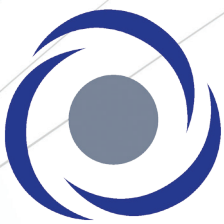
DEVELOPMENTS IN THE GREEN CERTIFICATES MARKET

2012 DEDICATED ANNUAL REPORT

Prepared pursuant to article 29 of the decree of the Walloon Government of 30 November 2006 relating to the promotion of electricity generated from renewable sources of energy or cogeneration



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1. OBJECT

Article 29 of the decree of 30 November 2006 relating to the promotion of electricity generated from renewable sources of energy or cogeneration (AGW-PEV)[1] states:

"Art. 29. For 30 April, the CWAPE shall establish a dedicated annual report concerning trends in the market for guarantee of origin labels and the market for green certificates. This report shall mention, inter alia, the number of green certificates awarded by technology and energy source over the course of the year under consideration, the green certificates transmitted to the CWAPE in accordance with article 25, the average price of a green certificate as well as the administrative fines imposed on system operators and suppliers for failing to fulfil quotas.

The report shall also mention the number of guarantee of origin labels awarded by technology and by energy source over the course of the year under consideration, the guarantee of origin labels transmitted to the CWAPE, the average price of guarantee of origin labels, as well as the number of guarantee of origin labels exported to and imported from other regions or countries.

This report shall be sent to the Walloon government."

The first part of the report contains a reminder of the development objectives for green electricity in Wallonia as well as a detailed description of the green certificates (GC) mechanism. The main legislative changes that occurred during 2012 are presented as well as the opinions delivered by the CWaPE on the subject.

The second part of the report deals with an assessment of 2012. This assessment comprises three components:

- Statistics relating to the generation of green electricity in Wallonia: changes in certified generation sites, the volume of electricity generated by these sites, corresponding number of green certificates to be awarded by the CWaPE and, finally, the contribution of these green electricity generating facilities to the overall electricity supply in Wallonia.
- Statistics relating to the green certificates market: changes in the purchase price of GC by intermediaries, suppliers and DSOs to producers according to type of installation, number and volume of transactions, and sales at the regional or federal guaranteed price of EUR 65/GC or EUR 150/MWh respectively.
- Application of quotas to suppliers and DSOs taking account of the reductions to be applied to energy-intensive end-customers (branch agreements), cancellation of GC by the suppliers for the purpose of fulfilling their quota obligation in Wallonia (or in the Brussels-Capital Region) and, where appropriate, fines imposed by the CWaPE on suppliers for failing to fulfil their quota obligations.

The final part of the report deals with the prospects for development of the green certificates market over the period 2013-2020 and, in particular, the prospects for reducing the imbalance between supply and demand.

Data relating to the guarantee of origin labels (GOL) market is included in another report, not yet published, concerning an assessment of each supplier's fuel mix in terms of its entire electricity generation and in terms of each product sold by the supplier (AGW-PEV, Art. 27).

2. DEVELOPMENT OF GREEN ELECTRICITY IN WALLONIA

2.1 Support mechanism for the generation of green electricity

Pursuant to European Directives 2009/28/EC (previously 2001/77/EC) and 2004/8/EC, a mechanism to support the generation of electricity from renewable sources of energy and high-quality cogeneration has been in place in Wallonia since 1 January 2003.

As in Flanders and Brussels, Wallonia has opted for a green certificates mechanism, which is managed by the CWaPE.

[1] *This decree was amended by the decrees of 25 January 2007, 20 December 2007, 8 January 2009, 14 January 2010, 4 February 2010, 15 July 2010, 23 December 2010, 24 November 2011 and 1 March 2012.*

As regards development of electricity generated from renewable energy sources (RES-E), the mechanism established in Wallonia proved to be particularly effective insofar as the indicative target of 8% up to 2010 set for Wallonia was achieved by 2008.

Green certificates are awarded by the CWaPE on a quarterly basis to every producer of green-certified electricity in proportion to the quantity of net electricity generated and according, on the one hand, to the estimated extra cost associated with generation in the sector and, on the other hand, the measured environmental performance (amount of CO2 saved) of the installation in comparison to benchmark standard electricity generation. Since 2010, for installations of 10 kW or less, a portion of the green certificates have been awarded in advance for an estimated amount corresponding to 5 years of generation, with a limit of 40 GC per generating site. This advance awarding of certificates must then be repaid by the producer based on readings of electricity generated transmitted on a quarterly basis to the CWaPE within a maximum period of 5 years.

The green certificates awarded may be sold by producers during their period of validity (set at 5 years) to suppliers or system operators to enable them to fulfil their quota obligations. If they are unable to find a buyer, producers may also invoke, subject to certain conditions, Elia's obligation to purchase at the guaranteed minimum price of EUR 65/GC.

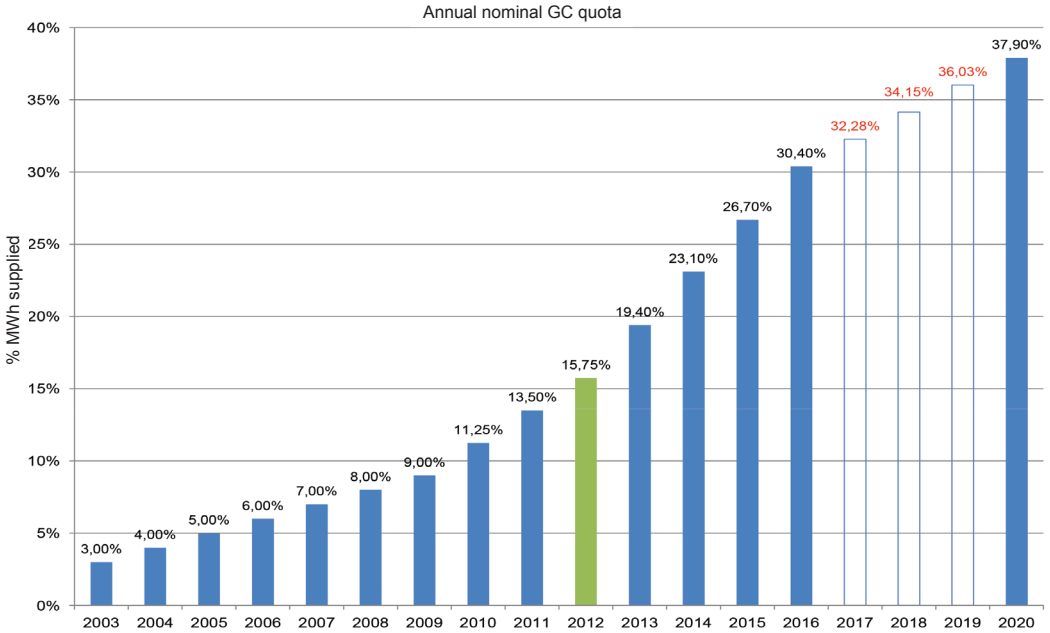
Funding for this support mechanism is therefore assured via a public service obligation (PSO) on the part of electricity suppliers and system operators. Like all PSOs, this obligation is passed along to the end-customer. Nevertheless, energy-intensive users benefit from partial exemptions, subject to entering into agreements with the Region (branch agreements) with a view to improving their energy efficiency over the short, medium and long term.

For each year, the Government of Wallonia sets the quota of green certificates to which the suppliers and system operators are subject. They then return the GC on a quarterly basis to the CWaPE under penalty of a fine, currently set by the Government of Wallonia at EUR 100/missing GC.

In 2012, the quota was fixed at 15.75% of the electricity supplied in Wallonia. The quotas for the period 2013-2016 as well as the quota for 2020 were set out by the Government of Wallonia on 1 March 2012.

The figure below illustrates the change in quotas over the period 2003-2020. In the figure, the values indicated for the period 2017-2019 are provided for information purposes only.

Figure 1: Changes in nominal quotas of green certificates over the period 2003-2020



2.2 Development objectives for green electricity up to 2020

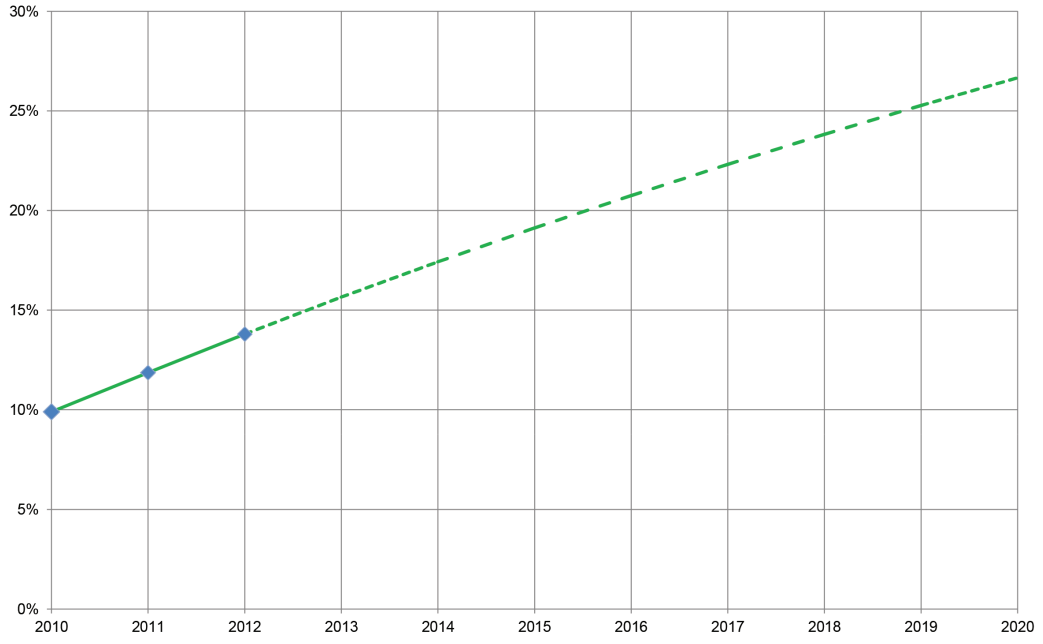
European Directive 2009/28/EC assigns Belgium a binding target of generating 13% of its final energy consumption from renewable energy sources by 2020.

Within the framework of this new directive, Belgium anticipates generating 20.9% of final energy consumption from renewable energy sources in 2020, amounting to approximately 23 TWh.

For Wallonia, the objective is to generate 8 TWh of electricity from renewable energy sources, amounting to a little over 25% of estimated final energy consumption for 2020. Wallonia has also set itself a target of generating 3 TWh from high-quality cogeneration by 2020.

The figure below illustrates the expected changes in the generation of electricity from renewable energy sources (RES-E) over the period 2010-2020.

Figure 2: Contribution of RES-E to final energy consumption in Wallonia (Source: SPW - Walloon energy audits 2010 and 2011 / CWaPE Projections 2012-2020)



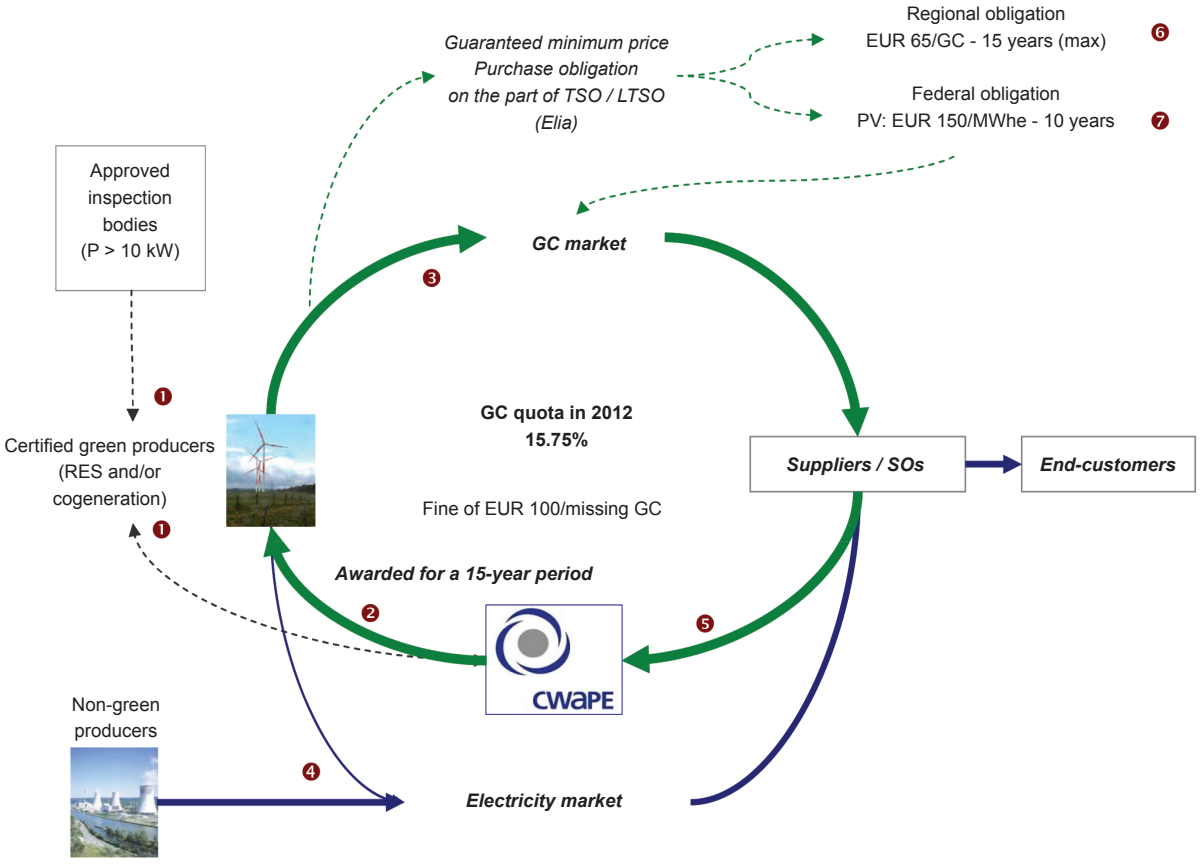
These regional targets are seen as realistic by the CWaPE and were given effect in 2012 by the setting of quotas for green certificates over the period 2013-2020.

Nevertheless, the CWaPE believes that realising these objectives by 2020 requires clarification and rapid stabilisation of the legal framework for the promotion and development of green electricity in the broad sense. This was not possible in 2012, thereby severely curbing the funding of new projects, mainly in wind and biomass, with a well-known exception for both domestic and professional photovoltaic solar energy, which benefits from a much more favourable level of support.

2.3 How the support mechanism works

The diagram below outlines the current support mechanism for green certificates (GC).

Figure 3: Operating principle



Every site generating green electricity must submit a preliminary application for certification (PAC) for green certificates (GC) to the CWaPE. A certificate of guarantee of origin (CGO) prepared by an approved inspection body must be enclosed with the application[2] to certify that the installation is compliant. Once the application is accepted, the site is registered in the CWaPE database (**1**) and can benefit from the awarding of GC for a period of 15 (or 10) years.

Every quarter, the producer sends meter readings to the CWaPE. Based on these readings, the CWaPE awards GC for the site generating the electricity (**2**). Once in possession of the GC, the producer can sell them to any player active in the GC market (**3**), independently of the sale of the actual electricity generated (**4**). These GC are valid for a period of 5 years.

Every quarter, the volumes of electricity in Wallonia reported by the suppliers and, in part, measured by the system operators, are sent to the CWaPE. Based on this information, the suppliers and system operators are required to return[3] to the CWaPE a quota of GC in proportion to the quantity of electricity supplied over the quarter[4]. A fine of EUR 100 per missing GC is applied (**5**).

[2] Excluding installations with a net generating capacity of ≤ 10 kWe that benefit from a simplified procedure (AGW-PEV, Art. 6 and Art. 7(2)) where the CGO is prepared directly by the CWaPE. These sites also benefit from a mechanism for the advance awarding of green certificates corresponding to the 5 first years of operation, with the number of GC limited to 40 (AGW-PEV, Art. 13(2)).
[3] This operation results in the green certificates being cancelled and rendered unusable in the database.
[4] A reduction in quota is provided for end-customers consuming more than 1.25 GWh per quarter and per operating headquarters that have signed an agreement with the Walloon Region with a view to improving their energy efficiency (AGW-PEV, Art. 25(5)).

As an alternative solution to the sale of GC, a system obliging the purchase of GC by the Local Transmission System Operator (LTSO), Elia, at a minimum guaranteed price of EUR 65 has been provided for in the decree (**6**). These GC are then cancelled and they can no longer be resold.

Provision for a guaranteed price has also been made by the Federal Government. For example, for photovoltaic systems, the guaranteed price is EUR 150 per MWhe. These GC purchased by the Transmission System Operator (TSO), which is also Elia, may still be resold on the GC market (**7**).

2.3.1. Definition of green electricity generation (Decree, Art. 2)

Renewable energy sources: any source of energy, other than fossil fuels and fissile material, the consumption of which does not limit its future use, in particular hydropower, wind energy, solar energy, geothermal energy and biomass (Decree, Art. 2.4°). ***Biomass***: renewable material (in solid, liquid or gaseous form) obtained from the biodegradable fraction of products, waste and residue from agriculture (including plant and animal substances), forestry and related industries, as well as from the biodegradable fraction of industrial and domestic waste (Decree, Art. 2, 4°a).

Cogeneration: the simultaneous generation, in a single process, of thermal and electrical and/or mechanical energy (Decree, Art. 2, 2°a). ***High-quality cogeneration and trigeneration***: combined generation of heat (or cold) and electricity, in accordance with the customer's heating or cooling requirements, which saves energy compared to the separate generation of the same quantities of heat, electricity and, where appropriate, cold, in reference modern installations, the annual operating efficiencies of which are defined and published on an annual basis by the CWaPE (Decree, Art. 2, 3°).

Green electricity: electricity generated from renewable energy sources or from high-quality cogeneration, the generation of which produces *minimum savings in carbon dioxide of 10% compared to carbon dioxide emissions*, defined and published on an annual basis by the CWaPE, from standard generation in modern reference installations (Decree, Art. 2, 5°).

2.3.2. Principles for awarding green certificates (Decree, Art. 38)

A green certificate is a transferable instrument awarded by the CWaPE to producers of green electricity for a quantity of net kWh generated corresponding to 1 MWhe divided by the amount of carbon dioxide saved (Decree, Art. 38(2) and 38(7)). By way of derogation, the Government may, after the CWaPE has given its opinion, apply a *multiplier coefficient*, where appropriate, on a time-based sliding scale, to the number of green certificates awarded for the electricity generated from photovoltaic solar panels, in accordance with the procedures it lays down (Decree, Art. 38(6)).

The carbon dioxide savings rate is determined by dividing the amount of carbon dioxide saved by the sector being examined, by the carbon dioxide emissions from standard electricity generation, the emissions for which are defined and published on an annual basis by the CWaPE (Decree, Art. 38(2)).

Carbon dioxide emissions are the emissions generated by the entire green electricity generation cycle encompassing the production and transportation of the fuel, the emissions during any combustion and, where appropriate, waste processing. In a hybrid installation, all the installation's emissions are taken into account. The different ***carbon dioxide emissions coefficients*** for each sector being considered are approved by the CWaPE (Decree Art. 38(4)).

Upper and lower capacity thresholds: the carbon dioxide savings rate is limited to 1 for electricity generated by an installation of more than 5 MW. Below this threshold, it is limited to 2 (Decree, Art. 38(2))[5]. As regards hydropower, high-quality cogeneration or installations generating electricity from biomass, green certificates are awarded for the electricity generated by these installations up to 20 MW capacity (Decree, Art. 38(8)).

[5] *Nevertheless, where an installation, which recovers mainly biomass, with the exception of wood, produced by industrial activities on the site of the installation, uses a particularly innovative process that is intended to promote sustainable development, the Government may, after the CWaPE issues an opinion on the particularly innovative nature of the process used, decide to limit to 2 the carbon dioxide savings rate for all production from the installation resulting from the sum of all power developed on the same generation site, within a limit below 20 MW (Decree, Art. 38(3)).*

Reducing coefficients: after the CWaPE issues an opinion, the Government may reduce the number of green certificates awarded according to the age of the installation generating the green electricity, its rate of return and the generating sector to which it belongs (Decree, Art. 38(5)).

2.4. Conditions and procedure for awarding green certificates

2.4.1. Awarding criteria and electricity metering code

The number of green certificates awarded is proportional to the net electricity generated by the installation (Eenp, expressed in MWhe):

Number of GC = k x Eenp
with k: the awarding rate, expressed in [GC/MWh]

The net electricity generated is the gross electricity generated minus the electricity required by the operational components, i.e. energy-consuming equipment (primary, electricity, heating, cooling) required for the electricity generation cycle, including fuel production and, where appropriate, treatment of waste (AGW-PEV Art. 2, 10°).

Green certificates are awarded both for the electricity consumed by the producer and the electricity injected into the network or transmitted via direct lines (AGW-PEV, Art. 15(2)). The potential export of green electricity generated does not therefore have any impact on the awarding of green certificates. The net electricity generated (Eenp) taken into consideration is measured before any transformation during injection into the network (AGW-PEV, Art. 15(3)).

The awarding rate (k) depends on:

- the measured *environmental efficiency* of the installation (amount of CO2 saved);
- the *decentralised nature* (power thresholds, limit on CO2 savings); Since 1 January 2008, for biomass sectors, the awarding of green certificates is limited to the first tranche of 20 MW as with the hydropower and high-quality cogeneration sectors (Decree, Art. 38(8))[6];
- the *rate of return of the sector* ("k" reducing factors after 10 years and "q" for legacy installations; multiplier coefficients for photovoltaic energy).

A metering code[7], established by the Minister pursuant to article 9 of the AGW-PEV, sets out the principles and methods applicable in terms of measuring the volume of energy taken into account for calculating the number of green certificates to award to sites generating green electricity (AGW-PEV Art. 15(3)).

For further information on calculating the number of certificates to be awarded, a software program available on the CWaPE website offers a more detailed compilation of the calculation methods to be used for most green electricity generation sectors.

2.4.2. Certification of the electricity generation site (CGO)

The green certificates (and the guarantee of origin labels) are awarded for the electricity generated by a generation site provided that an approved inspection body[8] has verified that the volume of electricity generated from this site can be clearly identified and measured, in particular to certify the sources of energy (the renewable nature of the energy) and the efficiency of the conversion (the output from the cogeneration). In practical terms, an inspection body issues a certificate of conformity for an installation, called a certificate of guarantee of origin (CGO), to electricity generating installations with energy readings that comply with the Metering Code. Installations with an output of 10 kW or less benefit from an exemption[9] which removes the requirement for the involvement of an inspection body. For these installations, the Certificate of Guarantee of Origin is supplied free of charge by the CWaPE.

[6] *For the biomass sector, this provision is only aimed at generating sites whose certificates of guarantee of origin were awarded after 26/10/2007 (Decree of 04 October 2007 – Art. 20).*
[7] *See Ministerial Order of 12 March 2007 setting out the applicable procedures and metering code for measuring energy volumes, published in the Belgian Official Gazette of 20 April 2007– Appendix «procedures and metering code for electricity generated from renewable energy sources and/or cogeneration».*
[8] *The list of approved inspection bodies can be consulted on the CWaPE website: www.cwape.be.*
[9] *AGW-PEV, Art. 7(2)*

Among other things this document mentions the energy sources used, the technology used to generate the electricity and the net generating capacity of the installation. It sets out, among other things, the metering algorithms, i.e. the mathematical equations used to calculate the different volumes of energy. These include: the metering algorithm for net electricity generated (Eenp) - electricity consumed for own use (Eac) - electricity supplied locally (Eeloc); - electricity injected into the network (Eeinj); the metering algorithm for the net heat recovered (Eqnv); the metering algorithm for net cooling energy recovered (Efnv); the metering algorithm for input energy (Ee).

In addition to random, targeted inspections organised by the CWaPE (AGW-PEV, Art. 8) and post-modification inspections, each installation must be inspected by an approved body (AGW-PEV, Art. 7) at a frequency based on the installation's net generating capacity: for installations of more than 20 kW, an annual inspection is required; for installations of between 10 and 20 kW, an inspection is required every 5 years.

2.4.3. Preliminary Application for Certification (PAC)

Any producer wishing to obtain green certificates (and/or guarantee of origin labels) must submit a preliminary application for certification to the CWaPE accompanied by a copy of the certificate of guarantee of origin (AGW-PEV Art. 10). The CWaPE verifies that the application is complete and complies with the legislation and notifies the producer of its decision. Notification of acceptance by the CWaPE guarantees the right to obtain green certificates for a period of 15 years (AGW-PEV Art. 15(1)). However, it should be noted that generating sites consisting of one or more generating units which have undergone significant modification within the meaning of article 15b of the AGW-PEV may be awarded green certificates for a further period of 15 years. The same applies for any new generating unit on an already certified site.

Since 1 January 2008, photovoltaic (PV) solar power installations of 10 kW or less benefit from a simplified procedure[10], both for the processing of requests to the Distribution System Operator (DSO) to connect the installation and for applying compensation as regards the volume of electricity drawn from and injected into the network, and for the processing of the preliminary application for certification to the CWaPE.

Since 1 October 2010, a new simplified procedure has come into force, known as the "one-stop-shop" procedure, where all of these requests are submitted and processed directly by the DSO. After a duly completed form is received, the DSO firstly deals with the request to commission the installation (including applying compensation) and then inputs the dossier in the CWaPE database. The DSO has a period of 45 calendar days to process these requests, including the inputting of dossiers in the CWaPE database.

At the end of 2011, the one-stop-shop procedure was modified, following consultation, to take account of the new methods for awarding green certificates for installations commissioned from 1 December 2011 onwards.

At the same time, certain modifications were also made based on experience from the previous year. These modifications include, for example, authorisation for immediate commissioning once the installation is confirmed as compliant by an approved inspection body. This provision avoids penalising a producer in case of a delay in the processing of the application by the DSO. However, this provision comes with an obligation on the part of the producer to submit its application to the DSO within a period of 45 days from the date of confirmation that the installation is compliant. In case of failure to meet this deadline, a second inspection is required by the DSO, with the period of production between the two inspections not conferring any entitlement to the awarding of green certificates.

This so-called "fit and inform" procedure was already in force in Flanders and now applies in Wallonia, thereby enabling the regulations and practice on the ground to be reconciled without compromising the DSOs' legitimate requirements relating to safety on the electricity distribution networks. The methods for applying compensation have also been the focus of particular attention to ensure that they are handled in the same way throughout Wallonia.

[10] *AGW-PEV, Art. 6a*

2.5. Higher generation costs and level of support for green producers

In order to ensure the development of green electricity generation in Wallonia, the green certificates must offer a level of support that compensates for the higher generation costs of these sectors compared to standard generation sectors. These higher generation costs must, among other things, take account of the return on the capital invested.

