PROCEDURE FOR ISSUING A GUARANTEE OF ORIGIN FOR ELECTRICITY PRODUCED BY HIGH-EFFICIENCY COGENERATION UNITS

Version 1

1. PURPOSE

Whereas:

- under Resolution 42 of the *Autorità per l'Energia Elettrica e il Gas* (AEEG – Electricity and Gas Authority) of 19 March 2002, and its subsequent amendments and additions, cogeneration sections are defined, for a given production year, as those which for the year in question meet the two specified conditions in terms of the Electricity Saving Index (*Indice di Risparmio Energetico* – IRE) and the Thermal Limit (*Limite Termico* – LT, the ratio of thermal energy to total energy produced);

- Directive 2004/8/EC of the European Parliament defines high-efficiency cogeneration (hereafter: 'HEC') as cogeneration producing primary energy savings of at least 10% compared to the references for separate production of heat and electricity, and production from small-scale cogeneration units (< 1 MW_e) and micro-cogeneration units (< 50 kW_e);

- Legislative Decree 20 of 8 February 2007, implementing Community Directive 2004/8/CE on the promotion of cogeneration, gives Gestore dei Servizi Elettrici – GSE S.p.A. (hereafter 'GSE') responsibility for issuing guarantees of origin (hereafter also 'GO_c') for electricity produced by high-efficiency cogeneration plants;

- The same decree stipulates that by 31 December 2010, the conditions for recognition of high-efficiency cogeneration shall match those defined for cogeneration in the above-mentioned[1] AEEG Resolution 42/02 and its subsequent amendments and additions;

this document sets out to provide a technical and operational guide to the procedure for requesting a GO_c for electricity produced by units operating in cogeneration mode.

The procedure comprises 3 Annexes – a facsimile of the application for a GO_c (Annex A2) and its related tables (Annexes B1 and B2) – which are also available for download from the website www.gsel.it.

Under the terms of Article 4 (6) of Legislative Decree 20/2007, for the purposes of issuing the guarantee of origin, GSE will provide a dedicated computer system with controlled access enabling producers to submit their requests via the portal. It is intended that, in the future, that

[1] After that date, the conditions stipulated by the European Community will apply, as transposed into Italian legislation.

system could be connected to the system operated by the Association of Issuing Bodies (AIB)[2] to trade guarantees of origin on a European level, through a specific hub.

To facilitate understanding of the procedure, we transcribe below the relevant articles of the above-mentioned Legislative Decree 20/2007 which provided for the issue of guarantees of origin for electricity produced by high-efficiency cogeneration units, as introduced by Directive 2004/8/EC.

*"**Article 4: Guarantee of origin for electricity produced by high-efficiency cogeneration***

1. *Electricity produced by high-efficiency cogeneration is entitled to the award, at the producer's request, of a guarantee of origin of electricity produced by high-efficiency cogeneration, referred to hereafter as 'guarantee of origin'.*

2. *Gestore dei Servizi Elettrici – GSE S.p.A. is the body designated, under the terms of this decree, to issue the guarantee of origin referred to in paragraph 1, using criteria which are objective, transparent and non-discriminatory.*

3. *The guarantee of origin may only be issued where the annual electricity produced from high-efficiency cogeneration is not less than 50 MWh, rounded in accordance with common commercial practice.*

4. *The guarantee of origin shall specify:*

   a) *the location of the plant;*
   b) *the technology used;*
   c) *the fuel from which the electricity has been produced;*
   d) *the amount of fuel used monthly;*
   e) *the corresponding net monthly production of electricity from high-efficiency cogeneration, in accordance with Annex II, which the guarantee of origin represents;*
   f) *the lower calorific value of the fuel source from which the electricity was produced;*
   g) *the use of the heat generated together with the electricity;*
   h) *the primary energy savings calculated in accordance with Annex III.*

5. *The guarantee of origin may be used by the producers to which it is issued to enable them to prove that the electricity sold by them was produced by high-efficiency cogeneration within the meaning of this decree.*

[2] The Association of Issuing Bodies is a voluntary international organisation promoting the recognition and trading of certificates under the Renewable Energy Certificate System (RECS). In all countries adhering to the RECS system, it is anticipated that an agreement will be signed between the Issuing Body and producers setting out the rights and obligations of the parties arising from the registration of production plants and the issue and trading of certificates for the production of electricity from renewable sources. To fulfil its role, GSE provides producers and traders with a computerised management system holding all the necessary information.

