





EXPERT EVALUATION NETWORK DELIVERING POLICY ANALYSIS ON THE PERFORMANCE OF COHESION POLICY 2007–2013

YEAR 1 - 2011

TASK 1: POLICY PAPER ON RENEWABLE ENERGY AND ENERGY EFFICIENCY OF RESIDENTIAL HOUSING

BELGIUM

VERSION: FINAL

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APPLICA

A report to the European Commission Directorate-General Regional Policy

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LIST OF ABBREVIATIONS

- AIR Annual Implementation Report
- CEP Competitiveness and Employment Programme
- CP Convergence Programme
- EEN Expert Evaluation Network
- ERDF European Regional Development Fund
- ESF European Social Fund
- GC Green Certificate
- OP Operational Programme

1. EXECUTIVE SUMMARY

In Belgium, which is a federal state, the three regions have large autonomy over the design and implementation of policy supporting renewable energy sources and energy efficiency of residential housing. Each region therefore has its own strategy in this regard and its own set of policy measures.

Energy efficiency of residential housing is supported in all regions by a broad set of instruments including loans and premiums for investment in insulation, glazing, heating, appliances, energy audits and feasibility studies. Investment is also supported by the federal government through fiscal incentives and VAT reductions. The support schemes are defined on an annual basis.

The main promotion scheme for renewable energy is green certificates. All three regions have established their own green certificate (GC) schemes and a quota obligation on electricity suppliers to supply an increasing proportion of their electricity from renewable sources. The federal government has introduced an additional scheme for offshore wind. In addition renewable energy production is supported through subsidies from the regional governments and tax reductions at the federal level.

There is variation in the rate of support for the renewable electricity insofar as the guaranteed minimum prices of GCs vary with technology. Highest support goes to solar electricity which is the most costly to produce given the climatic conditions of the country, which mean that the high rate of support for solar energy might not be the most cost-effective way to contribute to the development of renewables.

Belgium is among the Member States with the smallest shares of the ERDF (1.5%) allocated to renewable energy sources and energy efficiency of residential housing. In the Walloon region and in Hainaut, ERDF is contributing to the installation of solar panels on public buildings. In the Flemish region ERDF is supporting investment in energy efficiency of social housing. There is no allocation to either policy area in the Brussels region. Overall, the implementation of projects is in line with planning and no particular difficulties have arisen.

The rationale for public support for investment in solar panels is spelled out in the programming documents of the Walloon region and of Hainaut. The purpose goes beyond solar energy production as such. By installing solar panels on public buildings the government is seeking to raise the awareness of the population, set an example in the use of renewable energy and contribute to a positive image of the region. The programming documents of the Flemish region do not spell out any particular rationale for public intervention in energy efficiency in social housing.

2. NATIONAL POLICY

Belgium is a federal state with three levels of government – federal, regional, and linguistic communities – and a complex division of responsibilities. The three regions of Flanders, Wallonia and Brussels–Capital are principally responsible for energy efficiency, renewable energy sources (except offshore wind which is the competence of the federal government), energy R&D (except nuclear) and the distribution and supply of electricity and gas.

In each region there is a wide variety of measures to support energy efficiency of residential housing including low- or zero-interest loans and premiums for investment in insulation (roof, exterior walls, floor and basement), high performance glazing, ventilation, heating, lighting, renewable energy and appliances but also for energy audits and feasibility studies. The support systems in place are difficult to compare because the applied support rates, the required technical standards (e.g. minimum efficiency requirements) and the criteria for eligibility to support (e.g. age of housing) differ from region to region. In the Walloon and the Brussels region, the premiums in most cases vary with the income of households (3 levels) but the thresholds applied are different in the two regions. If use is made of specific materials (e.g. "natural insulation") an extra bonus can be obtained in Wallonia and in Brussels. The premium is generally higher if the work is carried out by a registered company. In the Flemish region, the main support is provided by the five grid managers whereas support from the Flemish government is confined to roof insulation. A number of provinces and municipalities provide additional support. Investment in the energy efficiency of residential housing is also supported by the federal government through fiscal incentives and VAT reduction. Households (both owners and tenants) can deduct 40% of their investment cost from the tax base¹.