For each green electricity generation sector, the higher generation costs are evaluated on a periodic basis based on reference technical-economic characteristics used and published by the CWaPE.

Based on this analysis, the levels of support for each sector can be adjusted by the Minister for Energy ("k" reducing factor after 10 years) or by the Walloon Government (multiplier coefficients for photovoltaic solar power).

2.5.1 Reference rate of return

For each green electricity generation sector, the expected rate of return on capital invested is communicated to investors via the fixing of a reference rate of return[11] by the Minister for Energy, based on a proposal from the CWaPE[12]. These rates of return take account of the different risk factors (technological, fuel market prices, heat recovery, etc.).

Table 1: Reference rate of return

ID.	Generating sectors	With cogen.	Without cogen.
1.	Photovoltaic	-	7%
2.	Run-of-the-river hydropower	-	8%
3.	Pumped storage hydropower	-	8%
4.	Wind	-	8%
5.	Biogas - Engineered landfill	9%	8%
6.	Biogas - domestic and similar waste sorting centre (SORTING)	9%	8%
7.	Biogas - wastewater treatment plant (WWTP)	9%	8%
8.	Biogas - agriculture products/residue/waste (AGRI)	12%	11%
9.	Biogas - agricultural and agri-food industry products/residue/waste (MIXED)	12%	11%
10.	Liquid biofuel 1 (used products/residue or waste)	9%	8%
11.	Liquid biofuel 2 (non-refined products/residue)	12%	11%
12.	Liquid biofuel 3 (non-refined products/residue)	12%	11%
13.	Solid biofuel 1 (waste)	9%	8%
14.	Solid biofuel 2 (industrial residue)	12%	11%
15.	Solid biofuel 3 (waste)	12%	11%
16.	Fossil fuel cogeneration (natural gas, fuel oil, recovered gas and heat)	11%	-

[11] *See Ministerial Order of 21 March 2008 setting the reference rate of return used to determine the «k» factor.*
[12] *CD-7I18-CWaPE-175" - Supplementary opinion concerning the Walloon Government's draft decree implementing various measures to promote the generation of green electricity from new sources of renewable energy or cogeneration - Reference rate of return for the purpose of determining the «k» reducing coefficient.*

2.5.2. “q” factors applied to legacy installations

Since 1 January 2008, the number of green certificates allocated to installations commissioned before 1 May 2001, referred to as “legacy” installations, has been reduced pursuant to a “q” coefficient, set for each electricity generation sector by the Government, after the CWaPE has issued an opinion (AGW-PEV, Art. 15a and annex).

2.5.3. Review of “k” factors applied after 10 years

Since 1 January 2008, the length of time for which green certificates are awarded has increased from 10 to 15 years subject, nevertheless, to application of a reducing coefficient (“k” factor) for the last five years[13]. This factor is determined by the Minister, for each green electricity generation sector, following a proposal from the CWaPE and is adjusted every three years (AGW-PEV, Art. 15). The table below lists the values in force since 1 October 2011.

Table 2: “K” factor applied after 10 years

ID	Sectors	K coefficient
0.	Power capacity ≤ 10 kW	
	Photovoltaic < = 10 kWe until 30 November 2011	100
	Photovoltaic < = 10 kWe from 1 December 2011	0
	Other sectors < = 10 kWe	100
1.	Photovoltaic > 10 kWe	100
2.1	Run-of-the-river hydropower < = 500 kWe	100
2.2	Run-of-the-river hydropower < = 1 MWe	65
2.3	Run-of-the-river hydropower > = 1 MWe	25
3.	Pumped storage hydropower	25
4.	Wind	100
5.	Biogas - Engineered landfill	25
6.	Biogas - domestic and similar waste sorting centre	25
7.	Biogas - wastewater treatment plant (WWTP)	25
8.	Biogas - agriculture products/residue/waste (AGRI)	100
9.1	Biogas - agricultural and agri-food industry products/residue/waste (MIXED) < = 1 MWe	85
9.2	Mixed biogas > 1 MWe	55
10.	Liquid biofuel 1 (products/used or waste residue)	25
11.1-2	Liquid biofuel 2 (non-refined products/residue) < = 1 MWe	100
11.3	Liquid biofuel 2 (non-refined products/residue) < = 5 MWe	75
11.4-5	Liquid biofuel 2 (non-refined products/residue) > 5 MWe	75
12.	Liquid biofuel 3 (refined products/residue)	75
13.1	Solid biofuel 1 (waste) < = 1 MWe	100
13.2	Solid biofuel 1 (waste) < = 5 MWe	25
13.3	Solid biofuel 1 (waste) < = 20 MWe	25
13.4	Solid biofuel 1 (waste) > 20 MWe	25
14.	Solid biofuel 2 (industrial residue)	100
15.	Solid biofuel 3 (pellets and energy crops)	100
16.1	Fossil fuel cogeneration (natural gas, fuel oil, recovered gas and heat) < = 1 MWe	100
16.2-3-4-5	Fossil fuel cogeneration (natural gas, fuel oil, recovered gas and heat) > 1 MWe	25

[13] *The values in force for the period 2003-2010 are listed in the Ministerial Order of 21 March 2008. The period of application for these values was extended until 30 September 2011. The Ministerial Order of 29 September 2011 sets the values applicable from 1 October 2011.*

It is important to note that pursuant to the revision of this "k" factor in September 2011 the length of time for which green certificates are awarded dropped from a de facto 15 years to 10 years for photovoltaic solar power installations with power capacity of under 10 kW. This revised factor applies for installations ordered[14] from 1 December 2011.

2.5.4. Review of multiplier coefficients for the solar power sector

For the photovoltaic solar power sector, the level of support is augmented by the application of a multiplier coefficient in place of a coefficient based on the rate of CO2 savings (Decree, Art. 38(6)). The multiplier coefficients applicable according to the power of the installation are listed in Art. 15c of the AGW-PEV. These coefficients may be revised by the Government based on a report from the CWaPE.

In November 2009, the CWaPE indicated, in its opinion concerning advance awarding (CD-9k24-CWaPE-263), that the support regime provided for 2010 for SOLWATT installations was still too generous, offering rates of return of 16% instead of the set 7%: *"While a decrease in the rate of return can be seen in 2010 compared to 2009, with the withdrawal of the bonus being only partially offset by the reduction in the cost of the installations, the rate of return nevertheless remains significantly higher than the 7% reference rate of return set for the photovoltaic sector in the Walloon Region. These findings thereby confirm the analysis published by the CWaPE at the end of 2007 before implementation of the SOLWATT plan, highlighting, in particular, the risk of overcompensating for the higher costs of generation for photovoltaic solar power installations with a capacity equal to or lower than 10 kW."*

In this opinion, the price considered for the installations was EUR 5,500/kWc (excl. VAT). At the end of 2011, the prices were EUR 3,000/kWc (excl. VAT). With an unchanged support regime (including reduction in tax), this drop of almost 50% in two years in the cost of installations led to enormous rates of return, up to 25%, thereby attracting many individuals and SMEs as well as numerous third-party investors into the segment.

In November 2011, the Walloon Government decided on a gradual reduction in the support regime for SOLWATT installations between 1 December 2011 and 31 March 2013. Like with the "k" factor (see above), the rules for its implementation provided for the possibility of benefitting from the previous regime, subject to the installation being ordered before 1 December 2011 and the installation being completed within a period of 6 months (period extended for the days of inclement weather following an interpretative memo adopted in May 2012).

The table below lists the 4 regimes for the awarding of green certificates available for installations commissioned in 2012 according to the date of the order and the date of commissioning (RGIE [General Regulations for Electric Installations] inspection). It should be noted that from 1 April 2013, the normal regime applies, i.e. 1 GC/MWh for 10 years.

Table 3: Regimes for the awarding of green certificates for installations commissioned in 2012

SOLWATT regimes	R1	R2	R3	R4
Final order date	30/11/2011	31/03/2012	31/08/2012	31/03/2013
Final date for RGIE inspection (excluding bad weather)	31/05/2012	30/09/2012	31/01/2013	30/09/2013
Duration of award	15 years	10 years	10 years	10 years
Rate of award	Rate of award per tranche	Rate of award per tranche	Rate of award according to sliding scale over time	Rate of award according to sliding scale over time
Number of GC over the period of the award (per one MWh generated on an annual basis)	105-90	70-60	60	50

[14] Article 15 of the AGW-PEV provides, by way of exemption, that the k factor that applies is that in force on the date on which an advance payment of at least 20 % of the total investment is made, or the date on which a green loan, as referred to in article 2 of the law of 27 March 2009 for economic recovery, corresponding to all or part of the investment has been agreed, or the date of awarding of the public tender for contracting authorities subject to the law of 24 December 1993 on public procurement contracts and certain contracts for works, supplies and services. This exemption applies on condition that the installation is declared compliant by the RGIE authorised inspection body within 6 months of the date of the decision to invest. If not, it is the date on which the RGIE authorised inspection body declares the installation to be compliant that will be taken into account (date of inspection).

2.5.5. Level of support

In addition to the value derived from the electricity generated, the income that a green producer can expect to earn from the sale of its green certificates will depend, on the one hand, on the actual rate of award of green certificates (GC/MWh) and, on the other, on the selling price of its green certificates (EUR/GC):

Income from green certificates = k x GC price (EUR/MWh)

The following table gives, by way of example, the theoretical maximum (GC price = EUR 100, value of the fine) that a green producer can expect during the first ten years (before application of reducing factors and excluding cases of "legacy" installations), as well as the minimum income guaranteed (if the producer satisfies the criteria) by the regional (GC price = EUR 65) or federal mechanism.

Table 4: Level of support for different generation sectors (P> 10 kW)

Sectors (and total installed capacity)	Nominal rate of award (GC/MWh)	Guaranteed minimum level of support (EUR/MWh)	Theoretical maximum level of support (EUR/MWh)
Fossil fuel cogeneration (≤ 20 MW)	0.1 to 0.4	6.5 to 25	10 to 40
Biomass (≤ 20 MW)	0.1 to 1	6.5 to 65	10 to 100
Hydropower (≤ 20 MW)	1	65	100
Wind	1	65	100
Biomass cogeneration (≤ 5 MW)	0.1 to 2	6.5 to 130	10 to 200
Photovoltaic (10 - 250 kWc)	1.2 to 6	160 to 390	170 to 600
Photovoltaic (> 250 kWc)	1 to 4.1	65 to 265	150 to 408

2.6. The green certificates market

2.6.1. Supply: awarding of green certificates to green producers - (AGW-PEV, Art. 13)

Every quarter, each producer sends its meter readings to the CWaPE. Based on these readings and the metering algorithms (see 2.4.2 - Certification of the electricity generation site), the CWaPE calculates the rate of award (GC/MWh) and awards a number of green certificates in proportion to the quantity of MWh generated in each certified installation generating electricity. In accordance with the provisions provided by the AGW-OSP of 30 March 2006, it is when submitting its reading that the producer must inform the CWaPE of its decision to sell the green certificates to be awarded on the market or to activate the guarantee of EUR 65/GC. This choice is final.

By way of exemption, for applications submitted from 1 December 2009, generation sites with installed capacity of 10 kW or less benefit from advance awarding of green certificates provided that the installation in question did not avail of the bonus provided for in the Ministerial Order of 20 December 2007, relating to the terms and procedure for awarding bonuses aimed at encouraging the rational use of energy, and that the producer has formally waived this bonus. The green certificates are awarded in advance at the time of the notification by the CWaPE of the decision to approve the application, up to the estimated number of green certificates to be received for a period of generation of five years and subject to a maximum of 40 green certificates. The producers are still required to submit their meter readings each quarter in order to, firstly, repay the number of GC awarded in advance and, secondly, to benefit from the awarding of GC over the rest of the 15-year period.

The green certificates are valid for 5 years. The CWaPE issues the green certificates in electronic form. Each producer has access to the CWaPE extranet service from which it can check the status of its account in which the awarded green certificates are held. After each awarding of GC, the CWaPE provides the producers with a detailed breakdown of the award as well as the status of their account.

Producers with a photovoltaic solar power installation can also submit their quarterly readings online via the CWaPE extranet service. This service can be accessed, excluding periods of maintenance, 24 hours a day, 7 days a week. For each reading submitted, the CWaPE performs an automated check of the accuracy of the quantity of electricity being generated. In the CWaPE extranet, the message “calculation error” is displayed for an index reading when the alarm threshold is exceeded. After a systematic check of the file, an operator from the CWaPE either releases the award or requests an explanation from the producer or the DSO, or dispatches an authorised inspection body to conduct an on-site inspection. In general, the answers received enable the block to be removed. Less frequently, the CWaPE awards GC based on average production (award based on undisputed production).

In the case of third party investment (and other similar setups), the CWaPE has created, for the players, a model assignment agreement for the right to obtain green certificates. The producer, referred to as the assignor, transfers to the assignee the right to obtain green certificates awarded by the CWaPE for green electricity generated by its photovoltaic installation. The transfer is made in return for the assignee’s services. Based on the model assignment agreement developed by the CWaPE, the assignor grants the assignee authority to manage all administrative and technical aspects with regard to the CWaPE or the DSO for the duration of the assignment, including management of the green certificates account and the periodic transmission of meter readings. The assignees must first register with the CWaPE and a list of these registered assignees is published on the CWaPE website.

2.6.2. Structure of the market

2.6.2.1. Database (AGW-PEV, Art. 21)

The authenticity of green certificates is guaranteed by their registration in a centralised database managed by the CWaPE. This register of green certificates issued includes information about the generation site, the producer, the date of issue of the green certificates, the party holding them and any recorded operations (awarding, transaction, cancelation for the quota, expiration).

Each player in the green certificates market (producer, assignee, intermediary or broker, supplier and DSO) has an account opened in its name, linked, where appropriate, to its generation sites. Each player has secure access to the account (extranet service at www.e-cwape.be) enabling it to carry out all basic operations (view accounts, input readings, sale or purchase transactions, cancellation for the quota).

2.6.2.2. Transactions

The CWaPE must be notified of every transaction relating to a green certificate so that it can be authenticated and recorded in the register of green certificates.

Market players trade green certificates without any CWaPE involvement. Once agreement has been reached, the seller gives notice of the transfer of ownership of the green certificates via the extranet or by completing the form provided for this purpose.

The CWaPE provides players with an account statement giving details of transactions carried out as well as the status of their account.

2.6.2.3. Intermediaries

Any private individual or corporate entity that registers with the CWaPE may conduct transactions relating to green certificates. In this way, for example, end-customers can choose to purchase the green certificates associated with their consumption directly and then transfer them to their electricity suppliers and, in this way, negotiate a price for electricity exclusive of green certificates.

BELPEX, the Belgian power exchange, has set up a green certificates exchange (BELPEX GCE) which opened for business in 2009. The advantage of this exchange is that it guarantees anonymity between professional buyers and sellers at the time of the transaction and provides a spot price for the green certificate. Given the current imbalance in the green certificates market, BELPEX, however, decided to suspend trading sessions in 2012.

A number of intermediaries are active in the green certificates market. Some of them specialise in the purchase of green certificates from private individuals while others only target industrial producers. Brokering of green certificates is also permitted subject to compliance with a special procedure and opening a specific green certificates account reserved for brokering.

The CWaPE publishes a list of potential buyers of green certificates on its website (intermediaries, suppliers, DSOs and industrial customers). This list specifies, among other things, which buyers specialise in the purchase of green certificates from private individuals (SOLWATT installations).

2.6.3. Demand: return quota for suppliers

2.6.3.1. Obligation

Each supplier is required to return, on a quarterly basis[15], to the CWaPE, a number of green certificates corresponding to the number of MWh supplied to end-customers located in Wallonia, multiplied by the quota in force. For DSOs, the quota applies to its own electricity consumption and, where appropriate, to any electricity delivered to end-customers supplied by the operators. For holders of a limited licence for the purpose of supplying themselves, the quota applies based on the electricity consumed that passed over the transmission system, the local transmission system or the distribution system (AGW-PEV, Art. 25(2)).

There are four stages to the “return quota” procedure for suppliers:

1. Transmission of quarterly meter readings to the CWaPE;
2. Calculation by the CWaPE of the number of green certificates to be returned based on the quota and any reductions;
3. Cancellation of green certificates intended for the “return quota”;
4. Calculation by the CWaPE of the amount of fines to be applied, where an insufficient number of green certificates has been cancelled.

The quota to be achieved by the suppliers and DSOs is set as follows (AGW-PEV, Art. 25(3)):

…

- **15.75% between 1 January 2012 and 31 December 2012;**
- 19.40% between 1 January 2013 and 31 December 2013;
- 23.10% between 1 January 2014 and 31 December 2014;
- 26.70% between 1 January 2015 and 31 December 2015;
- 30.40% between 1 January 2016 and 31 December 2016;
- 37.90% between 1 January 2020 and 31 December 2020.

For the period from 1 January 2017 to 31 December 2019, annual quotas will be set, at the latest, in 2014, based on an evaluation carried out in advance by the CWaPE. This evaluation will cover the appropriateness of the annual quotas set for the years 2012 to 2016, with the objective of aiming for 20% of final energy consumption being from renewable energy, including a contribution of 8,000 GWh of renewable energy generated in Wallonia, taking account of the growth trends in renewable energy sectors as well as the European and Belgian context in terms of targets for renewable energy and high quality cogeneration, changes in the socio-economic context and energy prices for all categories of consumers, including domestic customers.

These are “nominal” quotas which do not take account of reduction opportunities for suppliers supplying operating headquarters that satisfy the conditions for a reduction in the quota of green certificates (see next section). When the reductions granted are taken into account, they are referred to as “effective” quotas.

Depending on changes in the green electricity market, the Walloon Government may review the aforementioned quotas as part of a three-year evaluation process and, for the first time, in 2014 (AGW-PEV, Art. 25(4)).

[15] *Before the end of the second month following the quarter just ended (i.e. 31 May, 31 August, 30 November and 28 February).*

Based on this, the Government will set new annual quotas so as to always cover a total period of 8 years. The new quotas will be set so as to aim for a target of 20% of final energy consumption from renewable energy in 2020, and, for the period beyond 2020, for an overall target of renewable energy generation to be determined by the Government for the first time by 31 December 2014, at the latest, based on a prior opinion of the CWaPE, transmitted, at the latest, by 31 December 2013. The green certificates taken into account in the quotas are currently limited to green certificates awarded in Wallonia[16].

Furthermore, the Brussels-Capital Region acknowledges green certificates awarded to any certified installation generating green electricity in the Walloon Region within the 10 years following the industrial commissioning of any such installation[17].

2.6.3.2. Reduction (AGW-PEV, Art. 25(5))

Since 1 January 2004, suppliers supplying an end-customer whose consumption for the quarter under consideration is greater than 5 GWh for an operating headquarters and which have signed an agreement with the Walloon Region aimed at improving energy efficiency in the short, medium and long term (e.g. branch agreements, etc.) may benefit from a reduction in the number of green certificates to be submitted to the CWaPE.

From 1 January 2008, the eligibility threshold for operating headquarters has changed from a minimum quarterly consumption of 5 GWh to 1.25 GWh. The number of potentially eligible headquarters is therefore higher.

The applicable reduction has also been increased based on the following formulae:

- For the quarterly tranche of electricity consumption between 0 and 5 GWh inclusive, application of the quota for the year preceding the current year increased by half of the growth in the annual quota;
- For the quarterly tranche of electricity consumption between 5 and 25 GWh inclusive, application of 50% of the annual quota;
- For the quarterly tranche of electricity consumption above 25 GWh, the application of an annual fixed quota of 2% has been maintained.

Where the end-customer is supplied by several suppliers for a single operating headquarters, the reduction in the number of green certificates is divided up in proportion to the volumes supplied by each supplier.
Any reductions in costs resulting from the provisions in this paragraph must be passed along directly by the suppliers to each end-customer that is the source of such reductions.

Guidelines concerning the procedure to be followed in order to benefit from this reduction in quota as well as the methods of calculation are available on the CWaPE[18] website.

The AGW-PEV provides that the Walloon Government must, at the latest by 1 January 2013, set out a new system for reducing the number of green certificates to be submitted to the CWaPE so that the total volume of green certificates benefitting from this reduction corresponds to a maximum of 23% of the nominal quota. These reductions will be allocated to professional customers (electrically-intensive large companies and SMEs) that have signed, directly or through a federation, an agreement with the Walloon Region aimed at improving their energy efficiency in the short, medium and long term as well as at domestic end-customers. In the absence of any government decision in this regard, the current system will remain in force.

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[16] Decree. Art. 39: «The conditions and procedures according to which similar certificates awarded to producers of green electricity generated in other regions in Belgium, in the areas referred to in article 6 of the law, or abroad, may be taken into account in the quota mentioned in paragraph 1, are determined by the Government, following an opinion from the CWaPE».
[17] Order of the Brussels Minister for Energy dated 3 May 2005 recognising Walloon green certificates so that they can be taken into account for compliance with the obligation imposed on suppliers in the Brussels-Capital Region by article 28(2) of the electricity decree.
[18] CD-10e4-CWaPE, Guidelines relating to the general procedure for the awarding of a quarterly reduction in the quota for operating headquarters; CD-10b18-CWaPE, Guidelines relating to the methods for calculating quota reductions for the period 2010-2012.

The table below gives a summary of the quotas with the applicable reduction for 2011, 2012 and 2013 for the different quarterly tranches of consumption.

Table 5: Quotas with reduction for the period 2011-2013

Years	2011	2012	2013
Nominal quota	13.5%	15.75%	19.4%
Quota applicable for the tranche from 0 to 5 GWh	10.25%	11.375%	12.5%
Quota applicable for the tranche from 5 to 25 GWh	6.75%	7.875%	9.7%
Quota applicable for the tranche > 25 GWh	2%	2%	2%

Example of calculation of reduction for the 2012 quotas

For example: an end-customer, fulfilling the conditions for benefitting from the reduction in quota, consuming 35 GWh for each quarter of 2012.

Without any reduction, a quota of 15.75% x 35,000 MWh applies for each quarter, which is 5,512.50 GC to be submitted every quarter by the supplier for this customer.

With a reduction, for the tranche between 0 and 5 GWh, the supplier of this customer will have to submit a quota corresponding to the quota for the previous year for the tranche, increased by half of the growth in the annual quota. This gives a quota of 11.375% x 5,000 MWh, which is 568.75 GC per quarter.

For the second tranche, between 5 GWh and 25 GWh, the supplier will have to fulfil a quota reduced by half. This gives a quota of 7.875% x (25,000-5,000) MWh, which is 1,575 GC per quarter.

For the third tranche, above 25 GWh, the supplier will have to submit a quota reduced to 2%, which is 2% of (35,000-25,000) MWh, giving 200 GC per quarter.
The supplier will, in total, have to return 2,343.75 GC over the quarter, which corresponds to an effective quota of 6.7% instead of the nominal quota of 15.75%. The reduction allocated in this way to the supplier for the benefit of its customer will therefore be 3,168.75 GC, which is a reduction of 57%.

2.6.3.3. Penalty regime (AGW-PEV, Art. 30)

In the event of failure to reach the target quotas, the supplier or DSO is required to pay an administrative fine for the quarter in question. The fine is set by the Walloon Government and is currently EUR 100 per missing certificate. The amount of the fine has remained unchanged since the second half of 2003 (EUR 75 for the first half of 2003).

2.6.4. Purchase guarantee mechanisms for green certificates

2.6.4.1. Regional obligation to purchase green certificates by the LTSO (Elia)

Since 1 January 2008, the generation support mechanism has been replaced by a purchase obligation mechanism on the part of the local transmission system operator (LTSO), Elia (Decree, Art. 40). The AGW-OSP of 30 March 2006 sets out the procedures and terms for submitting a request and for applying this purchase obligation (articles 24 b) to e)).

The price at which the LTSO is obliged to purchase green certificates is EUR 65/GC. The purchase obligation starts from the month following the commissioning of the installation and is for a maximum period of 180 months.

In order to benefit from this purchase guarantee, the green producer is required to submit an application to the authorities. The duration of validity of the purchase obligation is determined by the CWaPE based on published methodology (see CD-5d05-CWaPE - Communication on methodology for examining applications for production support). The total green certificate purchase price must compensate for the higher cost of electricity generation compared to the market price during the payback period for the installation in question, including repayment of the capital invested at the reference rate of return referred to in article 15 of the AGW-PEV [19].

By way of exemption, installations with small installed capacity (≤ 10 kW) are not required to submit an application and benefit from an automatic purchase guarantee for a period of 180 months.

The decision to opt for the guaranteed price or for the sale of green certificates on the green certificates market is made by the green electricity producer each time that it submits its quarterly meter readings to the CWaPE.

As regards advance awards, the decision to opt for the guaranteed price or for the sale of green certificates on the green certificates market can be made by the green electricity producer anytime during the period of validity of the green certificates (5 years).

Green certificates purchased by Elia are immediately cancelled in the database. This mechanism enables excess supply to be reduced, which helps to stabilise the price of green certificates in the Walloon market.

2.6.4.2. Federal obligation to purchase green certificates by the TSO (Elia)

Pursuant to the Royal Decree of 16 July 2002 on the establishment of mechanisms to promote electricity generated from renewable energy sources (RES), the transmission system operator (TSO), Elia, as part of its public service mandate, has an obligation to purchase, from any green electricity producer who so requests, the green certificates awarded at a fixed minimum price, according to the generation technology. This purchase obligation comes into effect from the time of commissioning of the installation and is valid for a period of ten years.

The Royal Decree of 16 July 2002 was amended on 18 January 2013 and now limits this federal green certificates purchase guarantee to the hydropower sector and to photovoltaic solar power installations commissioned before 1 August 2012 (see table below).

Table 6: Guaranteed federal purchase price for GC according to the Royal Decree of 16/07/2002

Generation technology	Price per MWhe-RES
On-shore wind energy	€50
Hydropower	€50
Solar energy	€150
Other renewable sources of energy (including biomass)	€20

[19] *See Ministerial Order of 21 March 2008 setting the reference rate of return used to determine the «k» factor.*

Table 7: Guaranteed federal purchase price for GC according to the amending Royal Decree of 18/01/2013

Generation technology	Price per MWhe-RES
Hydropower	€50
Solar energy (units commissioned before 01/08/2012)	€150

In Wallonia, this system, in practice, therefore concerns only green certificates awarded to photovoltaic units commissioned before 01/08/2012 (as evidenced by the date of commissioning on the certificate of guarantee of origin) for the tranche of capacity not benefitting from the multiplier coefficient (> 10 or 250 kWc, as appropriate). That is because in this case (rate of award of 1 GC/MWh) the value of surrendering these green certificates to the TSO is EUR 150/GC, which is higher than the EUR 100 fine per missing green certificate (as well as the regional guarantee of EUR 65/GC).

