



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY

Director General

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

Ministry of

Economic Affairs, Agriculture and Innovation

Directorate-General for Energy, Telecommunications and Competition

Directorate for Energy and Sustainability

The Netherlands

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1. Transposition/implementation of the legal text of Directive 2004/8/EC

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

A1 The Netherlands has fully implemented the Directive.

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

A2 Since 14 December 2005, the 1998 Electricity Act has provided a framework for the nature, operation and application of guarantees of origin for high-efficiency cogeneration (Article 77ca to 77ce). Detailed provisions for the guarantees of origin are contained in the 'Regulation on guarantees of origin for electricity generated in a high-efficiency cogeneration plant' (WJZ7105952/BWBR0022539). The implementing provisions for establishing the detailed guidelines are laid down in that Regulation with an amendment that entered into force on 1 December 2009.

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

A3 The Netherlands has fully implemented the guidelines. See also the answer to question 2.

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

A4 No.

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

A5 No. Article 7 of the 'Regulation on guarantees of origin for electricity generated in a high-efficiency cogeneration plant' provides that guarantee management body CertiQ determines the quantity of electricity from high-efficiency cogeneration which a producer has fed into a network and the primary energy saving with direct application of:

- a. Annexes II and III to the Directive;
- b. the efficiency reference values established by the Commission of the European Communities in its Decision of 21 December 2006 (OJ L 32, 2007);
- c. the Commission Decision of 19 November 2008 establishing detailed guidelines for the implementation and application of Annex II to Directive 2004/8/EC of the European Parliament and of the Council (OJ L 338).

2. National potential to increase the share of high-efficiency cogeneration

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

A6 The most recent progress report dates back to 2007 and reported a cogeneration-related energy saving of 75.2 PJ (High-efficiency cogeneration in the Netherlands, ECN-E--07-080, page 20). In the attached spreadsheet this figure is adjusted to 81 PJ. The difference between these numbers results from three factors:

1. The 2007 report made use of provisional Statistics Netherlands (CBS) statistics for 2006. When these figures became final they were adjusted a little.
2. The category 'Other fuels' was split up further for the attached spreadsheet. As a result the primary energy savings are determined more precisely for this category.
3. Where the 2007 report was based on assumptions on the high-efficiency status of installations, this status has been checked in more detail for the purposes of the attached spreadsheet, with the result that here too the figures are more precise.

After 2006 the saving increased to 90 PJ in 2009. It can be seen from the spreadsheet that this increase is the result of an increase in installed capacity in the farming sector, especially in greenhouse horticulture. This applies above all to gas-fired combustion engines. The installed capacity of other techniques and in other sectors remained largely stable between 2006 and 2009.

The above-mentioned increase can be ascribed to the possibility of using the gas engines profitably in greenhouse horticulture (see e.g. the report 'Uneconomic top calculations for new cogeneration capacity for 2009', ECN-E--08-082). The best farm savings through cogeneration in greenhouse horticulture are partly due to management policy. Relevant policy measures are, for example, exemption from environmental tax for installations generating electricity with an electrical yield of 30% or higher (Article 64 of the Environmental Taxes Act), and the tax rebate for energy investments through the Energy Investment Allowance (EIA).

Also, problems of congestion in the electricity network have largely been put right. These problems appeared in areas where the growth of cogeneration capacity was concentrated. With the construction of a total of six new high-voltage substations – in Horst aan de Maas, Westland, Luttelgeest, Klazienaveen and IJmuiden – cogeneration operators will once again have full marketplace access. The last of the new substations will be handed over in January 2012.

Q7 What is your evaluation of the progress towards increasing the share of high-efficiency cogeneration in your country? Your assessment should be based on the specific figures to be

included in the **attached spreadsheet (Excel file)** designed to facilitate the submission of your data.

A7 The attached spreadsheet shows that in spite of the increase in installed capacity (see answer to question 6) the share of high-efficiency cogeneration in electricity production in 2009 is the same (35%) as in 2006.¹ This finding is largely due to the fact that the capacity of non-high-efficiency cogeneration and separate generation also increase in the period in question.