6. *Without prejudice to the provisions of Legislative Decree 196 of 30 June 2003, Gestore dei Servizi Elettrici – GSE S.p.A. shall set up a computerised system with controlled access, which will also enable the data contained in the guarantee of origin to be verified.*

7. *Gestore dei Servizi Elettrici – GSE S.p.A. shall issue the guarantee of origin after checking the data supplied by the applicant and ensuring they comply with the terms of this decree. For that purpose, and without prejudice to the role of the Autorità per l'Energia Elettrica e il Gas (AEEG – Electricity and Gas Authority), Gestore dei Servizi Elettrici – GSE S.p.A. shall arrange for checks to be carried out on the plants in use, based on an annual programme.*

8. *Within three months from the date of entry into force of this decree, Gestore dei Servizi Elettrici – GSE S.p.A., shall adopt and submit for the approval of the Ministry for Economic Development the technical procedures for issuing guarantees of origin.*

9. *Guarantees of origin issued in other European Union Member States following the implementation of Directive 2004/8/EC shall also be recognised in Italy on condition that they include all the details given in Paragraph 4 above, that they have been issued by countries which have introduced measures to promote and incentivise high-efficiency cogeneration similar to those in force in Italy, and that they offer the same possibility to plants located in Italy, on the basis of agreements between the Ministry for Economic Development and the Ministry for the Environment, Land and Sea Protection and the competent authorities of the foreign State from which the electricity from high-efficiency cogeneration is imported."*

*"**Article 2: Definitions***

1. *For the purposes of this decree, the following definitions shall apply:*

a) *"cogeneration" shall mean the simultaneous generation in one process of thermal energy and electrical and/or mechanical energy, or thermal, electrical and mechanical energy;*
b) *"cogeneration unit", or a section of a combined electricity and heat production unit, shall mean a unit that can operate in cogeneration mode;*
c) *"cogeneration production" shall mean the sum of electricity and mechanical energy and useful heat from cogeneration;*
d) *"small scale cogeneration unit" shall mean cogeneration units with an installed capacity below 1 MW_e;*
e) *"micro-cogeneration unit" shall mean a cogeneration unit with a maximum capacity below 50 kW_e;*
f) *"useful heat" shall mean heat produced in a cogeneration process to satisfy an economically justifiable demand for heat or cooling;*

g) "economically justifiable demand" shall mean the demand that does not exceed the needs for heat or cooling and which would otherwise be satisfied at market conditions by energy generation processes other than cogeneration;
h) "electricity from cogeneration" shall mean electricity generated in a process linked to the production of useful heat and calculated in accordance with the methodology laid down in Annex II;
i) "back-up electricity" shall mean the electricity supplied through the electricity grid whenever the cogeneration process is disrupted, including maintenance periods, or out of order;
l) "top-up electricity" shall mean the electricity supplied through the electricity grid in cases where the electricity demand is greater than the electrical output of the cogeneration process;
m) "overall efficiency" shall mean the annual sum of electricity and mechanical energy production and useful heat output divided by the fuel input used for heat produced in a cogeneration process and gross electricity and mechanical energy production;
n) "efficiency" shall mean efficiency calculated on the basis of the lower calorific values of fuels;
o) "high-efficiency cogeneration" shall mean cogeneration meeting the criteria of Annex III;
p) "efficiency reference value for separate production" shall mean efficiency of the alternative separate productions of heat and electricity that the cogeneration process is intended to substitute;
q) "power to heat ratio" shall mean the ratio between electricity from cogeneration and useful heat when operating in full cogeneration mode, using operational data of the specific unit.

2. In addition to the definitions given in paragraph 1 above, the definitions given in Legislative Decree 79 of 16 March 1999, and its subsequent amendments, shall also apply as well as those given in Legislative Decree 387 of 29 December 2003 and its subsequent amendments."

2 GUARANTEE OF ORIGIN FOR ELECTRICITY PRODUCED FROM COGENERATION UNITS

2.1 Classification of high-efficiency cogeneration units for the purposes of applying for a GO_c

For the purposes of Legislative Decree 20/2007, the various types of cogeneration unit are as follows:

"…
(a) Combined cycle gas turbine with heat recovery
(b) Steam backpressure turbine
(c) Steam condensing extraction turbine
(d) Gas turbine with heat recovery

(e) Internal combustion engine
(f) Microturbines
(g) Stirling engines
(h) Fuel cells
(i) Steam engines
(j) Organic Rankine cycles
(k) Any other type of technology or combination thereof falling under the definition laid down in Article 2(a)..." of Legislative Decree 20/2007.

2.2 Contents of the guarantee of origin

Under the terms of paragraphs 3 and 4 of Article 4 of Legislative Decree 20/2007, the guarantee of origin *"...may only be issued where the annual electricity produced from high-efficiency cogeneration is not less than 50 MWh, rounded in accordance with commercial practice".*

"The guarantee of origin shall specify:

a) *the location of the plant;*

b) *the technology used;*

c) *the fuel from which the electricity has been produced;*

d) *the amount of fuel used monthly;*

e) *the corresponding net monthly production of electricity from high-efficiency cogeneration, in accordance with Annex II",* of Legislative Decree 20/2007 *"which the guarantee of origin represents;*

f) *the lower calorific value of the fuel source from which the electricity was produced;*

g) *the use of the heat generated together with the electricity;*

h) *the primary energy savings calculated in accordance with Annex III"* of Legislative Decree 20/2007.

3 APPLICATION FOR A GO_c FOR ELECTRICITY PRODUCED BY HIGH-EFFICIENCY COGENERATION

Producers may apply to GSE for issue of a GO_c for electricity produced by cogeneration. The GO_c will be issued retroactively for the year prior to that of the application. We give below the procedures and documentation necessary to apply for a GO_c.

3.1 Procedures and documentation for applying for a GO_c

Application must be made for a GO_c by 31 March[3] each year in respect of energy produced by cogeneration sections in the previous year. In all cases, the GO_c may only be issued to plants which have obtained positive recognition of cogeneration.