2.7. Passing along of cost of PSO to end-customers

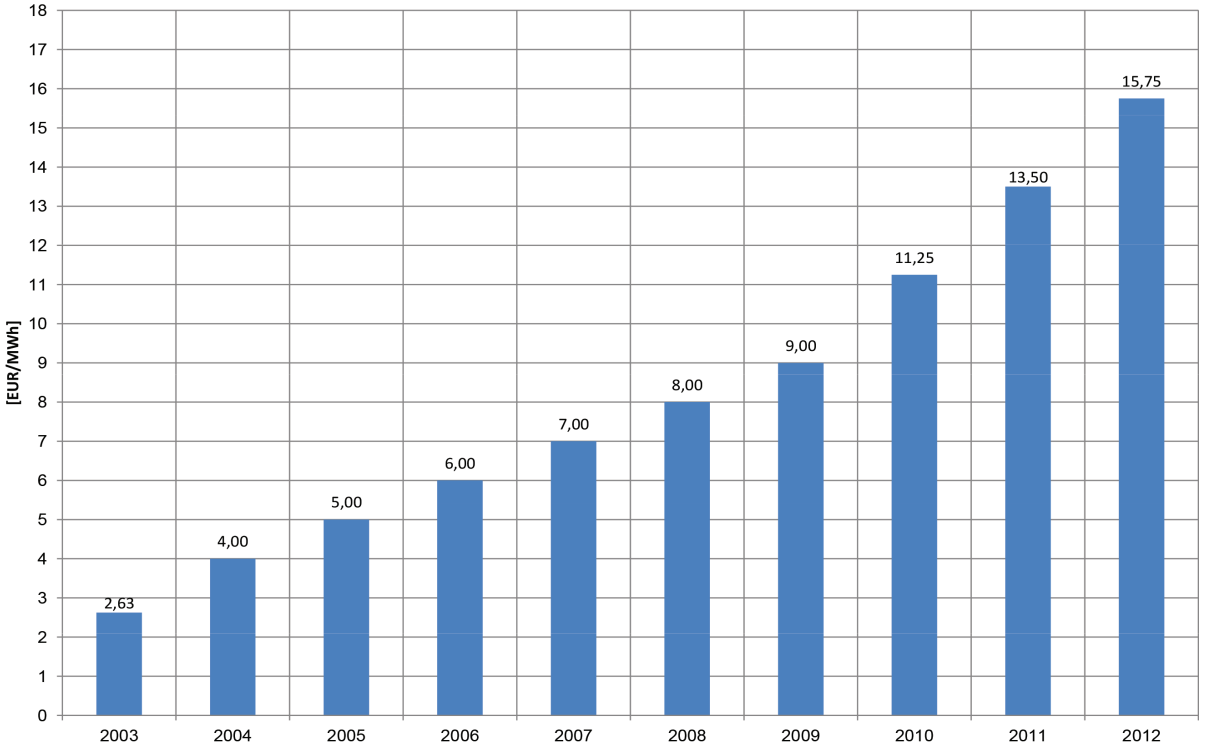
2.7.1. Passing along of cost of green certificate quotas

For end-customers that do not benefit from a reduction in quota, the maximum cost of the public service obligation (PSO) relating to the green certificates quota is obtained using the following formula:

maxPSO cost = nominal quota x fine (EUR/MWh)

The figure below shows the value of this maximum cost calculated for the period 2003-2012.

Figure 4: Maximum cost to end-customer not benefitting from a reduction in quota (EUR/MWh excl. VAT)



In practice, the cost of the PSO relating to the GC quota is passed along to the end-customer, partly in the price of the "energy" component invoiced by the supplier and partly in the transmission tariffs for the part of the PSO for which the DSO is responsible.

At DSO level, the passing along of the cost of this "green PSO" is monitored by the federal regulator (CREG - Commission for Electricity and Gas Regulation) as part of the approval of transmission tariffs (regulated tariffs).

At supplier level, inclusion of the cost of this "green PSO" in the price of the "energy" component invoiced to the end-customer is not regulated. In principle, it is freely negotiated by the supplier and customer. Nevertheless, in the interest of transparency, the legislator has implemented three provisions in the area:

- For all customers, the AGW-OSP of 30 March 2006 requires suppliers to indicate in the contract and on invoices the amount, specifically identified, corresponding to the passing along of the costs of GC. This cost cannot, under any circumstances, be included in the items relating to taxes and charges;

- For domestic customers and SMEs, article 20(c)(1) of the law of 29 April 1999 provides that "for domestic customers and SMEs, the maximum a supplier can pass along to the end-customer is the actual cost associated with the regional obligations relating to green certificates and cogeneration certificates while solely taking the market price for certificates and a flat rate transaction cost into account";

- For end-customers benefitting from a reduction in quota, the resulting reduction in costs must be passed along directly by the suppliers to each end-customer that is the source of such reductions.

The CWaPE is responsible for ensuring supplier compliance with these provisions. The CWaPE's periodic reports examining the price of electricity in Wallonia will show the amounts invoiced by the suppliers for the GC to different categories of end-customer.

2.7.2. Passing along of cost of regional GC purchase obligation by the LTSO (Elia)

The amounts paid to producers by Elia are recouped by Elia by means of a regional levy applied to the electricity drawn by category 2, 3 and 4 users of the local transmission system in Wallonia (around 75% of the supply in Wallonia). Users of the system directly connected to the transmission system (380 kV, 220 kV or 150 kV) do not, therefore, contribute to this regional levy.

Approval and monitoring of this regional levy (amount and method of passing along to the different categories of consumer) is carried out by the federal regulator (CREG) as part of the approval of transmission tariffs (regulated tariffs). From 1 January 2015, this responsibility is slated to be transferred to the CWaPE.

2.7.3. Passing along of cost of federal GC purchase obligation by the TSO (Elia)

The TSO (Elia) offers these green certificates on the market in order to recoup the costs of fulfilling this obligation. The net balance, resulting from the difference between the purchase price of the green certificate by the TSO and the selling price on the market, is funded by a levy applied to the transmission tariffs. Approval and monitoring of this regional levy (amount and method of passing along to the different categories of consumer) is carried out by the federal regulator (CREG) as part of the approval of transmission tariffs (regulated tariffs).

3. 2012 ASSESSMENT

3.1. Generation facilities

3.1.1. Registration of sites generating more than 10 kW

In 2012, the CWaPE registered almost 110 new[20] generation sites representing additional installed electricity capacity of just over 50 MW, which is an increase three times less than that observed in 2011 (over 150 MW). These new installations include 98 new photovoltaic solar power installations (11 MW).

A slight increase in installed electricity capacity in wind can be seen (+38 MW in 2012 compared to +85 MW in 2011). In fact, there are only three new wind farms (23 MW) as against 10 in 2011, as well as an increase from 6 MW to 7.5 MW for 10 wind turbines at the Estinnes wind farm (15 MW).

For the biomass and cogeneration sectors, there were 9 new installations:

- 1 biomethanisation unit (1 MW at Geer) and 1 wood pellet unit (1.5 MW at Sart Tilman);
- 6 cogeneration units using low-power gas turbines (< 100 kW) giving a total of 250 kW, as well as 1 cogeneration unit of 1 MW.

Among the installations decommissioned was the Electrawinds facility in Mouscron (17 MW), which was shut down in March 2012 for reasons of profitability. This installation mainly used biofuel produced from category-1 waste animal fat (unsuitable for human or animal consumption) refined at their Ostend plant.

In total, at the end of 2012 there were 440 certified installations registered with the CWaPE (330 installations at the end of 2011). These installations were subject to quarterly monitoring both with regard to certification of the generation site (modifications, breakdowns, renewable nature and CO2 emissions from biomass inputs, cogeneration audit for solar power installations, etc.) and with regard to the awarding of green certificates (GC) and guarantee of origin labels (GOL). Due to the workload, the average time taken by the CWaPE to process new generation sites is in the region of six months.

Certification of these green electricity generation sites has been carried out by four inspection bodies accredited by BELAC[21] in accordance with the standard NBN EN ISO/IEC 17020 and approved by the Minister for Energy. These bodies are: AIB-Vinçotte Belgium (AVB), Bureau Technique Verbrugghen (BTV), Electro-Test and SGS Statutory Services Belgium (SGS-SSB).
In addition to the initial certification stage, the approved bodies conduct periodic inspections of all certified sites. The CWaPE can also, at any time, carry out an inspection or request that an approved inspection body carry out an inspection and examine whether the elements indicated in the certificate of guarantee of origin correspond to the actual situation.
Amendments to certificates of guarantee of origin are also made in case of a modification to the installation, the measuring instruments, or any other element indicated in the certificate of guarantee of origin. Where biomass inputs are used (local and imported), certification also involves demonstrating the renewable nature of such inputs and their traceability throughout the entire production cycle.

3.1.2. Registration of sites generating less than 10 kW

For generation sites with a net generating capacity of 10 kW or less, the CWaPE issues the certificate of guarantee of origin (CGO) directly in accordance with a simplified procedure.

In addition, since 1 October 2010, applications concerning photovoltaic solar power installations connected to the distribution grid are submitted directly to the distribution system operator under the “one-stop-shop” procedure which brings together in the same form the request for awarding of green certificates intended for the CWaPE and the connection request intended for the distribution system operator (DSO).

[20] *The year of commissioning does not necessarily match the year of certification (this is the case, for example, with legacy installations).*
[21] *Belgian accreditation body: http://economie.fgov.be/belac.jsp*

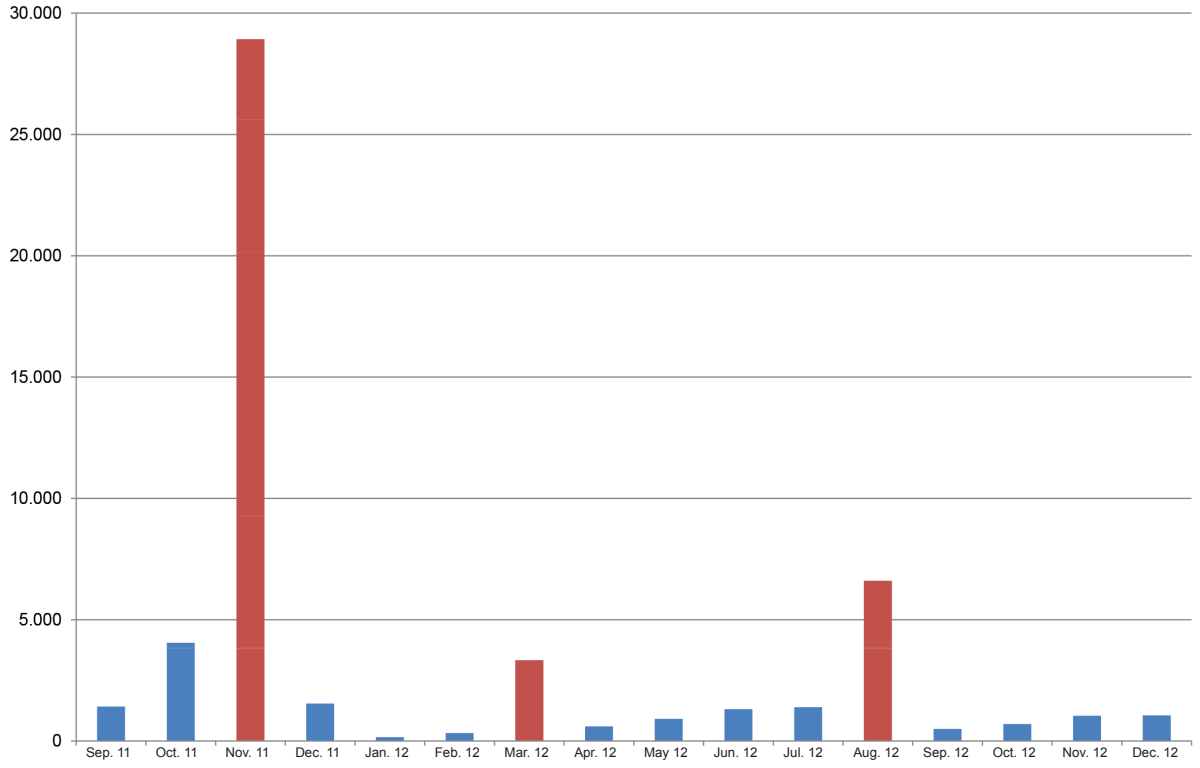
Photovoltaic solar power installations of less than 10 kW

In November 2011, the Walloon Government had announced a gradual review of the support regime for SOLWATT installations between 1 December 2011 and 31 March 2013. However, the implementing rules provided for the possibility of benefitting from the previous regime subject to the installation being ordered before 1 December 2011 and the installation being completed within a period of 6 months (period extended for the days of inclement weather following an interpretative memo adopted in May 2012).

The announcement of the ending of the tax breaks combined with the reduction in the support regime for installations ordered from 1 December 2011 onwards resulted in a rush of orders in November 2011 for almost 29,000 installations, which is more than the total number of installations completed in 2011.

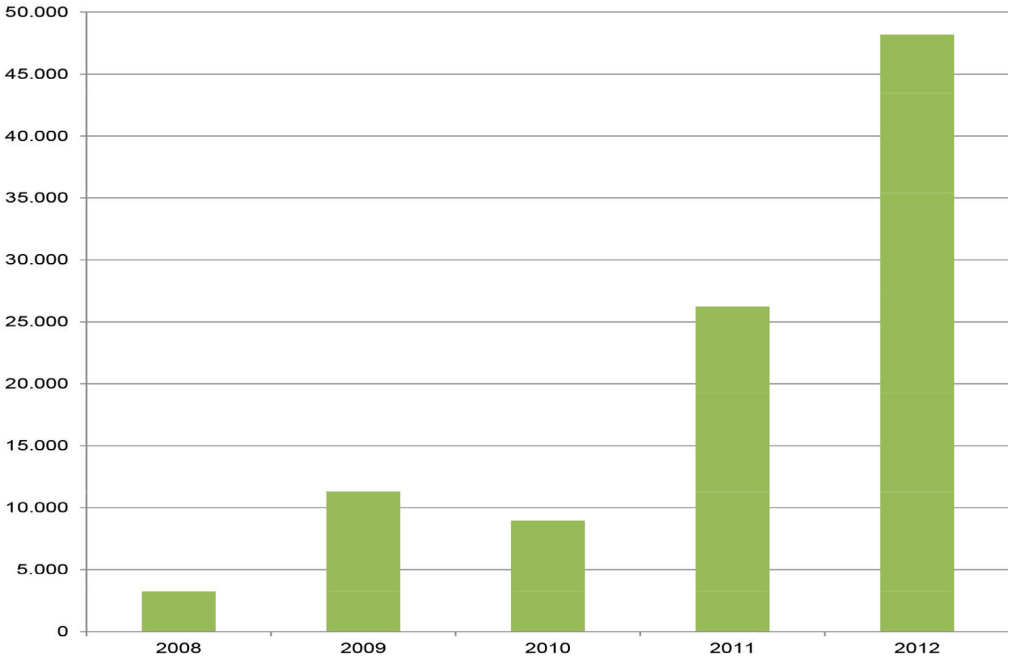
The figure below shows the change in orders over the period from September 2011 to December 2012. Of particular note are the peaks in orders in November 2011 and in March and August 2012, corresponding, on each occasion, to the move from one support regime to a less favourable regime.

Figure 5: Changes in orders between September 2011 and December 2012



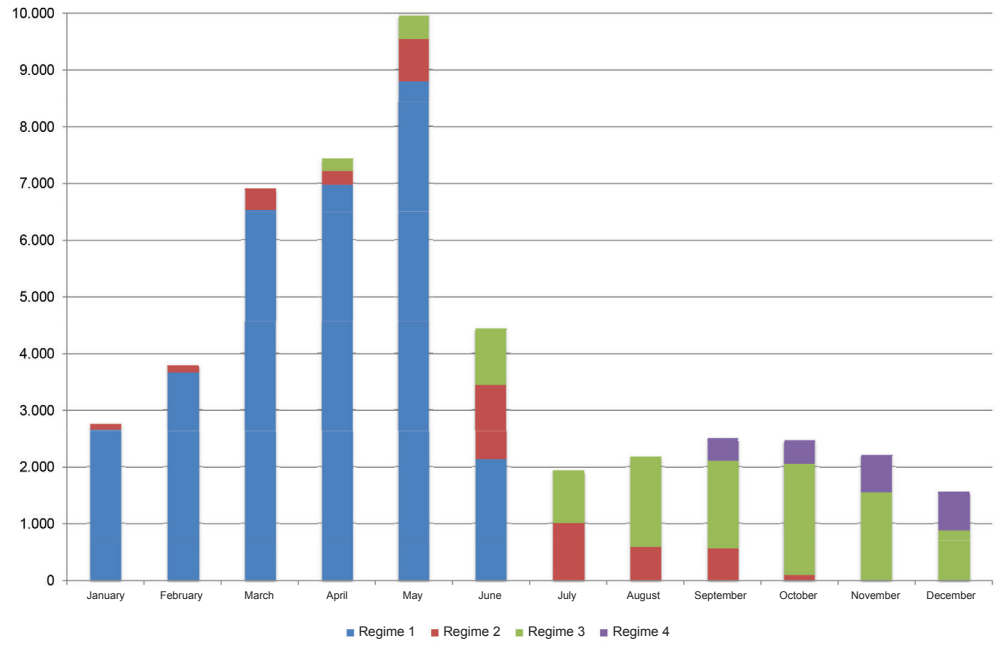
In total, more than 48,000 installations were commissioned in 2012, which is an almost doubling of total installed capacity in one year. At the end of 2012, installed capacity in Wallonia was close to 540 MWc (240 MWc at the end of 2011), with more than 98,000 installations listed in the CWaPE database. It should be noted that the average capacity of installations increased from 4 kWc in 2008 to almost 6 kWc in 2012.

Figure 6: Number of PV solar power installations commissioned over the period 2008-2012



The figure below shows the monthly change in the number of installations commissioned in 2012, broken down according to the 4 possible support regimes in 2012 (compare table 3).

Figure 7: PV solar power installations commissioned in 2012 - broken down by GC award regime



Among other things a surge in installations can be seen in May 2012 (10,000), with the end of May corresponding to the deadline for installation for those wishing to benefit from the 15-year award regime (R1). Finally, almost 65% of installations completed in 2012 were ordered before 1 December 2011, commissioned within 6 months ((extended by the 26 days of inclement weather in winter 2011-2012, following adoption of a circular in May 2012) and therefore benefit from the 15-year award regime (R1).

Other installations under 10 kW

Just over 90 new installations of this type were registered in 2012, which is four times more than in 2011.

At the end of 2012, there were around 150 non-solar-photovoltaic power installations of under 10 kW, giving just 575 kW of installed capacity.

Among the new installations, continuous growth in domestic micro-cogeneration units of 1 kW can be seen (over 80 installations in 2012), with these being able to avail of a regional investment grant. Based on the generation readings provided, the CWaPE confirms the observation made last year concerning the limited performance of such installations in practice. As a result, these installations were only awarded green certificates in a limited number of cases where the minimum CO2 savings of 10% were achieved.

It should be noted that the CWaPE has tasked an approved inspection body with carrying out an audit with a view to verifying producer statements and collecting, on a systematic basis, all of the technical data required for the preparation of certificates of guarantee of origin for complex low power installations (cogeneration and biomass), given that such installations are not currently subject to any prior inspection by a “green certificates” approved body. Furthermore, as part of this audit mission, random or targeted inspections of photovoltaic solar, hydropower and wind installations are also being carried out.

3.1.3. Green electricity generation sites (as at 31/12/2012)

As of 31 December 2012, a little more than 98,500 green electricity generation sites satisfied the conditions for the awarding of green certificates and accounted for a total capacity of more than 1,700 MW.

Table 8: Green electricity generation sites at end of 2012

Generation sites	Number of sites	Capacity (kW)
PV solar	98,173	556,927
Hydropower	89	110,965
Wind	74	562,373
Biomass	59	270,696
Fossil fuel cogeneration	163	206,382
Total	**98,558**	**1,707,344**

These include 440 generation sites with capacity of more than 10 kW, giving total higher capacity of close to 1170 MW. A list showing these generation sites can be found in annex 1.

Table 9: Green electricity generation sites of more than 10 kW at the end of 2012

Generation sites > 10 kW	Number of sites	Capacity (kW)
PV solar > 10 kW	209	19,752
Hydropower	56	110,743
Wind	58	562,249
Biomass	52	270,671
Fossil fuel cogeneration	65	206,209
Total	**440**	**1,169,594**

At the end of 2012, there were more than 98,000 small capacity sites (≤ 10 kW) totalling close to 540 MW (240 MW in 2011).

Table 10: "Small capacity" green electricity generation sites (≤ 10 kW) at the end of 2012

Generation sites ≤ 10 kW	Number of sites	Capacity (kW)
PV solar	97,964	537,175
Hydropower	33	222
Wind	16	124
Biomass	7	55
Fossil fuel cogeneration	98	173
Total	**98,118**	**537,750**

3.1.4. Generation of green electricity and green certificates

The table below shows the change in green electricity generation from 2011 to 2012 as well as the change in the number of green certificates "generated" with regard to the electricity generated. The change over the period 2003-2012 is given in annex 2.

Table 11: Change in green electricity generation between 2011 and 2012

	2011			2012			2012-2011	
Sectors	**Generation**		**Rate of award**	**Generation**		**Rate of award**	**Increase**	
	(MWh)	**(GC)**	**(GC/ MWh)**	**(MWh)**	**(GC)**	**(GC/ MWh)**	**(MWh)**	**(GC)**
Photovoltaic	140,663	938,066	6.669	412,021	2,741,478	6.654	193%	192%
Hydropower	187,780	101,201	0.539	307,858	153,619	0.499	64%	52%
Wind	1,029,512	1,029,347	1.000	1,134,867	1,134,867	1.000	10%	10%
Biomass	1,623,803	1,576,958	0.971	1,329,433	1,469,417	1.105	-18%	-7%
Fossil fuel cogeneration	1,004,634	124,911	0.124	1,031,502	137,186	0.133	3%	10%
Total	3,986,391	3,770,484	0.946	4,215,680	5,636,566	1.337	6%	49%

Generation of green electricity

Green electricity generation grew by 6% over 2011 to exceed 4 TWh. Nevertheless, growth was less than that seen in the previous year (15%). With a 32% share of green electricity generated, biomass (including cogeneration) is in the lead but has declined compared to the previous year. It is followed by wind energy (27%), fossil fuel cogeneration (24%), and photovoltaic solar power (10%), which has now overtaken hydropower (7%).

The greatest increase can be seen in the photovoltaic solar power sector (+200%). Wind energy has seen a limited increase (+10%). Biomass has declined sharply (-18%), mainly due to the decommissioning of the Electrawinds installation in Mouscron in March 2012 and lower generation by the Awirs power station (wood pellets). This decline in generation and decommissioning is mainly the result of less favourable economic conditions (rise in price of biofuel, fall in electricity prices and drop in the price of green certificates). Following a significant drop in 2011, hydropower climbed by over 60%, returning to a more typical level of generation due to more favourable climatic conditions in 2012.

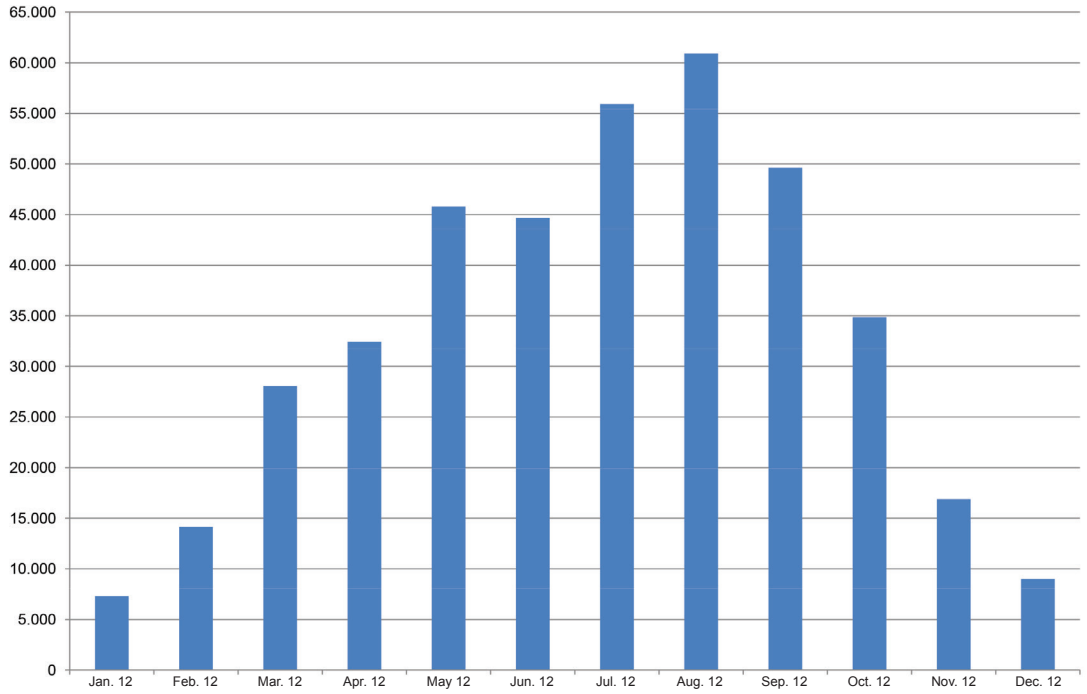
The figure below gives an estimate of monthly electricity generation over the course of 2012 for photovoltaic solar power installations with capacity of 10 kW or less. This estimate is based on the monthly change in installed capacity as well as the monthly reference generation used by the CWaPE (kWh/kWc.month) to take account of climatic conditions observed over the month.

By way of information, the table below gives the reference values used by the CWaPE over the period 2008-2012. For Wallonia, the average reference value over the past 5 years has been 960 hours/year[22].

Table 12: Average reference duration for PV solar power installations in Wallonia

Year	kWh/kWc.year
2008	898
2009	976
2010	915
2011	1,029
2012	972

Figure 8: Estimated monthly solar power generation (SOLWATT) in 2012 (MWh)



[22] *This reference value represents an installation with an optimal orientation. This value is therefore not representative of the average performance of installations in Wallonia.*

Generation of green certificates

In terms of green certificates, it is important to note that the number of green certificates "generated" based on the quantity of electricity generated in 2012 can differ significantly from the number of green certificates actually awarded and available on the market in 2012 [23].