The incentives provided at different levels (regions, provinces, municipalities and central government) can be cumulated. It should be noted however that having to go through multiple administrative procedures and the complexity of the system could dissuade people from applying for support².

The support schemes and the budgets available for the premiums are defined by each region on a yearly basis. This enables quick adjustments to be made in response to changes

¹ See Annex 1 for a more detailed description.

² Around half of the Belgian dwellings (around 2 million) did not meet current building codes in 2009 (Source: Paul Magnette, Minister of Climate and Energy, 14 January 2009). Final

in technology (e.g. improved energy performance of materials or installations) and/or the profitability of investment³.

Policies to support the **development of renewable energy sources** are equally under the competence of the regions with the exception of offshore wind power which is the responsibility of the federal authority. Although the most important instrument to promote electricity production from renewables are quotas and green certificates (GCs) in the three regions, the systems are very different in practice⁴ leading to three separate markets for GCs plus the federal certificate scheme for electricity from offshore wind power.

In the Flemish system, a producer is awarded one certificate for every MWh of renewable electricity produced and injected to the grid or auto-consumed. In the Walloon system and in Brussels, certificates are awarded on the basis of the CO₂ avoided⁵. In each system there is a quota obligation for electricity suppliers and the quota concerned has been increased every year⁶. With the exception of Brussels, the regions have also guaranteed minimum prices (fall back prices) for GCs. Electricity suppliers recover the cost of the quota obligation imposed on them through their tariffs. It is therefore the end-consumer who in practice bears the cost of the support system.

In order to support the establishment of units producing energy from renewable sources, the three regions subsidise investment in renewable energy production, the amount varying between 20% and 50% of the investment depending on the size, the nature of the applicant (e.g. whether SMEs, large enterprises or households) and the technology. The federal authority has set up a tax reduction scheme for individuals and enterprises to support investment in renewable energy (and energy saving). Households can deduct 40% of the investment costs⁷ and enterprises up to 20.5%.

The federal government aims to stimulate the production of offshore wind power in the North Sea⁸. Electricity production started in early 2009, with the construction of the Thorntonbank Wind Farm with a capacity of 30 MW. The capacity is expected to be increased gradually to 300 MW in 2015 but progress is behind the planned schedule because of

 ³ For instance, the Walloon region abolished premiums for investment in photovoltaic panels in February 2010 because the investment concerned is supported by other means and is sufficiently profitable without this measure.
 ⁴ See annex 2 for a more detailed comparison of the GC systems.

⁵ 1 GC for 456kg avoided CO₂ in the Walloon region and 217kg avoided CO₂ in Brussels. Given that the basis of GCs is different in the regions, Flemish GCs are not interchangeable with GCs from Wallonia and Brussels.
⁶ Flemish region: 5.25% in 2010 increasing to 7% in 2012 and 13% in 2020; Walloon region: 10% in 2010 increasing to 12% in 2012; Brussels region: 2.75% in 2010 increasing to 3.25% in 2012.

⁷ See annex 1.

⁸ Wind energy accounts currently for around 13% of electivity production from renewables. By 2020 this share is expected to reach 45% (Source: ECN). Final

planning constraints and difficulties of accessing the grid as well as financial constraints. In fact it is difficult to find a suitable site with good wind potential in the North Sea which is close to the coast because the waters are used for many other purposes, such as shipping, fishing, pipelines and cables.

Overall, the policy focus has so far been strongly on solar energy which has received the highest rate of support in regional and national support schemes and for which the guaranteed minimum price of certificates is significantly above the market price of GCs⁹. This has resulted in a large increase in the number of PV installations over the last few years but the volume of energy produced by these is insignificant and represents less than 0.2% of energy from renewables¹⁰.

