# REPORT OF ITALY PURSUANT TO ARTICLE 3, PARAGRAPH 3, AND ARTICLE 5, PARAGRAPH 5, OF DIRECTIVE 2001/77/EC

## 1. PREMISE

Article 3, paragraph 3, of Directive 2001/77/EC of the European Parliament and Council of 27

September 2001, on the promotion of electricity produced from renewable energy sources in the internal electricity market, establishes that every two years the Member States should publish a report which includes an analysis of their success in meeting the national indicative targets, taking account, in particular, of climatic factors likely to affect the achievement of those targets and which indicates to what extent the measures taken are consistent with the national climate change commitment.

Article 5, paragraph 5, of the same Directive provides that in the same report the Member States should outline the measures taken to ensure the reliability of the guarantee of origin system provided for in Article 5.

Regarding the national indicative targets we will refer to the report adopted by Italy implementing Article 3, paragraph 2, of the Directive (Annex 1).

Concerning the guarantee of origin, the pertinent provisions are those in Article 11 of Legislative Decree No 387 of 29 December 2003 (with which Directive 2001/77/EC was transposed) and related implementing provisions.

## 2. ANALYSIS OF THE ACHIEVEMENT OF THE NATIONAL INDICATIVE TARGETS

Table 1 shows the forecasts of gross national electricity requirements and the national indicative targets identified in the report issued pursuant to Article 3, paragraph 2, of Directive 2001/77/EC.

| | Year | Gross Electricity Requirement[1] (TWh) | Internal Production from Renewable Sources (TWh) | Imports from Renewable Sources (TWh) | Consumption of Electricity from RenewableSources(% of gross consumption) |
|---|---|---|---|---|---|
| Estimate Reported | 2003 | 317 | 55 | 12 | 21.1 |
| | 2004 | 324 | 56 | 12 | 21.0 |
| Actual Figures | 2003 | 345 | 48.0 | 26.5 | 21.6 |
| | 2004 | 349 | 55.7 | 34.9(*) | 26.0 |

***Table I – Comparison between the estimated gross national electricity requirement from renewable energy sources (included in the report issued pursuant to Article 3, paragraph 2, of Directive 2001/77/EC) and the actual figures. Source: GRTN***

[1] It should be noted that, while in elaborating the estimates the gross requirement was defined as final consumption + losses, in this report the following definition is used: national electricity production, including auto-production, plus imports minus exports.

N.B.: The preliminary data for 2005 shows internal production from renewable energy sources at 49.7 TWh. The decline in relation to 2004 can be explained by a decrease in water resources, which caused a significant decline in the production of hydropower, counterbalanced by an increase in production from other renewable energy sources for approximately 1 TWh.

(*) Estimate: in 2004 a new method was introduced to certify the origin of imported electricity from renewable energy sources, in compliance with the provisions of Directive 2001/77/EC; imports during that year could therefore be subject to different methods of evaluation. These evaluations will be completed by the end of May 2006, in compliance with the provisions that regulate the green certificate mechanism.

In the future it is possible that there will be a decrease in the quantity of imported electricity certified as coming from renewable energy sources.

| | | |
|---|---|---|
| Source/Technology | | |
| Hydro > MW | | |
| Hydro ≤ MW | | |
| Geothermal | | |
| Wind | | |
| Solar | | |
| Biomass, biogases and waste | | |
| Of which, solid municipal waste | | |
| Total | | |
| | Actual figures | Targets |

***Table II –Differentiation of the internal capacity and the total production of electricity by source: comparison between actual figures (up to 2004) and future targets as included in the report (Annex I). Source: GRTN***

N.B.: from 2001, year of publication of Directive 2001/77/EC, the part represented by solid municipal waste is reported separately.

N.B.: The preliminary data for 2005 shows internal production from renewable energy sources at 49.7 TWh. The decline, in relation to 2004, can be explained by the decrease in water resources, which caused a significant decline in the production of hydroelectric power, partially compensated by an increase in production from other renewable energy sources for approximately 1 TWh.

To better comprehend the data, you will find, in Table II, the figures for internal production of electricity from renewable energy sources differentiated according to the source. Also this table is included in the annexed report.

It should be noted that in 2003 and 2004 the degree of success in meeting the target for consumption of electricity from renewable energy sources(% of gross consumption), as shown in Table I, is in line with the objectives.