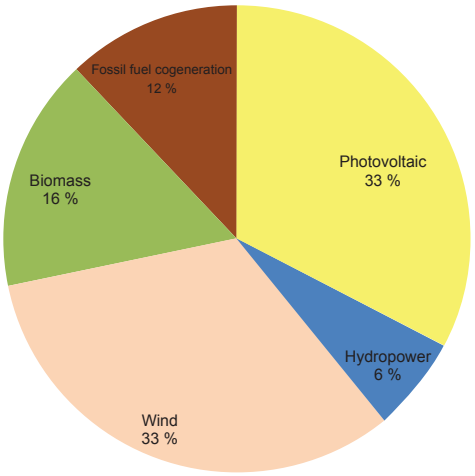
This difference has become even more significant since the CWaPE started awarding green certificates in advance for small capacity installations. For the photovoltaic solar power sector, these advance awards correspond, on average, to two years of power generation.

Even if these advance awards are not taken into account, there has been an almost 50% increase in the number of green certificates generated compared to 2011. With almost 50% of green certificates "generated", the photovoltaic solar power sector is now comfortably in the lead, followed by biomass (26%) and wind (20%). Hydropower and fossil fuel cogeneration accounted for only 5% of total green certificates generated in 2012.

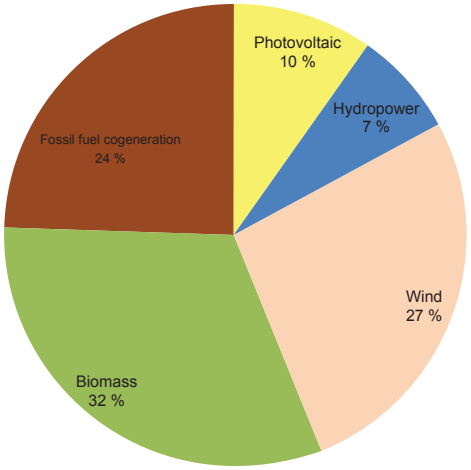
The largest increases are in the photovoltaic solar sector (+200%), followed by hydropower due to more favourable climatic conditions (+50%). Biomass has fallen by 7% while fossil fuel cogeneration continues to increase (+10%).

[23] *In fact, over the course of the year there is a difference between the green electricity generated and the corresponding green certificates awarded. Thus, green certificates are not awarded on a continuous basis but based on readings that have to be submitted each quarter. As a result, the periods of generation covered by these readings do not necessarily correspond to calendar quarters. Furthermore, for new sites the awards can relate to different periods due to the certification and notification procedure. Corrections for awards may also be made over a period of one year. Finally, for photovoltaic generation <10 kW any advance awards create a reverse mismatch.*

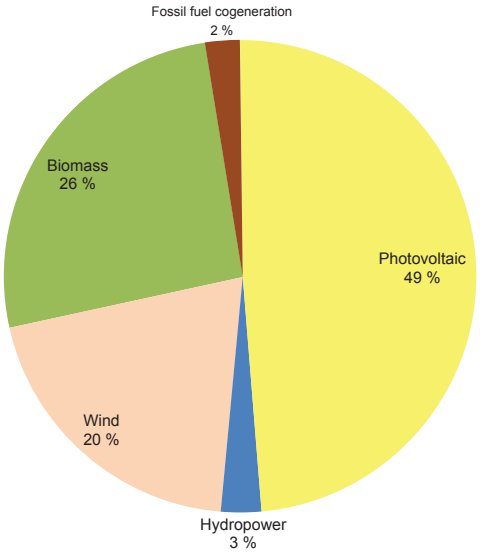
Figure 9: Electricity generation facilities in 2012



Installed capacity: 1,707 MWe



Electricity generated: 4,216 GWh



Green certificates generated: 5,636,566 GC

3.1.5. Average level of support per sector

The table below gives the values of the average support in 2012 by sector.

Table 13: Average level of support per sector in 2012

Sectors	Average rate of award (GC/MWh)	Average price to producer (EUR/GC)	Average level of support (EUR/MWh)
Photovoltaic solar	6.654	68.40	455.12
Hydropower	0.499	78.18	39.01
Wind	1.000	78.18	78.18
Biomass	1.105	78.18	86.41
Fossil fuel cogeneration	0.133	78.18	10.40
Average green sectors	1.337	74.10	99.08

This table illustrates, among other things, the capacity of the Walloon mechanism to adapt the level of support for green electricity according to both the amount of CO2 saved and the higher generation costs for each sector.

This average support can, in this way, be directly compared with a feed-in premium system. Any comparison with a feed-in tariff system would, however, require adding the selling price of the electricity to the values below.

It can be seen that, overall, the average effective rate of award for all the green electricity generation facilities increased from 0.946 GC/MWh in 2011 to 1.337 GC/MWh in 2012. This increase is exclusively attributable to the significant increase in the contribution of photovoltaic solar power to the generation of green certificates.

With an average market price of EUR 74.10/GC in 2012, a decrease of 10% compared to 2010, the average level of support was EUR 99.08/MWh, an increase of 27% compared to 2011 (EUR 77.73/MWh).

3.1.6. Contribution of green electricity to the electricity supply in Wallonia

In 2012, electricity generated in green certified installations made up almost 18.65% of the electricity supply in Wallonia (22,608,953 MWh), compared to around 17.40% in 2011.

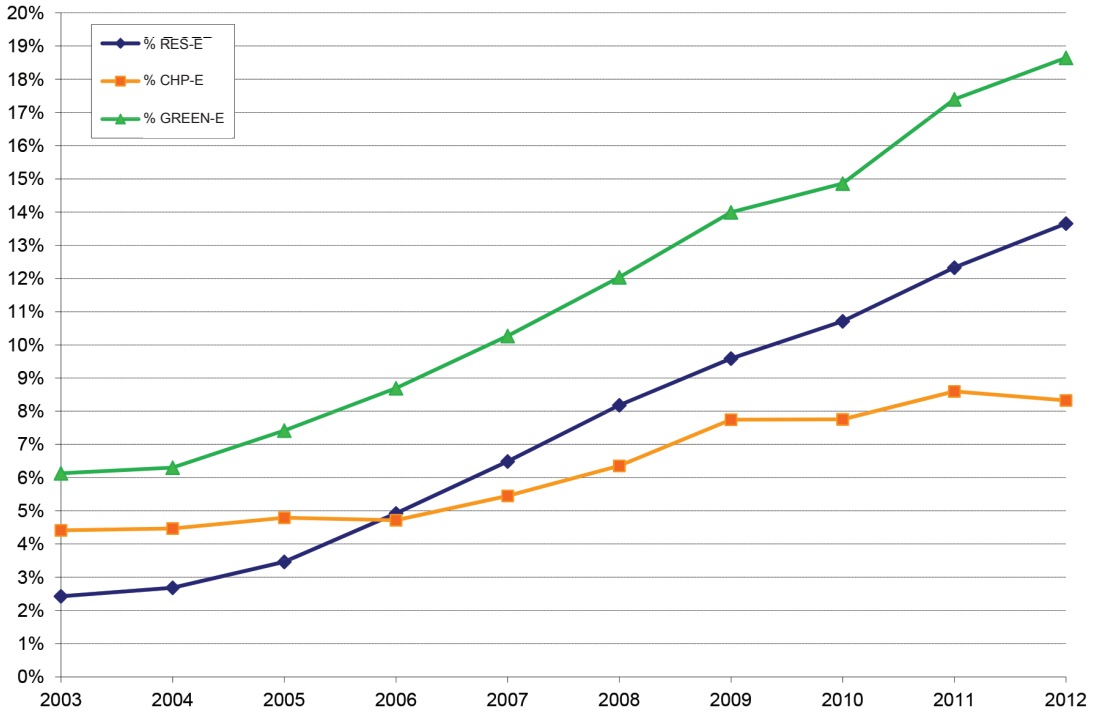
This 7% increase in green electricity market share is slightly ahead of that observed with regard to green electricity generation (6%) due to a fall in the supply of electricity of close to 1.3% between 2011 and 2012.

Table 14: Contribution of net electricity generated by green certified installations to Walloon supply in 2012

Green electricity	% Walloon Region supply
Photovoltaic	1.82%
Hydropower	1.36%
Wind	5.02%
Biomass	5.88%
Fossil fuel cogeneration	4.56%
Total	**18.65%**

Based on the figure below, it can be seen that over the period 2003-2012 the contribution of electricity generated from renewable energy sources increased from 2.5% to 13.65%. As regards high-quality cogeneration (fossil fuel and renewable), its contribution increased from 4.5% to 8.3% (a slight decline compared to 2011).

Figure 10: Change in contribution of green electricity to Walloon supply (period 2003-2012)



3.2. Green certificates market

For the green certificates market, 2012 was marked by a worsening of the imbalance between supply and demand, mainly due to a doubling in a single year of the number of solar power installations with capacity under 10 kW. These installations were able to continue benefitting from overly generous green certificate award mechanisms, leading to an excessive rate of return (well above the 7% reference rate of return) and, in this way, generating more than 3,250,000 GC in 2012 (against 1,500,000 GC already generated in 2011).

The number of green certificates to be submitted by suppliers to satisfy their quota obligation was 2,700,000 GC, an increase of just under 400,000 GC compared to 2011. This increase in demand for green certificates is therefore considerably less than that seen in terms of supply, which increased by more than 2,250,000 GC in one year. At the end of 2012, there was an excess of more than 5,000,000 green certificates on the market.

3.2.1. Green certificate transactions

First and foremost, 2012 was characterised by a significant increase in the number of transactions. This was due mainly to the increase in the number of small producers and concerned the sale of advance awards of green certificates or awards made on the basis of readings submitted via the CWaPE extranet service.

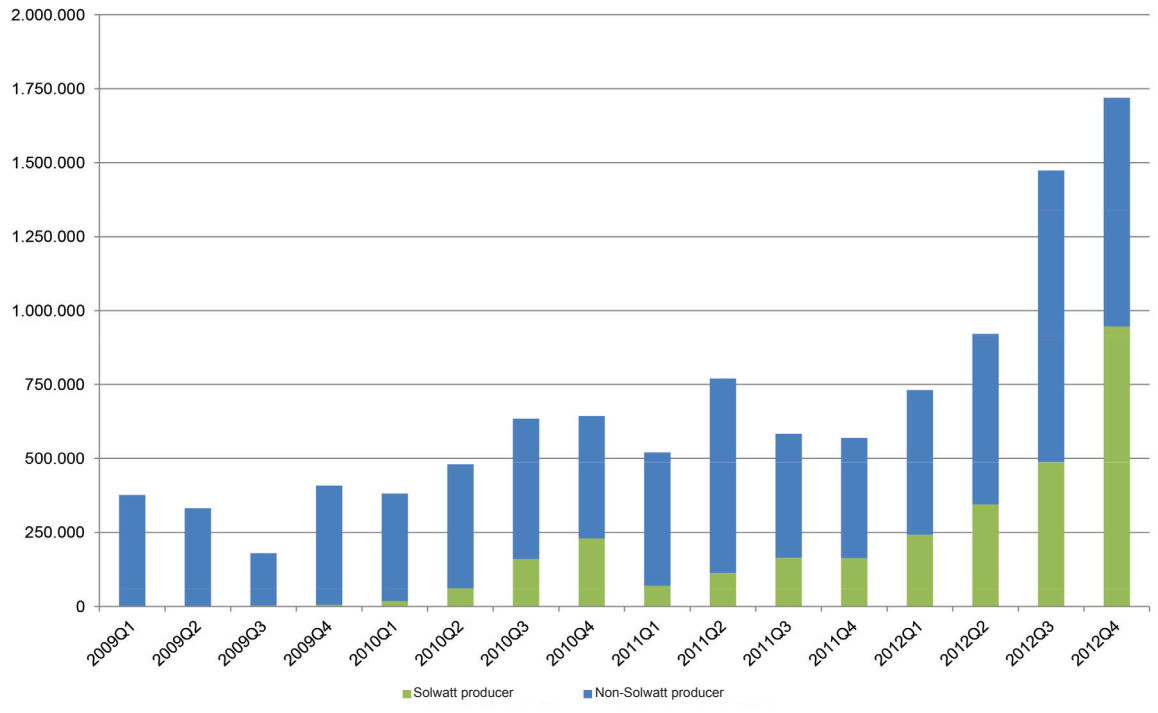
Table 15: Change in transactions over the period 2009-2012

Years	Price to the producer								
	Solwatt			Non-Solwatt			Overall market		
	Transactions	Volume of GC	Average price	Transactions	Volume of GC	Average price	Transactions	Volume of GC	Average price
	Number	Number	EUR/GC	Number	Number	EUR/GC	Number	Number	EUR/GC
2009	364	9,770	€86.85	329	1,287,921	€87.87	693	1,297,691	€87.87
2010	20,697	468,909	€84.79	475	1,670,449	€84.91	21,172	2,139,358	€84.88
2011	16,666	512,225	€76.92	569	1,931,292	€83.33	17,235	2,443,517	€81.99
2012	63,154	2,020,503	€68.40	1,167	2,824,108	€78.18	64,321	4,844,611	€74.10

Thus, there were more than 63,000 transactions with an overall value of around EUR 360 m involving a total volume of over 4,800,000 GC, which represent around 70% of the green certificates issued over the year. The balance corresponds to still unsold green certificates (mainly due to excess supply of green certificates on the market), those awarded to generation sites belonging to producers and used (directly) for their respective quota, or those held in reserve for future use.

Based on the figure below, it can be seen that the share of GC from the SOLWATT sector accounts for an increasing share of GC sold over the period 2010-2012. This sector represents over 40% of the number of GC sold in 2012.

Figure 11: Quarterly change in the number of GC sold over the period 2009-2012



3.2.2. Changes in prices

The surplus of green certificates on the market resulted in a gradual drop in the selling prices for green certificates. These prices cover forward contracts concluded in the past (not impacted by the current imbalance), new forward contracts (potentially impacted by the current imbalance) and sales on the spot market. A more marked fall can therefore be seen in the selling prices for SOLWATT producers, who do not for the most part have forward contracts and most of whom sell at the minimum price guaranteed by Elia, i.e. EUR 65 excl. VAT.

For the other producers, the fall in price is less marked since a greater proportion of them are still covered by forward contracts pre-dating the emergence of the imbalance on the market. This downward trend in prices is likely to intensify in 2013.

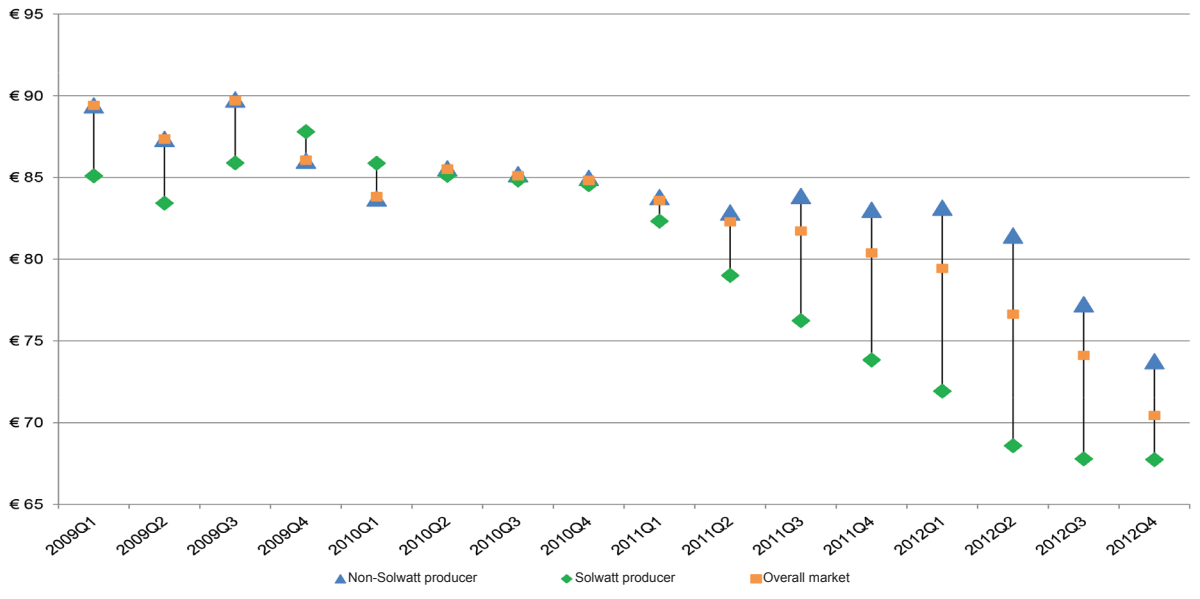
The table below shows the values of transactions carried out in 2012. It is the price for a green electricity producer including all types of transactions for the sale of green certificates, whether on the spot market or based on forward contracts.

Table 16: Average quarterly prices for green certificate transactions in 2012

	Price to the producer								
	Solwatt			Non-Solwatt			Overall market		
	Transactions	Volume of GC	Average price	Transactions	Volume of GC	Average price	Transactions	Volume of GC	Average price
	Number	Number	EUR/GC	Number	Number	EUR/GC	Number	Number	EUR/GC
2012Q1	8,755	241,567	€71.93	210	489,263	€83.15	8,965	730,830	€79.44
2012Q2	10,574	344,485	€68.59	264	576,723	€81.45	10,838	921,208	€76.64
2012Q3	16,155	487,832	€67.79	317	985,959	€77.25	16,472	1,473,791	€74.12
2012Q4	27,670	946,619	€67.74	376	772,163	€73.76	28,046	1,718,782	€70.44

The average unit price on the market was EUR 74.10 in 2012, which is a drop of 9.6% compared to the average price in 2011. It should be noted that the drop in price is greater for SOLWATT producers than for the other sectors. Over the period 2009-2012, this reduction has been in the order of 21% for the former although it has only been around 11% for the latter.

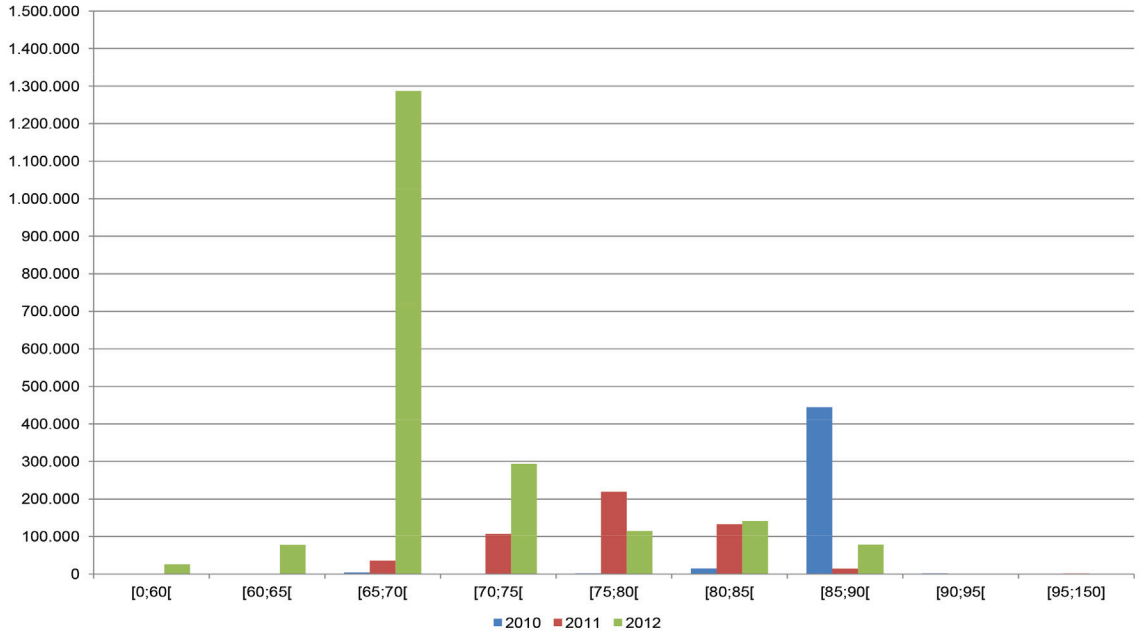
Figure 12: Drop in selling prices of GC over the period 2009-2012



3.2.3. PV solar power sector under 10 kW

As the figure below shows, the average annual values conceal a clear variability in green certificate prices. Green certificates were, in over 96% of cases, sold at a price of between EUR 65/GC and EUR 90/GC over the period 2010-2012.

Figure 13: Variability in selling prices of "SOLWATT" GC over the period 2010-2012



While in 2010 the mode[24] of transactions at EUR 85/GC dominated the market (corresponding to the price offered by the free brokerage service set up by the Walloon Region and entrusted to the non-profit association "Les Compagnons d'Éole"), a slide towards lower price intervals can be seen in 2011, and even more so in 2012.

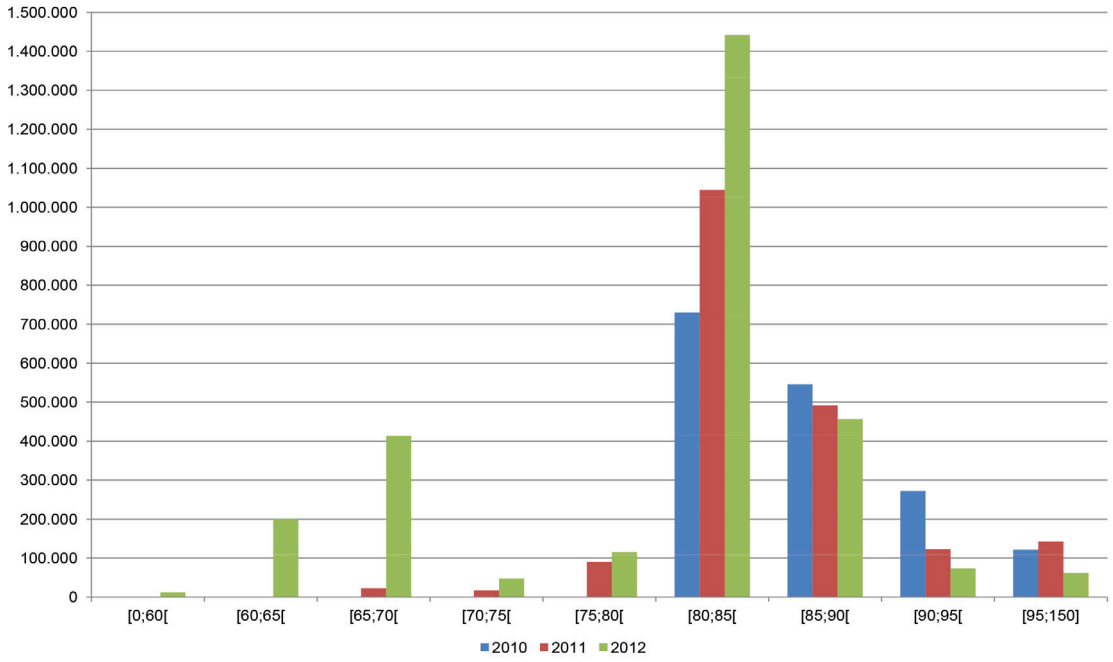
In fact, in 2012 more than 59% of GC were sold at a price of EUR 65/GC, representing almost 1,200,000 GC. Around 35% were sold at a price above EUR 65/GC, but below EUR 90/GC, and a little over 5% were sold at a price below EUR 65/GC.

[24] *In statistics, the «mode» is the value that appears most often for a given variable in a set of data; in graph form, it corresponds to a peak.*

3.2.4. Other sectors

A certain degree of variability in the price of green certificates has also been noted in the other sectors. Nevertheless, these certificates were, in over 80% of cases, sold at a price between EUR 80/GC and EUR 94/GC.

Figure 14: Variability in selling prices of "NON-SOLWATT" GC over the period 2010-2012



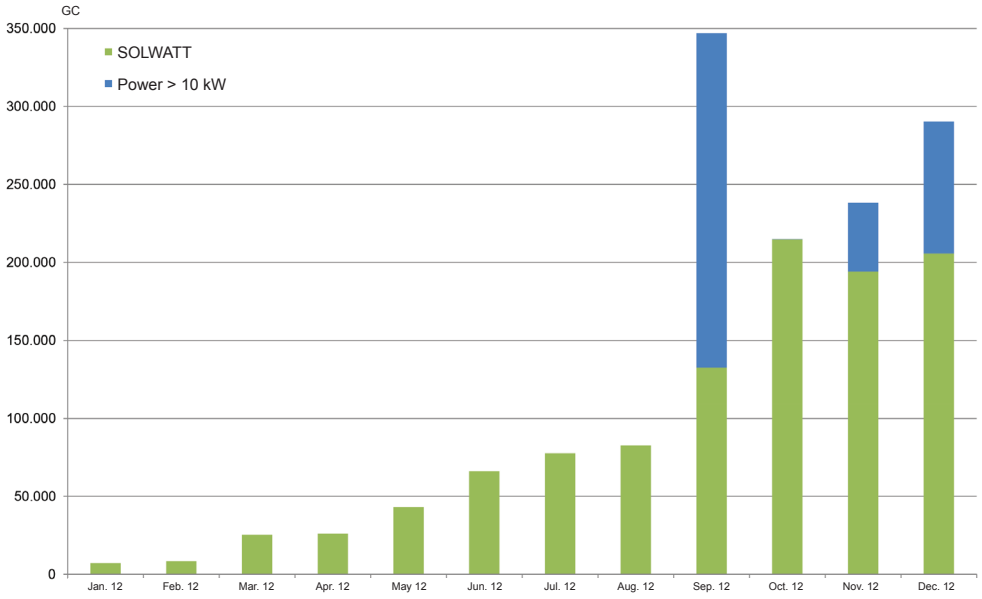
As with the Solwatt sector, a slide towards lower price intervals can be seen. It should, however, be noted that the majority of GC have since 2010 been the subject of transactions at a price between EUR 80/GC and EUR 84/GC. In fact, in 2012 more than one out of every two GC (around 51%) was sold at a price falling within the [80; 85] interval.

Finally, although the number of GC sold at a price lower than EUR 80/GC was no more than 170 GC in 2010 (around 0.01%), this figure has increased significantly, reaching almost 130,000 GC in 2011 (around 6.7%) and approximately 790,000 GC in 2012 (i.e. 27.9%).

3.2.5. Regional and federal guaranteed price

In total, more than 1,425,000 GC were sold to Elia in 2012, around 1,085,000 GC of which were awarded to SOLWATT producers, with the remaining 340,000 GC coming from installations of more than 10 kW. The figure below shows the change in the number of green certificates sold to Elia over the course of 2012.

Figure 15: Monthly change in sales of GC to Elia at the guaranteed price of EUR 65/GC (excl. VAT)



The widespread activation of sales to Elia by producers created a significant extra workload for the CWaPE and Elia, which had to quickly put in place cooperation and auditing procedures to ensure the proper processing of payments, particularly for SOLWATT producers.

