The WALLOON COMMISSION FOR 3rd L ' NERGIE

3RD ANNUAL SP REPORT CIFIQUE 2005

CD-6e16-CWaPE

on

' the market trends of the green certificates '

established pursuant to Article 22 of the decree of 4 July 2002 relating to the promotion of green electric ity.

22 June 2006

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Annual report sp 3rd cifique 2005 of the CWaPE on l ' 3rd volution of the 3rd march of the gr een certificates (CV)

1 Object

The decree of 4 July 2002 relating to the promotion of green electricity, stipulates in its Article 22 that:

> *"Article. 22. for 31 March, the CWaPE draws up a specific annual report concerning the market trends of the gree n certificates. This report mentions in particular the number of green certificates granted by technology and by source during the envisaged year, the green certificates transmitted to the CWaPE in accordance with Article 21, the average price of a green c ertificate and the fines impos 3rd are to the r managers 3rd buckets and to the suppliers due of non-observance of the quotas. This report is forwarded to the Walloon Government. "*

Article 21 of the same decree stipulates as:

> *"Art.21 § 1. At the end of th e second month which follows a past quarter, the suppliers and managers of network are required to give to the CWaPE a number of green certificates corresponding to the quota which is imposed to them under the terms of this article. To this end, they tran smit to the CWaPE the number, the characteristics of the green certificates that they want to enter in their quota and the total of the supplies carried out in Walloon Region during the envisaged quarter.*
>
> *§ 3. The quota is of:*
> *3% between [1] January 2003 a nd the 31 d 3rd cembre 2003; 4% between [1] January 2004 and the 31 d 3rd cembre 2004; 5% between [1] January 2005 and the 31 d 3rd cembre 2005;*

2 The m 3rd canism of the green certificates

2.1 3rd framework l gal and aims in view

Under European Directi ve 96/92/EC [1] on the common rules for the internal market of electricity, the Walloon Region, in its field of competence relating to the distribution of electricity (network of lower tension 70 kV), adopted, on 12 April 2001, a decree concerning the organi sation of the regional market electricity, named hereafter the Decree. This Decree incorporates in particular following concerns:

- a progressive opening of the market for the consumers and the introduction of a principle of competition between producers/s uppliers;
- the determination of the rules of functioning of the market checked by a public body: the Walloon Commission for Energy (CWaPE);
- the public service obligation determination the responsibility of the operators of the market,

including a green certificate arrangement encouraging any efficient electricity production technology from renewable energy resources and from combined heat and power.

The Walloon Government adopted, on 4 July 2002, the decree concerning the promotion of green electricity. This decree, named hereafter the AGW -PEV, details the applicable system of the green certificates in Wallonia.

The mechanism of support for the green electricity production set up in Walloon Region also registers itself under the two following European directives:

- Directive 2001/77/EC of 27 September 2001 concerning the promotion of the electricity produced from renewable energy resources on the internal market of electricity.
- Directive 2004/8/EC of 11 February 2004 concerning the promotion of combined heat and power on the basis of the useful heat request in the energy internal market.

These directives make promotion of green electricity Community priority due to its contribution:

- at safety and at the diversification of the energy supply;
- at environmental protection (and in particular to the reduction in greenhouse gas emissions) and at sustainable development;
- at the strengthening of competition on the internal market of electricity;
- at economic (regional and local development) and social cohesion (generation of local jobs).

For these reasons and with a view to achieving the laid down national objectives, these directives provide for explicitly the setting up by the support mechanism Member States including the green certificate systems.

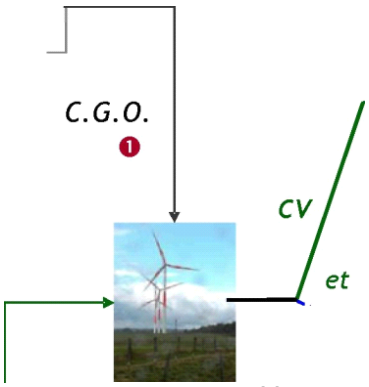
In addition, the Walloon Government adopted, on 6 November 2003, the decree concerning the production aid granted to green electricity. The federal Government also adopted, on 16 July 2002, the Royal Decree concerning the establishment of mechanisms aiming at the promotion of the electricity produced from renewable energy resources, establishing a system of minimum prices of acquisition of the green certificates by the transport network manager (GRT).

On 16 March 2006, the Walloon Government decided on a number of measures aiming to ensure the Walloon market equilibrium of the green certificates and which will require an amendment of the legislation in force.

[1] Repealed since by new European Directive 2003/54/EC concerning the internal market of electricity.

2.2 the principle of the system of the green certificates

Suppliers



Organisme **i** agr éé

Granting
quarterly
QCV

Ö
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Production aid of

© the R 3rd Walloon gion

i.e.

- Q —* ¦ Rachat by the GRT (Elia)

1

Market of the H.P.S

O * -

Green produ cer **"***Market of,*

^ **.** *electricity*

Non green producer

® Quota of CV: 5% in 2005, p 3rd nalit 3rd of 100 € /CV missing **Figure 2.1: Principle of the syst 2nd me green certificates**

Final customer

Any unit of green electricity production has to be the subject of a preliminar y request for granting of green certificates sent to the CWaPE. A certificate of guarantee of origin (O) drawn up by an approved control organisation has to be enclosed to this request.

Once the preliminary request for granting of certificates is accepted by the CWaPE, the producer transmits quarterly the statements of the energy meters to the CWaPE. On the basis of these statements, the CWaPE grants (2nd) a number of green certificates.

In possession of the green certificates, the producer can negotiate their sale with any purchaser (2nd), independently of the sale of physical electricity (O).

Quarterly, the electricity suppliers have the obligation to return to the CWaPE [2] a green certificate quota, proportional to the quantity of provided electricity [3]. A fine of EUR 100 by missing green certificate is applied (2nd).

As an alternative solution for the flow of the green certificates obtained for the electricity production installations from renewable energy, an aid scheme was envisaged by the Walloon Government [2] (©).

An obligation system of acquisition of the green certificates by the network manager of transport (Elia) at a minimum price was also envisaged by the federal Government. The green certificates bought by the transport network manager are then resold on the market of the green certificates (2nd).

Apr 2nd s this POs 3rd ration, the green certificates are supprim 3rd s of the 3rd donn base is.
A r 3rd quota duction has however 3rd t 3rd Pr 3rd sight to b 3rd n 3rd fice of the consumers of more than 5 GWh by
quarter and by if 2nd Ge d ' use (AGW -PEV, Article 21, § 4)

2.3 the essential concepts relating to l ' granting of green certificates

2.3.1 definition of the green electricity production (Decree, art. 2)

Renewable energy resourc es: any energy resource, other than the fossil fuels and the nuclear fission, the consumption of which does not limit its future use, in particular the hydropower, the wind energy, solar energy, geothermal energy, biogas, the organic products and waste of agriculture and of forestry arboriculture and the biodegradable organic fraction of waste (Decree, Article 2, 4°).

Combined heat and power and trigénération of quality : combined heat and electricity production, conceived according to requirements of heat or of cold of the customer, which makes energy saving in relation to the production separated from the same quantities of heat and of electricity, and if necessary of cold in modern facilities of reference the annual use output of which is defined and pub lished annually by the CWaPE (décret, art.2, 3°).

Green electricity: electricity produced from renewable energy resources or from combined heat and power of quality the production channel of which generates a minimum rate of 10% of economy of carbon dioxi de in relation to the emissions of carbon dioxide, defined and published annually by the CWaPE, of traditional production in modern reference facilities. The electricity

produced from hydroelectric facilities or from combined heat and power of quality is limited to a power less than 20 MWe (Decree, Article 2, 5°).

2.3.2 principles of the granting of the green certificates (Decree, art. 38)

A green certificate is a transmissible title, granted by the CWaPE to the green electricity producers, for a number of kWhe products corresponding to a MWhe divided by the rate of carbon dioxide economy (Decree, Article 38, § 2, subparagraph 1 and §3). By production site, the right to obtain green certificates is limited to ten years (AGW -PEV, art. 10).

The rate of carbon dioxide economy is determined by dividing the gain into carbon dioxide carried out by the channel envisaged by the emissions of carbon dioxide of the traditional electricity of reference (TGV gas -steam –turbine –AGW-PEV, art.11) the emissions of wh ich are defined and are published annually by the CWaPE. This rate of carbon dioxide economy is limited to 1 for the units of production in their production higher than 5 MW. Underneath this threshold, it is limited to 2. (Decree, Article 38, § 2, subparag raph 2).

The emissions of carbon dioxide are those produced by the cycle of production of green electricity including the production of the fuel, the emissions at the time of possible combustion and, if necessary, the waste treatment. In a hybrid install ation, account is taken of all the emissions of the installation (Décretn Article 38, § 2, subparagraph 3).

The emission coefficients of carbon dioxide of each considered green electricity production channel are approved by the CWaPE (Decree, Article 38, § 23, subparagraph 4).

2.4 conditions and procedure of granting of the green certificates

2.4.1 procedures and code of counting of green electricity

The green certificates are granted both for green electricity consumed by the producer and for green electricity injected on the network or transmitted by means of direct lines, except for green electricity exported outside Belgium (AGW -PEV, Article 10, subparagraph 3).

The green certificates are calculated on the basis of produced clear electricity (Eenp) measured before the possible transformation towards the network. Produced clear electricity is the decreased produced electricity of the electricity required by the functional equipment of the unit of production or being used for the preparation of t he renewable energy resources necessary for the electricity production (AGW -PEV, Article 10, subparagraph 4).

A counting 4 code, drawn up by the minister under the terms of Article 6 of the AGW -PEV of 4 July 2002, states the applicable principles and meth ods as regards measures of the quantities of energy which are taken into consideration the calculation of the number of green certificates to be granted to the green electricity production installations.

2.4.2 the certification of the green electricity p roduction site

The green certificates are granted for the green electricity production provided that a guarantee certificate of origin were issued to the green electricity production installation by a control approved 5 organisation by the Minister havin g energy in its attributions (AGW -PEV, Article 6 and 9).

This guarantee certificate of origin mentions in particular the energy resources used, production technology, the developable output capacity of the installation and attests that energy countings intervening in the calculation of the number of green certificates conform with the counting code.

The guarantee certificate of origin establishes in particular *counting algorithms* i.e. the mathematical operations making it possible to calculate these vari ous quantities of energy. One distinguishes primarily:

- the algorithm of counting of produced clear electricity (Eenp);
- the algorithm of developed clear domestic heat metering (Eqnv);
- the algorithm of counting of the developed clear cooling energy (Efnv) ;
- the algorithm of counting of entering energy (Ee).

2.4.3 the preliminary request for granting of green certificates

To be able to claim obtaining green certificates, a preliminary request for granting of green certificates has to be sent by the produ cer to the CWaPE. The joined applicant a copy of the guarantee certificate of origin.

The CWaPE checks that the preliminary request for granting of green certificates is complete and in conformity with legislation and notifies its decision. It is as from the acceptance notification date by the CWaPE that the right to obtain green certificates is guaranteed for a ten - year period.