However, it should be pointed out that:

- a significant role is played in this result by the figure relating to imports, higher than the forecast, caused, at least in 2004, by not having, as yet, complete availability, in that year, of the guarantee of origin instrument;

- on the other hand, internal production of electricity from renewable energy sources was significantly lower than expected in 2003, and, to a lesser extent, also in 2004.

Next, we will examine the evolution of the situation in the light of two considerations: imports, and internal production of electricity, taking into account the effect of climatic factors.

## 2.1. The problem of imports

Pursuant to Article 11 of Legislative Decree No 79 of 16 March 1999, imports from non-renewable energy sources are subject to the obligation of the minimum quota, as is internal production from non-renewable sources. For imports made until the end of 2004, the importers had the possibility of a waiver of this obligation through self-certification, to be presented to the company, GRTN - Gestore della Rete di Trasmissione Nazionale S.p.A. (National Transmission Grid Manager), (later Electricity System Manager) by the 31st of March of each year. This certification referred to the imports of the preceding year and guaranteed the origin of the imported electricity as coming from renewable sources. The self-certification had to be attested to by the manager of the foreign grid.

When Legislative Decree No 387 of 29 December 2003 came into force on 15 February 2004, the regulations were revised. In the case of imports from European Union Member States, the an exemption from the minimum quota obligation can be had if requested and a Guarantee of Origin is presented, issued pursuant to Article 5 of Directive 2001/77/EC, in the country where the production plant is located. For imports from countries that are not members of the European Union, the exemption from this obligation is granted only if there is an agreement between the Ministry of Productive Activities and the Ministry of the Environment and Territorial Conservation and the competent Ministries of the foreign country from which the electricity is imported, that establishes methods for verifying that the electricity imported actually comes from renewable energy sources, comparable to those provided by the European Community.

Now, in that Italy is an importer of electricity, both from EU Member States and non-Member States, it should be emphasized that, as yet, not all EU States have implemented a Guarantee of Origin system and that with regards to the others, no agreement has been made by the Italian Ministries.

It is therefore foreseeable that, in the years following 2004, the quantity of imported electricity for which the origin from renewable energy sources can be recognized will be significantly less than that which was reported in 2004.

## 2.2. National electricity production and the effect of climatic factors

From 1997 to 2004 electric power capacity from renewable energy sources increased by nearly 3200 MW, of which approximately 1070 MW from generating installations using conventional renewable energy sources (hydraulic and geo-thermal) and more than 2100 MW by new renewable energy sources(in particular, wind and biomass) and waste.

From the point of view of the increase in capacity, the results achieved in 2004 are in line with the targets for installed capacity set for 2006 (Table II). On the other hand, the production of electricity

is less than expected. This is the result of climatic factors for the most part, particularly significant for production from hydro sources.

In 2003 the production capability in hydro-electric plants was 2014 kWh/kW for those plants with capacity greater than 10 MW, and 3084 kWh/kW for plants with capacity up to 10 MW.

In 2004, the two figures were similar, respectively, 2306 kWh/kW and 3748 kWh/kW.

These figures should be compared with the production capability for the average year utilized for the forecasts2. If the hydro-electric plants had functioned as expected in 2003 and 2004, the production of hydro-electric power would have been 43.7 TWh in 2003 and 44.0 TWh in 2004.

Similar considerations can be made for the other sources, even if attributable to factors that are not only of a climatic nature.

On the one hand, the production capability for geothermal generating installations that was recorded in 2003 and 2004 was greater than expected, and so the actual amount produced was 5.34 TWh instead of 5.21 TWh in 2003, and 5.44 TWh instead of 5.02 TWh in 2004.

The opposite situation is noted for wind installations and those using biomass, biogases and waste, even if it is difficult to differentiate between climatic effects and other factors. On one hand, in fact, the production capability of these types of generating installations, in relation to the actual period of operation, is in line with or even superior to that of an average year. In fact, despite the increase in installed capacity due to the new installations placed in operation, there was a decrease in the specific energy produced because of the time necessary for testing and start-up of these new installations.

Table III shows production figures for 2003 and 2004 normalized with respect to the production capability in an average year.