In accordance with the EU Directive 2003/30/EC on biofuels, Belgium has adopted a decree setting the target for biofuels to provide 5.8% of fuels for transport by 2010 and passed a number of laws establishing the legal and regulatory framework and providing tax incentives (e.g. a reduction in excise duties). The policy has however proved relatively ineffective because the share of biofuels is still small (1.2% in against 3.5% in the EU27). To accelerate the use of biofuels, a law on compulsory incorporation of biofuels in fossil fuels was adopted in 2009, requiring all registered oil companies to blend a minimum of 4% of biofuels with fossil fuels with fines imposed for non-compliance.

Although because of the crisis and the subsequent constraints on public financing a few support measures have been adjusted and the criteria for eligibility for some kinds of investment premiums have been revised (e.g. solar panels in the Walloon region), overall there has been little change in policy since the beginning of the crisis. There is, therefore, little evidence for support being intensified or accelerated during the economic downturn.

3. ERDF AND COHESION FUND SUPPORT AND CONTRIBUTION TO NATIONAL POLICY

In Belgium, the ERDF provides support for **renewable energy sources** only in the Walloon region (see Table A) in both the Convergence programme (CP) of Hainaut and the Competitiveness and Employment Programme (CEP) of the Walloon Region excluding Hainaut. The support is mainly used to equip town halls and other public buildings with photovoltaic systems and solar lighting. According to the Managing Authority, the purpose of the measure goes beyond the use of solar energy in public buildings as such. By installing

⁹ See Annex 2.

¹⁰ Renewable energy in Belgium accounts for only 3% of total energy consumption (10% in the EU27). The main renewable energy source is biomass, mainly waste, which account for around 95% of renewable energy production (Source: Eurostat)

solar panels on public buildings, the government seeks to raise the awareness of the population and to set an example in the use of clean energy. The measures supported by ERDF are closely in line with the Walloon energy management strategy for buildings belonging to regional and local authorities and the funding (UREBA¹¹) for this.

In the Hainaut region, the ERDF is also providing support for the construction of a biomassgasification plant (in the commune d'Aiseau-Presles).

| Table A – Renewable energy sources and energy efficiency in residential housing – Measures |
|--|
| implemented in the Belgian ERDF programmes |

| Measures | Flemish region | Walloon region | Brussels region | Hainaut |
|--|----------------|---|--------------------|---|
| Production of renewable energy | - | Solar panels on public buildings in 31 communes | - | Solar panels and street-lighting in public buildings Biomass-gasification plant |
| Energy efficiency in residential housing | Social housing | - | - | - |

Source: OPs, AIRs 2009.

While in Brussels, the Walloon region and Hainaut, the ERDF is not used to co-finance improvements in energy efficiency in residential housing in the Flemish region, ERDF support is directed towards social housing. In late March 2011, the ERDF Monitoring Committee decided on the allocation of resources following the call for projects on "Energy efficient measures in social housing" launched in July 2010. Overall, 24 projects were selected which are currently being carried out which mainly involve installing high-efficiency glazing and heating in older homes. ERDF support for these amounts to EUR 2.6 million (1.5% of total ERDF of the Flemish programme).

| | Flemish | Walloon | Brussels | | | Flemish | Walloon | Brussels | | |
|---------------------------------------|---------|---------|---------------|---------|-------|---------|---------|---------------|---------|-------|
| | region | region | region | Hainaut | Total | region | region | region | Hainaut | Total |
| | | ERD | = (EUR millio | on) | | | as % | % of total El | RDF | |
| Renew able energy | 0 | 4 | 0 | 8 | 12 | 0.0 | 1.5 | 0.0 | 1.7 | 1.2 |
| Energy efficiency residential housing | 3 | 0 | 0 | 0 | 3 | 1.5 | 0.0 | 0.0 | 0.0 | 0.3 |
| Total | 3 | 4 | 0 | 8 | 15 | 1.5 | 1.5 | 0.0 | 1.7 | 1.5 |
| policy areas | | | | | | | | | | |
| 1. Enterprise environment | 118 | 162 | 32 | 280 | 592 | 58.8 | 57.5 | 55.0 | 62.2 | 59.8 |
| 2. Human resources | 0 | 0 | 7 | 0 | 7 | 0.0 | 0.0 | 13.0 | 0.0 | 0.8 |
| 3. Transport | 9 | 22 | 0 | 22 | 54 | 4.7 | 7.9 | 0.0 | 4.9 | 5.4 |
| 4. Environment and energy | 20 | 24 | 5 | 42 | 91 | 10.0 | 8.6 | 9.4 | 9.3 | 9.2 |
| 5. Territorial development | 45 | 71 | 11 | 101 | 228 | 22.5 | 25.0 | 18.6 | 22.5 | 23.0 |
| 6. Technical assistance | 8 | 3 | 2 | 5 | 18 | 4.0 | 1.1 | 4.0 | 1.1 | 1.9 |
| Total ERDF | 201 | 283 | 58 | 449 | 990 | 100 | 100 | 100 | 100 | 100 |

