

**BELGIUM'S WRITTEN REPORT IN ACCORDANCE WITH ARTICLES 6(3) AND 10(2) OF DIRECTIVE 2004/8/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON THE PROMOTION OF COGENERATION BASED ON A USEFUL HEAT DEMAND IN THE INTERNAL ENERGY MARKET AND AMENDING DIRECTIVE 92/42/EC**

## **PRELABLE**

La répartition des compétences institutionnelles en Belgique attribue une compétence de principe aux Régions en matière de promotion de la cogénération. L'autorité fédérale reste toutefois compétente en matière de tarifs.

Les systèmes de promotion de la cogénération à haut rendement adoptés au niveau régional reposent principalement sur des obligations de quota imposés aux fournisseurs d'électricité complétés, tant au niveau fédéral que régional, par différents systèmes d'aide à l'investissement.

Par conséquent, le présent rapport a été élaboré par chacune des Régions en ce qui les concerne et par l'Administration fédérale pour ses compétences.

### **1. TRANSPOSITION/MISE EN ŒUVRE DU TEXTE DE LA DIRECTIVE 2004/8/CE**

Q1 What is the level of transposition of the Directive in your country? What is the timeline for the remaining parts of the transposition of the Directive, if any?

#### Région wallonne

Extract of the « Progress report due by Member States on 21.02.07 under Article 6.3 of Directive 2004/8/EC on the promotion of cogeneration. »

*The complete transposition of the Directive 2004/8/EC for the Walloon Region has been notified to the Commission and has been registered by the Commission on :*

- 6 January 2007 with reference n° MNE(2007)50110 and MNE(2007)50109
- 27 April 2007 with reference n°MNE(2007)53494;
- 8 November 2007 with reference n°MNE(2007)57966.

#### Flemish Region

The Directive has been transposed in the Flemish Region.

The relevant provisions are set out in:

- the Decree of 8 May 2009 laying down general provisions on energy policy (Title VII. Environmentally friendly energy production and rational use of energy);
- the Flemish Government Decision of 19 November 2010 laying down general provisions on energy policy (Title VI. Environmentally friendly energy production and rational use of energy).

#### The Brussels Capital Region

The transposition of the Directive in the Brussels Capital Region is complete.

The legislative pieces transposing the directive in the Brussels Capital Region are:

- Ordinance of 19th July 2001 concerning the organisation of the electricity market
- Decision of 6th May 2004 of the Brussels government concerning the promotion of green electricity and Quality Cogeneration.
- Counting Code of 12th October 2004
- Ministerial decision of 3rd May 2005 regarding the equivalence between the Brussels and Walloon green certificates.
- Decision of 19th July 2007 of the Brussels government concerning the guarantees of origin.
- Decision of 19th July 2007 of the Brussels government about the licensing of green suppliers.
- Decision of 19th July 2007 of the Brussels government regarding quotas of green certificates.
- Ministerial decision of 16th September 2008 regarding the reference values for the separate production of heat and electricity.
- Decision of 26th May 2010 modifying some of the dispositions relating to green certificates established in decision of 6th May 2004.

**Q2** What is the timeline for implementing measures based on the Commission Decision of 19.11.2008 establishing detailed guidelines? Please indicate how this has taken place (revision of a general energy law, a specific law, decree, regulation,...).

With regard to the application of Annex II to the issuing of guarantees of origin for electricity from cogeneration, the principles of the Decision are applied. A forthcoming revision of the Belgian legislation concerned will include more consistent application of the Decision.

**Q3** To what extent do you consider your country to have already significantly implemented the Directive?

Région wallonne

Yes, as specified in response to Q1 and Q2, different support mechanisms were put into place in the Walloon Region prior to the Directive:

- The green certificate mechanism, which is an aid to production, the amount of which is proportional to the quantity of CO<sub>2</sub> prevented (implemented in 2001-2002);
- GOLs (guarantee of origin labels) since 2007;
- Different types of support for investment;
- Fiscal support (at federal level in Belgium);
- Technical and promotional support via the “Cogeneration Facilitator” (since 1997);
- Support for feasibility studies