It should be noted that the total normalized production amounts to approximately 57 TWh for 2003 and approximately 59 TWh for 2004, as compared to the targets of 55 TWh and 56 TWh.
It can be concluded that the extent of achievement of targets, as far as internal production is concerned, is satisfactory, considering also that the actual production figures differ from the estimated production figures due to climatic factors, above all, and, to a lesser extent, to issues arising from the actual date in which the generating installations began operating.

| Source/Technology | Normalized production (TWh) | |
|---|---|---|
| | 2003 | 2004 |
| Hydro > 10 MW | 35,13 | 35,26 |
| Hydro ≤10 MW | 8,62 | 8,75 |
| Geothermal | 5,20 | 5,00 |
| Wind | 1,75 | 2,26 |
| Solar | 0,01 | 0,01 |

[2] the following average annual production amounts were assumed: hydro-electric > 10 MW: 2400 kWh/kW; hydro-electric ≤ 10 MW: 3700 kWh/kW; geo-thermal: 7350 kWh/kW; wind: 2000 kWh/kW; photovoltaic 1100 kWh/kW; biomass and biogases: 6000 kWh/kW; waste: 5000 kWh/kW. These figures refer to an average year for hydroelectric, geothermal, drawn from the literature for biomass and waste, wind and photovoltaic.

| | | |
|---|---|---|
| Biomass, Biogases and Waste | 6,07 | 7,57 |
| Total | 56,78 | 58,85 |

***Table III – Production that would have been obtained in 2003 and 2004 with the specific production capabilities of an average year.***

## 3. EXTENT TO WHICH THE MEASURES TAKEN ARE CONSISTENT WITH THE NATIONAL CLIMATE CHANGE COMMITMENT

As provided in Law No 120 of 1 June 2002, in which Italy ratifies and implements the Kyoto protocol, on 19 December 2002 the CIPE approved the Resolution entitled "Revision of the guidelines for national policy and provisions to reduce emissions of greenhouse gases (Law 120/02)".

This Resolution provides that, for the period from 2008 to 2012, national production of electricity from renewable energy sources should contribute to the reduction of the greenhouse gas emissions through an increase in production of up to 75 TWh, reconfirming, therefore, the targets previously identified in the White Paper on promoting energy from renewable sources. The targets in the White Paper were then used to define the national indicative targets pursuant to Directive 2001/77/EC, as described in Annex 1. Therefore, the targets are consistent with the national climate change commitment.

It remains to determine whether the measures adopted are consistent with the achievement of the targets.

In this regard, Table II shows that the actual situation at the end of 2004 is very near that of the targets set for 2006.

From this we can conclude that the measures adopted have been adequate, so far, to achieve the intermediate targets set.

Naturally, it is still necessary that further measures be introduced to ensure that the projected growth trend in production from renewable energy sources is sufficient to meet the targets set for 2012.

To this regard, action is initiated through the provisions of Article 4, paragraph 1, of Legislative Decree No 387 of 29 December 2003, by which the Minister of Productive Activities with its own ministerial decrees issued in concert with the Minister of the Environment and Territorial Conservation, having consulted the unified Conference, sets down additional increases in the minimum quota for the three-year period 2007-2009 and the three-year period 2010-2012.

## 4. EVALUATION OF THE RELIABILITY OF THE GUARANTEE OF ORIGIN SYSTEM

Article 11 of Legislative Decree No 387 of 29 December 2003 determines that electricity produced in plants using renewable energy sources and production attributable to renewable energy sources in hybrid plants have the right, at the request of the producer, to receive the guarantee of origin of electricity produced from renewable energy sources.

the National Transmission Grid Manager (GRTN S.p.A.), since November 1 the manager of the electricity system, already having charge of the green certificates mechanism, will be responsible for issuing the guarantees of origin.

To implement Legislative Decree No 387 of 29 December 2003 the manager of the electricity system, GRTN, drew up a document entitled "Procedure for issuing the guarantee of origin of electricity produced from renewable energy sources" (Annex 2) with the purpose of providing the producers with technical and operational guidelines for requesting the guarantee.

The mechanism is based on a preliminary qualification of the plant as using renewable energy sources and a subsequent verification of how the electricity is actually produced, given that it serves as the basis for issuing a guarantee.

In 2004, at the request of the operators, the manager of the electricity system qualified 25 hydroelectric plants for an overall capacity of approximately 710 MW, in the light of which it is presumable that guarantees of origin for approximately 2.2 TWh will be issued.