A producer wishing to obtain a GO_c must submit to GSE, **separately for each section of its plant**, the following documentation and Annexes duly completed:

1. the application for issue of the GO_c and solemn affirmation equivalent to a statutory declaration signed by the production company's legal representative, setting out the Electricity Saving Index (IRE) figure and the thermal limit (LT) for the production of energy in the calendar year preceding that of the application, calculated as laid down in AEEG Resolution 42/02 and its subsequent amendments and additions (Annex A2);

2. the Technical Recognition Report for the unit and cogeneration section, consisting of the following:

    a) general characteristics: type of section and type of unit, general operating diagram, identification and characteristics of the generators and heat exchangers, primary motors, electricity generators, reference size – as defined in Article 1 (j) of AEEG Resolution 42/02 – and other significant components;

    b) identification of the measurement methods and criteria used to calculate the figures shown in the tables in Annexes B1 and B2 (set out in Point 4 below);

3. annual programme for use of the section, and in particular the combined production capacity of heat and electricity, efficiency and fuels used (including in-process fuels, waste and energy recovered, and non-commercial fuels), purpose of the production (own use, sale to third parties, supply of services to third parties[4], etc.), specifying:

[3] By 31 December of each year if the application is made under the terms of AEEG Resolution 34/2005.
[4] This applies, for example, in the case of ESCOs.

- in the case of own use, the annual volume of production of products whose production process uses the heat, and the exact consumption of heat in the various stages of that production process;

- in the case of sales to third parties, the quantity of heat sold to third parties, giving details of the purchasers and the amounts purchased by each of them;

4. data given in Annexes B1 and B2 (Issue of the guarantee of origin for Cogeneration).

The Technical Recognition Report described in Point 2 above must be submitted at the time of the first request for recognition of combined production of electricity and heat via cogeneration.

For subsequent requests, the Producer is required to submit the above technical report only if changes have occurred with an impact on compliance with the technical conditions of cogeneration or if there has been any alteration in the measurement methods. If so, the new Technical Report must show, in particular, the changes which have occurred and the alterations made.

The various stages in the issue of the GO_c are described briefly below. With its first available communication, GSE will also send the producer a Unique Plant Identification Code and a Unique Section Identification Code, to be used in subsequent correspondence between the producer and GSE. The Section Identification Code consists of two separate parts, the first one repeating the Plant Code, the second specific to the section.

Stage A: Application for the GO_c (by the producer)

For each individual section of the plant, the producer may request GSE to issue a GO_c for the annual electricity produced the previous year, submitting the documentation specified above.

Once the computer system referred to in Paragraph 1 is operational, producers will first need to register their data on the controlled-access portal and send the relative hard-copy documentation to enable the application to be processed by GSE.

For those sections of the plant for which the producer has already applied to GSE for recognition of cogeneration in accordance with AEEG Resolution 42/02 and its subsequent amendments and additions, when making any further application for a GO_c for the same year of production, the producer must:

- submit the GO_c application in accordance with Annex A2;
- compile the data as shown in Annex B2;
- sign all the requisite documentation and submit it by post.

Stage B: Issue of the GO_c to the producer (by GSE)

GSE will check the documentation submitted and, if appropriate, issue the guarantee of origin for electricity produced during the previous year to the producer within 120 days from the date of the GO_c application, subject to the terms of Section 5 below.

At the producer's express request, the GO_c application can be submitted each year, supported by the documentation described above.

4 PROCEDURES FOR CALCULATING ELECTRICITY FROM COGENERATION FOR THE PURPOSES OF ISSUING A GO_c

Under the terms of Legislative Decree 20/2007, to determine the quantity of electricity produced by high-efficiency cogeneration for which a GO_c can be issued, the method of calculation set out in Annex II to that decree is to be used:

"***Calculation of electricity from cogeneration***

1. *Values used for calculation of electricity from cogeneration shall be determined on the basis of the expected or actual operation of the unit under normal conditions of use. For micro-cogeneration units the calculation may be based on certified values.*

2. *Electricity production from cogeneration shall be considered equal to total annual electricity production of the unit measured at the outlet of the main generators:*

   a) in cogeneration units of type (b), (d), (e), (f), (g) and (h) referred to in Annex I," to Legislative Decree 20/2007 *"with an annual overall efficiency of at least 75%, and*

   b) in cogeneration units of type (a) and (c) referred to in Annex I, with an annual overall efficiency of at least 80%.

3. *In cogeneration units with an annual overall efficiency below the value referred to in paragraph 2 (a) [cogeneration units of type (b), (d), (e), (f), (g), and (h) referred to in Annex I] or with an annual overall efficiency below the value referred to in paragraph 2 (b) [cogeneration units of type (a) and (c) referred to in Annex I] cogeneration is calculated according to the following formula:*

   $E_{CHP} = H_{CHP}C$

where:

E_{CHP} is the amount of electricity from cogeneration;

C is the power to heat ratio defined in point 4 below;

H_{CHP} is the amount of useful heat from cogeneration (calculated for this purpose as total heat production minus any heat produced in separate boilers or by live steam extraction from the steam generator before the turbine).