Source: based on DG REGIO data

¹¹ Utilisation Rationelle de l'Energie dans les BAtiments.

Given that there are only a few measures in the ERDF programmes for supporting renewable energy sources and energy efficiency of residential housing, the share of ERDF funding directed to these is only around 1.5% of total ERDF (Table B). This share is much less than in the EU27 on average (3.8%) and places Belgium among the four Member States with the smallest allocation to these areas.

Overall, the implementation of the projects in the Walloon region is in line with what was planned and no particular difficulties have arisen. Some 10,200 square metres of solar panels is to be installed by end 2015 in Hainaut and 6,800 square metres in the rest of the Walloon region. According to the AIRs, at end-2009, around 45% of funds allocated were committed in Hainaut and 497 square metres of panels were installed. In the Walloon region, commitments amounted to 18% of allocation and the first panels were installed in March 2010. In the Flemish region, housing renovation projects are currently being carried out.

4. RATIONALE FOR PUBLIC INTERVENTION

Energy and climate issues are integrated as cross cutting themes in the OPs of the three Belgian regions. Each OP refers to the contribution of the programmes to reducing energy consumption from fossil fuels, diminish greenhouse gas emission, reduce energy dependency on imports and to creating employment at the same time.

The main rationale for support for the development of solar panels spelled out in the programming document of Hainaut and the Walloon region are their positive effects on the quality of life, the attractiveness of the area for people looking for a healthy environment and on the image the region to investors. There is no assessment or quantification in the documents of the profitability of investment with or without support or of the social and environmental returns to investment.

The programming documents of the Flemish region do not state any specific rationale for public intervention in energy efficiency of social housing, partly because the programme is defined in broad terms and does not identify specific projects to support. According to the Managing Authority, the Flemish region has taken the opportunity given by Regulation (EC) No 397/2009 of the European Parliament and the Council of 6 May 2009 and the amendment of Regulation (EC) No 1080/2006 to provide support for investment in energy efficiency in social housing.

While there is no real public debate on the rationale for supporting renewables, it is recognised that there is a need in Belgium to better assess the cost-effectiveness¹² of the existing and planned support schemes (IEA, 2009). The potential of renewable energy sources is low in the country compared to other Member States because of its geographic and climatic conditions and its high population density. This limited potential adds to the overall cost and challenges. It is therefore important to assess carefully the economic potential of the available technologies and to ensure that the right incentives are given to attract investment in the most cost-efficient technologies. Given Belgium's climatic condition, international bodies (e.g. IEA) increasingly emphasise that the relatively high support for solar energy in Belgium may not be the most cost-effective way to help develop renewables.

5. RATE OF SUPPORT AND PROFITABILITY

There is some variation in the rate of support to *electricity production* from renewables insofar as there is variation in the guaranteed minimum prices for GCs (See Annex 2). The guaranteed minimum price is exceptionally high for solar–generated electricity in regional and national schemes, which reflects the low return from investment. For instance in the Flemish region, the minimum price of GCs for solar electricity is EUR 350/MWh against a market price of around EUR 107/MWh. For electricity produced from other kinds of renewables, there is little–to–no variation in the minimum prices within each system but there are sizable differences between regional schemes partly because the norms used for certification differ.