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See the ministerial Decree of 1 June 2004 determining the procedures and the code of counting applicable on measures of quantity of energy published in the Belgian Monitor of 17/09/2004 –Annex "procedures and code of counting of green electricity in Walloon Region".
The list of the approved control organisations can be consulted on the site of the CWaPE:www.cwape.be. In addition, the list of the approved organisations to 31 December 2005 appears page 15.

2.4.4 method of calculating the green certificates

The number of granted green (CV) Certificates is equal to the saving rate of CO_2 (•) multiplied by clear electricity produced by the installation (Eenp, expressed in MWhe):

Number of CV = • x Eenp
(1)

The number of granted green certificates is therefore quite proportional to produced clear electricity. It also depends on the overa ll performance of the installation in terms of CO 2 saving.

To determine the CO 2 saving rate (•), the CWaPE defines and publishes 6 (see table below) the annual use 7 output annually and the CO 2 emissions of the modern reference facilities for the production separated from electricity (Eref), from heat (Qref) and from cold (Qf , ref.) with which green electricity production installations will be compared.

Reference of traditional electricity:
TGV power station to the G.N. çe output = 55%
emission 251 coefficient kgCO 2/MWhp

REFERENCE E ref. = 251/0,55 = 456
kgCO 2/MWhé

Thermal reference natural gas distribution area boiler to the G.N. output • q = 90%
emission 251 coefficient kgCO 2/MWhp

Q ref GN = 251/0,90 = 279 kgCO 2/MWhq

Thermal reference out of natural gas distribution area boiler to output diesel • q = 90%
emission 306 coefficient kgCO 2/MWhp

Q ref HGN = 306/0,90 = 340 kgCO 2/MWhq

Refrigerating reference Instruction from cooling < 0°C Groupe to Coefficient
compression of COPref performance = 2
2/MWhe emission 456 coefficient kgCO

Q f,ref. = E ref. / COP ref. = 228 kgCO2/MWh f

Refrigerating reference Instruction from cooling = 0°C Groupe to Coefficient
compression of COPref performance = 4
2/MWhe emission 456 coefficient kgCO

Q f,ref. = E ref. / COP ref. = 114 kgCO2/MWh f

Table 2.1: Annual output d ' use and 3rd missions of carbon dioxide of fili 2nd res of r 3rd f 3rd rence

The CO 2 emissions of the modern reference facilities for cold production are calculated by considering that the group with compression is supplied in electricity by traditional electricity.

With:

MWh p: Primary energy Megawatt -heure
MWh e: Produced net electric Megawatt -heure
MWh q: Developed net thermal Megawatt -heure
MWh f: Developed net refrigerating Megawatt -heure

6

7
Annual use output and emissions of carbon dioxide of traditional electricity and those relating to the modern reference facilities for heat and cold production (Management Committee of the CWaPE of 18 October 2005 – Belgian Monitor of 22/11/2005) For a given site of green electricity production, the energy efficiency of the modern reference facilities is maintained to the values in force at the time of the granting of the first green certificates concerning the site concerned.

In the absence of the green electricity production installation, the produced clear electrical energy (Eenp) would have had to be pro duced by the electricity of reference. The green electricity production installation avoids consequently the emission of a quantity of CO2

corresponding to Eenp x Eref.

In the absence of the green electricity production installation, developed clear heat (Eqnv) would have had to be produced by the channel of reference heat production. The green electricity production installation avoids consequently the emission of a quantity of CO2 corresponding to Eqnv x Qref.

In the absence of the green electricity pr oduction installation, the developed clear cooling energy (Efnv) would have had to be produced by the channel of reference cold production. The green electricity production installation avoids consequently the emission of a quantity of CO2 corresponding to Efnv x Qf, ref..

On the other hand, in a number of cases, a green electricity production installation emits itself a certain quantity of CO2 according to the fossil fuels and renewable utilis 3rd s (C wire i 2nd re) [8] proportional to l ' 3rd nergie ente ring (Ee). In such cases, l ' 3rd installation puts a 3rd quantit of CO2 corresponding to Ee x C wire i 2nd re.

The gain in CO2 G carried out by the green electricity production installation will correspond consequently to the difference between the decre ased amount of the avoided quantities of CO2 of the emitted quantity of CO2, i.e.:

Gain _ in _ C02 = 3rd CO2 lives 3rd - put 3rd CO2 (2)

with

CO2 é vit é = Eenp x Eref + Eqnv x Qref + Efnv x Qf, ref
Put 3rd CO2 = Ee x Cf. ¡i i2ndre

The rate of CO2 saving (•) having been fixed conventionally at the relationship between the gain in carbon dioxide carried out by the green electricity production installation by the emissions of carbon dioxide of the traditional electricity of reference producing the same quantity of electricity (Eenp), one obtains:

$$\bullet = \frac{Gain\_en\_C0_2}{EenpxE_{ref.}} \qquad (3)$$

In other words, one can say that a green certificate is granted to the green electricity production installation whenever it made it possible to avoid the emission of a quantity of CO2 corresponding to that emitted by the traditional electricity of reference for production d ' 1 MWhe (Eref). This value of Eref is 456 kg CO2/MWhe [9].

The following paragraph submits the number of green certificates to be granted for some simple cases-type. Pr 3rd calculation feels 3rd is valid in as far as the rate d ' 3rd conomy of CO2 calculated is higher than 10% and that the power of the installation is lower than 5 MW. For more information, a booklet and software available on the si te of the CWaPE show in a more detailed way the calculation methods to apply for the majority green electricity production channels.

8

[9] Methodology and the list of the conventional CO2 emission coefficients already approved by the CWaPE are included in *the CO 2 emission coefficients of the green electricity production channels*, monitor CD-4f01-CWaPE of the CWAPE of 1 June 2004, communication Belgian of 22 November 2005

2.4.5 some standard cases

Case 1: Wind-engine, photovoltaic hydroelectric power station

The installation does not emit CO_2. The production of a MWhe by such an installation saves the CO_2 that the reference electricity production installation would have emitted to produce it. This quantity is called "gain in CO_2" and is worth 456 kg of CO_2.

In addition, the CO 2 saving rate (•) is calculated as a quotient between the gain in CO_2 and the quantity of CO_2 emitted by the electric installation of reference, which is worth again 456 kg of CO_2.

The CO 2 saving rate (•) is therefore of 1 it which means that the green producer will receive 1 CV for each MWhe net that it produces.

Case 2: Power station from biomass

The biomass recycles continuously in the atmosphere carbon dioxide absorbed at a previous life stage. CO2 released today by combustion is that which was captured yesterday and which will be tomorrow so. The balance is therefore pointless. An electricity production installation from biomass emits therefore a certain quantity of CO_2 when of fossil energy was used for the preparation and the transport of the fuel. We will take in this example an arbitrary value of 50 kg $CO_{2/MWhe}$ clear product.

This installation makes it possible however to save the CO_2 that the reference electricity production installation would have emitted to produce the same quantity of electricity. This quantity is called "gain in CO_2" and is worth 406 (= 456 -50) kg $CO_{2/MWhe}$ clear product.

In addition, the economy rate is calculated as a quotient between the CO 2 gain and the quantity of CO_2 emitted by the electricity production installation of reference, which is worth 456 kg of 2/MWhe $_{CO}$.

The CO 2 saving rate (•) is therefore equal to 0.89 (= 406/456) it which means that the green producer will receive 0.89 H.P.S for each produced MWhe net.

Case 3: Natural gas cogenerator

Combined heat and power, in particular those consuming of fossil energy, product CO_2. Moreover, it saves the CO_2 that a power station of reference and a reference boiler would have emitted, respectively, to produce an equivalent quantity of electricity and of heat. Combined heat and power of green quality arrives by combining both productions (electricity and heat) to emit less CO_2 than the facilities separated from reference.

Let us take the example of natural gas combined heat and power which, to produce an electric MWh, consumes 3 natural gas MWh (• e = 33,33%) but r 3rd cup 2nd re 1.5 MWh of heat (• q = 50%).

The production of an electric MWh by combined heat and power makes it possible to avoid 456 kg of CO_2 that the power station of reference would have emitted to produce it.

It also makes it possible to avoid 418.5 kg CO_2 (= 1.5 MWh of heat x 279 kg $CO_{2/MWh}$ of heat for the reference) that the boiler of natural gas reference would have emitted to produce them.

On the other hand, the installation of combined heat and power consumed 3 natural gas MWh and therefore issued 753 kg CO natural gas x 2 (= 3MWh 251 kg $CO_{2/MWh}$ for gas).

The gain in CO_2 is calculated by withdrawing the quantity of CO_2 emitted by the green electricity production installation to the quantities of CO_2 avoided to the reference facilities. In this example, it

applies (456 kg CO_2 + 418.5 kg CO_2 –753 kg $CO_{2)/MWh}$ = 121.5 kg CO_2.

The CO 2 saving rate (•) is calculated by dividing the CO 2 gain by the CO 2 emission of the power station of reference, which gives: 121.5 kg CO_2 / 456 kg CO_2 = 0.266.

The green producer will receive 0.266 green certificates by produced MWhe net.

2.5 impact of the green certificates for the green producer:

The maximum income that a green producer can hope for from a green certificate system is directly related to the amount of the fine:

Income max = • x amends (€ /MWh)

The following table gives as an indication the theoretical maximum income (out of taxes) to which a green producer can expect according to the production channel under consideration.

Channels	Guideline figure d ' 3rd CO conomy $_2$	Maximum income HT 3rd orique out of taxes (€/MWh)
Photovoltaic	1	100 € (150 € aupr è s d ' Elia)
Hydraulics	1	100 €
Wind	1	100 €
Biomass	0.7 to 1	70 to 100 €
Cog 3rd n 3rd biomass ration	1 to 2	100 to 200 €
Cog 3rd n 3rd fossil ration	0.1 to 0.4	10 to 40 €

Table 2.2: Maximum income HT 3rd orique for the green producer

The income could even be higher if one takes the fiscal aspects into account. Indeed, the purchase of green certificates, contrary to the fines, is fiscally deductible on the part of the suppliers subjected to corporation tax.

2.6 the market of the green certificates

2.6.1 the offer: the granting of the green certificates to the green producers - (AGW-PEV, art. 10/11)

Each green producer transmits his counting statements quarterly to the CWaPE. On the basis of these statements and on the basis of counting algorithms included in the guarantee certificate of origin, the certified green electricity production installation will be allocated a number of green certificates proportional to the number of MWh produced during the past quarter and to the saving rate of CO_2 calculated by the CWaPE for the quarter. The green certificates granted by the CWaPE last validity of 5-year. The CWaPE grants the green certificates in immaterial form quarterly. This granting is free. After each granting, the CWaPE transmits to the green producers an account statement listing the details of granting and the situation of their account.

2.6.2 the organisation

The 3rd donn bank is (AGW-PEV, Article 15 and 17):

The authenticity of the green certificates is guaranteed by the recording in a data bank centralised and managed by the CWaPE. It takes up again the inventory of the issued green certificates, their guarantee certificate of origin, their emission date, their holder and the recorded operations (granting, transactions, refund for the quota, expiry of validity).

Transactions:

Any transaction relating to a green certificate has to be notified to the CWaPE to be authenticated and registered in the green certificate register.
The actors of the market negotiate the green certificate transaction without intervention of CWaPE. Once the agreement is concluded, the salesman points out the transfer of property of green certificates by filling in the form envisaged for this purpose and while respecting proc 3rd setting in place by the CWaPE 10 lasts.
After each operation, the CWaPE transmits to those involved a taking up again account statement
the details of the transactions carried out and the situation of their account.

