*769.8*	*843.4*	*917.0*	*1,027.3*	*1,137.7*	*1,284.8*	*1,432.0*	*1,603.7*	*1,775.3*	*1,947*
biogas	*1.9*	*8.9*	*12.5*	*15.2*	*17.8*	*21.8*	*25.8*	*31.1*	*36.4*	*42.6*	*48.8*	*55*
bioliquids	*0*	*4.2*	*6.4*	*8.0*	*9.6*	*12.0*	*14.4*	*17.6*	*20.8*	*24.5*	*28.3*	*32*
Renewable energy from heat pumps	7.09	52.2	75.7	92.8	110.0	135.7	161.4	195.7	230.0	270.0	310.0	350
of which aerothermal:	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*
of which geothermal:	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*
of which hydrothermal:	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*	*not available*
Total	**490.6**	**766.4**	**910.2**	**1,015.1**	**1,120.0**	**1,277.3**	**1,434.6**	**1,644.4**	**1,854.2**	**2,098.9**	**2,343.7**	**2,588.4**

Table 12: Estimation of total contribution expected from each renewable energy technology to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport sector 2010-2020

(ktoe)	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bioethanol/bio-ETBE	0	37.18	35.86	43.47	41.82	49.34	47.42	55.38	64.51	76.29	83.76	91.23
Of which biofuels Article 21(2)	*0*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Of which imported	*0*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Biodiesel	0	291.87	293.52	368.61	370.67	447.27	449.33	466.18	460.99	556.56	628.22	697.91
Of which biofuels Article 21(2)	*0*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*44.40*	*43.90*	*101.19*	*114.22*	*126.89*
Of which imported	*0*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Hydrogen from renewables	0	0.00	0.00	0,00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Renewable electricity	16.4	23.84	26.76	29.85	33.39	37.44	47.34	56.24	65.51	75.46	86.24	97.19
Of which road transport	*0*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*5.62*	*11.79*	*18.43*	*25.61*	*33.37*	*41.50*
Of which non-road transport	*16.4*	*23.84*	*26.76*	*29.85*	*33.39*	*37.44*	*41.72*	*44.46*	*47.08*	*49.85*	*52.87*	*55.70*
Others (as biogas, vegetable oils, etc.)	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Of which biofuels Article 21(2)	*0*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
TOTAL	**16.4**	**352.89**	**356.13**	**441.93**	**445.88**	**534.06**	**544.09**	**577.80**	**591.00**	**708.31**	**798.22**	**886.33**

5.2. Total contribution expected from energy efficiency and energy saving measures to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity, heating and cooling and transport

5.3. Assessment of the impacts

No such assessment was carried out in the framework of this plan.

5.4. Preparation of the National Renewable Energy Action Plan and the follow-up one its implementation

(a) How were regional and/or local authorities and/or cities involved in the preparation of this Action Plan? Were other stakeholders involved?

Given the division of competences in Belgium, this plan results from consultation between federal and regional authorities. This consultation takes place within the CONCERE group on the basis of the Federal-Regional cooperation agreement in the field of energy of 1993.

(b) Are there plans to develop regional/local renewable energy strategies? If so, could you please explain? In case relevant competences are delegated to regional/local levels, what mechanisms will ensure national target compliance?

The consultation process within CONCERE will continue to prepare coherent supplementary regional and local strategies in line with the individual competences. Specific consultation platforms are in place (National Action Plan, certification of installers, taxation, energy performance of buildings, …), and others may follow.

(c) Please explain the public consultation carried out for the preparation of this Action Plan.

The sectors were involved at various occasions:

- Consultation with the sectors and the social partners in April 2009 (Walloon Region);
- Round Table on the potential in September 2009 (Flemish Region);
- EDORA in January 2010 (project REPAP) (Concere);
- Biofuels Round Table in March 2010 (Walloon Region);
- TSO, etc.

(d) Please indicate your national contact point/the national authority or body responsible for the follow-up of the National Renewable Energy Action Plan.

Chair of CONCERE,

Federal Public Service Economy, SMEs, Self-employed and Energy.

(e) Do you have a monitoring system, including indicators for individual measures and instruments, to follow-up the implementation of the Renewable Energy Action Plan? If so, could you please give more details on it?

Each year the Regions establish a detailed energy account, which makes it possible to follow developments in the various renewable energy sectors.

The regulators compile each year a report on the state of the electricity and green certificates markets.