4. *The calculation of electricity from cogeneration must be based on the actual power to heat ratio. If the actual power to heat ratio of a cogeneration unit is not known, the following default values may be used, notably for statistical purposes, for units of type (a), (b), (c), (d), and (e) referred to in Annex I provided that the calculated cogeneration electricity is less or equal to total electricity production of the unit:*

Type of Unit	***Default power to heat ratio (C)***
Combined cycle gas turbine with heat recovery	*0.95*
Steam backpressure turbine	*0.45*
Steam condensing extraction turbine	*0.45*
Gas turbine with heat recovery	*0.55*
Internal combustion engine	*0.75*

If default values are introduced for power to heat ratios for units of type (f), (g), (h), (i), (l) and (m) referred to in Annex I, such default values shall be published and shall be notified to the European Commission.

5. *If a share of the energy content of the fuel input to the cogeneration process is recovered in chemicals and recycled, this share can be subtracted from the fuel input before calculating the overall efficiency used in paragraphs (a) and (b).*

6. *If necessary, the power to heat ratio may be calculated as the ratio between electricity and useful heat when operating in cogeneration mode at a lower capacity using operational data of the specific unit.*

7. *In accordance with the procedure referred to in Article 14(2) of Directive 2004/8/EC, the European Commission may establish detailed guidelines for the implementation and application of Annex II"* to Legislative Decree 20/2007 *"including the determination of the power to heat ratio".*

8. Reporting periods other than one year may be used for the purpose of the calculations according to paragraphs 2 and 3.

5. OUTCOMES OF THE APPLICATION FOR A GO_c FOR ELECTRICITY FROM COGENERATION

5.1 Deadlines for issuing a guarantee of origin

GSE will notify the producer of the outcome of the GO_c assessment carried out in accordance with Legislative Decree 20/2007 and taking account of the present Technical Procedure, within 120 days from the date of the application, subject to the terms of paragraph 5.4.

As indicated in paragraph 3.1, with its first available communication, GSE will also send the producer a Unique Plant Identification Code and a Unique Section Identification Code, to be used in subsequent correspondence between the producer and GSE.

The application for a GO_c is deemed to have been approved tacitly if there is no response from GSE by the end of the 120-day period. Once that period has elapsed with no response, the producer may undertake self-certification of the quantity of electricity produced and eligible for the guarantee of origin, calculated in accordance with Annex II to Legislative Decree 20/2007, always subject, however, to GSE's authority to check the producer's declaration.

In all communications between the producer and GSE, the date of the inward and outward mail stamp applied by the Protocol Office of GSE will be conclusive.

In terms of the foregoing, the following outcomes are possible:

5.2 Application successful

GSE will notify the producer within the 120-day deadline that the GO_c has been approved for the quantity of electricity specified in the communication, calculated in accordance with Annex II to the Legislative Decree, subject only to subsequent checks on the accuracy of the declarations made.

5.3 Application unsuccessful

GSE will notify the producer, within the time limit set out in paragraph 5.1 that the section of the unit does not qualify for the award of a GO_c for the electricity produced, under the terms of Legislative Decree 20/2007 and the related regulations in force. GSE will set out its reasons for this decision.

5.4 Assessment suspended

The producer's application lacks some documentation and/or data necessary to issue the GO_c in accordance with applicable laws and regulations and this technical procedure.

GSE will notify the producer, within the time limit set out in paragraph 5.1, that the documentation has to be completed, indicating the data and documents required to enable the GO_c assessment to continue, also specifying that the required items must be received within 90 days from the GSE data stamp on the request for the additional information.

Until the additional information requested has been received by GSE, the application for the GO_c is suspended and the countdown to the deadline stipulated in paragraph 5.1 is stopped.

The countdown of the remaining number of days available to GSE to take a decision on the application will resume from the date of receipt of the additional information.

If the additional information is not received by GSE within 90 days from its communication, or if it is still not complete, the application is deemed to have been rejected as incomplete. In this case, GSE will notify the producer.

GSE may also suspend the application, giving timely notice to the applicant, to carry out technical investigations or to apply to the competent ministries or to the AEEG for guidance on the interpretation of the relevant decrees or regulations.

6. PRODUCERS' DECLARATIONS AND RESPONSIBILITY

Applications for the issue of GO_c and all declarations and/or communications made in support of or in connection with them are made in accordance with Articles 46 and 47 of Presidential Decree 445 of 28 December 2000, in accordance with the procedures of Article 38 of the same decree, and in the knowledge of the criminal sanctions stipulated in Article 76 in cases of forgery in official documents and the issuing of false statements. To that end, the producer must attach to the declarations and/or applications a photocopy of his/her own valid identity document, and must initial all documents submitted.

7. TECHNICAL CHECKS VIA SITE INSPECTIONS

Without prejudice to the powers of the Electricity and Gas Authority (AEEG) under Article 4 (7) of Legislative Decree 20/2007, GSE will conduct checks on operational units, on the basis of an

annual programme, to ascertain whether they qualify for the issue of a GO_c. This check shall also cover the requirements for the recognition of cogeneration operations.

Where the results of the checks show that declarations made by the producer were incorrect, the producer will immediately forfeit the benefits obtained, in accordance with Article 75 of Presidential Decree 445/2000, without prejudice to any other consequences envisaged by the laws in force.