Intermediaries:

Any natural or legal person who falls under the database of the CWaPE can carry out green certificate transactions. Thus, it is probable that in the long term, final customers decide to buy, to the market, the green certificates related to their consumption then to yield them to their electricity suppliers and thus negotiate an electricity price, out of elements attached to the green certificates.

Moreover, EDORA, the federation of the electricity producers of renewable energy resources, plans to organise a green certificate market in the form of grant. This system will have advantage of guaranteeing anonymity between purchasers and salesmen at the time of the transaction and of providing an information with real time of the green certificate price.

[10] See booklet "green Certificates: practical methods "

2.6.3 the request: the quota return for the suppliers

The obligation:

Each supplier has to give 11 [quarterly] to the CWaPE a number of green certificates corresponding to the number of MWh provided to his final customers located in Walloon Region multiplied by the quota in force. For the network managers, the quota is applicable to the electricity provided the final customers fed by those and its own electric consumption (AGW -PEV, Article 21, § 1 and 2).

The "quota " return procedure for the suppliers proce eds in four stages:

1. transmission to the CWaPE of the quarterly supply statements;
2. calculation by the CWaPE of the number of green certificates to be given on the basis of the quota and on the basis of the possible reductions;
3. remission to the CWaPE of the green certificates intended for the "quota return ". The thus given green certificates are suppressed of the database;
4. calculation by the CWaPE of the amount of the fines to be applied, in the event of insufficiency of given green certificates.

The quota to be reached by the suppliers and the network managers is fixed as follows (AGW -PEV, art. 21, §3):

- 3% from 01/01/2003 to 31/12/2003
- 4% from 01/01/2004 to 31/12/2004
- 5% from 01/01/2005 to 31/12/2005
- 6% from 01/01/2006 to 31/12/2006
- 7% from 01/01/2007 to 31/12/2007

These rates were established on the basis of the potential trend in the green electricity production. According to the market trends of green electricity, the Walloon Government can re -examine the above-mentioned quotas (AG W-PEV, art. 22).

An increase in the quotas of 1% a year for the period from 2008 to 2012 was proposed by the CWaPE in 2005 to the Walloon Government [12]. In its decision of 16 March 2006, the fixed Walloon with Government the green certificate quotas at 8% in 2008… 12% in 2012, while reserving oneself the possibility of re -examining the situation in 2009 and of increasing the quotas to the need. This decision is accompanied by a number of complementary measures which will require an adaptation of the legis lation concerning the green certificates.

The green certificates entered in the quotas are limited to the granted green certificates on the Belgian territory [13]. However, the green certificates granted by the other regions of Belgium or by the federal (domanial concessions in the North Sea), can be entered only by means of recognition of the Walloon green certificates in the quotas of these other regions or in the federal quota (AGW -PEV, art. 23). only the Brussels Capital region applied this provision and recognises the green certificates granted to an installation certified in Wallonia within 10 years of the industrial setting in operation of this installation [14].

[11]

[12]

[13]

[14] Before the end of the second month which follows the past quarter (namely, on 30 April, 31 July, 31 October and 28-29 February)

Proposal CD-5f28-CWaPE-101 of 11 July 2005

The green certificates issued for the electricity produced outside Belgium could be entered in the quota by means of a bilateral agreement between the parts and mutual recognition. Ministerial decree of 3 May 2005 carrying recognition of the Walloon green certificates in order to allow their accounting for the respect of the obligation put the responsibility of the suppliers in Brussels Capital region by Article 28, § 2 of the electricity prescription

The sanction arrangement (AGW -PEV, art. 24):

In the event of non-observance of the screw quotas 3rd s, the supplier or the r manager 3rd bucket is held
to pay an administrative fine for the envisaged quart er. The fine is raised
currently with EUR 100 by missing certificate. The Decree stipulates that the Government Walloon can fix the amount of this fine between EUR 75 and 125 by certificate missing [15].

The reduction (AGW -PEV, art. 21, §4):

In 2004, the quota imposed initially by legislation was the subject of a "modulation". The Government decided to reduce the impact of the cost of the green certificates on the industrial final customers large electricity consumers to answer the difficulties of an ec onomic nature encountered by the latter in the context of strict international competition. Since 1 January 2004, the suppliers feeding a final customer whose consumption of the quarter under consideration is higher than 5 GWh for a use seat and who signed a convention with the Walloon Region aiming to improve his energy efficiency with short, medium and long term (e.g.: branch agreements…) can benefit from a reduction of the number of green certificates to be given to the CWaPE.

The reduction granted fo r each use seat is of:

- 1/4 of the quota, for the quarterly consumption tranche of electricity ranging between 5 and 25 GWh included;

- Z, for the quarterly consumption tranche of electricity higher than 25 GWh, with Z = quota - 2. It which returns at the e nd to a fixed quota of 2% for this tranche whatever the quota imposed on the suppliers.

When the final customer is fed by several suppliers for the same use seat, the reduction of the number of green certificates is distributed in proportion to the volume s delivered by each supplier.

The reductions of costs resulting from the provisions of this paragraph are reflected directly on each final customer who is at the root.

Example for the quotas in 2005:

I.e. a final customer fulfilling the conditions to benefit from the quota reduction consuming 35 GWh on a quarter. Without reduction, the supplier of this customer would have had to present 1,750 H.P.S.

For the tranche ranging between 0 and 5 GWh, the supplier of this customer will have to satisfy the entirety of the quota, either, in 2005, 5% of 5,000 MWh, which makes 250 H.P.S For the

second tranche, ranging between 5 GWh and 25,000 MWh, the supplier will have to satisfy a reduced quota of a quarter, or (5% x ¾) x (25 000 -5 000) MWh = 750 H.P.S. For the third tranche, higher than 25 GWh, the supplier will have to satisfy a quota reduced to 2%, i.e. 2% x (35 000-25 000) MWh = 200 H.P.S. The supplier will have, on the whole, to return 1,200 H.P.S.

The reduction thus granted to the supplier for the benef it of its customer will be consequently 550 H.P.S.

[15] Decree, Article 53, § 2

2.6.4 the production aid of the Walloon Region

The Walloon Government adopted, on 6 November 2003, a decree concerning the production aid granted to green electricity. The ministerial decree of 24 May 2004 determines the procedures and the arrangements of submission of the request and of granting of the production aid. The green electricity producer produced from renewable energy resources the installation of which was put in operation after 30 June 2003 and signatory of a convention with the minister, can quarterly give to the minister all or part of the green certificates which were granted to it. This convention mentions the duration during which the production aid is guaranteed with a 120-month maximum from the month following the setting in operation of the installation.

The production aid cumulated for the period under consideration makes it possible to compensate the production additional cost in relation to the m arket 16 price during the amortisation period of the installation in question, including the return on the invested capital. The production aid granted by the minister in exchange of the green certificates will be of 65 €/CV [17].

The decision to choose the mechanism of the production aid or the sale of the green certificates on the market of the green certificates is stopped by the green electricity producer signatory of a convention whenever the latter introduces its quarterly counting statements. The gree n certificates held by the Walloon Region are the subject of a cancellation request to the CWaPE in order to suppress these certificates of the data bank. By this mechanism, the excess of offer is reduced, which stabilises the price.

2.6.5 the federal system of minimum acquisition prices

Pursuant to *the Royal Decree of 16 July 2002 relating to the establishment of mechanisms aiming at the promotion of the electricity produced from the renewable energy resources* , the manager of the transport network (GRT), Elia, within the framework of its public service mission, has the obligation to buy to the producer of green electricity which in fact the request, the green certificates granted to a minimum price fixed, according to the technology from production, t o:

Price production technology	**by green certificate**
3rd nergie 3rd olienne offshore oil rig	107/90 € [18]
3rd nergie 3rd olienne on-shore	50 €

3rd nergie hydraulics	50 €
3rd nergie solar	150 €
Other sources 3rd nergie d ' renewable (including the biomass)	20 €

This obligation to purchase becomes effectiveta to the setting in operation of the generating station, for a ten-year period. In Walloon Region, only the photovoltaic facilities are concerned in practice with this system since in this case the value of acquisition of the green certificate by the GRT (150 €/CV) is higher than the fine of 100 € by missing green certificate.

The GRT (Elia) has to give these green certificates to the market in order to recover the assumption of responsibility c osts of this obligation. The clear balance, which results from the difference between the purchase price of the green certificate by the GRT and the selling price on the market is financed by means of an overload on the tariffs of connection to the network of transport and of use of it.

16

17

18
This market price is determined by the CWaPE. The methodology followed by the CWaPE is detailed in CD-5d05-CWaPE communication of 7 April 2005.
According to technology, the convention can envisage a higher amount which will not be able however exceed the amount of the fine.
By domanial concession, 107 €/CV for the first 216 MW and 90 €/CV for the balance.

3 2005 assessment

3.1 production park

3.1.1 certification of the production sites

Three control organisations, by following Belac the standard NBN 45004 and by the Energy minister issue guarantee certificates of origin in the green electricity production sites. These organisms are: Aib-Vinçotte, Bureau Technique Verbrugghen, SGS Bureau Bubbles.

Among the facilities certified in 2005, one raises:

- two photovoltaic facilities (Greindl et Hecq -Hannecart) for a total power of 4 kW;
- five wind sites (Villers-le-Bouillet, Perwez, Bronromme, Saint -Vithsaint-Vith (Emmelsberg) et Walcourt) for a total power of almost 27 MW;
- three hydroelectric power stations (Bardonwez, Jauche Mill, Berchiwé Mill) for a total power of 60 kW;
- two facilities producing electricity from biomass (conversion of the unit 4 of the power station of the Awirs to the wooden pellets f or a power of 80 MW and animal fat SEVA development centre for a power of 885 kWe);
- five units of combined heat and power -biomass (THIS of the Isnes, THIS of Chapois Cramp, Aigremont margarinery, wood platform of Secobois, wood platform of Recybois) for a total power of 4,270 kW.
- eight combined heat and power facilities running on natural gas (psychiatric Brother Alexiens Clinic, three facilities to the Warcoing sugar refinery, Provital, IPALLE sewage treatment plant, Notre-Dame refinery Orafti and Longch amps râpery) for a power of slightly

more than 26 MW.

In addition to initial certification, the three approved organisations carry out annual controls of all the certified sites. Amendments in the guarantee certificate of origin are also carried out in the event of modification of the measuring instruments or of any other element included in the guarantee certificate of origin. In the event of use of biomass inputs (local or imported), certification also covers traceability and the demonstration of the renewable character of these inputs.

3.1.2 green electricity production sites

At the end of 2005..105 green electricity production sites fulfilled the conditions of granting of the green certificates for a total power of approximately 447 MW (see annex 1). The number of green producers corresponding to the 105 sites amounts to 64.

Number of sites	Power (kW)
4	6
46	103,791
11	49,018
9	96,223
14	46,507
21	151,382

Situation at the end of 2005		
Photovolta ï que		
Hydraulics		
3rd olien		
Biomass		
Cog 3rd n 3rd biomass ration		
Cog 3rd n 3rd fossil ration		
Total	105	446,927

Table 3.1: Production d sites ' 3rd lectricit 3rd green in 2005

In addition, two biomass sites and a site production of natural gas combined heat and power had their facilities shutted down.