At this time, the mechanism, even if adequately reliable, probably requires some refining if the operators intend to use it to attribute value to the "greenness" of the electricity from renewable energy sources on the electricity market. With regards to this aspect, it might be necessary to examine the problem of possible "multiple accounting", that is to say, the possibility that the same production is attributed value for its "greenness" several times. To avoid this, a system of annulment is under examination under which the owner of the certificate would be required to take it off the market as soon as it is sold, indicating at the same time the name of the buyer.

Regarding certification of electricity, it should be remembered that the manager of the electricity system is a partner, together with other grid managers, regulators and producers, in the E-Track project (European Tracking System for Electricity), financed as a part of the Intelligent Energy for Europe program. The project's purpose is to verify the use of possible harmonized methods to recognize electricity produced from renewable energy sources, providing proof of it to the final customer.

It should also be noted that the manager of the electricity system has acquired considerable experience with the RECS (Renewable Energy Certificate System, the internationally accepted mechanism of voluntary certification recognized today in 15 European countries. The manager of the electricity system is the organ which issues the certificates and is therefore a member of the AIB (Association of Issuing Bodies), founded in 2002 and since 2004 having among its associates organisations in charge of issuing RECS certificates as well as those issuing the Guarantees of Origin introduced by Directive 2001/77. To facilitate trade in these documents the AIB developed the technical specifications for the computer platform used by the members of the association in issuing and exchanging them. The two documents described above: RECS and GO are very similar certifications that differ only in their reference to regulations of a private nature, in the first case, and, in the second case, to European Community regulations. Because of these similarities, during the implementation phase of Directive 2001/77/EC, some countries, such as Austria, made the RECS certificates equivalent to the Guarantees of Origin provided for in Directive 2001/77/EC. In Italy, the RECS certificates were utilized to certify the origin from renewable energy sources of the electricity when supplied to industrial users and public administrations.

Due to the growing importance of certifications, the Authority for Electricity and Gas demonstrated its concern for the issue by publishing a paper entitled "Interventions to inform domestic users of tariffs and tariff options that provide price differentiations for electricity supplied in two or more

time slots and regulation of the offer to domestic users of guarantees of origin of electricity from renewable energy sources" (March 2005). With this document the Authority for Electricity and Gas raised some questions, in reference to the guarantee of origin, including the following:

"can the promotion of renewable energy sources be carried out also through marketing directly to domestic users the "guarantees of origin" that provide proof of the energy source used to produce the electricity. And if the answer is yes, being that domestic users are still bound by contract limitations, what are the regulatory mechanisms that could maximize the effectiveness of such a scheme, still bearing in mind the need to protect the interests of these customers;

"how would it be possible to ensure that the offer of "guarantees of origin" is transparent and non-discriminatory".

In this document the Authority hypothesised an offer of "guarantees of origin" to domestic customers through a single Purchaser, that is, through the distribution companies.
The process begun with this paper has not been concluded as yet.

In conclusion, therefore, we can state that even if the problem of reliability of the guarantee of origin is not particularly important at the moment, given that the market is still not particularly responsive to a choice in the type of source used for electric power generation, it is foreseeable that, with the evolution of the situation, there will be demands that can be anticipated by preparing a clear and reliable means of managing this scheme.

Annex 1

**CIRCULAR OF THE MINISTER OF PRODUCTIVE ACTIVITIES**

**on the subject of "National Indicative Targets for consumption of electricity produced from renewable energy sources for the 2003-2012 period and measures taken or planned, at the national level, to achieve these targets", pursuant to Article 3, paragraph 2, of Directive 2001/77/EC**

## 1. Premise

Article 3, paragraph 2, of Directive 2001/77/EC of the European Parliament and the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market requires that, not later than 27 October 2002 and every five years thereafter, Member States shall adopt and publish a report setting national indicative targets for future consumption of electricity produced from renewable energy sources in terms of a percentage of electricity consumption for the next 10 years. The report shall also outline the measures taken or planned, at national level, to achieve these targets. According to the Directive, to set these targets until the year 2010[3], the Member States shall:

a) take account of the reference values in the Annex to the Directive;
b) ensure that the targets are compatible with any national commitments accepted in the context of the climate change commitments accepted by the Community pursuant to the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

It should be remembered that the same Directive defines the consumption of electricity as national electricity production, including auto-production, plus imports, minus exports.