In this way, more than 10,000 sale transaction forms for advance awards had to be inputted by the CWaPE during 2012. Modifying the extranet service to permit the online selling of advance awards to Elia allowed for the number of forms to be processed to be stabilised, then reduced, despite the increasing number of sites registered in the CWaPE database after the DSOs made up the delay in inputting installations.

In spite of the large number of transactions (from 2,000 per month in June to over 6,000 per month in December), all payments were processed by Elia within the deadlines agreed with the CWaPE (30 days end of month).

The regional levy, which enables Elia to recover the sums paid to producers, was initially set at EUR 1.1889/MWh (excl. VAT) for 2012. As this amount was based on a supposed buyback of only 300,000 GC in 2012, Elia applied twice to CREG for a review of the amount of the levy during the year. These requests were granted by CREG. Thus, the regional levy increased to EUR 5.9445/MWh (excl. VAT) from 1 October 2012 and then to EUR 13.8159/MWh from 1 January 2013. In spite of this, for 2012 Elia was only able to recover EUR 42.3 m via the regional levy from the EUR 92.7 m paid to producers, giving a negative balance of EUR 50.4 m for the 2012 financial year, to be carried forward to 2013.

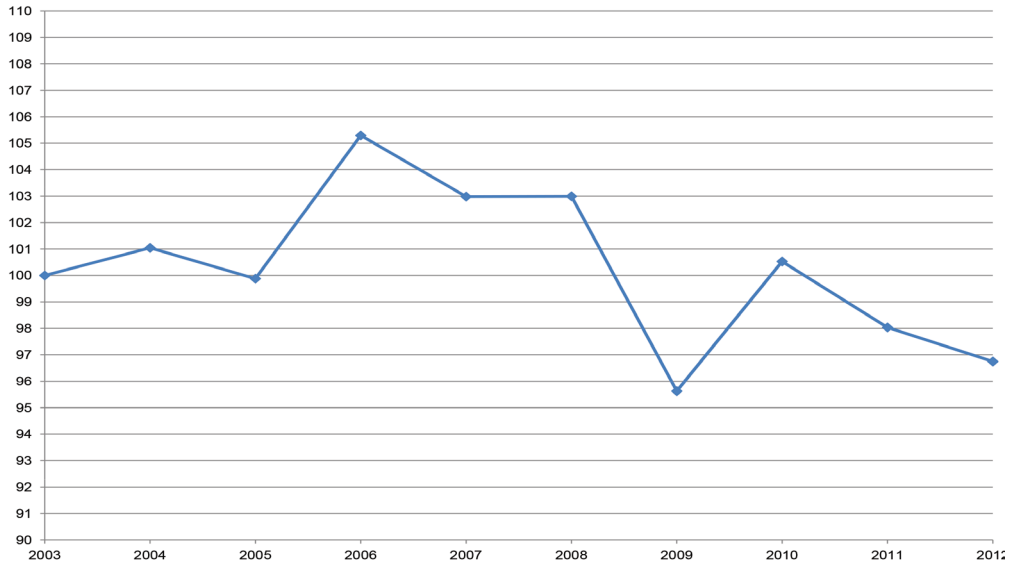
3.3. Application of green certificate quotas

3.3.1. Nominal green certificate quota

The number of green certificates to be returned pursuant to the obligation imposed on producers and DSOs by article 25 of the Walloon Government Decree of 30 November 2006 relating to the promotion of green electricity was established based partly on a share of the "nominal" quota and partly on the reductions in quota for supplies to energy-intensive end-customers.
The volume of electricity supplied and declared and taken into account for 2012 is 22,608,953 MWh[25], a reduction of 1.3% compared to 2011. Given the corrections for 2011, this ultimately gives a volume of 22,604,630 MWh.

The figure below shows the downward trend observed in recent years for supplies subject to green certificate quotas. The marked reduction in supply in 2009 (-7% compared to 2008) due to the effects of the economic crisis, should be noted. Despite a recovery in 2010, the downward trend has become established over the past two years.

Figure 16: Changes in supply subject to GC quota over the period 2003-2012



This reduction in supply, combined with an almost 17% increase in the nominal quota, resulted in an increase of around 15% in absolute terms (3,560,229 GC in 2012 compared to 3,093,313 GC in 2011) in the number of GC to be returned outside of any reduction in quota.

3.3.2. Effective green certificate quota

Given the reductions granted, the "nominal" quota of 15.75% for 2012 ultimately corresponds to an effective quota (ratio between the number of green certificates to be submitted and the number of MWh supplied) of 12.3% (10.47% in 2011), which corresponds to 2,780,910 GC to actually be returned by suppliers and DSOs. This is an increase of 15% in the effective demand for green certificates on the market compared to 2011 (2,385,054 GC in 2011).

[25] *This is the value declared by the suppliers as at 28 February 2013, not including any corrections from 2011. Any corrections after this date are not taken into account when calculating the 2012 quotas but are carried forward for the calculation of 2013 quotas.*

In 2012, out of 155 operating headquarters registered with the CWaPE, 138 operating headquarters of energy-intensive end-customers benefitted from a reduction in quota (compared to 136 in 2011). In order to benefit from this reduction, 3 conditions have to be satisfied:

1. Consume at least 1.25 MWh per quarter (except where the operating headquarters can prove that its consumption has decreased as a result of the installation of high-quality cogeneration);

2. Have signed a branch agreement;

3. Every quarter, submit, via the supplier of the operating headquarters, a certificate to the CWaPE within the established deadlines.

These conditions are verified every quarter and if one of them is not satisfied, no reduction is granted. In 2012, 9 of the 155 operating headquarters registered never reached the minimum consumption threshold during 2012, 4 exited the branch agreement, 2 went bankrupt and the others failed to return the requested certificate. This explains why, in practice, only 138 operating headquarters of energy-intensive end-customers benefitted from a reduction in quota.

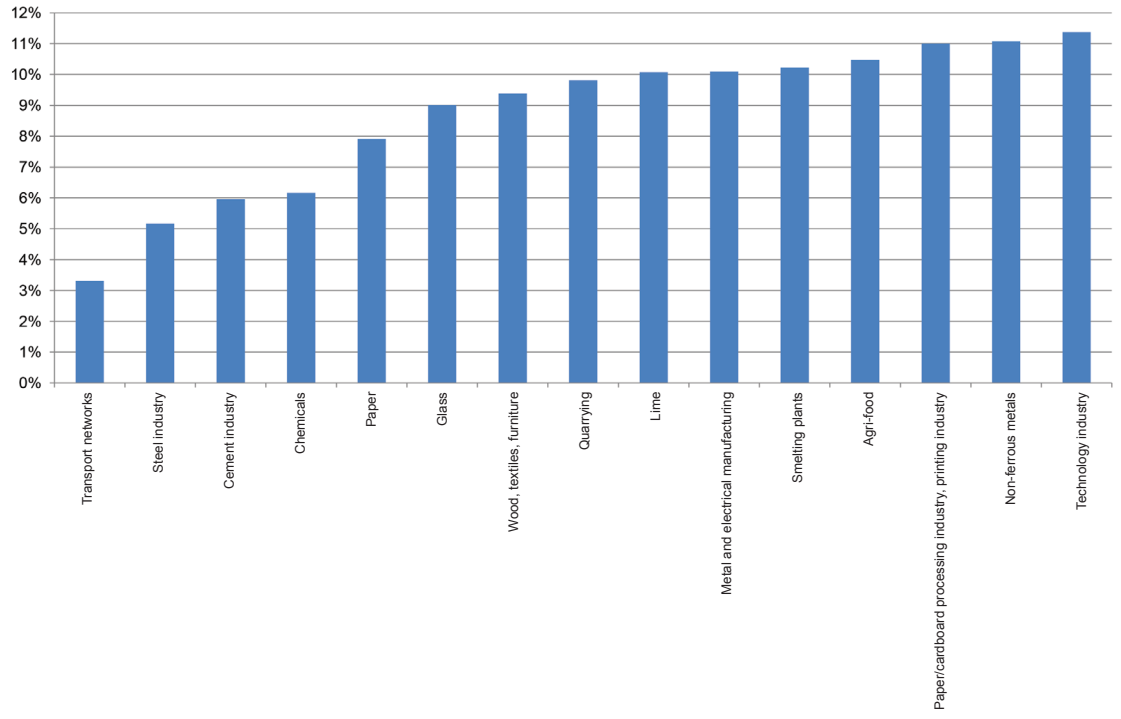
The total consumption of these 138 operating headquarters represented around 40% of the electricity supply in Wallonia.

Overall, the reductions in GC represent 22% of the nominal quota for green certificates. These reductions in quota granted totalled a little under 780,000 green certificates, which is an increase of close to 13% compared to the previous year (690,000 in 2011).

The average quota, including the reduction in 2012 for the 138 operating headquarters that benefitted from the reduction in quota, was therefore 6.61% (compared to 5.75% in 2011). A breakdown of the operating headquarters by sector of activity (branch agreements) and their respective consumption and reduction in GC can be found in the annex.

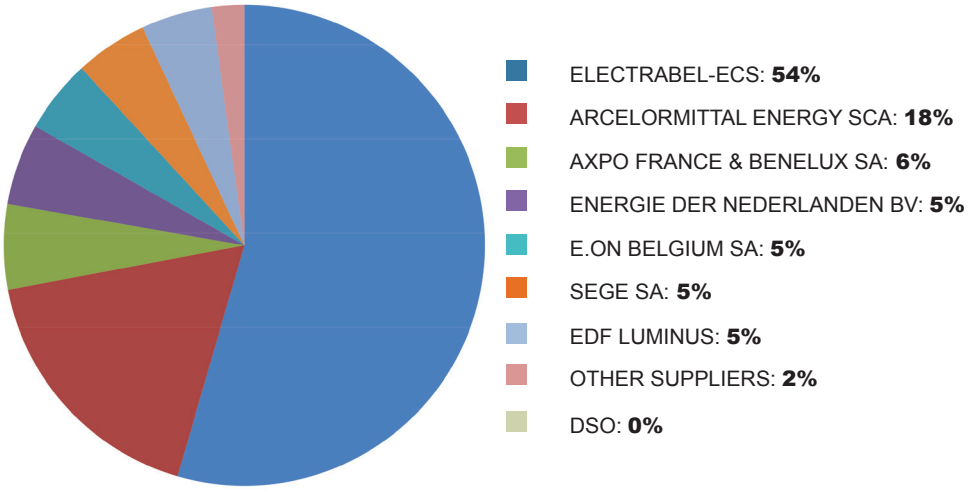
The figure below shows the effective quotas (after application of the reduction in GC) broken down by sector of activity.

Figure 17: Reduction in GC - effective quota by sector of activity in 2012



The figure below gives a breakdown of the reduction in GC quotas among suppliers. What is apparent is that, while 96% of reductions in 2011 were granted to legacy suppliers, in 2012 this fell to 59%. This can be explained by, among other things, a major breakthrough by new suppliers onto the market, in particular suppliers directly linked to energy-intensive companies such as, for example, ARCELORMITTAL.

Figure 18: Breakdown of reductions in quota by supplier



For end-customers benefitting from a reduction in quota, the resulting reduction in costs must be passed along directly by the suppliers to each end-customer that is the source of such reduction.

The table below gives an estimate of savings achieved in this way by the suppliers for the benefit of their end-customers based on the average GC market price of EUR 74.10 in 2012.

Table 17: Avoided cost corresponding to the reduction in GC quota - broken down by sector

SECTORS	Number of operating headquarters	Electricity supplied (MWh)	Reduction (EUR)
Steel industry	14	2,347,662	18,419,446
Chemicals	31	2,572,189	18,272,425
Cement industry	6	751,491	5,453,696
Transport networks	2	570,994	5,263,310
Glass	10	493,440	2,465,203
Agri-food	27	472,225	1,874,641
Paper	4	316,422	1,838,936
Metal and electrical manufacturing	10	257,425	1,079,205
Wood, textiles, furniture	4	186,223	879,202
Lime	6	174,188	732,876
Quarrying	8	145,698	641,152
Smelting plants	4	79,175	323,772
Paper/cardboard processing industry, printing industry	5	67,348	237,064
Non-ferrous metals	2	40,653	140,847
Bricks - ceramics	3	31,193	97,814
Technology industry	2	16,956	54,971
TOTAL	**138**	**8,523,281**	**57,747,560**

3.3.3. Return quotas for green certificates and fines in the Walloon Region

The number of suppliers and DSOs which, in 2012, were required to submit details of their supplies to the CWaPE every quarter, as well as the number of green certificates corresponding to the effective quota calculated for their end-customers, is as follows:

- 15 suppliers with a general supply licence;
- 6 suppliers with a limited supply licence;
- 13 distribution system operators.

The number of green certificates submitted to the CWaPE pursuant to the public service obligation imposed on suppliers and DSOs was 2,780,910 GC for all of 2012, which was all the GC that had to be returned. No fine therefore needed to be imposed.

The figures below give a breakdown by supplier and distribution system operator (DSO) of volumes of electricity supplied and GC to be returned. The difference between the two charts is explained by a different effective quota for each supplier according to the reductions in quota that may be applied to their customers.

Figure 19: Breakdown of electricity supplied

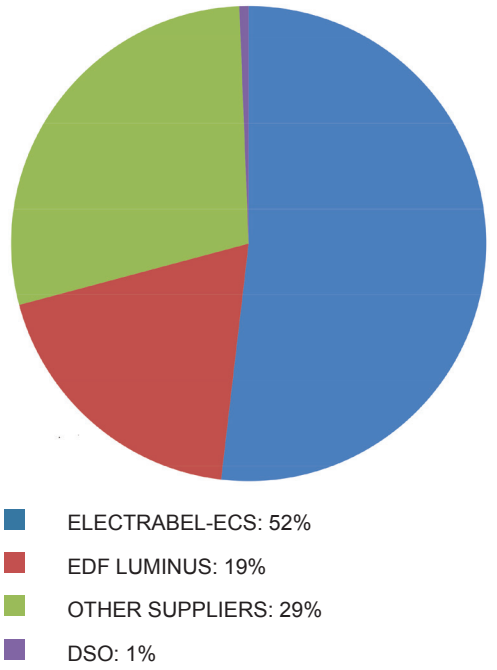
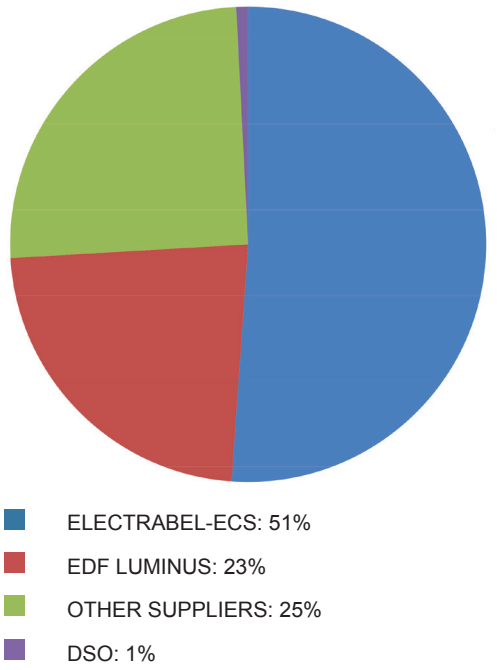


Figure 20: Breakdown of GC to be returned



The following table details, on a yearly basis[26], by supplier and distribution system operator, the electricity supplied, the reductions in GC granted, and the GC to be returned and actually returned in 2011.

[26] The total sales shown in this table correspond to the amounts declared as at 28/02/2012. Corrections after this date are not taken into account when calculating the 2011 quotas but are carried forward for calculating the 2012 quotas.

2012	Type of licence/DSO	Supplies submitted for the year (MWh)	Quota of GC excluding reduction	Reduction in GC	GC to be submitted	Effective quota	GC submitted	Missing GC	Admin. fine (in euros)
Suppliers									
AXPO FRANCE & BENELUX SA	General licence	438,856	69,120	44,585	24,535	5.59%	24,535	0	0
EDF LUMINUS SA	General licence	4,294,559	676,252	37,282	638,970	14.88%	638,970	0	0
ELECTRABEL SA	General licence	4,992,604	786,335	414,672	371,663	7.44%	371,663	0	0
ELECTRABEL CUSTOMER SOLUTIONS SA	General licence	6,729,604	1,059,388	9,909	1,049,479	15.59%	1,049,479	0	0
ENDESA ENERGIA SA	General licence	7,051	1,110	0	1,110	15.74%	1,110	0	0
ENECO BELGÏE BV	General licence	307,656	48,456	4,813	43,643	14.19%	43,643	0	0
ENERGIE 2030 AGENCE SA	General licence	4,332	682	0	682	15.74%	682	0	0
ENERGIE DER NEDERLANDEN BV	General licence	374,056	58,913	42,571	16,162	4.32%	16,162	0	0
ENI SA	General licence	777,183	122,406	2,959	119,447	15.37%	119,447	0	0
ENOVOS LUXEMBOURG SA	General licence	311	49	0	49	15.77%	49	0	0
E.ON BELGIUM SA	General licence	924,880	145,668	38,376	107,292	11.60%	107,292	0	0
ESSENT BELGIUM SA	General licence	682,354	107,470	9,150	98,320	14.41%	98,320	0	0
LAMPIRIS SA	General licence	1,170,926	184,421	0	184,421	15.75%	184,421	0	0
OCTA+ ENERGIE SA	General licence	25,020	3,941	0	3,941	15.75%	3,941	0	0
SCHOLT ENERGY CONTROL NV	General licence	6,510	1,025	0	1,025	15.75%	1,025	0	0
ARCELORMITTAL ENERGY SCA	Limited licence	1,331,001	209,632	136,815	72,817	5.47%	72,817	0	0
BELPOWER INTERNATIONAL SA	Limited licence	41,703	6,568	0	6,568	15.75%	6,568	0	0
ELEXYS SA	Limited licence	3,290	518	0	518	15.74%	518	0	0
RECYBOIS SA	Limited licence	1,970	311	0	311	15.78%	311	0	0
SEGE SA	Limited licence	348,136	54,831	38,006	16,825	4.83%	16,825	0	0
SEVA SA	Limited licence	6,710	1,057	0	1,057	15.75%	1,057	0	0
Sub-total		**22,468,713**	**3,538,154**	**779,319**	**2,758,835**	**12.28%**	**2,758,835**	**0**	**0**
Distribution system operators (DSOs)									
AIEG	Pure DSO	1,826	288	0	288	15.78%	288	0	0
AIESH	Pure DSO	886	139	0	139	15.69%	139	0	0
PBE (INFRAX)	Pure DSO	592	93	0	93	15.71%	93	0	0
REGIE DE WAVRE	Pure DSO	308	49	0	49	15.90%	49	0	0
TECTEO	Pure DSO	42,526	6,698	0	6,698	15.75%	6,698	0	0
IDEG (ORES)	Mixed DSO	16,140	2,542	0	2,542	15.75%	2,542	0	0
IEH (ORES)	Mixed DSO	42,685	6,723	0	6,723	15.75%	6,723	0	0
INTEREST (ORES)	Mixed DSO	1,842	290	0	290	15.75%	290	0	0
INTERLUX (ORES)	Mixed DSO	8,609	1,344	0	1,344	15.61%	1,344	0	0
INTERMOSANE (ORES)	Mixed DSO	13,580	2,139	0	2,139	15.75%	2,139	0	0
SEDILEC (ORES)	Mixed DSO	7,146	1,125	0	1,125	15.74%	1,125	0	0
SIMOGEL (ORES)	Mixed DSO	2,333	367	0	367	15.73%	367	0	0
GASELWEST (EANDIS)	Mixed DSO	1,767	278	0	278	15.73%	278	0	0
Sub-total		**140,240**	**22,075**	**0**	**22,075**	**15.74%**	**22,075**	**0**	**0**
GENERAL TOTAL		**22,608,953**	**3,560,229**	**779,319**	**2,780,910**	**12.30%**	**2,780,910**	**0**	**0**

Table 18: Return quotas for green certificates in 2012

3.3.4. Cancellation of Walloon green certificates for the quota in the Brussels-Capital Region

The quota of green certificates in the Brussels-Capital Region (BCR) is not applied on a quarterly basis, like in Wallonia, but once per year (31 March).

Initially, only Brussels green certificates are eligible for the quota. Afterwards, if the number of green certificates available on the Brussels market is insufficient to enable suppliers to fulfil their quota obligations, the Brussels regulator, BRUGEL, may authorise such suppliers to submit Walloon green certificates for the purpose of fulfilling their green certificate quota in the Brussels-Capital Region (BCR).

Only Walloon green certificates issued for installations less than 10 years old are eligible for the Brussels quota.

In this case, a multiplier coefficient corresponding to the ratio of the fine amounts is applied. The fine ratio since 2007 has been 100/100.

For 2012, 78,655 Walloon GC will have been submitted in this way by suppliers for the purpose of fulfilling their green certificate quotas in the Brussels-Capital Region, compared to around 105,000 Walloon GC in 2011.

Table 19: Number of Walloon GC cancelled for the Brussels quota

Years	Walloon GC cancelled
2003	0
2004	0
2005	60,818
2006	74,277
2007	113,135
2008	117,810
2009	113,907
2010	107,344
2011	105,020
2012	78,655
TOTAL	**770,966**

This recognition mechanism is valid for a period of 10 years, from 2005 to 2014. Walloon green certificates can still be used for electricity supplied in 2013 and 2014.

4. DEVELOPMENTS IN THE GREEN CERTIFICATES MARKET OVER THE PERIOD 2013-2020

The change in the balance in the green certificates market was the subject of an opinion issued by the CWaPE in May 2012 (CD-12e07-CWaPE-380). Based on developments in the market in 2012 and decisions taken by the Walloon Government in 2013, below is an update of the projections drawn up within the context of this opinion.

As regards the development of the sectors up to 2020, the CWaPE retains the same assumptions, namely a target of 8 TWh of electricity generated from renewable energy sources.

However, these projections differ from those made previously in relation to the following points:

- Updating of actual number of installations commissioned in 2012 (48,000);
- Taking account of 20,000 new installations benefitting from the SOLWATT regime for 2013;
- From 1 January 2014, solar power installations (under 10 kW) are presumed to benefit from the QUALIWATT regime and will therefore no longer have any impact on the green certificates market;
- Taking account of the Walloon Government's decision to reduce the length of time for which green certificates are awarded from 15 years to 10 years for SOLWATT installations;
- Green certificates awarded for photovoltaic solar power installations of under 10 kW are presumed to be sold to Elia at EUR 65/GC.

The table and figures below give the data and projections in question for the period 2011-2024.

Table 20: Outlook for stock of green certificates corresponding to actual generation of green electricity

Year	Stock start of year	SOLWATT	OTHERS	Supply	Demand	ELIA sale	Stock end of year
	(1)	(2a)	(2b)	(3) = (1) + (2a) + (2b)	(4)	(5)	(6) = (3) - (4) - (5)
	GC/year	GC/year	GC/year	GC/year	GC/year	GC/year	GC/year
2012	**2,749,718**	**2,741,478**	**3,304,000**	**8,795,196**	**2,859,565**	**1,426,696**	**4,508,935**
2013	4,508,935	3,969,274	3,489,671	11,967,880	3,641,569	3,969,274	4,357,037
2014	4,357,037	3,992,931	3,964,662	12,314,630	4,363,370	3,992,931	3,958,329
2015	3,958,329	3,844,391	4,360,400	12,163,119	5,005,226	3,844,391	3,313,502
2016	3,313,502	3,679,022	4,789,436	11,781,961	5,754,652	3,679,022	2,348,287
2017	2,348,287	3,590,097	5,284,156	11,222,540	6,169,438	3,590,097	1,463,004
2018	1,463,004	3,461,933	5,810,079	10,735,016	6,591,813	3,461,933	681,271
2019	681,271	3,054,188	6,418,351	10,153,810	7,021,885	3,054,188	77,737
2020	77,737	2,629,814	7,109,810	9,817,360	7,459,769	2,357,591	0
2021	0	1,509,968	7,109,810	8,619,778	7,459,769	1,160,009	0
2022	0	93,706	7,109,810	7,203,516	7,459,769	0	0
2023	0	81,849	7,109,810	7,191,659	7,459,769	0	0
2024	0	0	7,109,810	7,109,810	7,459,769	0	0
TOTAL		**32,648,652**	**72,969,804**	**129,076,275**	**78,706,363**	**30,536,133**	

Based on these assumptions, it can be seen that balance could return to the green certificates market in 2020 (cancellation of the stock of GC over the course of 2020)[27], provided that the entire volume of green certificates generated from 2013 within the framework of the SOLWATT sector is purchased by Elia. The volume of green certificates purchased in this way by Elia over the period 2012-2021 would be 30 million, which corresponds to an average cost over this period of slightly less than EUR 200 m per year.

[27] *If we consider balance to be achieved once the stock of GC is not greater than the return quota for the next quarter, this situation should occur in 2017.*

In practice, SOLWATT green certificates will move into the market while other green certificates, in similar quantities but generated by installations > 10 kW which benefit from a purchase guarantee, will be purchased by Elia at the price of EUR 65.