3.1.3 green and green certificates electricity production

The number of green certificates granted for green electricity produced in 2005 is 823,000 compared with 715,000 in 2004 i.e. an increase of 15%.

During the year, there is a delay between the green electricity production and the grantings of corresponding green certificates. Indeed, the granting of green certificates is not done in a continuous way but on the basis of statements having to be transmitted once by quar ter. Consequently, the periods of production covered by these statements necessarily do not correspond to the calendar quarters. Moreover, for the new sites, grantings can carry over different periods due to the certification procedure.

The ventilation of grantings by channel and per quarter is given in annex 2. The graph below gives an indication of the cumulated green electricity production by smoothing the grantings of green certificates over the period of production.

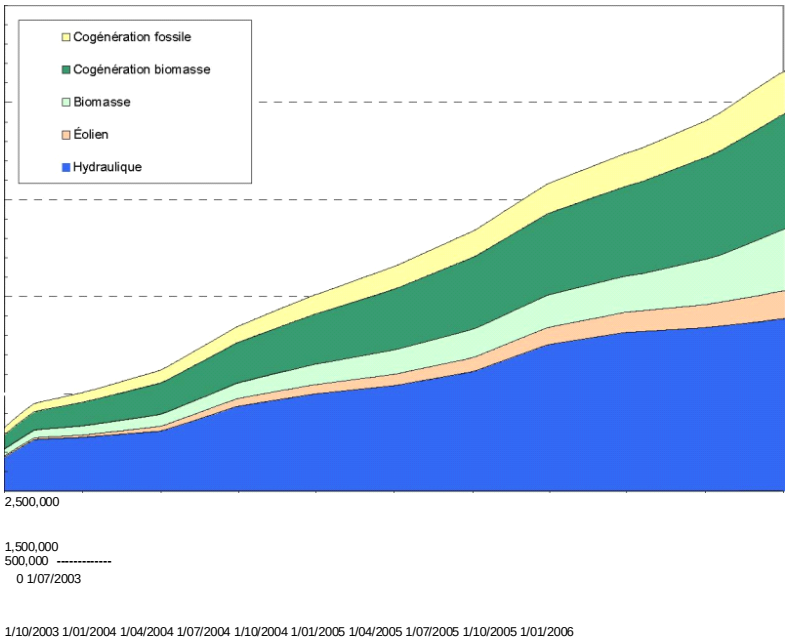


Figure 3.1: Cumulation production 3rd e of green certificates

The development of distribution by channel of the smoothed certified, electr icity production while distributing to pro missed days of the year in the event of statement covering 2 years, and of the corresponding green granted certificates is included in the following table and the figures.

Year	2004				2005				
	Power (MW)	Production (MWh)	(Green MWh)	Number of CV octroy 3rd	Power (MW)	(MWh)	(green MWh)	Number production of CV octroy 3rd s	Increase CV octroy 3rd
Photovoltaic	0	0	0	0	0	1	1	1	-
Hydraulics	104	305,746	305,746	305,746	104	274.191.274.191.274.191			- 10%
Wind	23	46,178	46,178	46,178	49	70.858.70.858.70.858			+ 53%
Biomass	16	86,553	86,553	86,109	96	262.276.262.276.171.041			+ 99%
Cog 3rd n 3rd biomass	41	233,792	186,842	207,773	47	243.469.198.023.222.201			+ 7%
Fossil combined heat	123	824,760	246,756	69,357	151	857.525.287.569.85.120			+ 23%
Total	**306**	**1,497,030**	**872,075**	**715,163**	**447**	**1.708.320.1.092.918.823.412**			+ 15%

Table 3.2: Production d ' 3rd lectricit 3rd green in 2004 and 2005

Given the definition of the decree of green electricity, for the units of combined heat and power (fossil and biomass) and the hydraulic units of a periodic developable output capacity (Pendp) of 20 MWe, the "MWh green " correspond to produced clear elect ricity multiplied by the ratio (20/Pendp).

The CO 2 (ô) means saving rate of the green electricity production park in 2005 is 0.75 H.P.S/green MWh (i.e. 0.48 H.P.S by produced electric MWh), which is lower than the 0.82 (respectively 0,48) observed i n 2004.

The existing sites at the time of the entry into force of the system of the green certificates, c ' is - with - to say at [1] October 2002, have pes 3rd for 77% in 2005 compared with 92% in 2004 [19].

3.1.4 2005 assessment compared to the forecasts m ade in 2004

In 2004, forecasts announced granting of really granted 975,000 green of almost units against approximately 823,400 certificates. The difference has been explained mainly by delays in the development of the biomass channels and wind -engine and production of the hydraulic facilities in continual fall since 2002.

Regarding the hydraulic channel, the downward trend is explained primarily by the sensitivity of this channel to the weather. Thus in relation to 2003, these are almost 34,000 H.P.S which were granted less in 2005.

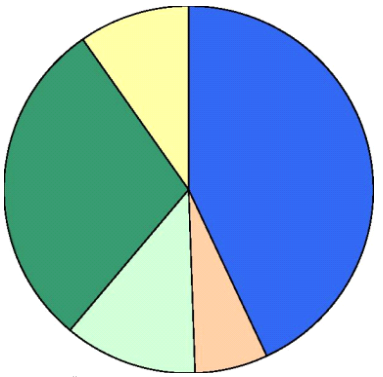
Regarding the delay taken in the carrying out of certain facilities of the biomass channel, a green electricity production in 2005 lower is noted primarily than the forecasts for the power station of the Awirs.

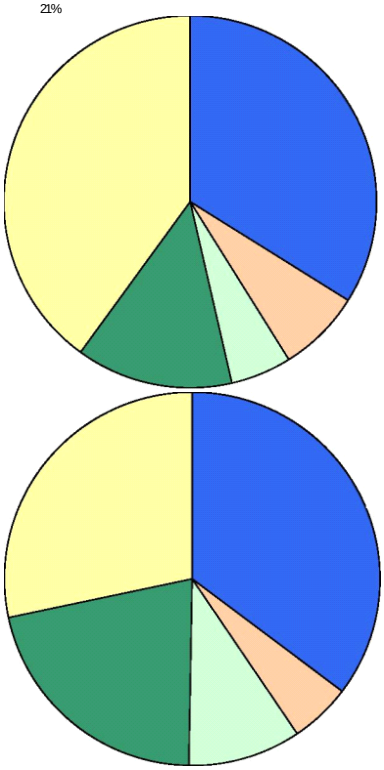
Regarding the delays observed in the carrying out of certain facilities of the wind channel, it is noted that two wind sites (7.5 MW) the setting of which in operation was envisaged during the second half of 2005 will emerge only in 2006, One also notes the abando nment of a wind project of 18 MW the setting of which in operation was envisaged in 2005 consequence at a refusal of licences. It is important to note moreover that five projects permitted in 2003 and 2004 (allowed granted) adding up a power of approximate ly 50 MW were not still carried out.

[19] Cf. CD-6c07-CWaPE-112

Figure 3.2: Green electricity production park in 2004

Power install 3rd e: 306 MWe
872 GWh green products
Number of CV octroy 3rd s: 715,163





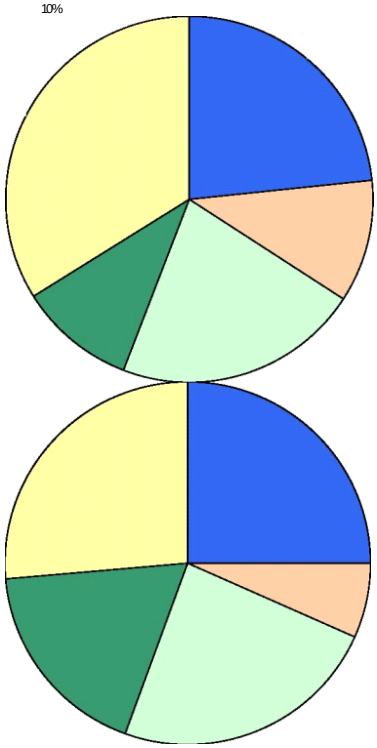
Cogen Biomasse 29%
Cogen Fossile 10%
Biomass 12%
Wind
6%

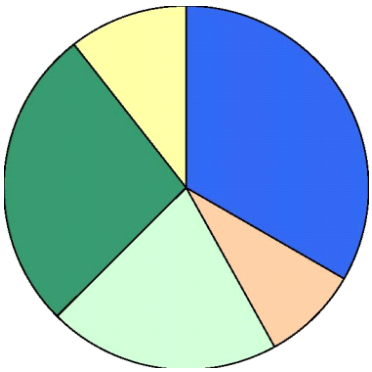
Figure 3.3: Green electricity production park in 2 005

Power install 3rd e: 447 MWe

1,093 GWh green Number
products of CV octroy 3rd s: 823,412

Hydraulics
23%
Hydraulics
25%
Cogen Fossile
27%
Cogen Fossile
34%
Hydraulics
33%
Wind
11%
Wind
6%
Cogen Biomasse
18%
Wind
9%
Cogen Biomasse
10%





3.1.5 share of green electricity in electricity supply in Walloon Region

In 2005, the green electricity production accounted for approximately 4.7 % $$#8191 $$#8192>of electricity supplies in Walloon Region (+/ - 23,341,000 MWh) against 3.7% in 2004.

Year	2004		2005	
Supply RW	23,628,470 MWh		23,341,061 MWh	
	(Green MWh)	%	% $$#8257	
Photovoltaic	0	0.0	1	0.0
Hydraulics	305,746	1.3	274,191	1.2
Wind	46,178	0.2	70,858	0.3
Biomass	86,553	0.4	262,276	1.1
Cog 3rd n 3rd biomass	186,842	0.8	198,023	0.8
Fossil combined heat	246,756	1.0	287,569	1.2
Total	872,075	3.7	1,092,918	4.7

Table 3.3: Share of production d ' 3rd lectricit 3rd green in the supply in RW

If one does not take account of the limit of 20 MW for the combined heat and power facilities (fossil and biomass) and hydraulics, the share of the electri city produced in facilities certified from renewable energy resources and from combined heat and power

of quality in Walloon Region is 7.3 % $$#8445 $$#8446>of electricity supplies in 2005 compared with 6.3% in 2004, which corresponds to an electricity pro duction renewable (SER) within the meaning of Directive 2001/77/EC of 3.4%.

Year	2004		2005	
Supply RW	23,628,470 MWh		23,341,061 MWh	
	(MWh)	%	% $$#8511	
Photovoltaic	0	0.0	1	0.0
Hydraulics	305,746	1.3	274,191	1.2
Wind	46,178	0.2	70,858	0.3
Biomass	86,553	0.4	262,276	1.1
Cog 3rd n 3rd biomass	233,792	1.0	243,469	1.0
Cog 3rd n 3rd fossil	824,760	3.5	857,525	3.7
Total	1,497,030	6.3	1,708,320	7.3
SER total	634,831	2.7	801,057	3.4

Table 3.4: Share of l ' 3rd lectricit 3rd produced in facilities certifi 3rd is in the supply in RW

3.2 3rd March of the H.P.S

3.2.1 green certificate transactions

During 2005..413,720 H.P.S were the subject of transaction s [20]. The average unit price remained this year around EUR 92.