The three regions are assessing the technical and economic characteristics of electricity production from renewables as well as the functioning of the market in GCs on a regular basis. In the Flemish region, a study is carried out every three years to estimate the need for support for investment to ensure the profitability of projects. The Walloon Energy commission also carries out a study at three-yearly intervals on the technical and economic characteristics of the different methods of producing electricity. It also undertakes an annual assessment of the functioning of the market in GCs.

With the exception of the Flemish grant scheme for companies, support rates for *investment* in electricity production from renewables are generally not based on profitability criteria. The same applies to the fiscal incentive scheme at federal level, which allows tax reductions of 40% of investment by households in energy saving and renewables regardless of the

¹² This is however difficult in practice because there is a lack of integrated data in Belgium of costs and public expenditure in these areas (See sections 6 and 7). **Final**

investment concerned. The installation of photovoltaic panels alone is subject to a higher tax reduction and is eligible for green loans (See Annex 1).

Although the support schemes do not explicitly link the rates of support to the profitability of investment and production, the schemes are adjusted each year as regards the kinds of investment eligible, the technical standards and the premiums¹³. It can therefore be assumed that the adjustments also take account of profitability considerations. For instance, the Walloon government suspended giving premiums for the installation of photovoltaic panels in 2010, judging that, in view of the other incentives, the investment was sufficiently profitable without this measure.

6. COSTS, PUBLIC SUPPORT AND PRICES

Information on production costs is available neither from the Energy Regulatory Authority¹⁴ nor from federal or regional governments. It is also difficult to assess the overall global amount of public support by type of renewable energy because of the complicated way responsibility is shared between authorities in Belgium.

| technology | | Discounted current values (EUR) | Guaranteed minimum price of GC (EUR/MWh)(*) |
|---------------------------|--|------------------------------------|---|
| PV | covered cost per MWh at market price | 738 | |
| | uncovered cost per MWh at market price | 228 | 350 |
| | total cost per MWh | 967 | |
| Onshore wind | covered cost per MWh at market price | 220 | |
| | uncovered cost per MWh at market price | 49 | 90 |
| | total cost per MWh | 269 | |
| Biomass | covered cost per MWh at market price | 185 | |
| | uncovered cost per MWh at market price | 60 | 90 |
| | total cost per MWh | 245 | |
| Biogas (biomass waste) | covered cost per MWh at market price | 68 | |
| | uncovered cost per MWh at market price | 46 | 60 |
| | total cost per MWh | 113 | |

Table C - Cost estimates of renewable electricity by technology

Source: based on CREG estimates

Note: (*) Guaranteed minimum prices are those of the Flemish region. Given that in the Walloon system the basis of GC is avoided CO_2 instead of MWh of green electricity the comparison is less straightforward.

¹⁴ Commission de Régulation de l'Electricité et du Gaz.

¹³ The system of fiscal aids can be reviewed each financial year. While, the scheme for individuals was reviewed and improved on several occasions since its implementation in 2002, the scheme for companies has not been modified for several years. In the Flemish region, the list of eligible technologies and additional costs is subject to review before any call for projects (3 times a year). In the Walloon region, the investment premium has been reviewed and improved on several occasions since it entered into force. In the Brussels–Capital region, the system of energy premiums is revised and optimised annually, with regard to both technical requirements and financing.

Estimates of the costs of investment in renewable energy are presented in Table C. These are based on discounted cash flow per MWh of green electricity produced and decompose the total cost into the part which is covered by the market price of electricity and the part which is not covered. The uncovered part represents the minimum level of support per MWh necessary in order to make production profitable. The table also indicates the guaranteed minimum price for each technology in the Flemish GC system, which is an indication of the support provided. It should be noted, however, that, with the exception of solar electricity, the market price of GCs (EUR 107/MWh) is higher than the guaranteed minimum price. It should also be noted that the cost of support to green electricity is in any case largely charged to end-consumers.