8. ANNEXES

Annexes A2, B1 and B2 complete and form an integral part of this procedure.

Annex A2 contains the facsimile of an application for a GO_c, including the solemn affirmation equivalent to a statutory declaration.

To complete the application, the tables of Annexes B1 and B2 must also be completed, and the documentation described in this procedure must be submitted.

ANNEX A2

(Application for a GO_c, and solemn affirmation equivalent to a statutory declaration)

To: Gestore dei Servizi Elettrici – G.S.E. S.p.a.
Engineering Unit
V.le Maresciallo Pilsudski, 92
00197 Rome

SUBJECT: Application for the issue of a guarantee of origin (GO_c) for electricity produced, within the meaning of Legislative Decree 20 of 8 February 2007, and solemn affirmation equivalent to a statutory declaration[5].

The undersigned , in his/her capacity as legal representative of the Company [*Company name, company type, registered office, tax code or VAT Number]*, the owner of the unit [6], known as

HEREBY REQUESTS

for the section of the unit [7], known as and located at , issuance of the GO_c for electricity produced during the calendar year and

DECLARES

- under the terms of Articles 21, 38 and 47 of Presidential decree 445 of 28 December 2000, and for the purposes and effects of Article 4 (1) of Resolution 42/02 and its subsequent amendments and additions, that the information provided is true:

[5] To be completed individually for each section of the unit for which recognition of cogeneration is sought.
[6] Please show the Unique Plant Identification Code, if already known.
[7] Please show the Unique Section Identification Code, if already known.

□ value of the Electricity Saving Index (IRE) achieved in the calendar year by the section of the unit indicated above:

□ value of the Thermal Limit (LT) achieved in the calendar year by the same section:

Attached is the documentation indicated in GSE's procedure and in the relevant laws and regulations.

(Place) , (date)

The Legal Representative[8]

[8] Please attach a legible photocopy of a valid identity document of the person signing the declaration.

ANNEX B1

(Table: Recognition of cogeneration)

RECOGNITION OF COMBINED PRODUCTION OF ELECTRICITY AND HEAT VIA COGENERATION

DATA FOR PRODUCTION FOR THE YEAR: _____

Ref. AEEG Resolution 42-02 of 19 March 2002

THE FOLLOWING TABLE SHOULD BE COMPLETED SEPARATELY FOR EACH SECTION OF PLANT

	Column A	Column B	Column C	Column D	Column E
	DEFINITIONS	***SYMBOL***	***UNIT OF MEASURE-MENT***	***TO BE COMPLETED BY OWNER***	***REFERENCE (AEEG Resolution 42/02)***
	Identification of producer				
	Name of plant				
	Plant Identification Code				
	Name of section of plant				Article 1.1 letter e)
	Section Identification Code				
1	Address of producer's registered office				
2	Address of section of plant				
3	Date commenced operations				Article 1.1 letter v)
4	Date commenced commercial operations				Article 1.1 letter w)
	Voltage of grid connection		kv		
6	Rated output of the first steam turbine	TV1-Pn	MW		
7	Rated output of the second steam turbine	TV2-Pn	MW		
8	Rated output of the third steam turbine	TV3-Pn	MW		
9	Rated output of the fourth steam turbine	TV4-Pn	MW		
10	Rated output of the fifth steam turbine	TV5-Pn	MW		
11	Rated output of the sixth steam turbine	TV6-Pn	MW		

12	Rated output of the first gas turbine	TG1-Pn	MW		
13	Rated output of the second gas turbine	TG2-Pn	MW		
14	Rated output of the third gas turbine	TG3-Pn	MW		
15	Rated output of the fourth gas turbine	TG4-Pn	MW		
16	Rated output of the fifth gas turbine	TG5-Pn	MW		
17	Rated output of the sixth gas turbine	TG6-Pn	MW		
18	Rated output of the first internal combustion engine	MCI1-Pn	MW		
19	Rated output of the second internal combustion engine	MCI2-Pn	MW		
20	Rated output of the third internal combustion engine	MCI3-Pn	MW		
21	Rated output of the fourth internal combustion engine	MCI4-Pn	MW		
22	Rated output of the fifth internal combustion engine	MCI5-Pn	MW		
23	Rated output of the sixth internal combustion engine	MCI6-Pn	MW		
24	Rated output of the first electricity generator	GEN1-Pn	MVA		
25	Rated output of the second electricity generator	GEN2-Pn	MVA		
26	Rated output of the third electricity generator	GEN3-Pn	MVA		
27	Rated output of the fourth electricity generator	GEN4-Pn	MVA		
28	Rated output of the fifth electricity generator	GEN5-Pn	MVA		
29	Rated output of the sixth electricity generator	GEN6-Pn	MVA		
30	Electricity input into grid	Ee immessa	MWh		Article 1.1 letter s)
31	Electricity consumed for own use	Ee autocons	MWh		Article 1.1 letter r)
32	Effective thermal electricity used for civil purposes (*)	Et civ	MWh		Article 1.1 letter o)
33	Effective thermal electricity used for industrial purposes (*)	Et ind	MWh		Article 1.1 letter o)
34	Fuel No 1	C1			
35	Primary energy used (Fuel No 1) (**)	Ec1	MWh		Article 1.1 letter l)
36	ETA Parameter for Fuel No 1	ETA_{c1}	p.u.		Article 1.1 letter p); Article 2.2. letter a)
37	Fuel No 2	C2			
38	Primary energy used (Fuel No 2) (**)	Ec2	MWh		Article 1.1 letter l)
39	ETA Parameter for Fuel No 2	ETA_{c2}	p.u.		Article 1.1 letter p); Article 2.2. letter a)
40	Fuel No 3	C3			
41	Primary energy used (Fuel No 3) (**)	Ec3	MWh		Article 1.1 letter l)
42	ETA Parameter for Fuel No 3	ETA_{c3}	p.u.		Article 1.1 letter p); Article 2.2. letter a)
43	Fuel No 4	C4			