These types of support were put into place to promote high-quality cogeneration as defined in Walloon legislation and not solely for high-efficiency cogeneration (as defined in the 2004 Directive). To be able to ascertain the impact of using one definition or another to express the electricity produced in terms of cogeneration, the table below shows the total production for cogeneration (biomass and fossil fuels) for three levels of efficiency: the electricity produced from all types of cogeneration irrespective of their efficiency, the production of units referred to as “high-quality” and the production of high-performance units within the meaning of the European Directive:

<b>Year 2009</b>	<b>All types of cogeneration</b>	<b>High-quality cogeneration</b>	<b>High-efficiency cogeneration</b>
Electricity generation (GWh)	1.857	1.731	1.507

#### Flemish Region

The Flemish Region actively implements the provisions of the Directive. The Flemish legislation supports only high-efficiency cogeneration in accordance with the criteria laid down under Directive 2004/8/EC. The potential of CHP has been mapped and is being developed by a system of certificates. Statistics are compiled annually and there is an operational system of guarantees of origin. Suppliers supplying a quantity of electricity to end customers in Flanders as electricity from qualitative cogeneration must submit a corresponding number of guarantees of origin as evidence to VREG (the Flemish regulator).

#### The Brussels Capital Region

The Brussels Capital Region has completely transposed the Directive.

**Q4** Is your country using the alternative calculation method according to Article 12(2)?

#### Région wallonne

Yes, the Walloon Region uses this method of calculation.

#### Flemish Region

The alternative calculation method according to Article 12(2) is used in Flanders.

#### The Brussels Capital Region

Yes, the Brussels Capital Region uses alternative calculation methods as allowed by Article 12 (2) for the Directive 2004/8/EC.

**Q5** Is there any need for your country to review in accordance with Article 13 the threshold values used for calculation of electricity from cogeneration and/or the threshold values used for calculation of efficiency of cogeneration production and primary energy savings?

Région wallonne

No.

Flemish Region

In practice the overall efficiency threshold values (75 and 80 %) present no problems to most CHP plants. Internal combustion engines (by far the most common form of technology) achieve overall efficiency levels of more than 90 %. The 75 % threshold does not present any problems to gas turbines, with or without auxiliary firing units, or steam backpressure turbines either. Only steam condensing extraction turbines and combined-cycle gas turbines (very rare) have difficulty in achieving 80 % overall efficiency. In the case of steam condensing extraction turbines this is a consequence of the nature of the installation, i.e. of the fact that it is designed to meet a variable demand for steam and therefore regularly eliminates heat. However, we do not consider this to be a reason to relax the threshold values.

Nor do we believe it is necessary to adapt the threshold values for qualitative CHP (0 and 10 %). Steam backpressure turbines are the best-known example of installations which struggle to achieve the 10 % threshold.

The Brussels Capital Region

No.

**2. POTENTIEL NATIONAL D'AUGMENTATION DE LA PART DE LA COGENERATION A HAUT RENDEMENT**

**Q6** Can your country already show progress in high-efficiency cogeneration since the last report on national potential which can be ascribed to either EU or national legislation and support schemes?

Région wallonne

Yes.

Flemish Region

The electrical/mechanical capacity of cogeneration (CHP) plants in Flanders was 2086 MW in 2010 – 128 MW or 6.5 % higher than in 2009. 57 MW of additional combustion engine CHP capacity was used in agriculture.

The amount of useful energy produced (electricity/power and heat) in 2010 (133 PJ) was 14.3 % higher than in 2009.

In 2010 CHP power accounted for 19.1 % of gross electricity consumption in Flanders, meeting the Flemish target (19%).

#### The Brussels Capital Region

Yes.

**Q7** What is your evaluation of the progress towards increasing the share of high-efficiency cogeneration in your country? Your assessment should be based on the specific figures to be included in the attached spreadsheet (Excel file) designed to facilitate the submission of your data.

#### Région wallonne

The share of cogeneration in relation to the total consumption of electricity and heat in the Walloon Region is progressing steadily. At the present time, the strongest growth is in micro-cogeneration (<50 kW<sub>e</sub>), which means that the overall quantities of heat and electricity produced by cogeneration are progressing relatively slowly.

However, the share of high-efficiency cogeneration is also progressing strongly in relation to cogeneration overall. This is due mainly to the green certificate mechanism and other types of support promoting high-quality cogeneration.