Figure 21: Changes in stock of green certificates over the period 2011-2024

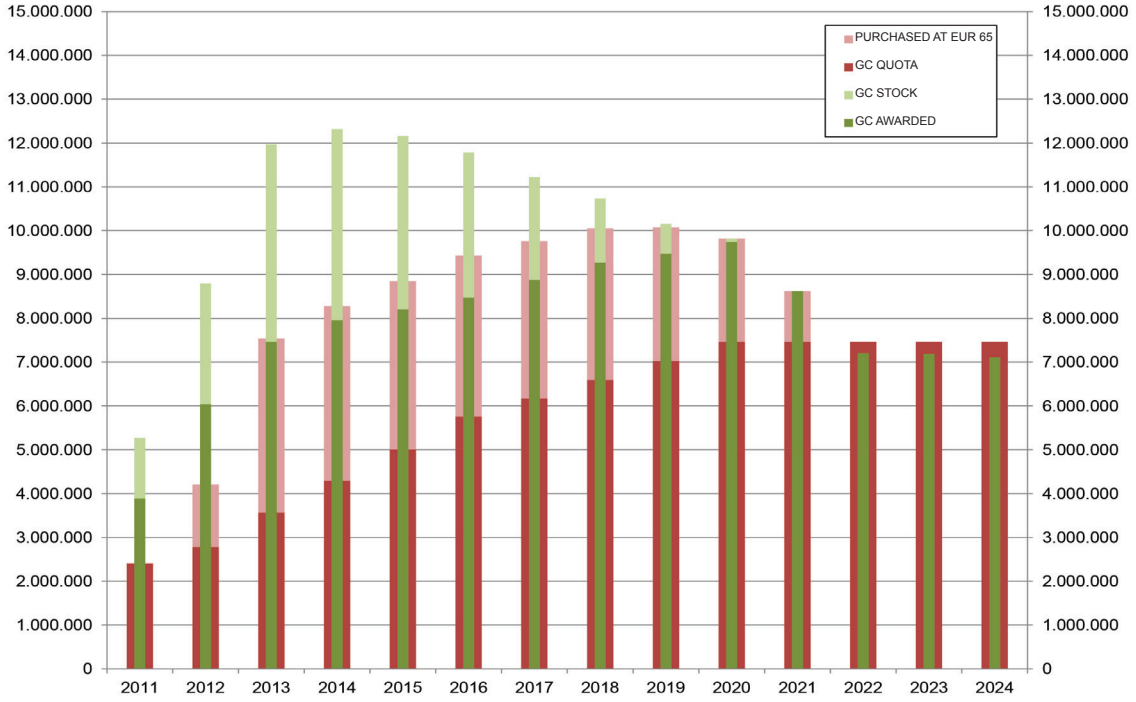
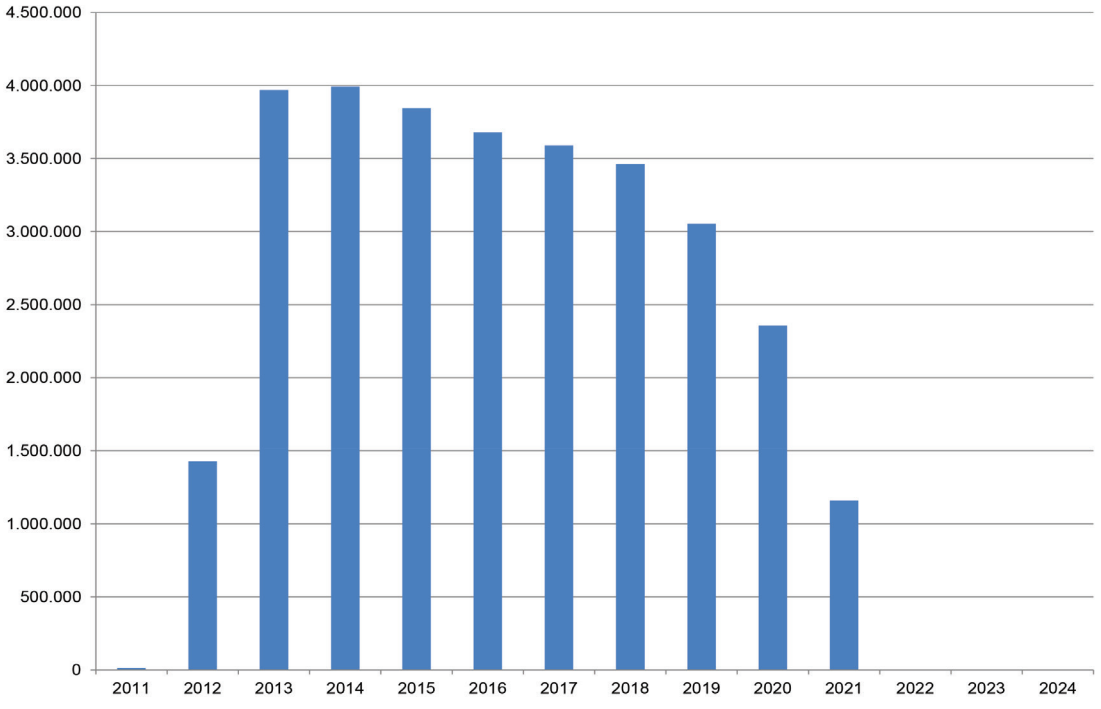


Figure 22: Change in number of green certificates sold to Elia at EUR 65/GC



5. CONCLUSIONS

Due to the imbalance in the green certificates market and uncertainty concerning the general framework for the promotion of green electricity in Wallonia, green electricity generation facilities are being developed at a less intensive pace than before. There is, however, the notable exception of the photovoltaic solar power sector, which in 2012 benefitted from a still too high level of support compared to the actual higher costs of generation.

With total installed capacity at the end of 2012 of 1,707 MW, generation of green electricity has increased by over 6% compared to 2011, supplying almost 19% of electricity in Wallonia. The photovoltaic solar power sector was the main driver of this growth in 2012. For the first time since 2003, the biomass sector has declined (-18%) following a deterioration in the return from certain installations and the absence of any new projects of sufficient scale. Climatic conditions were favourable to the hydropower sector in 2012 (+64%).

In terms of green certificates, the photovoltaic solar power sector once again saw the highest growth and is now in the lead with a market share approaching 50% (effect of multiplier coefficient). The biomass sector has dropped to second place with around 25% market share, followed by wind (20%).

The strong penetration of the photovoltaic solar power sector has resulted in a 27% increase in the average level of support for green electricity, which for 2012 was EUR 99/green MWh generated compared to EUR 78/green MWh generated in 2011.

As in previous years, since the number of green certificates available on the market greatly exceeded the number of green certificates required to be returned by suppliers, suppliers submitted the required number of green certificates and no fine needed to be imposed. As regards reductions in quota, significant penetration by new suppliers into the market can be seen, in particular those directly associated with energy-intensive companies.

A marked increase in the sale of green certificates at EUR 65 to Elia can be seen, both in the case of small producers which do not have contracts and that of larger producers with contracts expired in 2012. Pursuant to this, more than 1,425,000 GC were sold to Elia in 2012.

Based on its projections for the period 2013-2024, the CWaPE believes that balance can only return to the green certificates market from 2020 onwards. This return to balance implies the sale at EUR 65 of the equivalent of all green certificates awarded to SOLWATT installations from 2013 (presuming implementation of the QUALIWATT plan on 1 January 2014). The cost for Elia during this period is estimated at EUR 200 m per year, an amount that will be passed along directly to end-customer invoices in Wallonia via the regional levy provided for this purpose.

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - Biomass sector

Name of owner	Generation site (with file no.)	Pqnv (kW)	Pend (kW)
AGRIBERT - BENIEST	140_FERME DE LA GRANGE DE LA DÎME (MONT-SAINT-GUIBERT)	0	245
AIGREMONT	109_BIOMASSE AIGREMONT (FLÉMALLE)	1,318	1,090
AIVE	63_BIOMASSE C.E.T. DE TENNEVILLE	1.692	1,660
	186_BIOMASSE C.E.T. DE HABAY	693	444
ARBORETUM	183_BIOMASSE L'ARBORETUM (PÉRUWELZ)	41	25
ATELIER PROTÉGÉ LE SAUPONT	126_BIOMASSE LE SAUPONT (BERTRIX)	1,525	178
BEP - ENVIRONNEMENT	115_BIOMASSE C.E.T. DE HAPPE CHAPOIS	210	260
BIOENERGIE EGH	263_BIOMASSE BIOENERGIE EGH (NIDRUM)	218	220
BIOWANZE	1 151_BIOMASSE BIOWANZE	77,700	18,750
BURGO ARDENNES	43_BIOMASSE BURGO ARDENNE (VIRTON)	103,381	55,000
BURNIAUX Marcel	123_FERME PRÉ DE PRÉAT (SURICE)	56	85
C.E.T.B.	7 923_BIOMASSE C.E.T. LE BEAUMONT	258	477
CAP FORME	128_BIOMASSE CAP FORME (LA GLANERIE)	26	12
CAROLIMMO	134_BIOMASSE BUSINESS HOTEL (CHARLEROI)	26	12
COMMUNE DE GEDINNE	142_BIOMASSE COMMUNE DE GEDINNE	337	306
COMMUNE D'OTTIGNIES LOUVAIN-LA-NEUVE	188_BIOMASSE CENTRE CULTUREL D'OTTIGNIES	156	90
ECOGEER	2 177_BIOGAZ DU HAUT GEER	0	1,000
ELECTRABEL	84_BIOMASSE C.E.T. DE MONTZEN	0	176
	97_BIOMASSE AWIRS 4	0	80,000
	10_BIOMASSE LUTOSA (LEUZE)	2,703	2,190
ÉNERGIES RENOUVELABLES DES ARDENNES (ERDA)	152_BIOMASSE ERDA (BERTRIX)	19,000	6,300
ERPC	8 057_BIOMASSE ERPC	142	115
HECK	23_HOF HECK (NIDRUM)	226	153
IBV and Cie SA	1 152_BIOMASSE IBV (VIELSALM)	27,400	17,769
IDEA HENNUYERE	68_BIOMASSE STATION D'ÉPURATION DE WASMUEL	0	429
INTRADEL	82_BIOMASSE C.E.T. D'HALLEMBAYE	0	2.048
	8 046_BIOMASSE UVÉLIA (Herstal)	0	30,320
JOLUWA	7 957_BIOMASSE JOLUWA	110	88
KESSLER FRÈRES	38_FERME DE FAASCHT (ATTERT)	980	757
LENGES	24_HOF LENGES (RECHT)	2,871	2,200
L'ORÉAL LIBRAMONT	5 712_BIOMASSE BIOENERGIE L'ORÉAL	1,543	3,102
MONSOTEL	204_BIOMASSE HOTEL MERCURE (NIMY)	44	25
MYDIBEL	135_BIOMASSE MYDIBEL (MOUSCRON)	1,660	1,382
RECYBOIS	112_BIOMASSE RECYBOIS (LATOUR)	8,000	3,700
RENOGEN	138_BIOMASSE RENOGEN KAISERBARACKE BIOFUEL	3,607	2,949
	149_BIOMASSE RENOGEN KAISERBARACKE BOIS	16,000	9,700
SCHYNS Gaspard	2 181_BIOMASSE MOULIN SCHYNS (BATTICE)	2,000	1,027
SEVA	111_BIOMASSE SEVA (MOUSCRON)	1,040	2,000
SHANKS	2_BIOMASSE C.E.T. DE MONT-ST-GUIBERT / CETEM	0	10,657
SITA WALLONIE	1_BIOMASSE C.E.T. D'ENGIS-PAVIOMONT	0	1,780
SPAQUE	64_BIOMASSE C.E.T. D'ANTON (BONNEVILLE)	442	293
	105_BIOMASSE C.E.T. DES ISNES	105	49
SUCRERIE COUPLET	8 017_BIOMASSE SUCRERIE COUPLET	400	433
TWENTY SEVEN	196_BIOMASSE TWENTY SEVEN (WATERLOO)	41	25
UNIVERSITÉ DE LIÈGE	6 454_BIOMASSE CHAUFFERIE CENTRALE DU SART TILMAN	7,281	1,459
VALORBOIS	148_BIOMASSE VALORBOIS (THIMISTER-CLERMONT)	6,400	3,865
VAN GANSEWINKEL ENVIRONMENTAL SERVICES	20_BIOMASSE C.E.T. DE COUR-AU-BOIS	1,000	3,041
VANHEEDE BIOMASS SOLUTIONS	205_BIOMASSE SODECOM (QUÉVY)	1,200	2,328
VERDESIS	90_BIOMASSE A.I.V.E. (MARCHE)	0	26

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - Biomass sector (contd.)

VERLAC	155_BIOMASSE VERLAC (ALLEUR)	88	50
VILLE DE TOURNAI	2 824_BIOMASSE GAZENBOIS (TOURNAI)	600	292
ZINTZEN Jacques	8 002_COGEN BIOMASSE CITÉ DE L'ESPOIR	104	59
Net electrical generating capacity (Pend) (kw)			270,641
Number of sites			52

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - Fossil fuel cogeneration sector

Name of owner	Generation site (with file no.)	Pqnv (kW)	Pend(kW)
AW EUROPE	8 097_COGEN AW EUROPE	114	70
BAXTER	8 063_COGEN BAXTER LESSINES	8,410	5,336
BELGIAN QUALITY FISH	161_COGEN BQF (DOTTIGNIES)	655	375
BENEO-Orafti	113_COGEN RAFFINERIE NOTRE-DAME (OREYE)	70,000	9,500
BIESBROUCK	150_COGEN BIESBROUCK (PECQ)	6,539	4,942
BRIQUETERIES DE PLOEGSTEERT	8 036_COGEN BRIQUETERIE DE PLOEGSTEERT DIVISION BARRY	510	301
	1 973_COGEN BRIQUETERIES DE PLOEGSTEERT	1,187	889
CENTRE HOSPITALIER PSYCHIATRIQUE DE LIÈGE	185_COGEN CHP PETIT BOURGOGNE (SCLESSIN)	207	137
CENTRE PUBLIC D'ACTION SOCIALE DE MONS	8 145_COGEN RESIDENCE DU BOIS D'HAVRÉ	216	138
CHAAP	7 916_COGEN L'ORÉE DU BOIS	32	15
C.H.R DE LA CITADELLE DE LIÈGE	7 976_COGEN C.H.R DE LA CITADELLE DE LIÈGE	1,651	1,532
CHU AMBROISE PARÉ	170_COGEN CHU AMBROISE PARÉ	954	680
CHU MONT-GODINNE	8 326_COGEN CHU MONT- GODINNE	1,304	1,063
CLINIQUE DE L'IPAL	208_COGEN PÈRÎ DES CLINIQUES DE L'IPAL (SCLESSIN)	201	119
CLINIQUE PSYCHIATRIQUE DES FRÈRES ALEXIENS	103_COGEN CLINIQUE PSY DES FRÈRES ALEXIENS	380	251
CPAS DE NAMUR	164_COGEN CPAS DE NAMUR	200	118
DECOCK YOUNGPLANTS	8 021_COGEN PELARGONIUM DECOCK	1,909	1,448
DEPAIRON	3 381_COGEN DEPAIRON	186	122
DOW CORNING EUROPE	3 042_COGEN DOW CORNING SENEFFE	1,319	909
DUMOULIN	4 823_COGEN DUMOULIN	1,315	1,113
ELECTRABEL	4_COGEN CHR DE NAMUR	1,046	813
	39_COGEN SOLVAY (JEMEPPE)	116,000	94,447
ENEAS	45_COGEN MOTEL DE NIVELLES	109	65
	2 179_COGEN MALTERIE DU CHATEAU (BELOEIL)	630	330
FEDESCO	8 018_COGEN PRISON D'HUY	79	52
	359_COGEN FERRERO ARDENNES (ARLON)	4,848	4,204
FIRME DERWA	7 780_COGEN DERWA	772	510
FUNDP	1 174_COGEN FUNDP CHAUFFERIE DE CHIMIE	372	234
GALACTIC	8 005_COGEN GALACTIC	2,110	1,981
GLAXOSMITHKLINE BIOLOGICALS	8 035_COGEN GSK WAVRE	1,507	1,174
	3 522_COGEN GSK WAVRE	1,315	1,183
	3 523_COGEN GSK GEMBLOUX	216	139
GOBEL	371_COGEN AU JARDIN DU COEUR (FLÉRON)	32	18
HOTEL LES 3 CLES	8 451_COGEN HOTEL LES 3 CLES	67	30
IDEMPAPERS	7992_COGEN IDEMPAPERS VIRGINAL	55,000	8,950
IPALLE	89_COGEN STATION D'ÉPURATION DE MOUSCRON	644	403
ISERA & SCALDIS SUGAR	98_COGEN SUCRERIE DE FONTENOY	31,077	9,806
KRAFT FOODS NAMUR	1 722_COGEN KRAFT FOODS NAMUR	808	610
LE POLE IMAGE MEDIACITE	254_COGEN LE PÔLE-BÂTIMENT S (LIÈGE)	121	79
	7 909_COGEN LE PÔLE-BÂTIMENT T (LIÈGE)	163	123
LES NUTONS	8 044_COGEN LES NUTONS	731	621
MARIENHEIM	8 104_COGEN HOPITAL SAINT MARIE	124	60
NEKTO	8 124_COGEN NEKTO	62	30
PROGEST	7 904_COGEN CHANTEBRISE	77	48
PROVITAL INDUSTRIE	96_COGEN PROVITAL INDUSTRIE (WARCOING)	1,249	984

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - Fossil fuel cogeneration sector (contd.)

RAFFINERIE TIRLEMONTOISE	37_COGEN RAFFINERIE DE WANZE	60,000	12,475
	108_COGEN RÂPERIE DE LONGCHAMPS	15,502	6,888
RÉGIE COMMUNALE AUTONOME DE LA LOUVIÈRE	422_COGEN CENTRE AQUATIQUE DE LA LOUVIÈRE	458	300
RTBF - RADIO TELEVISION BELGE DE LA COMMUNAUTE FRANCAISE	8 462_COGEN MEDIA RIVES	114	67
SOCIÉTÉ D'EXPLOITATION DES THERMES DE SPA	7 907_COGEN THERMES DE SPA	582	390
SOWAER	2 374_COGEN AÉROPORT DE CHARLEROI	114	70
SPA MONOPOLE	1 178_COGEN SPA MONOPOLE	2,441	1,947
SPW	1 659_COGEN CA MET (NAMUR)	481	329
STUV	8 048_COGEN STUV BOIS-DE-VILLERS	220	140
SWDE	8 151_COGEN STATION DE TRAITEMENT DE STEMBERT	79	50
TAPIS RENT	8 056_COGEN TAPIS RENT	62	30
TECHSPACE AERO	141_COGEN TECHSPACE-AERO (MILMORT)	1,370	1,155
TOTAL PETROCHEMICALS FELUY	8 074_COGEN TPF	38,330	14,037
TRAITEUR PAULUS	8 382_COGEN PAULUS	28	12
UNIVERSITÉ CATHOLIQUE DE LOUVAIN	8 012_COGEN UCL LLN	4,112	3,768
UNIVERSITÉ DE LIÈGE	6 500_COGEN BÂTIMENT DE RADIOCHIMIE	202	134
	6 499_COGEN ULG BÂTIMENT D'ÉDUCATION PHYSIQUE	202	134
WARCOING INDUSTRIE	41_COGEN SUCRERIE DE WARCOING - SITE 1 VW	1,249	981
	118_COGEN SUCRERIE DE WARCOING 2 - SITE NIRO	1,050	803
	119_COGEN SUCRERIE DE WARCOING - SITE 3 TURBO	40,710	6,547
Net electrical generating capacity (Pend) (kw)			206,209
Number of sites			65

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - Wind sector

Name of owner	Generation site (with file no.)	Pqnv(kW)	Pend (kW)
A+ÉNERGIES	117_ÉOLIENNE BRONROMME	0	328
ALLONS EN VENT	132_PARC ÉOLIEN TIENNE DU GRAND SART	0	794
ASPIRAVI	250_PARC ÉOLIEN D'AMEL	0	9,897
	5 713_PARC ÉOLIEN VAUBAS (VAUX-SUR-SURE)	0	5,923
CAPE DOCTOR	7 901_PARC ÉOLIEN DE WARISOULX	0	9,842
DOW CORNING EUROPE	8 242_ÉOLIEN DOW CORNING SENEFFE	0	2,274
ECOPOWER	8 241_PARC ÉOLIEN RECOPIA	0	4,546
EDF Luminus	3 093_PARC ÉOLIEN SPE DE VERLAINE/VILLERS LE BOUILLET	0	7,959
ELECTRABEL	70_PARC ÉOLIEN DE BÜTGENBACH	0	7,993
	7 984_PARC ÉOLIEN QUÉVY 2	0	5,909
	8 122_PARC ÉOLIEN DE LEUZE EN HAINAUT	0	14,255
	7 905_PARC ÉOLIEN DE DOUR	0	9,553
	7 906_PARC ÉOLIEN DE BULLINGEN	0	11,919
ELECTRASTAR	144_PARC ÉOLIEN DE MARBAIS	0	21,747
ELECTRAWINDS BASTOGNE	3 786_PARC ÉOLIEN BASTOGNE	0	5,923
ÉLECTRICITÉ DU BOIS DU PRINCE	233_PARC ÉOLIEN DE FOSSES-LA-VILLE	0	21,745
ELSA	8 144_PARC ÉOLIEN DE LEUZE EUROPE 9	0	2,036
	8 123_PARC ÉOLIEN DE LEUZE EUROPE 10	0	2,036
ENAIRGIE DU HAINAUT	160_PARC ÉOLIEN DE DOUR-QUIÉVRAIN	0	14,124
ENERCITY	3 118_PARC ÉOLIEN DE VERLAINE / VILLERS-LE-BOUILLET	0	1,990
Energie 2030 Agence	104_ÉOLIENNE DE ST-VITH	0	593
	180_ÉOLIENNE DE CHEVETOGNE	0	800
GREEN WIND	3 028_PARC ÉOLIEN DE CERFONTAINE	0	21,834
	3 027_PARC ÉOLIEN DE CHIMAY	0	9,948
	2 825_PARC ÉOLIEN DE FROIDCHAPELLE	0	24,855
GREENELEC EUROPE	146_PARC ÉOLIEN DE COUVIN	0	1,977
HÉGOA WIND	7 963_PARC ÉOLIEN DE PERWEZ 4 (AISCHE EN REFAIL)	0	7,411
KVNRG	7 929_PARC ÉOLIEN QUÉVY 1	0	10,465
KYOTO TECHNOLOGIES	8 013_PARC ÉOLIEN DE CINEY 2	0	10,052
LES ÉOLIENNES DE PERWEZ	130_PARC ÉOLIEN DE PERWEZ 3	0	4,495
LES MOULINS DU HAUT PAYS	7 954_PARC ÉOLIEN MOULIN DU HAUT PAYS - EXTENSION DOURQUIEVRAIN	0	4,533
LES VENTS DE L'ORNOI	86_PARC ÉOLIEN DE GEMBLOUX-SOMBREFFE	0	8,982
LES VENTS DE PERWEZ	107_PARC ÉOLIEN DE PERWEZ 2	0	7,396
MICHAUX Jean-Pierre	91_PARC ÉOLIEN DU CHAMP DE RANCE	0	18
MOBILAE	7 930_PARC ÉOLIEN WAIMES-CHAIVREMONT	0	9,105
P.B.E.	69_PARC ÉOLIEN DE PERWEZ 1	0	597
PELZ	8 173_PARC ÉOLIEN DE LEUZE EUROPE 8	0	2,036
RENEWABLE POWER COMPANY	50_PARC ÉOLIEN DE SAINTE-ODE	0	7,484
	7 987_PARC ÉOLIEN DE BOURCY	0	17,433
	7 911_PARC ÉOLIEN DE SAINTE-ODE 2	0	14,944
Sky Sweeper	2 412_PARC ÉOLIEN DE PONT-À-CELLES (NIVELLES)	0	15,753
SOLANO WIND	8 276_PARC ÉOLIEN DE CINEY PESSOUX	0	14,818

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - Wind sector (contd.)

SPE POWER COMPANY	100_PARC ÉOLIEN DE VILLERS-LE-BOUILLET	0	12,000
	121_PARC ÉOLIEN DE WALCOURT	0	9,000
	163_PARC ÉOLIEN DE DINANT & YVOIR	0	11,447
	3 094_PARC ÉOLIEN DE FERNELMONT	0	6,831
	7 056_PARC ÉOLIEN DE FOSSE-LA-VILLE 2	0	7,919
	7 055_PARC ÉOLIEN DE BERLOZ	0	5,955
	8 009_PARC ÉOLIEN DE CINEY 1	0	10,052
TABNRG	7 928_PARC ÉOLIEN TOURNAI ANTOING	0	15,915
TIVANO	8 150_PARC ÉOLIEN DE GOUVY	0	11,307
VANHEEDE WINDPOWER	7 962_ÉOLIEN VANHEEDE WINDPOWER	0	2,000
VENTS D'HOUYET	94_ÉOLIENNE AUX TCHERETTES	0	1,390
WALDICO	147_ÉOLIENNE WALDICO GHISLENGHIEN	0	1,969
WINDFARM BIÈVRE	7 999_PARC ÉOLIEN BIÈVRE	0	14,000
WINDFARM SANKT-VITH£	8 054_PARC ÉOLIEN DE SAINT-VITH	0	9,714
WINDVISION WINDFARM ESTINNES	798_PARC ÉOLIEN D'ESTINNES	0	79,589
WINDVISION WINDFARM FLOREFFE	7 946_PARC ÉOLIEN WINDVISION WINDFARM FLOREFFE	0	6,839
Net electrical generating capacity (Pend) (kw)			562,249
Number of sites			58

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - Hydropower sector

Name of owner	Generation site (with file no.)	Pqnv (kW)	Pend (kW)
AFA Denis	52_HYDRO DES FORGES	0	66
C.E. Bruno MARAITE	61_HYDRO MARAITE (LIGNEUVILLE)	0	217
C.E. LA FENDERIE	71_HYDRO LA FENDERIE (TROOZ)	0	276
CARMEUSE	435_HYDRO NEUVILLE (MOHA)	0	90
CARRIÈRE DE VINALMONT	58_HYDRO DE RABORIVE (AYWAILLE)	0	60
CENTRALES GAMBY	59_HYDRO CHAPUIS (BELLEVAUX)	0	100
	60_HYDRO D'OLNE	0	256
DEGESTEN	8 313_HYDRO LES AMEROIS	0	74
DONY	48_HYDRO DU VAL DE POIX	0	94
ELECTRABEL	28_HYDRO DE LORCÉ	0	80
	29_HYDRO DE HEID-DE-GOREUX (AYWAILLE)	0	7,344
	30_HYDRO D'ORVAL	0	47
	31_HYDRO DE COO DÉRIVATION	0	385
	32_HYDRO DE STAVELOT	0	106
	33_HYDRO DE CIERREUX (GOUVY)	0	100
	34_HYDRO DE LA VIERRE (CHINY)	0	1,976
	35_HYDRO DE BÜTGENBACH	0	2,106
	36_HYDRO DE BÉVERCÉ	0	9,902
	77_MOULIN DE BARDONWEZ (RENDEUX)	0	32
ÉNERGIE BERCHIWÉ	122_MOULIN DE BERCHIWÉ	0	22
ÉNERGIE FLEUVES	207_HYDRO BARRAGE DE HUN	0	2,038
ENHYDRO	65_HYDRO DE PONT-À-SMUID (SAINT-HUBERT)	0	174
	66_HYDRO DE SAINTE-ADELINE (SAINT-HUBERT)	0	116
HYDRO-B	8 073_HYDRO DE MARCINELLE	0	656
HYDROLEC DENIS	51_HYDRO DE DOLHAIN (BILSTAIN)	0	140
	53_MOULIN PIRARD (NESSONVAUX)	0	49
HYDROVAL	47_HYDRO ZOUDE (SAINT-HUBERT)	0	178
IKONOMAKOS Xavier	564_HYDRO BARSE (MARCHIN)	0	45
JEANTY Nadine	76_MOULIN DE VILLERS-LA-LOUE	0	15
LA TRAPPERIE	2 501_HYDRO DE LA TRAPPERIE (HABAY-LA-VIEILLE)	0	37
MERYTHERM	57_HYDRO DE MÉRY (TILFF)	0	205
MOULIN HICK	158_MOULIN HICK (VAL-DIEU)	0	18
MOULINS FISENNE	73_MOULIN FISENNE (PEPINSTER)	0	95
MUYLE HYDROÉLECTRICITÉ	87_HYDRO DE MORNIMONT	0	698
PHY	74_HYDRO PIRONT (LIGNEUVILLE)	0	62
	75_MOULIN MAYERES (MALMEDY)	0	104
PROTIN Josette	56_MOULIN D'EN BAS (SAINT-HUBERT)	0	15
REFAT ELECTRIC	67_HYDRO DE REFAT (STAVELOT)	0	245
SAPIEF	72_HYDRO DE FRAIPONT	0	75
SCIERIE MAHY	83_MOULIN DE LA SCIERIE MAHY (CHANLY)	0	25

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - Hydropower sector (contd.)