44	Primary energy used (Fuel No 4) (**)	Ec4	MWh		Article 1.1 letter l)
45	ETA Parameter for Fuel No 4	ETA_{c4}	p.u.		Article 1.1 letter p); Article 2.2. letter a)
46	Fuel No 5	C5			
47	Primary energy used (Fuel No 5) (**)	Ec5	MWh		Article 1.1 letter l)
48	ETA Parameter for Fuel No 5	ETA_{c5}	p.u.		Article 1.1 letter p); Article 2.2. letter a)
49	Fuel No 6	C6			
50	Primary energy used (Fuel No 6) (**)	Ec6	MWh		Article 1.1 letter l)
51	ETA Parameter for Fuel No 6	ETA_{c6}	p.u.		Article 1.1 letter p); Article 2.2. letter a)
52	Reference size of the plant section	Trif	MW		Article 1.1 letter j)
53	Coefficient P for electricity input into the grid	Pimmessa			Article 1.1 letter t)
54	Coefficient P for electricity consumed for own use	Pautocons			Article 1.1 letter t)
55	Energy Saving Index	IRE	p.u.		Article 1.1 letter t)
56	Thermal Limit	LT	p.u.		Article 1.1 letter u)

(*) Excluding thermal energy produced by any separate boilers

(**) Including primary energy consumed by any afterburners; excluding primary energy consumed by any separate boilers.

Date Completed	
Stamp and signature of legal representative of the producing company	

ANNEX B2

(Table: Issue of GO_c)

ISSUE OF GUARANTEE OF ORIGIN FOR HIGH-EFFICIENCY COGENERATION (HEC)

DATA ON PRODUCTION FOR THE YEAR: _____

Ref. Legislative Decree 20 of 8 February 2007

THE FOLLOWING TABLE SHOULD BE COMPLETED SEPARATELY FOR EACH SECTION OF PLANT

	Column A	Column B	Column C	Column D	Column E	Column F
	DEFINITIONS	***MONTH***	***SYMBOL***	***UNIT OF MEASUREMENT***	***TO BE COMPLETED BY OWNER***	***REFERENCE (Legislative Decree 20 of 8/2/07)***
	Identification of producer					
	Name of plant					
	Plant Identification Code					
	Name of section of plant					
	Section Identification Code					
1	Address of producer's registered office					
2	Address of section of plant					
3	Overall annual output		EtaComp	p.u		Article 2 letter m)
4	(*) Power to heat ratio		C	p.u		Article 2 letter q)
	(*) Quantity of useful heat produced by cogeneration		ECHP	MWh		Article 2 letter f)
6	Annual electricity produced by HEC		Ee	MWh		Article 4 point 3)
7	Net electricity produced by HEC in the month of	January	Een_01	MWh		Article 4 para.4) Lett. e)
8	Net electricity produced by HEC in the month of	February	Een_02	MWh		Article 4 para.4) Lett. e)
9	Net electricity produced by HEC in the month of	March	Een_03	MWh		Article 4 para.4) Lett. e)