	Number of CV	Unit price average
2003: 1st six-month	7,669	87.63
2003: 3rd quarter	94,575	79.29
2003: 4th quarter	62,700	91.65
2004: 1st quarter	81,757	91.57
2004: 2nd quarter	71,380	91.68
2004: 3rd quarter	89,318	91.95
2004: 4th quarter	84,279	91.74
2005: 1st quarter	81,830	91.81
2005: 2nd quarter	120,608	92.00
2005: 3rd quarter	91,942	92.29

2005: 4th quarter		119,340	92.26
2006: 1st quarte r		132,064	92.08
Total		1,007,836	90.92
		Number of CV	**Unit price average**
	2003	164,943	84.38
	2004	326,733	91.74
	2005	413,720	92.10

Table 3.5: Average price of the green certificate transactions

These market prices published on the site of the CWaPE concern a number of green certificates corresponding to approximately 55% of the green certificates granted since the beginning of the entry into force of the system. The green certificate balance (45%) corresponds primarily to the green certificates granted to the production sites belonging to the suppliers, used for their respective quota or put in reserve for future use.

3.2.2 quotas (nominal and effective) of green certificates

The number of green certificates to be given to the CWaPE un der the terms of the obligation made to the suppliers and managers of network in Article 21 of the decree of 4 July 2002 relating to the promotion of green electricity was drawn up on the basis of a share of the "nominal" quota of 5%, and moreover on the reductions of quota for the supplies to the final customers large electricity consumers.

Electricity supplies declared and taken for 2005 are 23,341,061 MWh [21]. The nominal quota of 5% corresponds consequently to a number of 1,167,053 green certificates.

In 2005..78 final customers' use seats large electricity consumers benefited from a quota reduction. The total consumption of these seats accounts for approximately 37% of electricity supply in Walloon Region.

[20] The quota returns are not regarded as transactions.
[21] This involves the value declared by the suppliers to 28/02/2006. The corrigenda later with this date are not taken into account in the calculation of the 2005 quotas but are deferred in the calculation of 2006 quotas.

The granted quota reductions were raised on the whole in 161,419 green certificates i.e. 13.8% of the nominal quota of green certificates. The effective average quota in 2005 for the 78 use seats benefiting from the quota reduction thus was 3.15%.

The economy thus o btained by the suppliers for the benefit of their final customers can be evaluated as follows:

	Economy r 3rd alis 3rd e in 2004:	Economy r 3rd alis 3rd e in 2005:
On the basis of the amount of l ' amends (100 € /CV)	11,754,769	16,141,900

On the basis of the average price per CV on the 3rd march (91.74 € in 2004; 92.10 € in 2005)	**10,783,825**	**14,866,690**

The "nominal" quota of 5% for 2005 was thus brought back to an effective quota (relationship between the provided number of green certificates to be introduced and the number of MWh) of 4.31% in view of the granted reductions, which corresponds to a number of 1,005,634 H.P.S to be given indeed by the suppliers and network managers.

The figure below has been showing the deve lopment of the quotas since the entry into force of the system of the green certificates.

Figure 3.4: 3rd volution of the quotas on th e p 3rd riode 2003-2005

The nominal quota corresponds to that to the customers' suppliers are subjected not benefiting from green certificate reduction.

The quota with reduction corresponds to the average quota to are large electricity consumers subject the suppliers of the final customers' use seats benefiting from the reduction. This reduction is noted allowed to maintain for those a relatively stable quota of green certificates.

The effective quota corresponds to the effective request on the market of the green certificates.

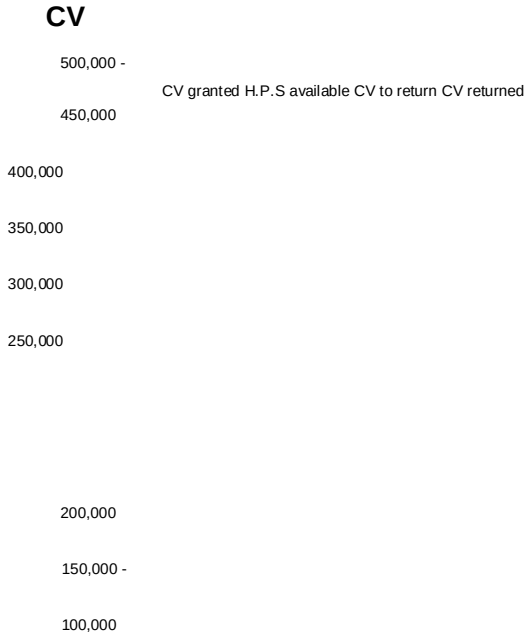
3.2.3 supply and demand on the market of the green certificates

The following graph represents the image of the market of the CV, at the time of the quota returns. Thus, in first column, one finds the amount of green certi ficates granted between two quota return dates.

The "H.P.S available " correspond to the number of present green certificates on the market at the time of the quota return. They come from the amount of the green certificates granted during the period an d from the stock of unused H.P.S of the previous period.

The "H.P.S to be returned " correspond to the number of green certificates having to have returned by the suppliers and the network managers. As a reminder, this amount corresponds to 5% of the total supplies of electricity (4% in 2004), minus the reductions granted for the final customers large electricity consumers.

Lastly, the "returned H.P.S " correspond to the effective number of the certificates returned for the quota. The difference betwee n the "H.P.S available " and the " returned H.P.S " corresponds to the stock of the green certificates available at the time of the quota return. The difference between the "H.P.S to be returned " and the " returned H.P.S " corresponds to the fines.



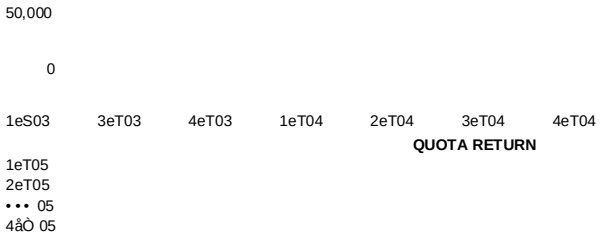


Figure 3.5: 3rd l ' supply and demand volution on the 3rd march of the green certificates

At each quota return, the number of green certificates available was sufficient to answer the number of certificates to be returned. A considerable r eduction in liquidity is noted however at the time of the quota return relating to the third quarter of 2005 (3eT05).

Quarter concerned	Date of the quota return	Stock of green certificates available on the 3rd march
1st quarter of 2005	31 May 2005	125,769
2nd quarter of 2005	31 August 2005	191,098
3rd quarter of 2005	30 November 2005	45,158
4th quarter of 2005	28 February 2006	93,758

The graph below presents an annual balance sheet of the market of the green certificates in 2003..2004 and in 2005.

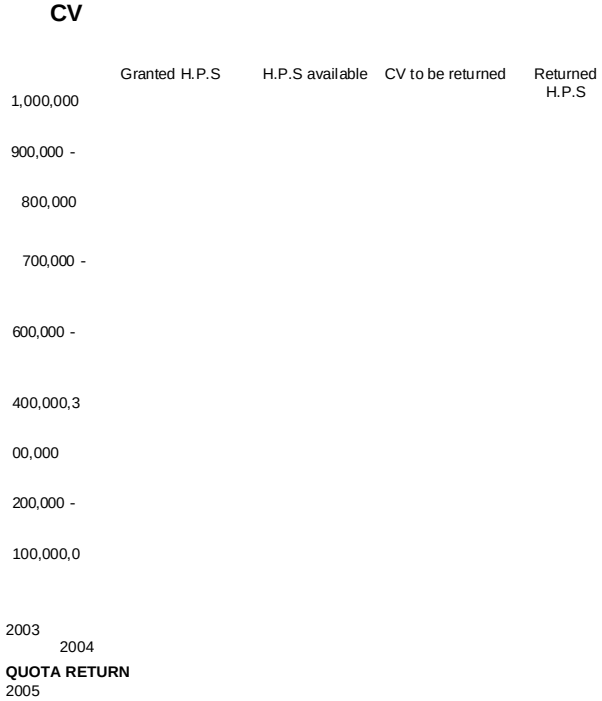


Figure 3.6: Annual balance sheets of the 3rd march of the green certificates

In this graph, the "H.P.S available " correspond to the amount of the green certificates granted in the year and of the stock of unused gr een certificates of the previous year.

It is noted that the number of green certificates granted in 2005 remains lower than the number of green certificates to return for the quotas (approximately 83.8%). The number of green certificates available on the market in 2005 taking account of the stock made up at the end of 2004 was slightly lower than the number of green certificates to be returned for the quotas (± 95.8%).

As explained previously, this slight lack of green certificates over 2005 is primarily due to the fall of production of the hydraulic channel and to the delays taken in the startup of certain facilities of the biomass and new wind parks channel.

3.2.4 quota returns of green certificates

The number of green certificates given to the CWaPE under the terms of the obligation made to the suppliers and network managers was raised to 871,447 H.P.S for 2005, against 733,370 for 2004. The 871,447 H.P.S given to the CWaPE account for thus 86.65 % $$#10211 $$#10212>of the number of CV that had to be given.

The number of suppliers and of network managers who were required to introduce in 2005 their supplies and a number of green certificates quarterly corresponding to the nominal quota of 5% aupr 2nd s of the CWaPE is as follows:

- 12 suppliers having a general supply licence,
- 5 suppliers having a green supply 22 licence,
- 13 r managers 3rd bucket

[22]The green supply licence is granted to the suppliers whose at least 50% of their supplies are made up of green electricity.

Table 3.6: Quarterly quota returns of green certificates

	Total sales over the year (MWh)	Quota of CV out of reduction	Reduction CV	CV to be introduced	Returned H.P.S	Missing H.P.S Al
			1st quarter of 2005			
Suppliers	3,808,895	190,445	42,126	148,319	148,274	45
GRD	2,575,698	128,785	0	128,785	90,895	37,890
TOTAL	6,384,593	319,230	42,126	277,104	239,168	37,935
			2nd quarter of 2005			
Suppliers	3,735,271	186,764	41,521	145,242	145,242	0
GRD	1,749,469	87,473	0	87,473	58,990	28,483
TOTAL	5,484,741	274,237	41,521	232,716	204,233	28,483
			3rd quarter of 2005			
Suppliers	3,481,857	174,093	35,891	138,202	138,026	176
GRD	1,802,080	90,104	0	90,104	65,529	24,575
TOTAL	5,283,937	264,197	35,891	228,306	203,555	24,751
			4th quarter of 2005			
Suppliers	3,851,106	192,555	41,880	150,675	150,660	15

GRD	2,336,684	116,834	0	116,834	73,831	43,003
TOTAL	6,187,790	309,390	41,880	267,509	224,491	43,018

2005 TOTAL

	Total sales over the year (MWh)	Quota of CV out of reduction afterwards	Reduction CV	CV to be introduced	Returned H.P.S	Missing H.P.S	Al
Suppliers	14,877,129	743,856	161,419	582,438	582,202	236	
GRD	8,463,931	423,197	0	423,197	289,245	133,951	
TOTAL	23,341,061	1,167,053	161,419	1,005,634	871,447	134,187	

Total sales included in this table correspond to the amounts declared to 28/02/2006. The later corrigenda at that date are not taken into account in the calculation of the 2005 quotas but are deferred in the calculation of the 2006 quotas.

