

Letter from: Mr José Pascual Marco Martínez  
Ambassador and Deputy Permanent Representative  
Spanish Permanent Representation to the EU

To: Mr Philip LOWE  
Director-General  
DG ENER

Date: Brussels, 28 October 2011

Subject: Promotion of cogeneration based on a useful heat demand in the internal  
energy market (Directive 2004/8/EC) - Report

As requested in your letter of 11 April 2011 (ref. ENER/PL/jma/pc/S-309427), I enclose  
the completed questionnaire on high-efficiency cogeneration in Spain in accordance with  
Articles 6(3) and 10(2) of Directive 2004/8/EC.

[Complimentary close]

[Signature]

José Pascual Marco Martínez

**Concerning the 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**

**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?**

Spain has fully transposed Directive 2004/8/EC by publishing Royal Decree No 616/2007.

In addition, the technical, financial and administrative framework for cogeneration in Spain is set out by Royal Decree No 661/2007 laying down rules on generation under the Special Regime.

The most important future step in the transposition of the Directive will be the simplification of the authorisation procedures for small-scale cogeneration, planned for next year.

**Q2 What is the timeline for implementing measures based on the Commission Decision of 19 November 2008 establishing detailed guidelines?**

The measures set out in the Commission Decision of 19 November 2008 were incorporated into Spanish law by means of the Decision of the Secretariat-General for Energy of 14 May 2008 approving the Technical Guide for measuring the useful heat, the quantity of electricity produced and the primary energy savings from high-efficiency cogeneration. The document explains the method to be used for calculating the most important energy values for high-efficiency cogeneration.

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

Spain has implemented the Directive to a high degree, since it has a highly developed system of financial incentives and the *Comisión Nacional de la Energía* (National Energy Commission - CNE), as the competent authority, has been managing the system of guarantees of origin for electricity from high-energy cogeneration.

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

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?**

No, because we consider them to be sufficiently adapted to the best technology currently available.

However, we take the view that the efficiency reference values for separate production of heat should be extended to take account of the direct use of exhaust gases and the use of hot air at temperatures of less than 250°C in drying applications.

The criteria for taking account of cooling as a useful product in trigeneration systems should be clarified and criteria laid down for condensate return that are harmonised with what is set out in Guidance Document No 3 on the harmonised free allocation methodology for the EU-ETS post 2012.

A discussion would also be useful on a mechanism for calculating the power-to-heat ratio that would eliminate any subjectivity on the part of the operator or on adopting a revised definition of electricity from cogeneration with useful heat that strictly complies with the criterion of PES=10%, with a suitable calculation method.

## **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?**

Cogeneration has shown slow growth in Spain over the past five years. However, the financial incentives provided for by Spanish legislation have produced annual growth of the order of 100 MW over recent years.

**Q7 What is your evaluation of the progress towards increasing the share of high-efficiency cogeneration in your country?**

Practically all the new cogeneration capacity installed is high efficiency. Royal Decree No 661/2007 lays down minimum efficiency requirements for all cogeneration installations and provides an additional payment to cogeneration facilities that exceed those minimum requirements, based on their increased efficiency.

Moreover, the applicable legislation requires all substantial renovation of existing cogeneration installations to achieve high efficiency.

## **3. Barriers to high-efficiency cogeneration**

**Q8 Please give your views on the current barriers to high-efficiency cogeneration in your country. Indicate the measures to overcome them.**

The main barriers to the development of high-efficiency cogeneration in Spain are:

- barriers in relation to administrative procedures
  - administrative and technical complexity of the procedures for obtaining authorisation for small-capacity cogeneration installations and for connecting them to the grid.
- barriers in relation to electricity grid system and tariff issues
  - availability of the grid for absorbing the electricity generated. There is a great deal of ignorance and uncertainty regarding the possibility of connection to the grid, the technical conditions and, not least, the cost. This is a very important barrier in view of its strong impact on the financial viability of new projects.
  - Strong competition among energy sources in electricity generation. There is excess generation capacity in Spain that could, in future, cause competition between different technologies, including cogeneration.
- other barriers
  - The volatile nature of thermal-energy consumer-under takings, which prevents investment in new cogeneration projects.

- Access to funding for promoters of cogeneration projects. Cogeneration projects bear a higher risk than those involving electricity generation from renewable sources because of the stability [*sic*] of demand for useful heat. This means that financial institutions require more guarantees.
- The lack of experience in using cogeneration in public projects, such as district heating.
- Uncertainty regarding the impact of financial factors on the need to hand over CO<sub>2</sub> emission rights. This means that projects with only a small profit margin are not undertaken.

The measures that would overcome these barriers are:

- The introduction of simplified administrative procedures and simplified technical requirements for connecting small-capacity cogeneration installations (less than 1 MWe).
- The creation of special sources of funding for high-efficiency cogeneration with preferential conditions and reduced guarantees.
- An intensive programme of district heating projects in public installations.

#### **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.**

In Spain, the *Comisión Nacional de la Energía* administers the system for issuing guarantees of origin for electricity generated using renewable fuels and high-efficiency cogeneration. The system has operated since 1 December 2007 with the aim of informing final consumers about the origin of the electricity they consumer and its environmental impact.

The system for the issue of guarantees of origin in Spain is governed by Order No ITC/1522/2007 of 24 May 2007 laying down rules on guarantees of origin for electricity generated using renewable fuels and high-efficiency cogeneration.

**Q10 Does your country have support schemes for cogeneration based on Directive 2004/8/EC? What kind of support is provided? Are they designed to provide stable long-term investment conditions? Which sectors will be targeted?**

In Spain there is a system of financial support for cogeneration provided for by Royal Decree No 661/2007, which is based on the Directive. The following support is provided for cogeneration:

- Priority access to the grid.
- The transfer of net electricity production to the grid via the transmission or distribution network provided that absorption by the grid is technically possible.
- Receipt for the sale of net electricity production of a financial return based on the financial scheme chosen, either sale at regulated tariffs or sale on the market. Where electricity is sold on the market, a premium on top of the market price is paid. In addition, the tariff and the premium are indexed to the price of the raw material (fuel) used for cogeneration.
- Receipt of an additional payment based on the extent to which the energy efficiency of cogeneration exceeds the minimum laid down.

As for the sectors covered, the support plan covers all activities that might require heat or cooling, including a considerable part of the industrial and tertiary sectors.

**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?**

The incentives provided over recent years for cogeneration are shown in the following table in terms of the premium per kWh of electricity generated and in absolute terms.

Year	Equivalent premium (€/kWhe)	Total incentive (€ million)
2007	32.25	571.4
2008	33.72	714.6
2009	48.00	1 035.0
2010	55.35	1 302.0

The incentives planned to promote cogeneration until 2020 are as follows:

Year	Equivalent premium (€/kWhe)	Total incentive (€ million)
2012	40.7	1 235
2013	41.3	1 366
2014	41.9	1 496
2015	42.5	1 622
2020	45.5	2 080



[illegible]

<sup>4</sup> Within the scope of Directive 2004/8/EC

NB: these figures are estimates and are not based on available official statistics.