#### Flemish Region

Progress has been quicker than expected. The support for CHP is based on a system of certificates with an annual quota.

### The Brussels Capital Region

The current electrical capacity installed equals 23.4 MW in the Region. The graph below and the attached excel spread sheet both suggest cogeneration is increasing in the Brussels Capital Region. The number of CHP has moved from 25 in 2006 to 40 in 2009 where 9 new installations were put in service and certified. The latter will influence the production of electricity and heat as from 2010.

In 2020, the electrical capacity installed in the Brussels Capital Region could go beyond 75 MW.

[See graph in source document]

### **3. ENTRAVES A LA COGENERATION A HAUT RENDEMENT**

**Q8** Please give your views on the current barriers to high-efficiency cogeneration in your country:

### Région wallonne

Barriers in relation to administrative procedures (authorization, coordination among competent authorities, streamlined simplified procedures, etc)

There are often a number of administrative difficulties, especially for small structures. For example, the fact that there are several subsidy systems with different and sometimes time-consuming procedures (prior application etc.) without, in some cases, the guarantee that the subsidy will actually be granted.

Contacts with the DNO (distribution network operator) are sometimes difficult (lack of transparency). And there may also be many administrative procedures with the DNO (request for connection, meter, disconnection protection etc.)

A detailed feasibility study is required, which also involves certain costs.

Barriers in relation to electricity grid system and tariff issues (including specific measures for small scale and micro cogeneration units)

- Contacts with the DNO (distribution network operator) are sometimes difficult (lack of transparency);



- Administrative and legal complexities as to the notion of direct line and supply licence which make it very difficult in practice to enhance the value of on-site electricity generated thanks to a third party investment or to distribute this electricity to other establishments nearby without having to undergo a series of administrative and technical obligations such as the obligation to go through the distribution network and/or for the producer to take on the status of supplier (direct lines between two separate legal entities are generally not authorised, with a few exceptions). This is a barrier to developing cogeneration making it possible to supply both electricity and heat to a number of nearby buildings which do not belong to the same legal entity (industrial estate, collective housing, etc.). The status of self-producer makes it possible to avoid this necessity for direct line and supply licence authorisation but it is also very difficult to obtain this status in the case of a third party investor.

Other barriers (internalisation of external costs, energy prices, financial & technical barriers, etc) in accordance with Articles 9 and 6 of the cogeneration Directive 2004/8/EC

- Uncertainty about prices makes it impossible to predict future gains and to therefore forecast the true profitability of projects.

- Uncertainty about the Walloon industrial sector does not facilitate the expansion of high-output cogeneration, which is mostly linked to the industrial sector.

- Cogeneration does not replace a boiler, so it is an additional investment to be made. The investment is quite high, with non negligible operating costs.

- Cogeneration is not part of a company's core business.

- With regard to domestic micro-cogeneration, there is no competition yet in Wallonia and the performance of the first machine available is not yet conclusive.

- The notion of the sustainability of the biofuels which may be used

- The Emission Trading System

Indicate the measures aimed at overcoming them.

- The WEC (Walloon Energy Commission), which plays the role of regulator (green certificate quotas, compensation mechanism for machines < 10 kW, etc.)

- The third-party investor mechanism (but direct line and supply licence issues then have to be considered)
- Increase in prices for energy resources
- The “Cogeneration Facilitator” service set up in the Walloon Region makes it possible to advise the promoters of projects on administrative difficulties.
- Implementation of EPB (Energy Performance of Buildings)
- Industry-wide agreements for Wallonia’s industrial sectors

### Flemish Region

Barriers in relation to administrative procedures (authorization, coordination among competent authorities, streamlined simplified procedures, etc)

Although in Flanders the authorisation procedures for qualitative CHP do not necessarily result in the implementation of beneficial CHP projects, they do in many cases cause an unnecessarily long delay between an investment decision and the commissioning of the installation. The Flemish Government is currently discussing ways of simplifying the administrative procedures for obtaining authorisation with the other regional authorities (provinces and municipalities) and the Federal Government.

The process of applying for aid through cogeneration certificates also places a relatively heavy administrative burden on micro-cogeneration plants. VREG, the Flemish Regulator, is currently working on a simplified micro-cogeneration application procedure which is intended to minimise the administrative burden.