10	Net electricity produced by HEC in the month of	April	Een_04	MWh		Article 4 para.4) Lett. e)
11	Net electricity produced by HEC in the month of	May	Een_05	MWh		Article 4 para.4) Lett. e)
12	Net electricity produced by HEC in the month of	June	Een_06	MWh		Article 4 para.4) Lett. e)
13	Net electricity produced by HEC in the month of	July	Een_07	MWh		Article 4 para.4) Lett. e)
14	Net electricity produced by HEC in the month of	August	Een_08	MWh		Article 4 para.4) Lett. e)
15	Net electricity produced by HEC in the month of	September	Een_09	MWh		Article 4 para.4) Lett. e)
16	Net electricity produced by HEC in the month of	October	Een_10	MWh		Article 4 para.4) Lett. e)
17	Net electricity produced by HEC in the month of	November	Een_11	MWh		Article 4 para.4) Lett. e)
18	Net electricity produced by HEC in the month of	December	Een_12	MWh		Article 4 para.4) Lett. e)
19	Fuel No 1		C1			Article 4 para.4) Lett. c)
20	Lower calorific value of Fuel No 1		Pci1	MJ/Kg or MJ/SM^3		Article 4 para.4) Lett. f)
21	(**) Primary energy used in the month of	January	Ec1_01	MWh		Article 4 para.4) Lett. d)
22	(**) Primary energy used in the month of	February	Ec1_02	MWh		Article 4 para.4) Lett. d)
23	(**) Primary energy used in the month of	March	Ec1_03	MWh		Article 4 para.4) Lett. d)
24	(**) Primary energy used in the month of	April	Ec1_04	MWh		Article 4 para.4) Lett. d)
25	(**) Primary energy used in the month of	May	Ec1_05	MWh		Article 4 para.4) Lett. d)
26	(**) Primary energy used in the month of	June	Ec1_06	MWh		Article 4 para.4) Lett. d)
27	(**) Primary energy used in the month of	July	Ec1_07	MWh		Article 4 para.4) Lett. d)
28	(**) Primary energy used in the month of	August	Ec1_08	MWh		Article 4 para.4) Lett. d)
29	(**) Primary energy used in the month of	September	Ec1_09	MWh		Article 4 para.4) Lett. d)
30	(**) Primary energy used in the month of	October	Ec1_10	MWh		Article 4 para.4) Lett. d)
31	(**) Primary energy used in the month of	November	Ec1_11	MWh		Article 4 para.4) Lett. d)
32	(**) Primary energy used in the month of	December	Ec1_12	MWh		Article 4 para.4) Lett. d)
33	Fuel No 2		C2			Article 4 para.4) Lett. c)
34	Lower calorific value of Fuel No 2		Pc12	MJ/Kg or MJ/SM^3		Article 4 para.4) Lett. f)
35	(**) Primary energy used in the month of	January	Ec2_01	MWh		Article 4 para.4) Lett. d)
36	(**) Primary energy used in the month of	February	Ec2_02	MWh		Article 4 para.4) Lett. d)
37	(**) Primary energy used in the month of	March	Ec2_03	MWh		Article 4 para.4) Lett. d)
38	(**) Primary energy used in the month of	April	Ec2_04	MWh		Article 4 para.4) Lett. d)
39	(**) Primary energy used in the month of	May	Ec2_05	MWh		Article 4 para.4) Lett. d)
40	(**) Primary energy used in the month of	June	Ec2_06	MWh		Article 4 para.4) Lett. d)
41	(**) Primary energy used in the month of	July	Ec2_07	MWh		Article 4 para.4) Lett. d)
42	(**) Primary energy used in the month of	August	Ec2_08	MWh		Article 4 para.4) Lett. d)
43	(**) Primary energy used in the month of	September	Ec2_09	MWh		Article 4 para.4) Lett. d)
44	(**) Primary energy used in the month of	October	Ec2_10	MWh		Article 4 para.4) Lett. d)
45	(**) Primary energy used in the month of	November	Ec2_11	MWh		Article 4 para.4) Lett. d)
46	(**) Primary energy used in the month of	December	Ec2_12	MWh		Article 4 para.4) Lett. d)

47	Fuel No 3		C3			Article 4 para.4) Lett. c)
48	Lower calorific value of Fuel No 3		Pci3	MJ/Kg or MJ/SM^3		Article 4 para.4) Lett. f)
49	(**) Primary energy used in the month of	January	Ec3_01	MWh		Article 4 para.4) Lett. d)
50	(**) Primary energy used in the month of	February	Ec3_02	MWh		Article 4 para.4) Lett. d)
51	(**) Primary energy used in the month of	March	Ec3_03	MWh		Article 4 para.4) Lett. d)
52	(**) Primary energy used in the month of	April	Ec3_04	MWh		Article 4 para.4) Lett. d)
53	(**) Primary energy used in the month of	May	Ec3_05	MWh		Article 4 para.4) Lett. d)
54	(**) Primary energy used in the month of	June	Ec3_06	MWh		Article 4 para.4) Lett. d)
55	(**) Primary energy used in the month of	July	Ec3_07	MWh		Article 4 para.4) Lett. d)
56	(**) Primary energy used in the month of	August	Ec3_08	MWh		Article 4 para.4) Lett. d)
57	(**) Primary energy used in the month of	September	Ec3_09	MWh		Article 4 para.4) Lett. d)
58	(**) Primary energy used in the month of	October	Ec3_10	MWh		Article 4 para.4) Lett. d)
59	(**) Primary energy used in the month of	November	Ec3_11	MWh		Article 4 para.4) Lett. d)
60	(**) Primary energy used in the month of	December	Ec3_12	MWh		Article 4 para.4) Lett. d)
61	Fuel No 4		C4			Article 4 para.4) Lett. c)
62	Lower calorific value of Fuel No 4		Pci4	MJ/Kg or MJ/SM^3		Article 4 para.4) Lett. f)
63	(**) Primary energy used in the month of	January	Ec4_01	MWh		Article 4 para.4) Lett. d)
64	(**) Primary energy used in the month of	February	Ec4_02	MWh		Article 4 para.4) Lett. d)
65	(**) Primary energy used in the month of	March	Ec4_03	MWh		Article 4 para.4) Lett. d)
66	(**) Primary energy used in the month of	April	Ec4_04	MWh		Article 4 para.4) Lett. d)
67	(**) Primary energy used in the month of	May	Ec4_05	MWh		Article 4 para.4) Lett. d)
68	(**) Primary energy used in the month of	June	Ec4_06	MWh		Article 4 para.4) Lett. d)
69	(**) Primary energy used in the month of	July	Ec4_07	MWh		Article 4 para.4) Lett. d)
70	(**) Primary energy used in the month of	August	Ec4_08	MWh		Article 4 para.4) Lett. d)
71	(**) Primary energy used in the month of	September	Ec4_09	MWh		Article 4 para.4) Lett. d)
72	(**) Primary energy used in the month of	October	Ec4_10	MWh		Article 4 para.4) Lett. d)
73	(**) Primary energy used in the month of	November	Ec4_11	MWh		Article 4 para.4) Lett. d)
74	(**) Primary energy used in the month of	December	Ec4_12	MWh		Article 4 para.4) Lett. d)
75	Fuel No 5		C5			Article 4 para.4) Lett. c)
76	Lower calorific value of Fuel No 5		Pci5	MJ/Kg or MJ/SM^3		Article 4 para.4) Lett. f)
77	(**) Primary energy used in the month of	January	Ec5_01	MWh		Article 4 para.4) Lett. d)
78	(**) Primary energy used in the month of	February	Ec5_02	MWh		Article 4 para.4) Lett. d)
79	(**) Primary energy used in the month of	March	Ec5_03	MWh		Article 4 para.4) Lett. d)
80	(**) Primary energy used in the month of	April	Ec5_04	MWh		Article 4 para.4) Lett. d)
81	(**) Primary energy used in the month of	May	Ec5_05	MWh		Article 4 para.4) Lett. d)
82	(**) Primary energy used in the month of	June	Ec5_06	MWh		Article 4 para.4) Lett. d)
83	(**) Primary energy used in the month of	July	Ec5_07	MWh		Article 4 para.4) Lett. d)