There is no evidence for prices and rents of residential housing to include a premium for energy efficiency. Several reasons for this can be mentioned (Sources: Fédération des Notaires de Belgique and Institut Professionnel des Agents Immobiliers):

- 1) The housing stock is extremely heterogeneous in Belgium: "there are no two houses which are the same". The fragmentation of the housing market makes it difficult to compare house prices in general and the effect of the energy efficiency of housing in particular.
- 2) Related to the previous point, ownership is also very fragmented and compared to other countries there are few "large housing owners" in Belgium. This makes another difficulty in comparing savings from investment in energy efficiency.
- 3) In most parts of Belgium, energy performance certification in relation to housing sales is only in the process of being implemented¹⁵. It is assumed that energy certification will influence housing prices in the future though not in the short-run. It will take time for the certification system to become established and harmonised¹⁶ and for the market to take energy efficiency into account. It should be noted, however, that each Belgian region is developing its own system of energy performance certificates, so that even in the long run, the difficulty of comparing energy efficiency ratings is likely to remain.
- 4) In the Flemish region although energy performance certification for housing sales was introduced in 2008, there is currently no evidence that prices reflect energy efficiency. A common view is that up until now, energy auditing has been carried out

¹⁵ In the Brussels Capital region and the Walloon region, energy performance certification for housing sales was made obligatory by the May 2011 and January 2011, respectively. The obligation for certification will be extended to rented accommodation by November 2011 in the Brussels Capital region and by June 2011 in the Walloon region. In the Flemish region, energy performance certification of housing for sale and rent has been obligatory since 2008.

¹⁶ According to IPI, there is marked variation in the inspection standards applied by the different assessing bodies. This can lead to very different ratings for a similar building.

mainly to comply with regulations rather than to indicate the energy performance of housing.

7. CONCLUSIONS

Although there has been progress in promoting renewable energy in Belgium, there is still a long way to go to meet the goal of producing 13% of total gross final consumption from renewables by 2020 as defined in the National renewable energy action plan. This target is very challenging and to achieve it, the country will need more ambitious policies to promote renewables. The cost of the support policies in place needs to be carefully assessed. There is, however, a lack of comprehensive information on the total cost of existing public support for renewable energy in Belgium as emphasised by the IEA and the Federal Energy Department. Accordingly, the government should increase efforts to collect and analyse the information on support measures at all levels, federal, regional and local, and their relative costs. This is necessary to assess the effectiveness of policies in place.

Given that the potential sources of renewable energy are relatively limited in Belgium and the cost of supporting them is increasingly high, it is essential to assess the potential of all available technologies. There is a need to give priority to simulating the most cost-effective projects. The current, very costly, support system for solar electricity is hard to justify.

GCs are the main means of stimulating the development of renewable sources to generate electricity in each of the regions and at the federal level. The fact that the systems in place, however, differ leads to fragmentation of the already small energy market in Belgium. This is likely to increase the cost of producing electricity from renewables. Harmonisation of the different regional schemes and allowing the trading of certificates between regions could improve the efficiency of the GC market.

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ACKNOWLEDGEMENTS

The author is most grateful for help and assistance from:

Olivier Aoust – IPI (Institut professionnel des agents immobiliers) Directeur du Département juridique Director of Legal Department

Hugues de Bellefroid -IPI (Institut professionnel des agents immobiliers) Vice-President

Philippe Janssens – Executive Professor Real Estate at the UAMS and the KULeuven, member of the Flemish Housing Council, president of Stadim (société d'étude et de conseil en matière immobilière)

Gabriel Michaux - Attaché - Service Public Fédéral Economie, PME, Classes moyennes et énergie - Direction générale Energie

Marie Hélène Novak - Attaché - Service Public Fédéral Economie, PME, Classes moyennes et énergie - Direction générale Energie - Attaché Direction générale Energie

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ANNEX

Annex 1 – Energy efficiency in residential housing and investment in renewables – Tax reduction scheme of Federal Government

Since January 2003, the Belgian Federal Public Service (FPS) offers tax reductions for individuals improving energy efficiency and for certain investments in renewable energy in their homes. As of January 2005, those renting accommodation can also apply for the tax reductions.