Barriers in relation to electricity grid system and tariff issues (including specific measures for small scale and micro cogeneration units)

### Electricity network

CHP grid connection problems are currently a significant obstacle to the implementation of CHP projects. The existing electricity network imposes a number of barriers both to physical connection to

the grid itself and to exploitation of CHP plants through this connection.

The costs of physically connecting a CHP plant to the grid are high. In order to help fund this expensive process, Flanders has already introduced a measure exempting CHP plants from some of these costs (i.e. first kilometre free). Increasing grid congestion has also meant that new connections for decentralised production are no longer possible in certain regions (e.g. West Flanders). The grid operator has (partly as a result of pressure from the Flemish Government) found a solution for a number of decentralised production installations, including CHP plants, which had already applied for connection in 2010. However, this solution is an interim one, pending reinforcement of the high-voltage grid planned for 2014-2015. New, additional connection applications will not be considered before then.

Increasing grid congestion has not only resulted in the refusal of new applications. It also has implications for exploitation of the installations. CHP plants, which have to have a remote monitoring unit, can be controlled by the grid operator and be shut down or switched to part load at times of congestion or in the event of grid security and/or stability problems. This has been done in Noorderkempen and other places where CHP is often used in greenhouse horticulture. If it is done too often or without compensation, it can have an adverse effect on project profitability. The remote monitoring unit needed for such control is also expensive. The fact that the records of such units have yet to be standardised presents an additional technical barrier. Moreover, grid operators do not always communicate uniformly with regard to counter, meter and power chart requirements. The required grid studies and other associated services are expensive and deadlines are not always met.

### Tariffs

The charging of decentralised production injection tariffs since 2009, the legal basis for which is the Royal Decree of 2 September 2008, has also impeded ongoing and new CHP projects. However, since then the Flemish Government has adopted a Decree which prevents the injection tariffs from having to be paid for decentralised production from renewable energy sources and qualitative cogeneration (Decree of 23 December 2010). This decree has removed this obstacle altogether. CREG, the federal regulator responsible for the tariffs, has appealed against this Decree to the Constitutional Court. The Court has yet to deliver its judgment.

Other barriers (internalisation of external costs, energy prices, financial & technical barriers, etc) in accordance with Articles 9 and 6 of the cogeneration Directive 2004/8/EC

(Indicate the measures aimed at overcoming them)

The fact remains that the investment and operating costs of qualitative CHP, despite the savings made in primary energy, are fairly high. The Flemish Government therefore provides support through the cogeneration certificate system in order to encourage investment in qualitative CHP. This support system has led to a huge increase in qualitative CHP in Flanders since 2005. This increase has also resulted in a marked rise in the number of cogeneration certificates (CCs) provided since 2009, causing supply to greatly outstrip demand. This has created uncertainty on the certificates market, as the market price has fallen accordingly. A minimum guarantee is provided for CHP plants connected to the distribution grid. This has alleviated some of this uncertainty. However, this minimum guarantee is

not provided for CHP plants connected to the transmission grid. The Flemish Government has already taken steps to increase the stability of the certificate system, i.e. by increasing both the minimum guarantee in the distribution grid and the submission requirement quota. Nevertheless, the quota increase has not proven sufficient to eliminate the current excess supply.

Micro-cogeneration, which is used mainly in buildings, faces a number of specific obstacles:

- lack of product awareness/availability;
- high costs of available products;
- greater support for alternative electricity generation technologies (photovoltaic solar panels);
- impossibility of selling electricity within apartment buildings.

### The Brussels Capital Region

Barriers in relation to administrative procedures (authorization, coordination among competent authorities, streamlined simplified procedures, etc)

### Unauthorized private networks and direct electricity lines

In the housing sector, it is not allowed to sell the electricity that is produced by cogeneration to the different housing units of a same building. Indeed, the “Brussels Housing Code” imposes every single housing unit to be connected to the electricity grid through a proper EAN-meter and at the other hand, selling electricity requires a special licence that is very difficult to obtain. This has a bad economic impact on the profitability of an installation. Yet, a recent regional legislation offers more Green Certificates to gas cogeneration in housing buildings (cf. infra question 10 – the Brussels Capital Region – sub section ‘Sectorial Focus’), which improves the profitability even though the electricity production can only be used for the service quarters of the building or sold to an electricity supplier at a low price.