24

3.2.5 3rd volution of the amount of the fines

The quarterly development of the amount of the fines applied in 2005 is included in the figure below.

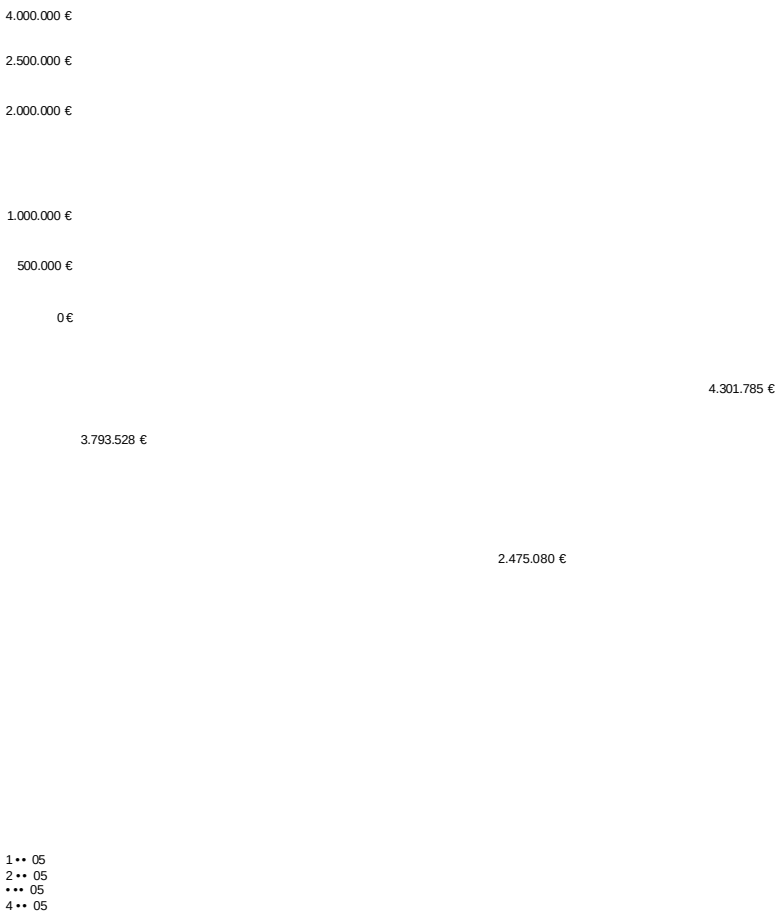


Figure 3.7: 3rd quarterly volution of the 3rd appliqu amount of the fines is in 2005

The total number of missing green certificates in 2005 having involved the application of fines accounts for approximately 13.35% of the effective quota against 11.4% in 2004. This amount is higher than the overall deficit of green certificates over 2005 (4.2%).

The number of green certificates that should b e given for 2005 being 1,005,634, the difference, i.e. 134,187 certificates, gave rise to the imposition of administrative fines for a total of EUR 13,418,714 (against almost 9.5 million in 2004).

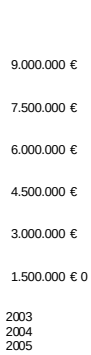


Figure 3.8: Fines appliqu 3rd are on the p 3rd riode 2003 -2005

It is important to point out that those are almost exclusively fines to the network managers. The fines paid by the suppliers t o the eligible customers account for only 0.2% of the total of the fines for 2005.

4 Prospects

4.1 development of the green electricity production park in 2006

On the basis of the projects under development and the trend in the production of the pa rk existing at the end of 2005, one can consider the development of the green electricity production park during 2006:

Projects 2006	Power (kWe)	Expected H.P.S for 2006	Increase CV in relation to 2005
Hydraulics	400	1,500	0.5%
Wind	37,100	35,500	50%
Biomass	0	210,000	123%
Cog 3rd n 3rd biomass	30,825	108,000	*49%*
Cog 3rd n 3rd fossil	0	15,500	18 % $$#11329
TOTAL	68,325	370,500	45%

Table 4.1: 3rd Pr volution 3rd sight in 2006

Among the major develop ments planned for 2006, let us note mainly the increase in production of the power station of the Awirs and of the biomass combined heat and power power stations put in operation in 2005 (Aigremont, Recybois, etc.). Also let us note the setting in operatio n of new cog 3rd n power stations 3rd biomass ration for slightly more than 30 MW (Renogen, ERDA, Electrawinds, etc.) as the setting in operation of new wind parks (Gembloux-Sombreffe extension, Perwez extension, Marbais, etc.) for a power of approximately 37 MW.

On the basis of these forecasts, the structure of the green electricity production park at the end of 2006 is given to the following figures.

Power install 3rd e: 515 MWe
Number of CV octroy 3rd s: 1,194,000

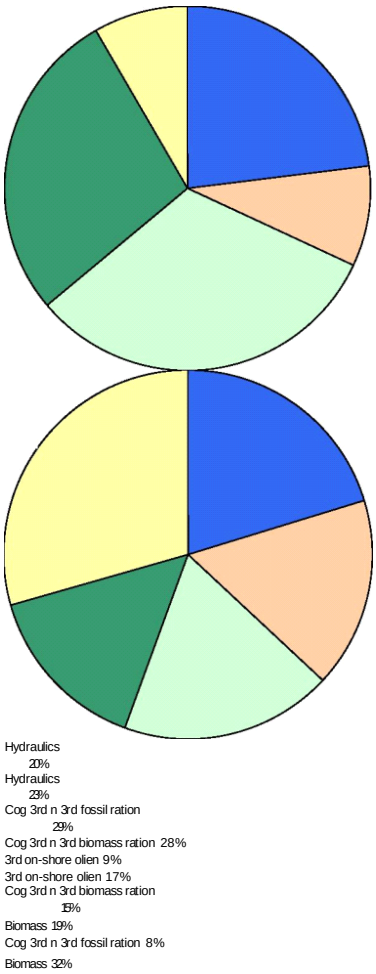


Figure 4.1: Pr 3rd visions for 2006

It is noted that the share of the hydraulic channel will count only for approximately a quarter in the granting of green certificates and that more than half of the green certificates will be granted to developing facilities of the biomass.

The facilities put in operation before 1 October 2002 now will account for only 52% of the total granted in 2006 compared with 77% in 2005.

4.2 market trends of the green certificates in 2006

On the basis of the development of the previous green electricity production p ark, in view of the necessitated quota of 6% in 2006 and in view of the due quota reductions, in view of a hypothesis of increase in electricity supplies of 1% in 2006 (growth not observed in 2005), one can simulate the development of supply and of green c ertificate demand for 2006.

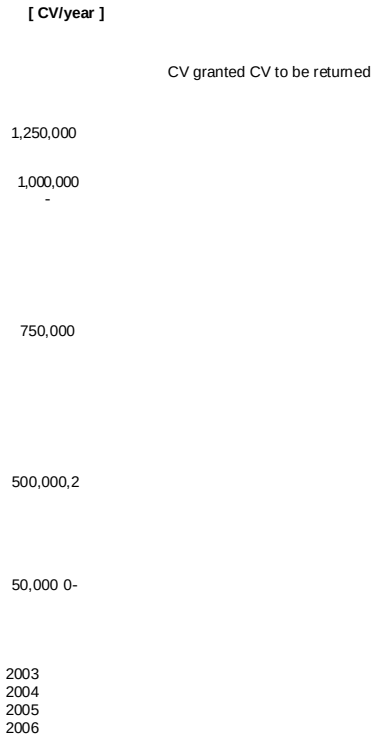


Figure 4.2: 3rd l ' supply and demand volution on the 3rd march of the H.P.S

It is noted that on the basis of these forecasts, one should for the first year achieve granting of green certificates slightly higher than the effective quota.

One will point out however the extreme sensitivity of these results to the proper functioning of the power station of the Awirs which will count for approximately a quarter of all the certificates which should be granted in 2006.

4.3 development of the green electricity production park over the period 2007 -2012

Since the publication of the scénarii of market trends of the green certificates (proposal CD -5f28-CWaPE-101 of 11 July 2005), numerous green production projects have made themselves better known. Independently of any legislative modification, these developments could already justify a revision of these scenarii.

In addition, on the basis of the decision of the Walloon Government of 16 Ma rch 2006, the following hypotheses were taken into account for the simulation of the development of the green electricity production park:

1 due to the fixing of the quotas at 8% in 2008 until 12% in 2012, only the corresponding scenario will be revised;
2 removal of the limitation of the CO2 saving rate to 1 for the powers higher than 5 MW for a number of combined heat and power sites from biomass;
3 introduction of the limitation of the green electricity concept with 20 MW for the facilities from biomass;
4 application of a reduction factor as from 2008 for the units of production the setting date of which in operation is higher than 10 years.

The principal modifications in relation to the projects identified to 30/06/2005 within this framework are as follo ws:

1 following various initiatives taken in Walloon Region during the second six -month period of 2005, the probabilities of realisation of biomass combined heat and power facilities in the first processing industry of wood and in the sector of oils/vege table/animal fat had to be increased.

2 regarding the offshore wind channel, since there is currently no agreement on the recognition / distribution methods between the regions of the green certificates which will be allocated by the CREG to the offshore wi nd parks, it was judged more appropriate no longer to take account of this channel in order to limit the analysis at the study of the channels falling strictly within the regional competence. Similarly, the possibilities of mutual recognition between regions were not taken into account.

The results presented hereafter were established on the basis of the update 31/03/2006 from the projects identified by the CWaPE by following methodology identical to that presented in the proposal CD-5f28-CWaPE-101.

The first scenario S1 below corresponds to an update of the previous scenario on the basis of the projects in the process of r 3rd 3rd alisation or autoris to 31 March 2006. The second Sc 3rd nario S2 is based on the same elements taking into account a reductio n factor for the units put in operation before the start of the system of the green certificates.

4.3.1 scenario 1 –development of the projects identified to 31/03/2006

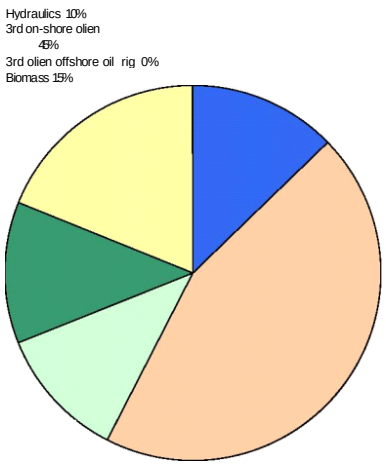
In relation to the scenario established in June 2005, an increase in the working installed capacity of approximately 50 MW is noted overall and one increase in the number of green certificates of approximately 380.000 H.P.S This is primarily due to the taking into account of important biomass combined heat and power projects.