3. Barriers to high-efficiency cogeneration

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

- barriers in relation to administrative procedures (authorisation, coordination among competent authorities, streamlined simplified procedures, etc);
- barriers in relation to electricity grid system and tariff issues (including specific measures for small scale and micro cogeneration units);
- other barriers (internalisation of external costs, energy prices, financial and technical barriers, etc) in accordance with Articles 9 and 6 of the cogeneration Directive 2004/8/EC.

Indicate the measures to overcome them.

A8 As regards administrative procedures the Dutch Government does not see any specific barriers to cogeneration, other than those which apply to (energy) projects in the wider sense. An important simplification is the 'environmental permit', which was introduced as from 1 October 2010 with the Environmental Law (General Provisions) Act. The environmental permit is a single integrated permit for building, residence, monuments, space, nature and environment. Integrating these permits, which previously had to be applied for separately, is conducive to better service provision and less red tape for undertakings and citizens, as well as shorter administrative procedures and consistent rules.

In the Netherlands there are no appreciable barriers resulting from the existing electricity grid system and system of tariffs. Where in the past network capacity was not sufficient to cope with all cogeneration, congestion is prevented by expanding the network infrastructure. See the answer to question 6. Nonetheless, there is a bill in preparation which will improve the position of cogeneration when there is network congestion on connecting up to the grid. See also the answer to question 10.

Another example of a barrier is the lack of commercial availability of small-scale cogeneration plants on the market. The Subsidy Scheme on Sustainable Heat for Existing Houses is intended *inter alia* to overcome this barrier. See also the answer to question 11.

¹ N.B. this concerns only the share of high-efficiency cogeneration. For the purposes of this progress report a clear distinction is made between high and non-high-efficiency cogeneration. This progress report differs here from the report submitted in 2010 on the potential for high-efficiency cogeneration, which gave a reported share of 51.8% for 2008 for all cogeneration, including non-high-efficiency cogeneration.

Where a lack of knowledge forms a barrier, objective knowledge is disseminated via the National Centre for Expertise on Heat. Internalisation of external costs takes place through the energy tax and the Emissions Trading System. In addition there are permit conditions for emissions other than CO₂ (e.g. NO_x, SO_x and volatile organic compounds), while large-scale installations also come under the NO_x trading system.

In 2010 the Netherlands carried out a study of additional potential for high-efficiency cogeneration in accordance with Article 6 of the Directive. The accompanying report names, besides some of the above barriers, a number in addition that are not the result of market failure and for which therefore no solutions are being sought or are in the offing. These are as follows:

- much of the technical potential has already been realised;
- an increasing flexibility in the demand for heat reduces the number of operating hours of cogeneration plants;
- industrial and domestic (i.e. household) heat demand is declining due to increasing energy efficiency;
- providing the infrastructure for heat distribution in an urban environment is expensive;
- in some cases it is uncertain whether an industrial heat demand exists;
- innovative energy concepts in greenhouse horticulture limit the potential for cogeneration;
- gas price volatility creates a risk for parties considering whether to invest in cogeneration;
- grid managers and cogeneration plant operators do not always interpret the legislation affecting the distribution of the grid connection costs in the same way.

4. Guarantees of origin and support schemes

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

A9 In the Netherlands the national grid manager TenneT has been designated the management body for guarantees of origin until 2018. CertiQ carries out the certification work on TenneT's behalf. CertiQ, a wholly-owned subsidiary of TenneT TSO B.V., is an independent body which operates objectively. The objectivity of the guarantees of origin is also guaranteed by the fact that the calculations are made on the basis of Annexes II and III to the Directive and the reference efficiencies and detailed guidelines established by the European Commission.

The procedure for issuing guarantees of origin is transparent for market players because the Directive, reference efficiencies, detailed guidelines and the Regulation on guarantees of origin for electricity generated in a high-efficiency cogeneration plant are documents in the public domain. CertiQ is, furthermore, accessible for providing clarification and offers

information, including tariff details, via its website. It uses the same procedure for guarantees of origin whatever the type of producer.

The April 2009 report to the Commission gives more details on how the scheme operates and how the reliability of the guarantees of origin is assured. This report is attached as Annex 2.