Tax reductions are offered when undertaking one or more of the following 8 measures:

1-Replacement of water heating systems, with new heaters meeting minimum efficiency requirements (reductions amounted to 15% of investment in the first year, up to 40% in the following years);

2-Installation of a solar water heating system;

3-Installation of solar photovoltaic panels for electricity generation, on condition that installations meet certain efficiency requirements;

4-Installation of geothermal heat pumps (since 2004);

5-Installation of double glazed windows meeting minimum efficiency standards (U value);

6-Roof insulation meeting minimum efficiency standards (R value);

7-Installation of thermostatic valves or regulated thermostats;

8-Energy audit: since 2009/2010, investment in wall and floor insulation has been added to the list of measures eligible for tax reductions.

The maximum deductible amounts have progressively been increased. For the 2011 fiscal year (costs incurred in 2010), the tax reduction amounts to 40% of the costs of all measures, up to a maximum amount of EUR 2,770 per household, whether for new construction or renovation except for solar energy installations (photovoltaic and solar thermal), for which the ceiling is EUR 3,600. The remaining costs can be carried forward to the next three fiscal years. In addition, since 2009, the scheme has been accompanied an interest–rate subsidy of 1.5% and a tax reduction of 40% on the residual interest on loans taken out for such investment (green loans). Among others conditions, borrowing for this purpose needs to be a minimum of EUR 1,250 and is subject to a ceiling of EUR 15,000.

| | Federal State | Walloon region | Flemish region | Brussels Capital region |
|--------------------------|-----------------------|-------------------------|----------------------|-------------------------------------|
| Issuing body | Commission for | Walloon Energy | Flemish Regulation | Commission for the |
| | Regulation of | Commission | Entity for the | Regulation of Energy |
| | Electricity and Gas | (CWAPE) | Electricity and Gas | in the Brussels |
| | (CREG) | | Market | Capital Region |
| | | | (VREG) | (Brugel) |
| Base | Energy production: | CO2 avoided: | Energy production: | CO2 avoided: |
| | 1 GC = 1 MWh | 1 GC = 456 kg | 1 GC = 1 MWh | $1 \text{ GC} = 217 \text{kg CO}_2$ |
| | renewable electricity | CO ₂ avoided | renewable | avoided |
| | | | electricity | |
| Quota 2010 | - | 10% | 5.25% | 2.75% |
| Quota 2011 | | 11% | 6% | 3% |
| Quota 2012 | | 12% | 7% | 3.25% |
| Penalties per missing GC | - | EUR 100 | EUR 125 | EUR 100 |
| Minimum prices of GC | yes | yes | yes | no |
| Minimum prices per GC: | | | | |
| Offshore wind | EUR 107(<216MW) | - | - | |
| | EUR 90(>216MW) | | | |
| Onshore wind | EUR 50 | EUR 65 | EUR 90 | |
| PV | EUR 150 | EUR 65(*) | EUR 350(**) | |
| Hydro | EUR 50 | EUR 65 | EUR 90 | |
| Biomass | EUR 20 | EUR 65 | EUR 90 | |
| Biogas (biomass waste) | EUR 20 | EUR 65 | EUR 60 | |
| Geothermic | EUR 20 | EUR 65 | EUR 60 | |
| Market price of GC 2009 | | EUR 88 | EUR 107 | EUR 86 |
| Duration | 20 years | 10+5years(***) | 10 years (20 for | |
| | | | solar)(****) | |
| Types of certificates | Federal, Flemish, | Walloon | Flemish certificates | Brussels-Capital and |
| accepted | Walloon, Brussels- | certificates only | only | Walloon certificates |
| | Capital certificates | | | |

| Annex 2 – Gree | n certificate (GC) | systems in | Belgium |
|----------------|--------------------|------------|---------|
|----------------|--------------------|------------|---------|

Sources: Commission de Régulation de l'Electricité et du Gaz.

Notes:

(*) Since 2008: EUR 455 for a power plant < 5 kW.

(**) This amount is reduced by EUR 20 for installations established as of 2013 and by EUR 40 for installations established as of 2014.

(***) A reduced coefficient (k-factor) is applied in the last five years.

(****) In the Flemish region, the price for solar PV is guaranteed for 20 years but from 2013 this will be reduced to 15 years.