84	(**) Primary energy used in the month of	August	Ec5_08	MWh		Article 4 para.4) Lett. d)
85	(**) Primary energy used in the month of	September	Ec5_09	MWh		Article 4 para.4) Lett. d)
86	(**) Primary energy used in the month of	October	Ec5_10	MWh		Article 4 para.4) Lett. d)
87	(**) Primary energy used in the month of	November	Ec5_11	MWh		Article 4 para.4) Lett. d)
88	(**) Primary energy used in the month of	December	Ec5_12	MWh		Article 4 para.4) Lett. d)
89	Fuel No 6		C6			Article 4 para.4) Lett. c)
90	Lower calorific value of Fuel No 6		Pci6	MJ/Kg or MJ/SM^3		Article 4 para.4) Lett. f)
91	(**) Primary energy used in the month of	January	Ec6_01	MWh		Article 4 para.4) Lett. d)
92	(**) Primary energy used in the month of	February	Ec6_02	MWh		Article 4 para.4) Lett. d)
93	(**) Primary energy used in the month of	March	Ec6_03	MWh		Article 4 para.4) Lett. d)
94	(**) Primary energy used in the month of	April	Ec6_04	MWh		Article 4 para.4) Lett. d)
95	(**) Primary energy used in the month of	May	Ec6_05	MWh		Article 4 para.4) Lett. d)
96	(**) Primary energy used in the month of	June	Ec6_06	MWh		Article 4 para.4) Lett. d)
97	(**) Primary energy used in the month of	July	Ec6_07	MWh		Article 4 para.4) Lett. d)
98	(**) Primary energy used in the month of	August	Ec6_08	MWh		Article 4 para.4) Lett. d)
99	(**) Primary energy used in the month of	September	Ec6_09	MWh		Article 4 para.4) Lett. d)
100	(**) Primary energy used in the month of	October	Ec6_10	MWh		Article 4 para.4) Lett. d)
101	(**) Primary energy used in the month of	November	Ec6_11	MWh		Article 4 para.4) Lett. d)
102	(**) Primary energy used in the month of	December	Ec6_12	MWh		Article 4 para.4) Lett. d)

(*) To be completed if the overall total efficiency parameters are not met as set out in ANNEX II, Paragraph 2) of Legislative Decree 20/2007

(**) Including primary energy consumed by any afterburners; excluding primary energy consumed by any separate boilers.

Date Completed	
Stamp and signature of legal representative of the producing company	

LEGAL REFERENCES

We give below the main legal references relating the recognition of high-efficiency cogeneration and the issue of guarantees of origin for the electricity produced. Reference should be made to these sources for any further information.

- ✓ Legislative Decree 79 of 16 March 1999: “Implementing Directive 96/92/EC concerning common rules for the internal market in electricity”.
- ✓ Legislative Decree 387 of 29 December 2003: “Implementing Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market”.
- ✓ Law 239 of 23 August 2004: “Reorganisation of the energy sector and delegation to the government to revise energy laws and regulations”.
- ✓ Resolution 42 of the Electricity and Gas Authority of 19 March 2002: “Conditions for recognition of the combined production of electricity and heat by cogeneration, within the meaning of Article 2 (8) of Legislative Decree 79 of 16 March 1999, and its subsequent amendments and additions.
- ✓ 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.
- ✓ Legislative Decree 20 of 8 February 2007: “Implementing Directive 2004/8/EC on the promotion of cogeneration based on a useful heat demand in the internal energy market, and amending Directive 92/42/EEC”.