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

A10 Other than the Regulation on guarantees of origin for high-efficiency cogeneration the Netherlands does not have any systems for cogeneration that are based directly on Directive 2004/8/EC. Such conditions are indeed attached to the current regulations, however (see the answer to question 11), that in practice only high-efficiency cogeneration comes into consideration. Also, an amendment to the 1998 Electricity Act is well under way. This amendment will regulate two things for high-efficiency cogeneration: (a) priority connection to the grid and (b) priority access to transport capacity in the event of congestion in the grid. These support measures are intended as a means of structurally reducing risks in the development and operation of high-efficiency cogeneration. The measures are not specifically aimed at a limited number of sectors, but are generally applicable.

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

A11 In 2009 about €9 million in fiscal support was promised to cogeneration in the Energy Investment Allowance (EIA), some €2 million of it for bio-CHP. With this support total investment reached €78 million (source: AgentschapNL, 2010. *Jaarverslag Energie-investeringsaftrek 2009* – 2009 annual report on the Energy Investment Allowance).

In addition to that, in the Subsidy Scheme on Sustainable Heat (part of the Energy and Innovation Subsidy Scheme) €4 million was made available in 2010 for investments in micro-CHP in existing houses. A good €3 million of this had been allocated by mid-2011, in particular to households and housing corporations.

Likewise in 2010 in the Sustainable Energy Production Incentive Scheme (SDE) a budget of €168 million was made available for high-efficiency cogeneration above 250 MW_e, but no applications were received for this.

The expectation is that the EIA will continue. In addition, within the above-mentioned SDE scheme a number of biomass projects will be honoured. A substantial amount of the €1.8 billion expenditure expected in the period 2011-2026 will relate to bio-CHP, for example in manure fermentation. Finally, from 2012 onwards SDE+, which will replace the SDE scheme as of 2011, will offer more possibilities of support for sustainable heat. Spending on sustainable heat, including that from bio-CHP, is expected to increase.

Such conditions are attached to all of the above schemes that in practice only high-efficiency cogeneration comes into consideration.

Annexes:

1. Spreadsheet to facilitate the submission of specific data to support the evaluation of progress towards increasing the share of high-efficiency cogeneration in accordance with Article 6(3) and Article 10(2) of Directive 2004/8/EC of the EP and of the Council on the promotion of cogeneration based on a useful heat demand in the internal market.
2. Report to the European Commission under Articles 10(1) and 5(3) of Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EC

Annex 2.

Report to the European Commission under Articles 10(1) and 5(3) of Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC

Ministry of Economic Affairs

Directorate-General for Energy and Telecommunications

Directorate for Energy and Sustainability

The Netherlands

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Introduction

Article 5(3) of Directive 2004/8/EC stipulates: 'Member States or the competent bodies shall put in place appropriate mechanisms to ensure that the guarantees of origin are both accurate and reliable and they shall outline in the report referred to in Article 10(1) the measures taken to ensure the reliability of the guarantee system.' This report complies with that requirement by describing:

- the legal guarantee for the Dutch guarantee-of-origin regulation;
- the regulation's operation and how its reliability is guaranteed;
- the designated guarantee management body.

Legal guarantee

Since 14 December 2005, the 1998 Electricity Act has provided a framework for the nature, operation and application of guarantees of origin for high-efficiency cogeneration (Article 77ca to 77ce). This has taken place in the context of implementing the cogeneration Directive (Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC – OJ L 52, 21.2.2004).

The essence of the Act on this point is that the designated guarantee management body (CertiQ), at a producer's request, opens an account and enters guarantees of origin in it based on the measurement data, submitted by a network manager or recognised entity responsible for measurement, regarding the cogeneration electricity generated and input into a network. These Guarantees of Origin are intended to be used within the framework of the labelling requirements (under Directive 2003/54/EC read in conjunction with Article 95j to 95l of the 1998 Electricity Act). Their period of validity is limited to one year. The explanatory memorandum to the Act states that the Guarantees of Origin are not intended for subsidy purposes and are not tradable.