## 2. National Indicative Targets

During the preparation of Directive 2001/77/EC, determination of the Community Indicative Target of increasing the consumption of electricity from renewable energy sources by 2010, and consequentially the reference values for each Member State, as shown in the Annex, was based on the White Paper of the Commission on Renewable Energy Sources[4]. This White Paper stated that "The role of the Member States in implementing the action plan (of the Community White Paper) is essential. They must decide their specific targets in the context of the more general framework and draw up their own national policies to carry them out". In fact, Italy followed these recommendations in preparing its own White Paper for the promotion of renewable energy sources,

[3] In this document, to be consistent with the Directive and other national bills, at times reference will be made to 2010, at others to the 2008-2012 period; this depends, on the one hand, to the fact that the Directive provides that the targets be set for the next ten years; on the other hand, the same Directive refers to 2010 as the time period in which consideration must be given to the national commitments for reduction of emissions of greenhouse gases. Nonetheless, the Kyoto protocol sets targets to be met in the 2008-2012 period.

[4] Com(97) 599 Ref. of 26-1-1997 "Energy for the future: renewable sources of energy – White Paper for a Community strategy and action plan"

approved by the CIPE (Inter-ministerial Committee for Economic Planning) with Resolution No 126 on 6 August 1999.

The compatibility with the national commitment made as part of the climate change commitments accepted by the Community under the Kyoto Protocol will now be examined in the light of developments in international negotiations for the implementation of the Kyoto Protocol and the related provisions adopted by Italy.
Law No 120 of 1 June 2002, "Ratification and implementation of the Kyoto Protocol to the United Nations Framework Convention on Climate Change, done in Kyoto on 11 December 1997" provides that, in order to determine the national policies and measures necessary to reach the objective of reduction of emissions at the lowest cost, a national action plan for reducing the level of greenhouse gases and increasing their absorption, a report including the state of implementation, and a proposal for the amendment of CIPE Resolution No 137/98 (guidelines for national policies and measures for reducing emissions of greenhouse gases) be presented to the CIPE with an identification of the policies and measures needed to:

1) achieve the best results in terms of reduction of emissions through an improvement of the energy efficiency of the national economic system and a greater use of renewable energy sources;
2) an increase in the absorption of greenhouse gases through soil use activities, changes in soil use and forestry practices, in compliance with the provisions of Article 3 and 4 of the Kyoto Protocol;
3) utilise fully the flexible mechanisms of *joint implementation* and *clean development* established in the Kyoto Protocol;
4) acceleration of initiatives in research and development to introduce hydrogen as a fuel in the national energy and transportation systems, as well as the realisation of generating installations using biomass, of plants for the utilisation of thermal solar energy, of wind and photovoltaic installations for producing electricity and generating installations using solid municipal waste and biogas.

In December 2002, the CIPE did, in fact, approve the Resolution "Amendment of the guidelines for national policies and measures for reducing emissions of greenhouse gases (Law 120/02)". This Resolution provides that, for the 2008-2012 period, the contribution to the reduction of greenhouse gas emissions attributable to national production of electricity from renewable energy sources should increase up to 75TWh, reconfirming, essentially, the targets identified previously in the White Paper.

*It follows that the indicative targets set in the Italian White Paper are consistent with the national commitments accepted in the context of the climate change commitments accepted by the Community pursuant to the Kyoto Protocol to the United Nations Framework Convention on Climate Change, in compliance with the provisions of the Directive, as described under letter b) of the premise.*

In the Italian White Paper indicative targets were set, for each source, for 2002, 2006 and 2008-2012. For the electricity sector, the targets, expressed in capacity and in electric energy, are shown in Table I. To be complete Table I also shows the recorded figures for 1997, base year taken into account in the White Paper, and those for 2001[5]. It should be pointed out that the section "Biomass, biogas and waste" includes a forecast of the share of waste, including the portion that is not bio-degradable, which is expected to be 4 TWh for 2008-2012.