Projects 2007-2012	Number of sites	Hangs (kW)	CV/year	MWh/year	tau average CV/MWh
Hydraulics	12	2,580	13,540	13,540	1.000
Wind on-shore	22	296,100	702,200	702,200	1.000
Biomass	1	350	42,100	61,801	0.681
Cog 3rd n 3rd biomass	11	35,688	821,160	486,260	1.689
Fossil combined heat and	2	9,100	6,531	24,100	0.271
Total	48	343,818	1,585,531	1,287,901	1.231

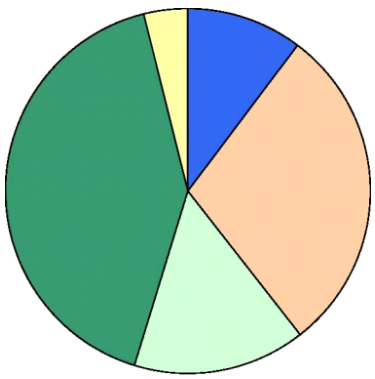
Table 4.2: Projects consid 3rd r 3rd s on the p 3rd riode 2007 -2012

The structure of the green electric ity production park by 2012 (out of application of the reduction factor) is presented in the figures below:

Power install 3rd e: 860 MWe



Nombre of CV octroy 3rd s: 2,780,000



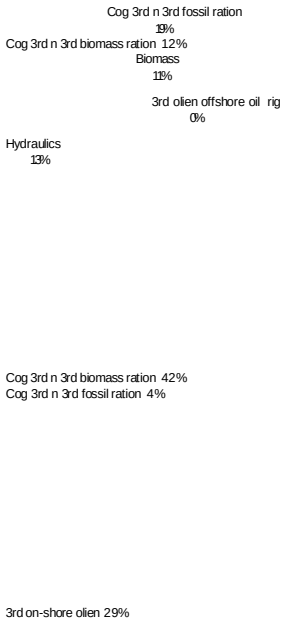


Figure 4.3: 3rd Sc nario 1 - Pr 3rd visions for 2012

(out of application d ' a coefficient r 3rd ductor for links them 3rd production s including the setting in service is sup 3rd rieure at 10 years)

4.3.2 scenario 2 - reducing factor for the units of production the sett ing of which in operation is higher than 10 years

The detailed rules for the application of the decision of the Walloon Government of 16 March 2006 not being defined yet, the hypothesis of a reduction factor of 50% was applied as from 2008 for the units of green electricity production the setting of which in operation is higher than 10 years. However, no reduction factor was applied for the sites justifying, according to the CWaPE, a production additional cost requiring the maintenance of the current sup port level.

This hypothesis does not prejudice in any way of the Government's decision in this matter. It does not have any other aim than to be used to quantify the impact of the measure decided by the Government under this hypothesis.

Complementary hypotheses were also incorporated concerning the definition of the date of the setting in operation of an installation.

The CWaPE fact thus the hypothesis whether the date of setting in operation of the unit of green electricity production taken could b e different of the first date put in operation by means of a substantial modification of the unit of production enabling it to meet one or the other of the following conditions:

- Noticeable improvement of the CO2 saving rate (change of fuel, passage to c ombined heat and power, etc.)

- Appreciable increase in the green electricity production (increase in the working installed capacity, etc.)

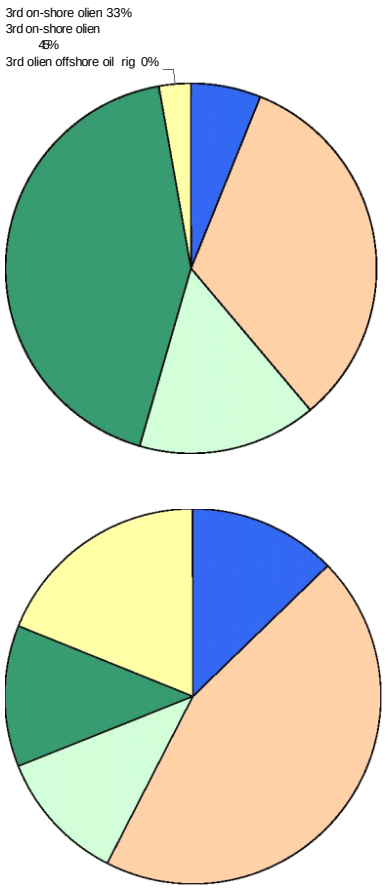
The following table gives the cumulated reduction of the number of certificates granted for the sites concerned over the period 2008-2012:

Year	Number of sites concerned	R 3rd cumulation duction 3rd e of green
2008	46	- 185,000
2009	51	- 190,000
2010	55	- 215,000
2011	62	- 220,000
2012	69	- 310,000

Table 4.3: R 3rd cumulation ducti on 3rd e of green certificates with a coefficient r 3rd ductor of 50%

The structure of the green electricity production park by 2012 with application of the reduction factor is presented in the figures below:

Power install 3rd e: 860 MWe
Number of CV octroy 3rd s: 2,470,000



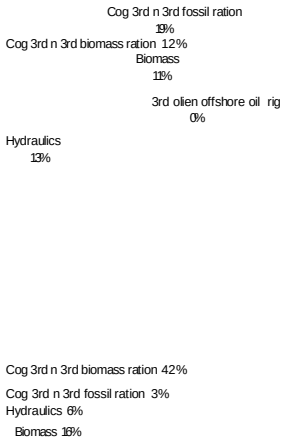


Figure 4.4: 3rd Sc nario 2 - Pr 3rd visions for 2012

(with application d ' a coefficient r 3rd ductor for links them 3rd production s including the setting in service is sup 3rd rieure at 10 years)

30

4.3.3 conditions of balance on the market of the green certificates

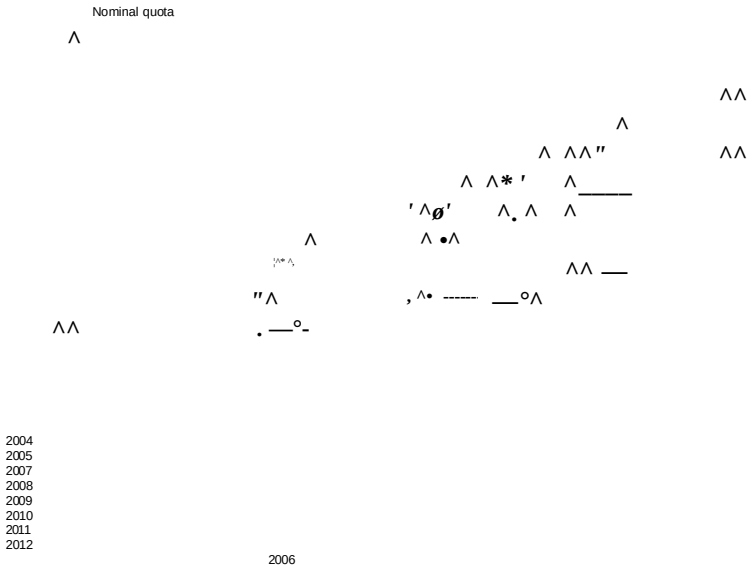
Following methodology identical to that presented in the proposal CD -5f28-CWaPE-101 on the taking into account of the quota reductions and growth of 1% of electricity supplies in Walloon Region over the period 2006 -2012, from the development of the effective quota is deduced (and that to which large electricity consumers are subjected the suppliers of the final customers' use seats benefiting from the red uction) in function of the nominal quota (see figure 4.5).

15

10

5

2003



Effective quotas

2006) 5.04 % $$#13427 $$#13428>2007 5.81%
2006 6.58%
2007 7.35%
2008 8.11%
2009 8.88%
2010 9.64%

2006 Figure 4.5: Nominal quota and effective quota

The development of the conditions of balance between supply and demand in the case of the scenario 1 will be found below where no reduction factor is applied for the units of productio n the setting of which in operation is higher than 10 years. Excess is noted at the level of the offer of green certificates as from 2008 leading at the end of 2012 to green certificate stock accounting for almost 75% of the effective quota of this same ye ar.

[CV/year]

CV granted CV to make fine Stock CV of year

Figure 4.6: 3rd quilibre between supply and demand without coefficient r 3rd ductor

In the case of the scenario 2, the conditions of balance can be satisfied with an annual increase in the nominal quota over the period 2008 -2012 of 1 % $$#13626 $$#13627>for the minimum development scenario and on the basis of the application of a reduction factor of 50% as from 2008 for the units of production the setting of which in operatio n is higher than 10 years. In this scenario, green certificate stock at the end of 2012 accounts for approximately 28% of the effective quota of this same year (see figure 4.7).