Barriers in relation to electricity grid system and tariff issues (including specific measures for small scale and micro cogeneration units)

In Brussels, there is no real barrier linked to electricity grid system and this can be partly explained by the fact that the electricity network is really dense and developed (urban character of the Brussels

Capital Region) and that there is only one Distribution Network Manager (Sibelga), which is sensitive to cogeneration issues as it operates itself several production units in the Brussels Capital Region.

There are no tariff barriers as the Distribution Network Manager does not impose injection tariffs for the electricity sent on the grid and as the production support mechanism consists of Tradable Green Certificates and no Feed-in Tariffs. The electricity production is sold separately to an electricity supplier.

Other barriers (internalisation of external costs, energy prices, financial & technical barriers, etc) in accordance with Articles 9 and 6 of the cogeneration Directive 2004/8/EC

#### Micro-cogeneration in single residential households (1 kWe)

The first installations are installed in the Brussels Capital Region since the beginning of 2011 but there exists barriers to the development of these types of cogeneration. Indeed, there is so far only one supplier in the Region (Whispergen) and the costs of investment remain very high (between 15 and 20 000 euros for a 1 kWe – Stirling cogeneration installed in a private house). Yet, other machines are announced to be launched on the market soon, what should open the competition.

Another barrier is that a consensus still does not exist about the environmental performances of these machines. A European study-comparison of different machines of 1 kWe installed in various European countries could possibly help removing this barrier.

#### Lack of district heating

The implementation of district heating projects in the Brussels Region could facilitate the installation of bigger scale cogenerations. Yet, the important initial cost of investment for a district heating, the complexity of its daily management and general people aversion regarding this type of installation can be considered as barriers to the development of district heating projects.

Furthermore, in 2010, the Brussels Capital Region has evaluated the opportunity to build 4 district heating networks including biomass. Amongst other things, the conclusions reveal that these projects are significantly less attractive if potentially connected buildings were to invest in measures enabling a more rational use of energy such as insulation, new windows, heat recuperation on ventilation systems etc.

As a result and considering cost effective measures should be promoted, the Brussels policies currently rank energy efficiency of the building stock much higher than the promotion of district heating networks in its list of priorities

## Energy prices

The energy prices are not properly speaking a barrier but it is clear that the profitability of high-efficiency cogeneration, and thus its development, is closely linked to the cost difference between fuel (gas, rapeseed oil,...) and electricity for the final consumer/producer.

## **4. GARANTIES D'ORIGINE ET REGIMES D'AIDE**

**Q9** Article 5 of the Directive requires Member States to ensure that accurate and reliable guarantees of origin are issued according to objective, transparent and non-discriminatory criteria. Please indicate what is the situation concerning the implementation of this measure in your country (information on primary energy savings, type of registration system)?

### Région wallonne

*"In addition to the procedure set up for the issue of green certificates, Walloon regulations also make it possible for end customers wishing to buy electricity generated from sustainable sources of energy and/or cogeneration to have a guarantee with regard to the quality of the electricity they have ordered. Producers who generate electricity from sustainable sources of energy and/or cogeneration receive a "guarantee of origin label" issued by the WEC. The procedure and requirements for obtaining these labels are similar to those for green certificates, so applications made to qualify for both schemes may be examined at the same time.*

*In practical terms, these labels involve the quarterly issue at the production site of a certificate showing the quantity of energy produced, minus, as appropriate, the quantity of electricity consumed by the producer itself, in the form of a guarantee of origin label per MWh. The guarantee of origin label allows its owner to guarantee that the electricity specified on the certificate actually comes from renewable energy sources (or from high-efficiency cogeneration), that the quantity specified on the certificate has been determined in accordance with the metering code method or comparable criteria which apply in other Member States of the European Union, and that the certificate has been awarded for a reliable system which prevents misuse.*

*The WEC has been issuing guarantee of origin labels in the Walloon Region since 1 January 2007."*

(source : [www.CWaPE.be](http://www.CWaPE.be))

### Flemish Region

Article 5 of the CHP Directive has been implemented as follows in the Flemish Region:

The Flemish Regulator of the Electricity and Gas Market (VREG) awards a cogeneration certificate for every 1 000 kWh of primary energy saved by a production installation located in the Flemish Region as a result of the use of a qualitative cogeneration plant in relation to reference installations and/or every 1 000 kWh of electricity generated by the qualitative cogeneration plant (Article 7.1.2 of the Energy Decree).