[5] It should be kept in mind that the provisional data relating to hydroelectric power refers to an average rainfall year.

| Source/Technology | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Hydro > MW | | | | | | | | | | |
| Hydro ≤ MW | | | | | | | | | | |
| Geothermal | | | | | | | | | | |
| Wind | | | | | | | | | | |
| Solar | | | | | | | | | | |
| Biomass, biogas and waste | | | | | | | | | | |
| Of which solid municipal waste | | | | | | | | | | |
| Total | | | | | | | | | | |

Table I – Status and forecast of the development of production of electricity from renewable energy sources up to 2008-2012

With this premise, in order to evaluate the indicative targets as instructed in the Directive, and therefore, in terms of "consumption of electricity from renewable sources as a percentage of gross national consumption", some assumptions must be made regarding the evolution of gross national consumption. It is also necessary to take into account the consumption of imported electricity from renewable energy sources.

In 2001, the gross national requirement (total consumption + losses) of electricity was 305 TWh. We can hypothesize that this figure will increase on an average of 2% per year, developing as shown in the following Table II [6]. Similarly, we assume that the national production of electricity from renewable energy sources will increase up to 76TWh in 2012, with the development, shown in the same table, projected on the basis of provisions taken as well as those under discussion, which we will discuss further below.

Concerning the contribution from imports of electricity produced from renewable sources, some aspects of the provisions taken, which will be described further below, should be illustrated here. On the basis of Article 11 of Legislative Decree 79/99, from 2002 producers and importers of electricity produced from renewable energy sources must feed into the electricity grid a minimum quota of electricity produced in plants fuelled by renewable sources that began functioning after 1 April 1999 (date in which Legislative Decree 79/99 entered into force). The quota, calculated on the basis of the production and importation of the previous year, was initially set at 2%. Regulation of the minimum quota obligation was provided for in the Ministerial Decree of 11 November 1999 which introduced green certificates; some additions were made to these provisions with the Ministerial Decree of 18 March 2002.

This last bill, in particular, sets out instructions for the importers of electric energy to request, in relation to the share of imported electricity produced from renewable sources, exemption from the minimum quota obligation, providing the following documents with their request:

a) declaration of the foreign operator which includes the quantity of electricity sold and the information identifying the production plant;

[6] Hypothesis taken from the CIPE Resolution "Amendment of the guidelines for national policies and measures for reducing emissions of greenhouse gases (Law 120/02)"

b) declaration, issued by the grid manager of the country where the production plant is located, that proves the origin of the electric energy as produced from renewable energy sources and which shows the information identifying the production plant. If the foreign grid manager is also the owner of the production facilities, the declaration must be furnished by the authority designated pursuant to Article 20, paragraph 3, of Directive 96/92/EC or an equivalent public agency.

Only for 2001, it is sufficient to supply the documents listed in point b).

On the basis of these regulations, the Manager of the National Transmission Grid (responsible for managing the mechanism, hereafter: Grid Manager) received documents which declare, for the year 2001, imports of electricity from renewable energy sources of 21.4 TWh, based on contracts that do not permit us to assert with certainty the portion of these imports which, in the coming years, will remain renewable. It is not, then, for the moment, possible to forecast with precision the portion of imported electricity which, in the next ten years, will be produced from renewable sources. Certainly overall imports of electricity are expected to increase, from 49TWh in 2001 to approximately 60 TWh over the next 10 years. Nonetheless, it is assumed conservatively that only approximately 50% of the current imports from renewable energy sources remain as such, supplying a share of approximately 12 TWh, with little variation over time.
With this hypothesis, the yearly indicative targets for consumption of electricity from renewable sources for the ten year period 2003-2012, expressed as a percentage of gross consumption, are shown in Table II.

*These indicative targets are consistent with the indications in the Annex to the Directive, and, therefore, the provisions of the same Directive, as described under letter a) of the premise, are met.*

In the case in which the hypotheses which led to the definition of the abovementioned targets should not become a reality, we refer to the contents of note 1 of the Annex to the Directive which reads that "Italy declares that 22% could be a realistic figure, assuming that in 2010 the gross national consumption of electricity is 340TWh. In taking into account the reference values listed in this Annex, Italy acts on the assumption that gross national production of electricity from renewable energy sources will represent up to 76TWh in 2010, a figure which includes the contribution of the non-biodegradable part of municipal and industrial waste utilised in compliance with the Community Law governing waste. To this regard it should be noted that the ability to reach the indicative target announced in the Annex depends on the actual level of internal demand for electric energy in 2010"[7].