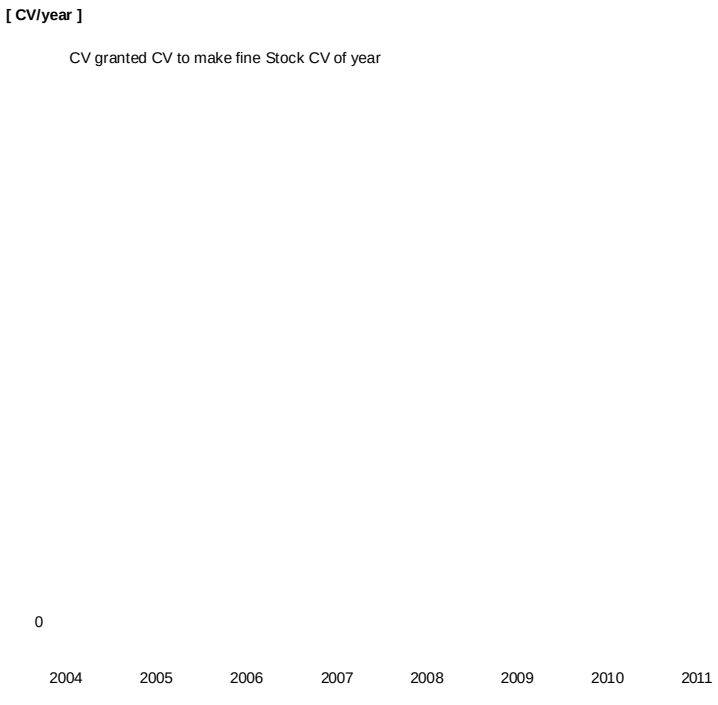


Figure 4.7: 3rd quilibre between supply and demand with coefficient r 3rd ductor

Contents

ANNEX 1: List of the production d sites ' 3rd lectricit 3rd green end of 2005

Channel	Site actor of production		Hangs (kW)
Photovoltaic	DAVENNE J-P. (private individual)	088_PHOTOVOLTAIQUE SOLWASTER	1
	GREINDL Bruno (private individual)	114_PHOTOVOLTAIQUE GREINDL	1
	HECQ-HANNECART (private individual)	125_PHOTOVOLTAIQUE HECK -HANNECART	3
	QUITTRE Laurent (private individual)	095_PHOTOVOLTAIQUE ISSOL	1
	Developable net electric output (hangs) (kW) - photovoltaic		6
	Number of sites		4
Hydraulics	POWER STATION THE SPLITTING mill	071_CENTRALE HE THE SPLITTING mill	2.76
	GAMBY POWER STATIONS	059_CENTRALE HE CHAPUIS	100
		060_CENTRALE HE DOLNE	256
	DONY	048_MICRO CENTRAL HE OF THE PITCH VALLEY	94
	ELECTRABEL	028_CENTRALE HE OF LORCE	5.1
		029_CENTRALE HE HEID DE GOREUX	7,344
		030_CENTRALE HE OF ORVAL	4.7
		031_CENTRALE HE DE COO DERIVATION	385
		032_CENTRALE HE OF STAVELOT	106
		033_CENTRALE HE OF CIERREUX	100
		034_CENTRALE HE OF THE VIERRE	1,976
		035_CENTRALE HE OF BUTGENBACH	2,106
		036_CENTRALE HE OF BEVERCE	9,902
		077_CENTRALE HE OF BARDONWEZ	3.2
	BERCHIWÉ ENERGY	122_CENTRALE HE MILL OF BERCHIWE	**22**
	ENHYDRO	065_CENTRALE HE OF PONT -A-SMUID	174
		066_CENTRALE HE OF SAINT -ADELINE	116
	HOTTOIS David (private individual)	120_CENTRALE HE MILL OF JAUCHE	7
	HYDROLEC DENIS	051_CENTRALE HE OF DOLHAIN	8.0
		052_CENTRALE HE OF THE FORGES	66
		053_CENTRALE HE OF THE PIRARD MILL	49
	HYDROVAL	047_CENTRALE HE ZOUDE	178
	JEANTY Nadine (private individual)	076_CENTRALE HE MILL OF VILLERS -LA-LOUE	1.5
	MARAITE Bruno (private individual)	061_CENTRALE HE MARAITE (LIGNEUVILLE)	217
	MERYTHERM	057_CENTRALE HE OF MERY	2.05
		058_CENTRALE HE OF RABORIVE	60
	MET - I.G. 45	078_CENTRALE HE OF the HOUR UAE	951
	FISENNE MILL	073_CENTRALE HE MILL FISENNE	95
	MUYLE HYDROELECTRICITE	087_CENTRALE HE OF MORNIMONT	659
	PIRONT Alphonse	074_CENTRALE HE PIRONT (LIGNEUVILLE)	6.2
		075_CENTRALE HE MILL MAYERES	119
	PROTIN Josette (private individual)	056_CENTRALE HE MI LL Of UNDER	1.5
	REFAT ELECTRIC	067_CENTRALE HE OF STAVELOT	245
	S.P.E.	012_CENTRALE HE OF FLORIFFOUX	843
		013_CENTRALE HE OF THE LARGE PATIENTS	4,887
		014_CENTRALE HE Of ANDENNE	8,986
		015_CENTRALE HE d' AMPSIN NEUVILLE	9,910
		016_CENTRALE HE DIVOZ RAMET	9,742
		017_CENTRALE HE OF MONSIN	17,765
		018_CENTRALE HE OF LIXHE	22,979
	SAPIEF	072_CENTRALE HE OF FRAIPONT	75
	MAHY SAWMILL	083 _ POWER station HE MAHY	2.5
	WALLOON COMPANY OF WATERS	054_COMPLE XE DE LOURTHE	7.58
		055_COMPLEXE DE.LA VESDRE	1,519
	WILLOT Jean-Luc (private individual)	099_CENTRALE HE MILL OF JEHOULET	**22**
	ZEYEN (private individual)	062_CENTRALE HE MILL OF WEWELER	169
	Developable net electric output (hangs) (kW) - Hydraulics		103,791
	Number of sites		46
Wind	ELECTRABEL	BÜTGENBACH 070_PARC WIND	7,993
	2030 ENERGY	104_ÉOLIENNE DEMMELSBERG	593
	THE WINDS OF the ORNOI	GEMBLOUX SOMBREFFE 086_ÉOLIENNES	5,995
	PERWEZ WINDS	107_ÉOLIENNES DE PERWEZ	7,396

HOUYET WINDS	094_ÉOLIENNE AUX TCHERETTES	607
MICHAUX Jean-Pierre (private individual)	091_ÉOLIENNE OF THE FIELD OF RANCID	2.5
P.B.E.	069_ÉOLIENNE DE PERWEZ	597
RENEWABLE POWER COMPANY	050_ÉOLIENNES OF HOLY ODE	7,484
SPE POWER COMPANY	100_ÉOLIENNES DE VILLERS-LE-BOUILLET	9,000
	121_ÉOLIENNES DE WALCOURT	9,000
VERLAG	117_ÉOLIENNE DE BRONROWIME	328
Developable net electric output (hangs) (kW) - wind		49,018
Number of sites		11

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ANNEX 1: List of the green electricity production sites at the end of 2005 (consequence and end)

Channel	Actor	Production site hangs (kW)	
Biomass	ELECTRABEL	084_C.E.T. DE MONTZEN	4.09
		097_AWIRS 4	80,000
	IDEA HENNUYERE	WASMUEL PURIFICATION 068_STATION	429
	INTRADEL	082_C.E.T. d' HALLEMBAYE	2,048
	ITRADEC	HARBOUR 027_SITE	1,623
	PAGE	002_CETEM	9,023
	SEVA	111_SEVA MOUSCRON	885
	SITA WALLONIA	001_CET d' ENGIS PAVIOMONT	1,780
	VERDESIS	090_ASSOCIATION INTER-COMMUNE OF DEVELOPME NT OF the UAE	2.6
	Developable net electric output (hangs) (kW) - Biomass 96,223		
	Number of sites 9		
Biomass combined heat and power	AIGREMONT	109_AIGREMONT	755
	BEP ENVIRONMENT	115_CET DE HAPPE-CHAPOIS	260
	CROSSED OUT TREATMENT	020_COUR-AU-BOIS	3,041
	BURGO ARDENNES	043_BURGO ARDENNE (VIRTON)	29,801
	ELECTRABEL	010_LUTOSA	2,190
		102_SECOBOIS	608
	HECK	023_HOF HECK	4.1
	I.D.E.Lux	063_DECHARGE DE TENNEVILLE	693
	ISERA & SCALDIS SUGAR	098_SUCRERIE DE FONTENO Y	5,580
	KESSLER BROTHERS	038_FERME DE FAASCHT	4.41
	LENGES	024_LENGES	155
	RECYBOIS	112_RECYBIOS LATOUR	2,600
	S • AQUE	ANTON'S 064_DECHARGE	293
		105_CET DES ISNES	4.9
	Developable net electric output (hangs) (kW) - biomass Combined heat and power 46,507		
	Number of sites 14		
Fossil combined heat and power	PSYCHIATRIC ALEXIENS BROTHER CLINIC	ALEXIENS B ROTHER 103_CLINIQUE	2.51
	DETRY BROTHERS	042_AUBEL	798
	GREEN ENERGY DIRECT	BUBBLE 045_MOTEL	6.5
	ELECTRABEL	NAMUR 004_CHR	813
		005_IRE (Institute national of the élmts radioactive)	1 Ü 24
		006_LABO THISSEN	338
		007_MINERVE	765
		008_SWEDEPONIC WALLONIA	341
		009_VESALE	1,331
		025_CENTRALE DE BRESSOUX	2,734
		039_SOLVAY	94,556
	IPALLE	MOUSCRON PURIFICATION 089_STATION	403
	PROVITAL INDUSTRY	096_PROVITAL INDUSTRY	984
	REFINERY OUR ORAFTI LADY	113_RAFFINERY OUR ORAFTI LADY	9,500
	TIRLEMONTOISE REFINERY	037_RAFFINERIE TIRLEMONTOISE WANZE	12,475
		108_RAPERIE DE LONGCHAMP	6,888
	S.P.E.	011_SUCRERIE DE WANZE	529
	SEDILEC	003_UCL	9,255
	WARCOING INDUSTRY	041_SUCRERIE DE WARCOING (Sitei)	9.81
		118_SUCRERIE DE WARCOmG (Site2 -NIRO)	803
		119_SUCRERIE DE WARCOING (SITE3 -TURBO)	6,547

Developable net electric output (hangs) (kW) - fossil Combined heat and power 1.51.382
Number of sites 21

Developable net Electric output TOTAL (hangs) (kW) 446,927 **TOTAL Number of sites** 105

ANNEX 2: Granting of green certificates in 2005 –Breakdown by fili 2nd re and per quarter

		2003 **	2004	2005	2005 - 1e quarter	2005 - 2e quarter	200 qua
Overall	Granted H.P.S	**621,842**	**715,163**	**823,412**	249,080	154,033	
	Avoided tonnes of CO2	**283,560**	**326,114**	**375,476**	113,580	70,239	
	Produced green electricity (MWh)	**775,807**	**872,075**	**1,092,918**	291,309	188,290	
	SER produced electricity (MWh)	**559,359**	**634,831**	**801,057**	229,688	136,519	
	Produced clear electricity (MWh)	**1,422,503**	**1,497,030**	**1,708,320**	467,799	330,000	
	Electricity supplies in RW	**23,368,935**	**23,628,470**	**23,341,061**	6,384,593	5,484,741	
	% $$#16006 $$#16007>green	**3.32%**	**3.69%**	**4.68%**	4.56%	3.43%	
	% $$#16038 $$#16039>SER	**2.39%**	**2.69%**	**3.43%**	3.60%	2.49%	
Photovoltaic *	Granted H.P.S					**0**	**0**
	Produced green electricity (MWh)					**0**	**0**
	SER produced electricity (MWh)					**0**	**0**
	Produced clear electricity (MWh)				**0**	**0**	**1**
Hydraulics	Granted H.P.S	**308,075**	**305,746**	**274,191**	140,763	62,154	
	Produced green electricity (MWh)	**308,075**	**305,746**	**274,191**	140,763	62,154	
	SER produced electricity (MWh)	**308,075**	**305,746**	**274,191**	140,763	62,154	
	Produced clear electricity (MWh)	**308,075**	**305,746**	**274,191**	140,763	62,154	
Wind	Granted H.P.S	**25,244**	**46,178**	**70,858**	17,809	14,496	
	Produced green electricity (MWh)	**25,244**	**46,178**	**70,858**	17,809	14,496	
	SER produced electricity (MWh)	**25,244**	**46,178**	**70,858**	17,809	14,496	
	Produced clear electricity (MWh)	**25,244**	**46,178**	**70,858**	17,809	14,496	
Biomass	Granted H.P.S	**60,560**	**86,109**	**171,041**	20,141	20,139	
	Produced green electricity (MWh)	**60,713**	**86,553**	**262,276**	20,224	20,223	
	SER produced electricity (MWh)	**60,591**	**86,366**	**242,025**	20,184	20,182	
	Produced clear electricity (MWh)	**60,713**	**86,553**	**262,276**	20,224	20,223	
Biomass combined	Granted H.P.S	**162,295**	**207,773**	**222,201**	51,440	41,138	
	Produced green electricity (MWh)	**133,549**	**186,842**	**198,023**	42,384	34,714	

	SER produced electricity (MWh)	**165,449**	**196,540**	**213 983**	50,932	39,687
	Produced clear electricity (MWh)	**183,061**	**233,792**	**243,469**	58,172	46,624
Fossil combined heat	Granted H.P.S	**65,668**	**69,357**	**85,120**	18,927	16,105
	Produced green electricity (MWh)	**248,226**	**246,756**	**287,569**	70,128	56,702
	SER produced electricity (MWh)				**0**	**0**
	Produced clear electricity (MWh)	**845,410**	**824,760**	**857,525**	230,830	186,503

*** having regard to the little certified facilities and the very low quarterly productions, the round - off rules draw the quarterly figures downwards. ** statistics 2003 comprise the few certified productions of 2002.**