SPE	12_HYDRO DE FLORIFFOUX	0	843
	13_HYDRO DES GRANDS-MALADES (JAMBES)	0	4,887
	14_HYDRO D'ANDENNE	0	8,986
	15_HYDRO D'AMPSIN-NEUVILLE	0	9,910
	16_HYDRO D'IVOZ-RAMET	0	9,742
	17_HYDRO DE MONSIN	0	17,765
	18_HYDRO DE LIXHE	0	22,979
SPW	78_HYDRO DE L'EAU D'HEURE	0	951
	79_HYDRO DU PLAN INCLINÉ DE RONQUIÈRES	0	2,690
	6 677_HYDRO BARRAGE DE LA GILEPPE	0	581
SWDE (SOCIÉTÉ WALLONNE DES EAUX)	54_HYDRO COMPLEXE DE L'OURTHE (NISRAMONT)	0	1,208
	55_HYDRO COMPLEXE DE LA VESDRE (EUPEN)	0	1,519
VERTWATT	202_HYDRO SAINT-ROCH (COUVIN)	0	92
WALDOR	1 375_HYDRO WALD'OR (MARCHIN)	0	75
WILLOT Jean-Luc	99_MOULIN JEHOULET (MOHA)	0	22
ZEYEN	62_MOULIN DE WEWELER (BURG-REULAND)	0	169
Net electrical generating capacity (Pend) (kw)			110,743
Number of sites			56

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - PV solar power sector

Name of owner	Generation site (with file no.)	Pqnv (kW)	Pend (kW)
A.C.M.	7 951_PHOTOVOLTAIQUE ACM	0	221
ABBIUSI Mauro	7 993_PHOTOVOLTAIQUE ABBIUSI	0	29
ACCUBEL	8 027_PHOTOVOLTAIQUE ACCUBEL	0	21
ADAMS Peter	7 931_PHOTOVOLTAIQUE ADM	0	46
ADMINISTRATION COMMUNALE DE PERWEZ	7 965_PHOTOVOLTAIQUE HALL DES SPORTS (PERWEZ)	0	29
AERTSSEN TERRASSEMENTS	8 301_PHOTOVOLTAIQUE AERTSSEN TERRASSEMENTS	0	42
AGRI-DETROZ	8 126_PHOTOVOLTAIQUE AGRI-DETROZ	0	223
ALAN & CO	172_PHOTOVOLTAIQUE ALAN & CO	0	45
ANAPHARMA	7 998_PHOTOVOLTAÏQUE ANAPHARMA	0	24
ANDRÉ Nicolas	8 007_PHOTOVOLTAIQUE ANDRÉ Nicolas	0	44
ARPAL MANAGMENT	8 011_PHOTOVOLTAIQUE ARPAL MANAGMENT	0	90
ATELIER 2000	8 186_PHOTOVOLTAIQUE ATELIER 2000. BAT 8000	0	248
	8 090_PHOTOVOLTAIQUE ATELIER 2000. BAT 1H11	0	248
ATELIERS BODART ET VANGE	8 087_PHOTOVOLTAÏQUE ATELIERS BODART ET VANGE	0	78
ATELIERS DU MONCEAU	8 465_PHOTOVOLTAIQUE ATELIER DU MONCEAU	0	173
AU PAIN CINACIEN	8 003_PHOTOVOLTAIQUE AU PAIN CINACIEN	0	44
BALTEAU	1 156_PHOTOVOLTAIQUE Balteau	0	28
BAM WALLONIE	3 728_PHOTOVOLTAIQUE BAM MAT	0	46
BARBIER Étienne	8 065_PHOTOVOLTAIQUE BARBIER	0	32
BEM'S	8 114_PHOTOVOLTAIQUE BEM'S	0	40
Bières de Chimay	2 046_PHOTOVOLTAIQUE Bières de Chimay	0	41
BIKERS DESIGN	8 468_PHOTOVOLTAIQUE BIKERS DESIGN	0	43
BONNE FORTUNE	8 305_PHOTOVOLTAIQUE ETIENNE BONNE FORTUNE	0	60
BREDA	8 160_PHOTOVOLTAIQUE BREDA	0	53
BRICO SERVICE	8 435_PHOTOVOLTAIQUE BRICO SERVICE	0	68
BRICOLAGES LESSINES	8 437_PHOTOVOLTAIQUE BRICOLAGES LESSINES	0	50
BRIDGESTONE AIRCRAFT TIRE	7 926_PHOTOVOLTAIQUE BRIDGESTONE AIRCRAFT TIRE	0	32
CAPAUL	8 168_PHOTOVOLTAIQUE CAPAUL	0	90
CARGO LIFTING	8 162_PHOTOVOLTAIQUE CARGO LIFTING	0	120
CARLIER BOIS	8 159_PHOTOVOLTAIQUE CARLIER BOIS	0	26
CARROSSERIE PIRON SA	8 302_PHOTOVOLTAIQUE CARROSSERIE PIRON	0	39
CATOULE	8 381_PHOTOVOLTAIQUE CATOULE	0	68
CELEM	8 193_PHOTOVOLTAIQUE CELEM	0	45
CEZAR MEUBLES	7 968_PHOTOVOLTAIQUE CEZAR MEUBLES	0	83
CHACON	8 258_PHOTOVOLTAÏQUE CHACON	0	80
CHAPELLERIE HERMAN	8 039_PHOTOVOLTAIQUE CHAPELLERIE HERMAN	0	21
CHAUDRO	7 942_PHOTOVOLTAIQUE CHAUDRO 2000	0	51
CHOCOLATERIE BELVAS	8 163_PHOTOVOLTAIQUE CHOCOLATERIE BELVAS	0	69
CODIBEL	8 099_PHOTOVOLTAIQUE CODIBEL	0	121
COMMUNE D'ATTERT	193_PHOTOVOLTAIQUE ÉCOLE COMMUNALE D'ATTERT	0	18
CORA CHATELINEAU	8 255_PHOTOVOLTAIQUE CORA CHATELINEAU	0	250
CORA ROCOURT	8 251_PHOTOVOLTAIQUE CORA ROCOURT	0	250
DANTINNE GEORGES	8 318_PHOTOVOLTAIQUE DANTINNE GEORGES	0	22
DEBAENST	8 331_PHOTOVOLTAÏQUE DEBAENST	0	150
DECRUYENAERE ASSOCIATION	8 457_PHOTOVOLTAIQUE DECRUYENAERE ASSOCIATION	0	68
DELABIE	7 166_PHOTOVOLTAIQUE DELABIE	0	680
DELINSNACK	8 040_PHOTOVOLTAIQUE DELISNACK	0	67
DELTA SOLAR ENERGY	8 229_PHOTOVOLTAIQUE UCB PHARMA	0	250
DELTRIAN INTERNATIONAL	8 316_PHOTOVOLTAIQUE DELTRIAN INTERNATIONAL	0	31
DERCO	8 076_PHOTOVOLTAIQUE DERCO	0	20
DEVAMEAT	8 408_PHOTOVOLTAIQUE DEVAMEAT	0	150

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - PV solar power sector (contd.)

DIEDERICKX J-F	8 037_PHOTOVOLTAIQUE DIEDERICKX	0	20
DISTRI- INCOURT	8 466_PHOTOVOLTAIQUE DISTRI-INCOURT	0	85
DIVINS	8 325_PHOTOVOLTAIQUE DIVINS	0	24
DOLCE LA HULPE	8 185_PHOTOVOLTAIQUE DOLCE LA HULPE	0	238
DOMAINE PROVINCIALE DE CHEVETOGNE	6 369_PHOTOVOLTAIQUE DOMAINE PROVINCIAL DE CHEVETOGNE	0	60
E.C.F.	8 164_PHOTOVOLTAIQUE E.C.F	0	60
EKOWATT	8 064_PHOTOVOLTAIQUE ETS MARCEL COLLIGNON	0	49
ELOY PREFAB	8 157_PHOTOVOLTAIQUE ELOY PREFAB	0	233
ENDECO	7 996_PHOTOVOLTAIQUE ENDECO	0	38
ENTREPRISE GÉNÉRALE GUSTAVE ET YVES LIÉGEOIS	7 918_PHOTOVOLTAIQUE LIÉGEOIS G ET Y	0	12
EPSILON SOLAR ENERGY	8 409_PHOTOVOLTAIQUE PRATT & WHITNEY	0	250
EQUISTAL	8 439_PHOTOVOLTAIQUE EQUISTAL	0	40
ETA LE SAUPONT	8 360_PHOTOVOLTAIQUE ETA LE SAUPONT	0	221
ETABLISSEMENT WUST Jean	8 166_PHOTOVOLTAIQUE ETABLISSEMENT WUST Jean	0	170
ETILUX	8 361_PHOTOVOLTAIQUE ETILUX	0	90
ETS DENIS	7 975_PHOTOVOLTAIQUE DENIS Jean-Luc	0	118
ETS LAURENT Christian	7 924_PHOTOVOLTAIQUE ETS LAURENT Christian	0	12
EUROSHOP	8 438_PHOTOVOLTAIQUE EUROSHOP	0	195
FERNEL-DIS	8 469_PHOTOVOLTAIQUE FERNEL-DIS	0	82
FIB Belgium	3 639_PHOTOVOLTAIQUE FIB BELGIUM	0	224
FONDERIE JACQUET	8 347_PHOTOVOLTAIQUE FONDERIE JACQUET	0	55
FUGEL FRAIS	7 997_PHOTOVOLTAIQUE FUGEL FRAIS	0	21
GALERE	8 303_PHOTOVOLTAIQUE GALERE	0	34
GALVAMETAUX	8 077_PHOTOVOLTAIQUE GALVAMETAUX	0	136
GAMMA SOLAR ENERGY	8 183_PHOTOVOLTAIQUE CHAMPION MESTDAGH MAISIÈRE	0	250
	8 146_PHOTOVOLTAIQUE CHAMPION MESTDAGH CERFONTAINE	0	66
	8 147_PHOTOVOLTAIQUE CHAMPION MESTDAGH TAMINES	0	102
	8 148_PHOTOVOLTAIQUE CHAMPION MESTDAGH CHARLEROI VILLE 2	0	112
	8 053_PHOTOVOLTAIQUE CHAMPION MESTDAGH COUILLET	0	164
	8 295_PHOTOVOLTAIQUE CHAMPION-MESTDAGH GENAPPE	0	56
	8 091_PHOTOVOLTAIQUE CHAMPION-MESTDAGH LUTTRE	0	92
	8 092_PHOTOVOLTAIQUE CHAMPION-MESTDAGH MONCEAU	0	107
	8 093_PHOTOVOLTAIQUE CHAMPION-MESTDAGH MONT-SUR-MARCHIENNE	0	236
	8 094_PHOTOVOLTAIQUE CHAMPION-MESTDAGH GEMBLOUX	0	113
	8 095_PHOTOVOLTAIQUE CHAMPION-MESTDAGH FONTAINEL'ÉVÊQUE	0	92
	8 096_PHOTOVOLTAIQUE CHAMPION MESTDAGH FARCIENNES	0	75
	8 106_PHOTOVOLTAIQUE CHAMPION MESTDAGH CHATELINEAU	0	119
	8 109_PHOTOVOLTAIQUE CHAMPION MESTDAGH JEMEPPE SUR SAMBRE	0	46
	8 110_PHOTOVOLTAIQUE CHAMPION MESTDAGH GOSSELIES	0	238
GAUME BOIS	7 925_PHOTOVOLTAIQUE GAUME BOIS	0	15
GESTION BIENS ET SERVICES	8 406_PHOTOVOLTAIQUE GESTION BIENS ET SERVICES	0	17
GHL Groupe	8 081_PHOTOVOLTAIQUE GHL Groupe	0	113
GIRRETZ PIERRE ENERGIES ALTERNATIVES	8 436_PHOTOPHOLTAIQUE GIRRETZ PIERRE ENERGIES ALTERNATIVES	0	39
GLAXOSMITHKLINE BIOLOGICALS	3 261_PHOTOVOLTAIQUE GSK WAVRE WN02	0	101
GLAXOSMITHKLINE VACCINES	8 396_PHOTOVOLTAIQUE GLAXOSMITHKLINE VACCINES WAVRE	0	100
GOFETTE	8 041_PHOTOVOLTAIQUE GOFFETTE	0	60

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - PV solar power sector (contd.)

GREENWATCH	8 407_PHOTOVOLTAIQUE DISTRIFOOD	0	166
	8 079_PHOTOVOLTAIQUE GGM	0	182
	8 115_PHOTOVOLTAIQUE INDUMET BELGIUM	0	200
	8 228_PHOTOVOLTAIQUE BLAISE	0	71
	8 344_PHOTOVOLTAIQUE AGR GALET MARCEL	0	60
	8 315_PHOTOVOLTAIQUE PIERRE VAN OOST	0	15
GROUPE VDRT	8 339_PHOTOVOLTAIQUE GROUPE VDRT	0	102
H&M	8 066_PHOTOVOLTAIQUE H&M GHLIN	0	238
HAVET Jacques	7 970_PHOTOVOLTAIQUE TERRASSEMENTS HAVET	0	26
HERBAGRI	7 978_PHOTOVOLTAIQUE HERBAGRI 1	0	60
HERION GUY	8 328_PHOTOVOLTAIQUE SOCIETE HERION	0	46
HUSTIN Philippe	8 068_PHOTOVOLTAIQUE HUSTIN FRUITS ET LEGUMES	0	142
IDELUX	5 109_PHOTOVOLTAIQUE GALAXIA	0	152
IDEMASPORT	8 050_PHOTOVOLTAIQUE IDEMASPORT	0	29
IGRETEC	8 015_PHOTOVOLTAIQUE Bâtiment TELECOM 2	0	20
	8 014_PHOTOVOLTAIQUE Bâtiment TELECOM 1	0	20
ILLUDESIGN	8 043_PHOTOVOLTAIQUE ILLUDESIGN	0	72
IMPERBEL	7 994_PHOTOVOLTAIQUE IMPERBEL PERWEZ	0	33
INFORMATIQUE COMMUNICATIONS SERVICES	7 986_PHOTOVOLTAIQUE I.C.S	0	21
INTERCOMMUNALE DES EAUX DU CENTRE DUBRABANT WALLON	8 132_PHOTOVOLTAIQUE IECBW	0	221
ISSOL	8 219_PHOTOVOLTAIQUE MECAMOLD	0	68
	8 321_PHOTOVOLTAIQUE BTN	0	166
	8 338_PHOTOVOLTAIQUE ISSOL	0	201
IWAN SIMONIS	7 936_PHOTOVOLTAIQUE IWAN SIMONIS	0	105
JNL	8 350_PHOTOVOLTAÏQUE JNL WAVRE	0	147
JOHN MARTIN	7 952_PHOTOVOLTAIQUE JOHN MARTIN	0	50
JOST LOGISTICS	8 101_PHOTOVOLTAIQUE JOST LOGISTICS	0	145
JOURDAN	8 333_PHOTOVOLTAIQUE JOURDAN	0	117
KEVERS	8 139_PHOTOVOLTAIQUE KEVERS MATERIAUX	0	17
KOCKARTZ AG	2 279_PHOTOVOLTAIQUE BACKEREI-KONDITOREI-KOCKARTZ	0	21
LA PETITE FOURNÉE	8 189_PHOTOVOLTAIQUE LA PETITE FOURNÉE	0	23
LANGE JM & Fils	8 004_PHOTOVOLTAIQUE LANGE JM & FILS	0	42
LANGER Bruno	5 936_PHOTOVOLTAIQUE LANGER Bruno	0	25
LE MIDI	8 143_PHOTOVOLTAIQUE LE MIDI	0	111
LE RY DE LEERS	8 345_PHOTOVOLTAIQUE LE RY DE LEERS	0	32
LECLERC Georges	8 001_PHOTOVOLTAIQUE LECLERC Georges	0	38
LES CAFES RECSI	8 459_PHOTOVOLTAIQUE LES CAFES RECSI	0	17
LES VÉRANDAS 4 SAISONS	5 592_PHOTOVOLTAIQUE LES VÉRANDAS 4 SAISONS	0	114
MAHIEU-SUN	8 332_PHOTOVOLTAÏQUE FERME MAHIEU	0	36
MAISON BUTERA	8 169_PHOTOVOLTAIQUE MAISON BUTERA	0	82
MAISON DES SYNDICATS	7 949_PHOTOVOLTAIQUE FGTB LIÈGE-HUY-WAREMME	0	18
MAISON DESPRIET	8 024_PHOTOVOLTAIQUE MAISON DESPRIET	0	81
MAISON LARUELLE	8 130_PHOTOVOLTAIQUE MAISON LARUELLE HALL2	0	68
	8 131_PHOTOVOLTAIQUE MAISON LARUELLE HALL1	0	64
MC TECHNICS	8 089_PHOTOVOLTAIQUE MC TECHNICS	0	36
MEENS André	7 989_PHOTOVOLTAIQUE MEENS André	0	39
MEGA FURNITURE	8 341_PHOTOVOLTAÏQUE OKAY MEUBLES	0	160
MENUISERIE KEPPENNE	5 108_PHOTOVOLTAIQUE MENUISERIE KEPPENNE	0	18
MENUISERIE-EBENISTERIE VANDEGAAR	8 306_PHOTOVOLTAIQUE MENUISERIE-EBENISTERIE VANDEGAAR	0	68

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - PV solar power sector (contd.)

MERLIN	8 429_PHOTOVOLTAIQUE MERLIN	0	73
ML CONCEPT	7 903_PHOTOVOLTAIQUE ML CONCEPT	0	34
MONNAIE-BAYS	5 107_PHOTOVOLTAIQUE MONNAIE-BAYS	0	228
MONUMENT HAINAUT	8 222_PHOTOVOLTAIQUE MONUMENT HAINAUT	0	180
MPR	8 121_PHOTOVOLTAIQUE MPR	0	76
MULTIFLEURS	8 370_PHOTOVOLTAIQUE MULTIFLEURS	0	80
MULTITRA	8 216_PHOTOVOLTAIQUE MULTITRA 1	0	34
	8 217_PHOTOVOLTAIQUE MULTITRA 2	0	38
NISSAN MOTOR MANUFACTURING	4 111_PHOTOVOLTAIQUE NISSAN NTCEB	0	53
NOIRFALISE & FILS	8 049_PHOTOVOLTAIQUE SEOS	0	91
NOVALUX PRODUCTS	8 088_PHOTOVOLTAÏQUE NOVALUX PRODUCTS	0	228
ORTMANS	8 383_PHOTOVOLTAIQUE ORTMANS	0	136
OTIUM	8 423_PHOTOVOLTAIQUE BRICO BURENVILLE - OTIUM	0	44
PFIZER ANIMAL HEALTH	8 058_PHOTOVOLTAIQUE PFIZER ANIMAL HEALTH	0	181
PHELECT	7 913_PHOTOVOLTAIQUE PHELECT	0	45
PHOENIX METALWORK	8 072_PHOTOVOLTAIQUE PHOENIX METALWORK	0	33
POUCETTRI SPRL	7 953_PHOTOVOLTAIQUE POUCETTRI	0	40
RECUPLAST	8 026_PHOTOVOLTAIQUE RECUPLAST	0	99
RTBF - RADIO TELEVISION BELGE DE LACOMMUNAUTE FRANCAISE	8 455_PHOTOVOLTAIQUE MEDIA RIVES	0	154
SANIDEL	7 971_PHOTOVOLTAIQUE SANIDEL TOITURE	0	54
SAVIMETAL	8 426_PHOTOVOLTAIQUE SAVIMETAL	0	99
SCAR (SOCIETES COOPERATIVES AGRICOLES REUNIES DES REGIONS HERBAGERES)	7 958_PHOTOVOLTAIQUE SCAR HERVE	0	48
SCHAAP	7 921_PHOTOVOLTAIQUE SCHAAP	0	34
SCHMETZ	8 221_PHOTOVOLTAIQUE SCHMETZ	0	54
SCHREIBER	8 070_PHOTOVOLTAIQUE SCHREIBER	0	94
SCHWANEN ET FILS	7 959_PHOTOVOLTAIQUE SCHWANEN	0	41
SCIMA	8 422_PHOTOVOLTAIQUE SCIMA 1	0	250
SEALTECH	5 710_PHOTOVOLTAIQUE SEALTECH	0	58
SNAUWAERT OLIVIER	8 418_PHOTOVOLTAIQUE POULAILLER SNAUWAERT	0	110
SNCB HOLDING	8 029_PHOTOVOLTAIQUE GARE DE CHARLEROI SUD	0	55
SOCIETE DE LIZIN	8 374_PHOTOVOLTAIQUE SOCIETE DE LIZIN	0	34
	8 375_PHOTOVOLTAIQUE LIZIN (HODY)	0	34
SOCIÉTÉ DES QUATRE CHEMINS	8 190_PHOTOVOLTAIQUE FLORENCHAMP	0	26
	8 191_PHOTOVOLTAIQUE VIVIER	0	18
SOLDERIE JOS	8 247_PHOTOVOLTAIQUE SOLDERIE JOS	0	45
SONIMAT	8 188_PHOTOVOLTAIQUE BIGMAT GEMBLOUX	0	117
SPAW TECH	8 400_PHOTOVOLTAIQUE SPAW TECH	0	250
SPIE	3 418_PHOTOVOLTAIQUE GSK WAVRE W18	0	43
SPRIMOGLASS sa	6 308_PHOTOVOLTAIQUE SPRIMOGLASS	0	128
STATION INTERZONING	8 083_PHOTOVOLTAIQUE STATION INTERZONING	0	34
STOCKAGE INDUSTRIEL	8 067_PHOTOVOLTAIQUE STOCKAGE INDUSTRIEL	0	232
SUCRERIE COUPLET	8 330_PHOTOVOLTAIQUE SUCRERIE COUPLET	0	249
TECHNIQUE ET PROTECTION DES BOIS	8 337_PHOTOVOLTAIQUE TECHNIQUE ET PROTECTION DES BOIS	0	97
TENNIS COUVERT DU CONDROZ	8 402_PHOTOVOLTAIQUE TENNIS COUVERT DU CONDROZ	0	77
THE CLAY AND PAINT FACTORY	8 156_PHOTOVOLTAIQUE THE CLAY AND PAINT FACTORY	0	85
TISS ET TEINT	8 125_PHOTOVOLTAIQUE TISS ET TEINT	0	105
TRICOBEL	8 062_PHOTOVOLTAIQUE TRICOBEL	0	90
V.P.D.	8 170_PHOTOVOLTAIQUE V.P.D.	0	81

ANNEX 1: List of sites generating green electricity at the end of 2012 (Pend >10 kW) - PV solar power sector (end)

VAESSEN POULEAU BENOÏT	8 038_PHOTOVOLTAIQUE FERME VAESSEN Benoît	0	46
VAN COLEN	8 220_PHOTOVOLTAIQUE VAN COLEN	0	204
VANDYCK FRERES	8 460_PHOTOVOLTAIQUE VANDYCK	0	40
VANHEEDE BIOMASS SOLUTIONS	8 317_PHOTOVOLTAIQUE VANHEEDE BIOMASS SOLUTIONS	0	225
VDS FOOD	8 080_PHOTOVOLTAIQUE VDS FOOD	0	227
VEEP TWO	8 071_PHOTOVOLTAIQUE VEEP TWO	0	25
VERLAC	3 608_PHOTOVOLTAIQUE VERLAC	0	14
VERMEIRE TRANSMISSIONS	7 910_PHOTOVOLTAIQUE VERMEIRE TRANSMISSIONS	0	68
VILLE DE MONS	7 950_PHOTOVOLTAIQUE ATELIER PIERART	0	12
WAREMME FRUIT	8 102_PHOTOVOLTAIQUE OLEYE	0	135
WERELDHAVE BELGIUM	8 394_PHOTOVOLTAIQUE SHOPPING DE NIVELLES 2	0	253
	8 329_PHOTOVOLTAIQUE SHOPPING DE NIVELLES 1	0	253
WILBOW	8 187_PHOTOVOLTAIQUE WILBOW	0	19
WONITROL	8 061_PHOTOVOLTAIQUE WONITROL MONS	0	82
	8 377_PHOTOVOLTAIQUE CODE IMMO	0	38
Net electrical generating capacity (Pend) (kw)			19,752
Number of sites			209

ANNEX 2: Generation of green electricity and green certificates[28] – Broken down by sector and by year