These cogeneration certificates may be used:

1. as a guarantee of origin, to be presented by suppliers of electricity from qualitative cogeneration under Article 5 of the Directive;
2. as evidence to be provided under the CHP quota obligation established in the Flemish Region (Article 7.1.5 of the Energy Decree).

A cogeneration certificate may be presented only once as a guarantee of origin and be submitted only once under the certification requirement. A certificate submitted under the certification requirement may not be used as a guarantee of origin. However, a certificate presented as a guarantee of origin may, once presented, still be submitted under the certification requirement unless it is a certificate awarded only for 1 000 kWh of electricity generated in the installation from qualitative cogeneration (Article 7.1.5 of the Energy Decree).

VREG records the awarded certificate data in a central database to ensure the authenticity of certificates. At least the following data are recorded for each cogeneration certificate:

1. the certificate holder's data;
2. the month and year of production;
3. the place of production;
4. the technology used;
5. rated output;
6. date of commissioning of the cogeneration plant;
7. the registration number;
8. the support received for the installation;
9. the fuel or energy source and the lowest calorific or energy value of the source;
10. the quantity of electricity produced from qualitative cogeneration covered by the certificate;
11. the reference efficiencies to be used to calculate the cogeneration saving;

12. the primary energy saving;
13. an indication as to whether or not the certificate is acceptable to satisfy the quota obligation;
14. an indication as to whether or not the certificate was submitted, where it may be used for this purpose, under the certification requirement or an indication that it is no longer submittable;
15. an indication as to whether the certificate may be used as a guarantee of origin;
16. the use made of the heat generated along with the electricity (Article 6.2.11 of the Energy Decree).

A guarantee of origin issued in another region or country may be used in the Flemish Region provided that the owner of the guarantee demonstrates to VREG that the following conditions have been met:

1. the guarantee contains at least the following data:
  - a) the lowest calorific or energy value of the fuel or energy source;
  - b) the cogeneration plant data, including the place of production;
  - c) the date of production of the corresponding quantity of electricity;
  - d) identification of the authority which issued the guarantee;
  - e) the quantity of electricity from qualitative cogeneration covered by the guarantee, calculated in accordance with the provisions set out in Annex II to this Decision;
  - f) the primary energy saving, calculated in accordance with the provisions set out in Annex I to this Decision;
  - g) the use made of the heat generated along with the electricity;
2. the guarantee of origin is issued based on net electricity production from qualitative cogeneration;
3. the guarantee is the only proof issued regarding the quantity of electricity concerned, showing that a producer generated in a specified calendar year a specified quantity of electricity, expressed in kWh, from qualitative cogeneration;
4. the quantity of electricity covered by the guarantee has not yet been sold under the description 'electricity from qualitative cogeneration' or an equivalent term (Article 6.2.15 of the Energy Decree).

#### The Brussels Capital Region

In the Brussels Capital Region the issuing and management of the guarantees of origin are competences of the local regulating body for the gas and electricity markets: BRUGEL.



BRUGEL is a member of the Association of Issuing Bodies (AIB) since September 2008, and has connected to the AIB international HUB in December 2008.

The AIB promotes the use of a standardized system, based on harmonized environment, structures and procedures in order to ensure the reliable operation of international energy certificate systems. This standardized system is known as EECS® - the European Energy Certificate System - and is set out in "The Principles and Rules of Operation" (the "PRO" i.e. the EECS Rules) and its supporting documents.

The subscription to the AIB, the implementation of the PRO and the interconnection with the other members through the international HUB ensures the reliable and transparent issuing, transfer and cancelling of guarantees of origin."

**Q10** Does your country have support schemes for cogeneration/CHP based on Directive 2004/8/EC (operational and/or investment aid)? What kind of support is provided (feed-in tariffs, certificates and quota, priority access to the grid,...)? Are they designed to provide stable long-term investment conditions? Which sectors will be targeted (agricultural and/or industrial and/or heating cogeneration)?