On 14 September 2007 the Minister for Economic Affairs adopted the Guarantees-of-Origin regulation for high-efficiency cogeneration installations, on the basis of Article 77cb and 77ce of the 1998 Electricity Act. The regulation develops in greater detail a number of provisions in the above-mentioned articles of the Act.

Operation of the regulation and how its reliability is guaranteed

On the basis of Article 16(1)(h) of the regulation, it is determined whether an installation can be designated as an installation for high-efficiency cogeneration (as defined in Annex 3 to the Directive). In order to do this the network manager, at the producer's request, assesses whether the producer's installation generates electricity by means of cogeneration such that there is a saving of at least 10% compared with the separate generation of electricity and heat.

An assessment is also made of whether the installation's measuring equipment is suitable for measuring the electricity input onto a network.

Then, in accordance with Article 77ca *et seq.* of the Act, Guarantees of Origin are issued for the electricity which the installation concerned has fed into a network and entered in an account with the guarantee management body. This is done using an electronic system. The Guarantee of Origin relates to a MWh or a multiple thereof; and the quantity per calendar month is determined on the basis of Annex 2 to the Directive (with the exception of gas engines – see below).

The data are shown on the guarantee of origin as stipulated in Article 5(5) of the Directive. This is laid down in Articles 7 and 8 of the regulation.

The regulation sets out more detailed conditions regarding whether a production installation meets the requirements for high-efficiency cogeneration, how the electricity input is measured and the issuing of cogeneration guarantees of origin. The regulation has, however, been based as much as possible on the existing Regulation on cogeneration certificates under the 1998 Electricity Act, and the Regulation on Guarantees of Origin for sustainable electricity.

An initial check to determine whether an installation meets the efficiency criterion is not sufficient. Therefore, also during the generation of electricity checks are made as to whether a producer meets the saving requirement. In order to do this, the producer draws up a monthly measurement report which – after verification by a recognised entity responsible for measurement – is submitted to the guarantee management body; the report includes the quantity of electricity fed into the network. In order to ensure that the data are measured consistently, the producers must use a measurement protocol approved by the entity responsible for measurement.

A producer with an installation comprising only gas engines is exempt from periodic measurement under the current regulation. Such an installation will receive guarantees of origin based on a fixed saving, because the ratio between the electricity to be produced and the quantity of heat is in principle invariable for this type of installation. The main argument in favour of this approach is a considerable lightening of the administrative burden for this category of producers. This is also in keeping with the approach underlying Article 9(1) of the Directive, under which legislative and other administrative barriers to cogeneration installations are to be reduced (prevented) as much as possible, and with Article 3 of the Directive, under which the values for calculating efficiency and the primary energy saving are determined on the basis of the expected or actual operation of the unit under normal operating conditions. Also in connection with this fixed approach for gas engines it has been chosen not to introduce a separate system for small-scale and/or micro cogeneration.

Further to the Detailed Guidelines published recently by the European Commission, the Dutch Government is endeavouring to amend the regulation quickly as regards the exemption from measurement. After the intended amendment a measurement requirement will also apply to installations comprising only gas engines, as now already applies to installations not comprising only gas engines.

In connection with a number of technical aspects the regulation refers to measurement conditions (annex to the regulation); these largely correspond to the conditions which apply under the existing cogeneration certificates in the context of the subsidy. It is therefore sufficient for participants in the existing scheme to produce a summary supplement to the existing protocol. This is an attempt to keep new administrative obstacles to a minimum for potential participants in the scheme. Both the measurement protocol and the measurement

reports must satisfy the conditions. However, as much as possible it has been chosen to apply directly the conditions in the Directive (including the provisions in the accompanying annexes).

Guarantee management body

By decree of 3 March 2008 the Minister for Economic Affairs designated CertiQ, part of the network manager of the national grid Tennet, as the guarantee management body for high-efficiency cogeneration for a period of 10 years.

CertiQ works using the standards of the Association of Issuing Bodies (AIB), of which it is a member. The AIB has developed a set of standards enabling clear and verifiable information provision at international level. This ensures to the greatest possible extent international, mutual recognition of Guarantees of Origin for high-efficiency cogeneration issued in other EU Member States.