		2003***	2004	2005	2006	2007	2008	2009	2010	2011	2012
Photovoltaic	GC generated	0	1	2	9	25	10,138	152,004	370,914	938,066	2,741,478
	RES electricity generated (MWh)	0	1	2	9	25	1,519	22,233	54,594	140,663	412,021
	Net electricity generated (MWh)	0	1	2	9	25	1,519	22,233	54,594	140,663	412,021
Hydropower	GC generated	310,988	305,024	277,690	350,276	377,909	190,851	167,623	163,237	101,201	153,619
	RES electricity generated (MWh)	310,988	305,024	277,690	350,276	377,909	365,843	317,582	295,535	187,780	307,858
	Net electricity generated (MWh)	310,988	305,024	277,690	350,276	377,909	365,843	317,582	295,535	187,780	307,858
Wind	GC generated	25,244	46,132	70,927	126,149	204,840	296,432	496,410	697,775	1,029,347	1,134,867
	RES electricity generated (MWh)	25,244	46,132	70,927	126,149	204,840	296,902	496,561	697,777	1,029,512	1,134,867
	Net electricity generated (MWh)	25,244	46,132	70,927	126,149	204,840	296,902	496,561	697,777	1,029,512	1,134,867
Biomass	GC generated	227,687	281,857	390,185	592,969	876,863	1,136,560	1,237,446	1,546,688	1,576,958	1,469,417
	RES electricity generated (MWh)	230,823	282,265	458,996	733,730	977,043	1,302,705	1,303,239	1,466,642	1,465,242	1,229,942
	COGEN electricity generated (MWh)	183,203	221,582	233,845	275,964	434,025	632,348	814,675	943,826	965,520	851,184
	Net electricity generated (MWh)	248,576	303,475	497,748	777,785	1,010,466	1,335,029	1,373,882	1,564,825	1,623,803	1,329,433
Fossil fuel cogeneration	GC generated	65,963	76,271	95,365	103,766	101,721	112,256	114,781	101,623	124,911	137,186
	RES electricity generated (MWh)	0	578	562	1,076	1,564	1,585	2,920	1,409	822	2,315
	COGEN electricity generated (MWh)	847,912	834,275	885,077	884,854	878,115	896,877	916,388	878,133	1,004,634	1,031,502
	Net electricity generated (MWh)	847,912	834,275	885,077	884,854	878,115	896,877	916,388	878,133	1,004,634	1,031,502
Total green electricity	GC generated	629,882	709,286	834,169	1,173,169	1,561,359	1,746,237	2,168,264	2,880,237	3,770,484	5,636,566
	RES electricity generated (MWh)	567,055	634,001	808,178	1,211,240	1,561,382	1,968,555	2,142,535	2,515,957	2,824,018	3,087,003
	COGEN electricity generated (MWh)	1,031,115	1,055,857	1,118,922	1,160,818	1,312,140	1,529,225	1,731,063	1,821,959	1,970,154	1,882,686
	Net electricity generated (MWh)	1,432,720	1,488,907	1,731,445	2,139,073	2,471,356	2,896,171	3,126,646	3,490,864	3,986,391	4,215,680
	Metric tons of CO2 saved	287,226	323,434	380,381	534,965	711,980	792,354	929,553	1,169,146	1,355,725	1,508,042
Share of supply	Electricity generated in Walloon Region	23,368,935	23,628,470	23,341,061	24,606,202	24,070,385	24,062,992	22,347,398	23,492,682	22,915,218	22,608,953
	% RES electricity*	2.43%	2.68%	3.46%	4.92%	6.49%	8.18%	9.59%	10.71%	12.32%	13.65%
	% COGEN electricity**	4.41%	4.47%	4.79%	4.72%	5.45%	6.36%	7.75%	7.76%	8.6%	8.33%
	% net electricity generated	6.13%	6.3%	7.42%	8.69%	10.27%	12.04%	13.99%	14.86%	17.4%	18.65%

** RES electricity is electricity generated from renewable energy sources within the meaning of European regulations (Directive 2009/28/EC).*
*** COGEN electricity is electricity generated from a high-quality cogeneration installation; this Walloon concept is similar to but different from the concept of high-efficiency cogeneration within the meaning of European regulations (Directive 2004/8/EC).*
**** The 2003 statistics include the limited certified generation from 2002.*

[28] *The number of green certificates «generated» is calculated based on the quantity of electricity generated. This number may differ significantly from the number of green certificates actually awarded and available in the market, in particular for photovoltaic solar power installations that benefit from advance awards.*

ANNEX 3: Reduction in quotas in 2012 - Broken down by sector

SECTORS	Number of operating headquarters	Electricity supplied (MWh)	GC - nominal quota	GC - reduction	GC - to be returned	Effective quota
Transport networks	(%)	570,994	89,932	71,030	18,902	3,31%
Steel industry	14	2,347,662	369,757	248,576	121,181	5,16%
Cement industry	6	751,491	118,360	73,599	44,761	5,96%
Chemicals	31	2,572,189	405,120	246,591	158,528	6,16%
Paper	4	316,422	49,836	24,817	25,019	7,91%
Glass	10	493,440	77,717	33,269	44,448	9,01%
Wood, textiles, furniture	4	186,223	29,330	11,865	17,465	9,38%
Quarrying	8	145,698	22,947	8,653	14,295	9,81%
Lime	6	174,188	27,435	9,890	17,544	10,07%
Metal and electrical manufacturing	10	257,425	40,544	14,564	25,980	10,09%
Smelting plants	4	79,175	12,470	4,369	8,101	10,23%
Agri-food	27	472,225	74,375	24,934	49,441	10,47%
Paper/cardboard processing industry, printing industry	5	67,348	10,607	3,199	7,408	11,00%
Non-ferrous metals	2	40,653	6,403	1,901	4,502	11,07%
Technology industry	2	16,956	2,671	742	1,929	11,37%
Bricks - ceramics	3	31,193	4,913	1,320	3,593	11,52%
Total	**138**	**8,523,281**	**1,342,417**	**779,319**	**563,098**	**6,61%**

ANNEX 4: Operating headquarters which benefitted from a reduction in GC quota in 2012

CWaPE HQ no.	END-CUSTOMER (name, business name)	OPERATING HEADQUARTERS (name, address)	FEDERATION	SECTOR
1	Air Liquide Industries Belgium S.A	AIR LIQUIDE MARCHIENNE Rue de la Réunion, 127, B-6030 MARCHIENNE-AU-PONT	ESSENSCIA	CHEMICALS
2	Air Liquide Industries Belgium S.A	AIR LIQUIDE BAUDOUR Route de Wallonie, B-7331 BAUDOUR	ESSENSCIA	CHEMICALS
3	Akzonobel Chemicals S.A	AKZO GHLIN Parc Industriel de Ghlin, Zone A B-7011 GHLIN	ESSENSCIA	CHEMICALS
4	Ampacet SPRL	AMPACET Rue d'Ampacet 1 B-6780 MESSANCY	ESSENSCIA	CHEMICALS
6	Caterpillar Belgium S.A	CATERPILLAR Avenue des Etats-Unis 1 B-6041 GOSSELIES	AGORIA	Metal and electrical manufacturing
7	CBR S.A	CBR ANTOING Rue du Coucou 8, B-7640 ANTOING	Febelcem	Cement industry
8	CBR S.A	CBR HARMIGNIES Rue Blancart 1 B-7022 HARMIGNIES	Febelcem	Cement industry
9	CBR S.A	CBR LIXHE Rue des Trois Fermes B-4600 LIXHE	Febelcem	Cement industry
10	CCB S.A	CCB G-RX Grand- Route, 260 B-7530 GAURAIN-RAMECROIX	Febelcem	Cement industry
11	Carsid S.A	CARSID MARCINELLE Rue de Marchienne, 42 B-6001 MARCINELLE	GSV	Steel industry
12	Arcelor Mittal Industeel Belgium S.A	INDUSTEEL Rue de Chatelet, 266, B-6033 MARCHIENNE-AU-PONT	GSV	Steel industry
13	Arcelor Mittal Stainless Belgium S.A	ARCELOR MITTAL CHATELET (Carlam) Rue des Ateliers, 14 B-6200 CHATELET	GSV	Steel industry
14	Arcelor Mittal Liège Upstream S.A	CHAUD-SERAING Rue Boverie, 5, B-4100 SERAING	GSV	Steel industry
15	Arcelor Mittal Belgium S.A	FROID-FLEMALLE-RAMET Chaussée de Ramioul, 50 B-4400 FLEMALLE	GSV	Steel industry
16	Arcelor Mittal Belgium S.A	FROID-TILLEUR-JEMEPPE B-4101 JEMEPPE SUR MEUSE	GSV	Steel industry
17	Segal S.A	SEGAL Chaussée de Ramioul, 50 B-4400 FLEMALLE	GSV	Steel industry
18	Air Liquide Industries Belgium S.A	AIR LIQUIDE LIEGE Rue de la Vieille Espérance, 86 B-4100 SERAING	ESSENSCIA	CHEMICALS
19	Arcelor Mittal Liège Upstream S.A	CS-CHAUD-CHERTAL Pont de Wandre B-4683 VIVEGNIS	GSV	Steel industry
20	Arcelor Mittal Belgium S.A	Tôlerie Delhoye Mathieu (TDM) Chaussée des Forges, 5, B-4570 MARCHIN	GSV	Steel industry
22	Dow Corning S.A	DOW CORNING Parc Industriel Zone C B-7180 SENEFFE	ESSENSCIA	CHEMICALS
23	Duferco Clabecq S.A	DUFERCO CLABECQ Rue de Clabecq 101 B-1460 ITTRE	GSV	Steel industry
24	Duferco La Louvière S.A	DUFERCO LA LOUVIERE rue des Rivaux 2 B- 7100 LA LOUVIERE	GSV	Steel industry
25	ENGINEERING STEEL BELGIUM SPRL	ELWOOD STEEL Rue de l'environnement 8 B-4100 SERAING	GSV	Steel industry
26	Exxonmobile Chemicals Films Europe S.A	EXXON MOBILE Zoning Industriel de Labour B-6760 VIRTON HIMIE	ESSENSCIA	CHEMICALS
27	Ferrero Ardennes S.A	FERRERO Rue Pietro Ferreo 5 B-6700 ARLON	Fevia	Agri-food
28	AGC Flat Glass Europe S.A	GLAVERBEL MOUSTIER S SAMBRE Rue de la Glacerie 167 B-5190 JEMEPPE-SUR-SAMBRE	FIV	Glass
29	Holcim S.A	HOLCIM HACCOURT Rue de l'écluse 40 B-4684 HACCOURT	Febelcem	Cement industry
30	Holcim S.A	HOLCIM OBOURG Rue des Fabriques 2 B-7034 OBOURG	Febelcem	Cement industry
31	Infrabel S.A	INFRABEL Wallonie	TRANSPORT	Transport networks
32	Ineos Feluy SPRL	INEOS FELUY Parc Industriel de Feluy Nord B-7171 FELUY	ESSENSCIA	CHEMICALS
33	Kabelwerk Eupen A.G.	KABELWERK EUPEN Malmedystrasse 9 B- 4700 EUPEN	AGORIA	Metal and electrical manufacturing

ANNEX 4: Operating headquarters which benefitted from a reduction in GC quota in 2012 (contd.)

CWaPE HQ no.	END-CUSTOMER (name, business name)	OPERATING HEADQUARTERS (name, address)	FEDERATION	SECTOR
34	Kraft Foods Production S.A	KRAFT FOODS Nouvelle route de Suarlée 6 B-5020 SUARLEE	Fevia	Agri-food
35	Carrières et fours à chaux Dumont Wauthier S.A	DUMONT-WAUTHIER B-4470 SAINT-GEORGES-SUR-MEUSE	Lhoist	Lime
36	Dolomies de Marche-les-Dames S.A	DOLOMIES MLD Rue Haigneux 1 B-5300 NAMECHE	Lhoist	Lime
37	Lhoist Industrie S.A	LHOIST MARCHE Usine de On B-6900 MARCHE-EN-FAMENNE	Lhoist	Lime
38	Magotteaux S.A	MAGOTTEAUX Rue Près Tour 55 B-4051 CHAUDFONTAINE	AGORIA	Smelting
39	MD Verre S.A	MANUFACTURE VERRE Route de Baudour 2 B-7011 GHLIN	FIV	Glass
40	Gerresheimer Momignies S.A	GERRESHEIMER MOMIGNIES Rue Mandenne 19-20 B - 6590 MOMIGNIES	FIV	Glass
41	Prayon Ruppel S.A	PRAYON Rue Joseph Wauters 144 B-4480 ENGIS	ESSENSCIA	CHEMICALS
42	Saint-Gobain Glass Benelux S.A	SAINT GOBAIN GLASS Rue des Glaces Nationales 169 B-5060 AUVELAIS	FIV	Glass
43	Saint-Gobain Sekurit S.A	SAINT GOBAIN SEKURIT Rue des Glaces Nationales 169 B-5060 AUVELAIS	FIV	Glass
44	SCA Hygiène Products S.A	SCA Rue de la Papeterie 2 B-4801 STEMBERT	COBELPA	Paper
45	Sol Spa S.A	SOL SPA Zonning B de Feluy, B-7180 SENEFFE	ESSENSCIA	CHEMICALS
46	Solvic S.A.	SOLVIC Rue de Solvay 39 B- 5190 JEMEPPE-SUR-SAMBRE	ESSENSCIA	CHEMICALS
47	Solvay Chimie S.A	SOLVAY CHIMIE Rue de Solvay 39 B- 5190 JEMEPPE-SUR-SAMBRE	ESSENSCIA	CHEMICALS
48	SPA Monopole SPRL	SPA MONOPOLE Rue Auguste Laporte - 34 B-4900 SPA	Fevia	Agri-food
49	Société Thy-Marcinelle S.A	THY-MARCINELLE Boîte Postale 1502 B-6000 CHARLEROI	GSV	Steel industry
50	Total Petrochemicals Feluy S.A	TOTAL FELUY Zone Industrielle-Zone C B-7181 FELUY	ESSENSCIA	CHEMICALS
51	Total Petrochemicals Ecaussines S.A	TOTAL ECAUSSINES Zone Industrielle-Zone C B-7181 FELUY	ESSENSCIA	CHEMICALS
52	Total Petrochemicals Antwerpen S.A	TOTAL ANTWERPEN Zone Industrielle-Zone C B-7181 FELUY	ESSENSCIA	CHEMICALS
54	UCB division pharmaceutique S.A	UCB Chemin du Forest B-1420 BRAINE-L'ALLEUD	ESSENSCIA	CHEMICALS
55	Pinguin Lutosa foods S.A	LUTOSA Zoning Industriel de Vieux Pont 5 B-7900 LEUZE EN HAINAUT	Fevia	Agri-food
56	NGK Europe (formerly NGK Ceramics Europe) S.A.	NGK Rue des Azalées 1, B-7331 BAUDOUR (Saint-Ghislain)	FBB-Fedicer	Bricks - ceramics
57	Yara Tertre S.A (formerly Kemira Growhow SA)	YARA (KEMIRA) Rue de la Carbo, 10 B-7333 TERTRE	ESSENSCIA	CHEMICALS
58	Erachem Comilog SA	ERACHEM Rue du Bois 7334 SAINT GHISLAIN	ESSENSCIA	CHEMICALS
59	Imerys Minéraux Belgique SA	IMERYS Rue du canal 2 B-4600 LIXHE	FORTEA - FEDIEX	Quarrying
60	Arjo Wiggins S.A	ARJO VIRGINAL Rue d'Asquempont, 2, B-1460 ITTRE	COBELPA	Paper
62	Knauf Insulation S.A	KNAUF Rue de Maestricht, 95 B-4600 VISE	FIV	Glass
63	3B Fibreglass SPRL	3B Fibreglass Route de Maestricht B-4651 BATTICE	FIV	Glass
64	Burgo Ardennes S.A	BURGO Rue de la Papeterie B- 6760 VIRTON	COBELPA	Paper

65	GSK Biologicals S.A	GSK WAVRE rue Fleming 1 B-1300 WAVRE	ESSENSCIA	CHEMICALS
66	Sonaca S.A	SONACA route nationale, 5 B-6041 GOSSELIES	AGORIA	Metal and electrical manufacturing
67	GSK Biologicals S.A	GSK RIXENSART rue de l'Institut 89 B-1330 RIXENSART	ESSENSCIA	CHEMICALS
68	Techspace Aero S.A	TECHSPACE route de Liers 121 B-4041 MILMORT	AGORIA	Metal and electrical manufacturing
71	Inbev S.A	INBEV avenue J. Prevert 23 B-4020 JUPILLE	Fevia	Agri-food
72	Hydro Aluminium Raeren S.A	HYDRO ALUMINIUM RAEREN Waldstrasse 91, B-4730 RAEREN	AGORIA	Non-ferrous metals
73	Beldem S.A	BELDEM Rue Bourrie, B-5300 ANDENNE	Fevia	Agri-food
74	Carmeuse S.A	CARMEUSE AISEMONT Rue de Boudjesse 1, Aisémont B-5070 FOSSES-LA-VILLE	Carmeuse	Lime
75	Carmeuse S.A	CARMEUSE MOHA Rue Val Notre Dame 300, B-4520 MOHA	Carmeuse	Lime
76	MOLKEREI - LAITERIE DE WALHORN S.A.	MOLKEREI Molkereiweg, 14 B-4711 WALHORN	Fevia	Agri-food
77	CORMAN S.A	CORMAN Rue de la Gileppe 4, B-7834 GOE	Fevia	Agri-food
78	Baxter SA	BAXTER Bld René Branquart 80 B-7860 LESSINES	AGORIA	Metal and electrical manufacturing
79	Berry Yarns SA	BERRY YARNS Route des Ecluses, 52 B-7780 COMINES	Fedustria	Wood, textiles, furniture
80	Sioen Fibers SA	SIOEN FIBERS Zone Industrielle du Blanc Ballot Boulevard Metropole, 9 B-7700 MOUSCRON	Fedustria	Wood, textiles, furniture
81	Beaulieu Technical Textiles SA (formerly Ideal Fibers & Fabriccs Komen SA)	BEAULIEU-T-T Boulevard Industriel, 3 B-7780 COMINES	Fedustria	Wood, textiles, furniture
82	Spanolux SA	SPANOLUX Zone Industrielle de Burtonville, 10 B-6690 VIELSALM	Fedustria	Wood, textiles, furniture
84	Firme Derwa SA	DERWA Avenue de Jupille, 4 B-4020 LIEGE	Fevia	Agri-food
85	Savimetal AG	SAVIMETAL Prümer Strasse, 44 B-4780 SAINT VITH	AGORIA	Smelting
86	Solarec SA	SOLAREC Route de Saint-Hubert, 75 B-6800 RECOGNE	Fevia	Agri-food
88	Européenne de Lyophilisation SA	EDEL Rue de Wallonie 16, B-4460 GRACE-HOLLOGNE	Fevia	Agri-food
89	Dumoulin SA	DUMOULIN INTERAGRI Rue Bourrie, 18 B-5300 SEILLEs	Fevia	Agri-food
90	NMC SA	NMC RAEREN Gert - Noël - Strasse B-4731 EYNATTEN	ESSENSCIA	CHEMICALS
91	Molnlycke Health Care SA	MOLNLYCKE HEALTH CARE Chaussée Romaine 176 B-4300 WAREMME	FETRA-FEBELGRA	Paper/cardboard processing industry, printing industry
92	Ahlstrom Malmedy SA	AHLSTROM MALMEDY Avenue du Pont de Warche 1, B-4960 MALMEDY	COBELPA	Paper
93	Gabriel Technologie SA	GABRIEL TECHNOLOGIE Rue des Roseaux 1, B-7331 SAINT-GHISLAIN	ESSENSCIA	CHEMICALS
94	Mactac Europe S.A	MACTAC Bld J. Kennedy 1 - B-7060 SOIGNIES	FETRA-FEBELGRA	Paper/cardboard processing industry, printing industry

ANNEX 4: Operating headquarters which benefitted from a reduction in GC quota in 2012 (contd.)

CWaPE HQ no.	END-CUSTOMER (name, business name)	OPERATING HEADQUARTERS (name, address)	FEDERATION	SECTOR
95	Umicore Zinc Chemicals S.A	UMICORE Rue de Chênée 53 B-4031 ANGLEUR	AGORIA	Non-ferrous metals
96	Treofan Benelux S.A	TREOFAN Rue Renory, 497 B-4031 ANGLEUR	ESSENSCIA	CHEMICALS
97	Nexans Benelux S.A.	NEXANS MARCINELLE Rue Vital Françoisse, 218 B-6001 MARCINELLE	AGORIA	Metal and electrical manufacturing
98	Nexans Benelux S.A.	NEXANS DOUR Rue Benoît, 1 B-7370 ELOUGES	AGORIA	Metal and electrical manufacturing
99	MC BRIDE SA	MC BRIDE Rue du Moulin Masure, 4 B-7730 ESTAIMPUIS	ESSENSCIA	CHEMICALS
100	Helio Charleroi S.A	HELIOZONING INDUSTRIEL, Avenue de Spirou, 23 B-6220 FLEURUS	FETRA-FEBELGRA	Paper/cardboard processing industry, printing industry
101	Magolux S.A	MAGOLUX Rue de la Hart, 1 B-6780 MESSANCY	AGORIA	Smelting
102	Mydibel S.A	MYDIBEL Rue du Piro Lannoy, 30 B-7700 MOUSCRON	Fevia	Agri-food
103	Cosucra Groupe Warcoing S.A	COSUCRA WARCOING Rue de la Sucrerie, 1 B -7740 WARCOING	Fevia	Agri-food
104	Dicogel S.A	DICOGEL Parc Industriel Rue de la Bassée, 3 B-7700 MOUSCRON	Fevia	Agri-food
105	Hesbayefrost S.A	HESBAYEFROST Rue Emile Lejeune, 20 B-4250 GEER	Fevia	Agri-food
106	Imperbel S.A	IMPERBEL Chaussée de Wavre, 13 B-1360 PERWEZ	ESSENSCIA	CHEMICALS
107	Chemviron Carbon S.A.	CHEMVIRON CARBON Parc Industriel de Feluy Zone C B-7181 FELUY	ESSENSCIA	CHEMICALS
108	Beneo-Oraftil S.A	ORAFTI Rue Louis Maréchal, 1 B-4360 OREYE	Fevia	Agri-food
109	TEC Charleroi	TEC CHARLEROI Place des Tramways 9/1 B- 6000 Charleroi	TRANSPORT	Transport networks
110	Sagrex QUENAST	GRALEX QUENAST Rue de Rebecq B-1430 QUENAST	FORTEA - FEDIEX	Quarrying
113	Gramybel S.A	GRAMYBEL Bld de l'Eurozone, 80 B-7700 MOUSCRON	Fevia	Agri-food
115	Wienerberger Mouscron S.A	WIENERBERGER MOUSCRON RUE DE LA ROYENNE 55 B-7700 MOUSCRON	FBB-Fedicer	Bricks - ceramics
116	Raffinerie Tirlemontoise S.A	RAFFINERIE WANZERUE DE MEUSE 9 B - 4520 WANZE	Fevia	Agri-food
117	Detry Freres S.A	DETRY AUBEL RUE DE MERCKHOF 110 B - 4880 AUBEL	Fevia	Agri-food
118	Materne-confilux S.A	MATERNE FLOREFFE ALLEE DES CERISIERS 1 B-5150 FLOREFFE	Fevia	Agri-food
120	Coca Cola entreprises Belgique S.A	COCA COLA CHAUDFONTAINE RUE DU CRISTAL 7 B - 4050 CHAUDFONTAINE	Fevia	Agri-food
121	Sagrex Beez S.A	GRALEX BEEZ RUE DES GRANDS MALADES B - 5000 BEEZ	FORTEA - FEDIEX	Quarrying
122	Wienerberger Peruwelz SA	BRIQUETERIE PERUWELZ Rue de l'Europe, 11 B - 7600 PERUWELZ	FBB-Fedicer	Bricks - ceramics
123	Carrières du Hainaut SA	CARRIERE HAINAUT Rue de Cognebeau, 245 B - 7060 SOIGNIES	FORTEA - FEDIEX	Quarrying
125	AGC flat glass Europe SA	GLAVERBEL ROUX Rue de Gosselies, 60 B-6044 ROUX	FIV	Glass
126	Cockerill Forges Ringmill S.A	COCKERILL FORGES RINGMILL Quai d'ougnée, 14 B-4102 SERAING	AGORIA	Metal and electrical manufacturing
128	Cargill chocolate products S.A	CARGILL CHOCOLATE Dréve de Gustave Fache, 13 B - 7700 LUINGNE	Fevia	Agri-food
130	Gralex S.A	GRALEX DEUX ACREN Rue des sergents B - 7864 DEUX ARCEN	FORTEA - FEDIEX	Quarrying

131	Rosier S.A	ROSIER Rue du Berceau, 1 B - 7911 MOUSTIER	ESSENSCIA	CHEMICALS
132	RKW Ace S.A	RKW ACE Rue de Renory, 499 B - 4031 ANGLEUR	ESSENSCIA	CHEMICALS
133	Tensachem S.A	TENSACHEM Rue de Renory, 28 4102 OUGREE	ESSENSCIA	CHEMICALS
134	Fonderies marichal ketin S.A	FONDERIES MARICHAL KETIN Verte Voie, 39 4000 LIEGE	AGORIA	Smelting
135	Huileries Savonneries Vandeputte S.A	HUILERIES SAVONNERIES VANDEPUTTE Boulevard Industriel 120 B-7700 MOUSCRON	ESSENSCIA	CHEMICALS
136	CARMEUSE S.A	CARMEUSE SEILLES Rue du château 13A B-5300 SEILLES	Carmeuse	Lime
137	CARMEUSE S.A	CARMEUSE ENGIS Chaussée de Ramioul 1 B-4480 ENGIS	FORTEA - FEDIEX	Quarrying
138	SILOX S.A	SILOX Rue joseph Wauters 144 B-4480 ENGIS	ESSENSCIA	CHEMICALS
139	Carrières Lemay	CARRIERES LEMAY Vieux Chemin de Mons 12 B-7536 VAUX	FORTEA - FEDIEX	Quarrying
140	Les Nutons S.A	LES NUTONS Chemin Saint Antoine, 85 B-6900 MARCHE EN FAMENNE	Fevia	Agri-food
141	VAMOS & CIE S.A	VAMOS Chaussée de Wave, 259a B-450 WANZE	Fevia	Agri-food
142	VPRINT S.A	VPRINT Boulevard industriel, 95 B-7700 MOUSCRON	FETRA-FEBELGRA	Paper/cardboard processing industry, printing industry
143	CARRIERES ANTOING	CARRIERES ANTOING Rue du coucou, 8 B-7640 ANTOING	FORTEA - FEDIEX	Quarrying
144	FN HERSTAL	FN HERSTAL Voie de Liège, 33 4040 HERSTAL	AGORIA	Metal and electrical manufacturing
146	LAMY LUTTI	LAMY LUTTI Avenue du Cida, 15 B-7170 BOIS D'HAINE	Fevia	Agri-food
147	DUROBOR	DUROBOR Rue Mademoiselle Hanicq, 39 B-7060 SOIGNIES	FIV	Glass
148	REMY ROTO	REMY ROTO Rue de Rochefort, 211 B-5570 BEAURAING	FETRA-FEBELGRA	Quarrying
149	VALEO VISION	VALEO VISION Rue du parc industriel 31 B - 7822 MESLIN L'EVEQUE	AGORIA	Metal and electrical manufacturing
150	AGC AUTOMOTIVE BELGIUM	AGC AUTOMOTIVE BELGIUM Avenue du Marquis B - 6220 FLEURUS	FIV	Glass
151	DUFERCO BELGIUM	DUFERCO BELGIUM Rue des Rivaux 2 7100 LA LOUVIERE	GSV	Steel industry
152	LOVENFOSSE	LOVENFOSSE Rue Merckhof 110 B - 4880 AUBEL	Fevia	Agri-food
153	EMERSON CLIMATE TECHNOLOGIES GMBH	AUTOMOTIVE BELGIUM Avenue du Marquis B - 6220 FLEURUS	AGORIA	Technology industries
155	AW Europe S.A.	AW EUROPE rue des Azalées B-7331 BAUDOUR	AGORIA	Technology industries

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