#### The Federal State

##### Tax reduction on energy-saving investments for individuals:

The Federal Authority has set up a scheme of tax reductions for individuals to support certain energy-saving investments including cogeneration. For 2011 incomes, this tax reduction amounts to 40% of the costs up to a maximum amount of EUR 2 830 per year and residence.

##### Tax deduction for investments for the benefit of companies:

Companies also benefit from a tax deduction for certain investments like cogeneration. The tax deduction rate amounts 13.5% of the total investment.

#### Région wallonne

Wallonia has different schemes for supporting high-quality cogeneration:

Green certificate mechanism which constitutes support for production:

*“Any site intending to produce green energy (electricity of renewable origin or from high-quality cogeneration) must first apply to the WEC for a green certificate (GC). Once its application has been accepted, the site is registered in the WEC database and may be issued a GC for a period of 15 years.*

*Every quarter, the producer sends the meter readings to the WEC. The WEC issues the GC for the production site on this basis. Once the producer has the GCs, it can negotiate their sale with any buyer active on the GC market, independently of the sale of the actual electricity produced. These GCs are valid for a 5- year period.*

*Every quarter, the supplies of electricity in Wallonia declared by suppliers, part of which is measured by the network operators, are sent to the WEC. On the basis of this information, suppliers and network operators are obliged to return a quota of GCs to the WEC that is proportional to the quantity of electricity supplied in the quarter. The 2011 quota was 13.5%. A €100 fine is applied per missing GC.*

*As an alternative solution to the sale of GCs, a system for the compulsory purchase of GCs by the local transmission system operator (LTSO Elia) at a minimum guaranteed price of €65 was provided for in the Decree (6). These GCs are then cancelled and cannot be resold on the GC market.”*

*(source : [www.CWaPE.be](http://www.CWaPE.be))*

- GOLs (Guarantee of origin labels);
- Different types of support for investment: Energy Fund premiums (for all sectors including individuals), UREBA premiums (public sector) from the Walloon Region and investment support (UDE support – economic growth law essentially for the private sector);
- Fiscal support (reduced tax at federal level for energy-saving investments for individuals and tax deductions for companies);
- Technical and promotional support via the “Cogeneration Facilitator” (since 1997) to advise project promoters at different stages in the project, and to organise training and information seminars on cogeneration to promote the technology.
- Subsidises for pre-feasibility studies of cogeneration (all sectors).

As stated in response to Q1 and Q3, most of these mechanisms were already in existence before the

Directive. Some of the support (investment support) is aimed at one sector more than another, but ultimately almost all sectors are covered, including individuals.

### Flemish Region

Cogeneration is supported mainly through a system of certificates with an annual quota.

The cogeneration certificate (CC) system has supported qualitative cogeneration in Flanders since 2005. Only CHP plants commissioned or significantly modified after 1 January 2002 are eligible for certificate support. This support is linked to the energy saved as a result of the CHP.

The Decree of 6 May 2011 also paved the way for the long-term rise in the cogeneration certificate quota: from 4.90 % in 2010 to 10.5 % in 2020.

The present support system for qualitative CHP in Flanders has achieved a great deal: it has created a stable and sufficiently attractive investment climate, stimulating sufficient investment to meet the Flemish Government's targets for the production of electricity by means of qualitative CHP.

Nevertheless, there are various reasons why the present cogeneration certificate systems should be evaluated and adapted where necessary.

- A number of policy-relevant lessons may be learned from the eight years of experience gained of the way these systems work.
- A number of recent – critical – analyses, recognising that the functioning of the certificate systems has a number of undesirable side-effects (windfall profits) and that the overall cost of the systems is increasing, have called for a discussion of the future development of the systems.
- Thoroughgoing revision is therefore essential in order to make the support policy for renewable energy and qualitative regeneration sufficiently future-focused and also future-'proof'.

In 2011 the Flemish Government announced an in-depth evaluation of support policy.

### The Brussels Capital Region

The Brussels Capital Region supports cogeneration since 2005. With the time, the Region elaborated a fairly complete set of support including:

- An expertise point of contact
- An investment support scheme
- A 'production' support scheme

#### Expertise point of contact

An expert in cogeneration is available for free in order to advise professionals willing to study or install a properly-dimensioned CHP-unit.

#### Investment support scheme

The 'energy premiums' encourage project promoters when acquiring cogenerations. This investment support scheme is available for both the private and public sectors as well as for companies and households.

In 2011, the premium formula for combined heat and power installation is:

3500 € \*√ (electric power of the CHP-unit in kW).

Besides specific grants for the so-called 'economic expansion' are available for local privately-owned SMEs. These grants also cover the acquisition of CHP-units and vary depending on the size of the company.

#### Operational support scheme: green certificates

Next to the expert and the investment support scheme, the key support mechanism in the Brussels-Capital Region is the Green Certificate scheme.

By general principle, 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 provided they can account for a CO<sub>2</sub> saving of at least 5% in comparison to reference installations. 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<sub>2</sub> (compared to the reference installations), 1 green certificate is issued.

The support schemes are governed by the following legal instruments:

- Ordinance of 19 July 2001 concerning the organization 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.

#### Sectorial focus

As from 2011, the Brussels Capital Region shall raise the GC level of support for gas fired CHP units installed in apartment blocks. The standard calculations of GC is enhanced with multiplying coefficients as follows:

- GC \* 2 for CHP units with an electric power of up to 50 kW;
- GC \* 1.5 for CHP units with an electric power exceeding 50 kW.

**Q11** How much money on a yearly basis has been provided in this way in the past years to the promotion of high-efficiency cogeneration in particular? And how much money is expected to be made available on a yearly basis to the promotion of high-efficiency cogeneration in the coming years?

#### Région wallonne

Green certificate mechanism, which constitutes support for production (last WEC report)

Year	Millions of euros for biomass cogeneration	Millions of euros for fossil-fuel cogeneration
2008	58.22	9.92
2009	74.85	10.09

Offer of subsidies for studies on the relevance of cogeneration in the private sector (no demand for the public sector!)

Year	Number of studies	Amount in euros
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2009	15	76 081.25
2010	14	30 910.00
2011	40	126 071.00 (at end of September)

Regional investment support (private and public sectors)

Year	Amounts in euros
2009	5 422 370.00
2010	1 004 190.00
2011	235 729.00 (at end of August)

Investment support for residential micro-cogeneration (around 1 kWe)

Year	Amounts in euros
2009	88 541.00
2010	44 917.00
2011	29 017.00 (at end August)

Flemish Region

The annual support given to qualitative regeneration under the quota obligation can be estimated based on the number of certificates awarded and the average market price of these certificates over the various years.

	Year	Number of cogeneration certificates awarded, acceptable under the CHP quota obligation	Average market price
<b>2004</b>	34 712	37.37	€ 1 297 187
<b>2005</b>	226 149	37.37	€ 8 451 188
<b>2006</b>	459 582	41.17	€ 18 920 991
<b>2007</b>	1 134 177	41.48	€ 47 045 662
<b>2008</b>	2 149 405	41.14	€ 88 426 522
<b>2009</b>	3 330 341	39.53	€ 131 648 380
<b>2010</b>	4 459 320	37.13	€ 165 574 552
<b>TOTAL</b>	13 662 792		€ 461 364 482

The following table lists the support necessary to make the as-yet unrealised potential of CHP sufficiently profitable.

Million € <sub>2011</sub>	Margin of unprofitability
<b>2011</b>	14
<b>2012</b>	27
<b>2013</b>	42
<b>2014</b>	56
<b>2015</b>	66

<b>2016</b>	77
<b>2017</b>	95
<b>2018</b>	113
<b>2019</b>	150
<b>2020</b>	184
<b>Total</b>	822

### The Brussels Capital Region

#### Investment support scheme

The 'energy premium' scheme supports investment in CHP unit. The table bellows indicates the amounts dedicated and paid each year to support CHP-investments in the Brussels Capital Region since 2005:

#### Operational support scheme: green certificates

The green certificate schemes are self-sustained by the electricity sector; its costs are borne by the consumers. Since 2005, the number of issued certificates is increasing as detailed here below:

#### Evolution of the operational support scheme in the Brussels Capital Region

The green certificate scheme will remain until 2020 and possibly beyond that point in time.

Considering (a) the continuous efforts to promote CHP, (b) the sectorial focus detailed in the answer to question 10 and (c) the current review of the quota of green certificates electricity providers have to hand in, the number of green certificates allocated to CHP plants in the coming years is expected to increase substantially.