We would like to underline the indicative nature of the targets set down herein, also in consideration of some of the uncertainties regarding the national capacity that can actually be assured from some of these sources. We refer, in particular, to biomass. According to the Commission White Paper of 1997, biomass should supply 230 Mtep in 2010; the Italian White Paper assigns a production of 17.8 TWh of electric energy production to biomass, biogases and waste in 2008-2012, of which 8 TWh from biomass. Experience is demonstrating just how difficult these targets are to reach. As an example, some figures which refer to a plant with a net capacity of approximately 20 MW, built with the currently available technology and functioning in a typical Italian agricultural area, are supplied below.

- Expected production: 0.14 TWh;
- Annual biomass requirement: 200,000 t;

[7] The observation is made that 2001 is the first year in which certification of renewability is available for imports of electricity, and therefore their potential contribution was not yet known when the Directive was being drawn up.

- Area to be used for the cultivation and harvesting of the biomass (hypothesising a fuel mix composed partially of crops cultivated as fuel and partially of discards from maintenance and management): 80,000 hectares
- Movement of the biomass: with 15 articulated vehicles, each delivering 3 loads of 200 t per day for 220 days per year
- Area used for the plant, including sections for the treatment and storage of the biomass and the security systems, approximately 22 hectares.

As is evident, these figures are significant and demonstrate the necessity to set up facilities sufficient to reach the proposed targets and, as a consequence, require an effort to organize the agriculture/forestry sectors, which in Italy are of considerable importance but are characterized by strong fragmentation in the ownership of agricultural land. Such an effort could require more than ten years to produce the significant results hypothesised above.

| Year | Gross Electricity Consumption (TWh) | National Production from Renewable Sources (TWh) | Imports from Renewable Sources (TWh) | Electricity Consumption from Renewable Sources (% of gross consumption) |
|---|---|---|---|---|
| | | | | |

Table II – Indicative targets for consumption of electricity from renewable energy sources for the ten-year period 2003-2012

We would like to point out again, in any case, that the ability to meet the indicative targets outlined above depends upon, in addition to the problems already cited, the actual development of gross national consumption of electricity. The values for this parameter shown in the table should be considered merely projections, intended only for calculating the targets for consumption of electricity from renewable energy sources according to the instructions provided in the Directive.
Similarly, it should be remembered that the production of electricity from hydroelectric and wind power depends upon the climatic conditions, a circumstance which could cause significant departures of the actual annual figures from the indicative values shown above.

## 3. Measures taken or planned

*3.1 Measures taken: economic incentives and the related operational mechanism*
In Italy, initial policies for giving new impulse to incrementing the use of renewable energy sources were laid out in the early 80s, with the preparation of the 1981 Energy Plan and with Law 382/82. More incisive efforts were made with the application of the 1988 Energy Plan, with Laws 9/91 and 10/91 and, above all, with the related provision CIP 6/92, which gave significant impulse to wider use of renewable sources, in that the capacity of generating installations using renewable energy sources built or in the process of being built under that provision is estimated to be approximately 2500 MW. The management of the provision did reveal, however, serious limitations, so the incentives were granted to initiatives proposed up to 30 June 1995 only.

A new scheme of incentives for the production of electricity from renewable energy sources was devised with Legislative Decree 79/99 in transposition of the European Directive on the internal electricity market, as well as by some implementing provisions. With this Legislative Decree, the electricity sector began to undergo extensive revamping, based on the principles of competition and free trade, while respecting the objectives of energy policy.

In line with this, an incentive program for the use of renewable energy sources was introduced based on the open market. Starting in 2002 the large producers and importers of electricity produced from non-renewable energy sources are obliged to feed into the grid system a minimum quota of electricity produced in generating installations running on renewable energy sources that began functioning after 1 April 1999 (date of entry into force of Legislative Decree 79/99). The quota is calculated on the basis of production and import figures for the preceding year, minus electricity produced in co-production, minus the consumption of the energy plant itself, minus exports, with an "exemption" of 100 GWh. The quota was set initially at 2%, and is subject to possible increase in the future. The minimum quota obligation is regulated through the provisions of the Ministerial Decree of 11 November 1999, which introduced the green certificates. Certain amendments and modifications were introduced with the Ministerial Decree of 18 March 2002. Below we will describe the logic of this new incentive mechanism, which, we repeat, is applicable to installations which began functioning after 1 April 1999.

The electricity produced is fed into the grid and participates in the electricity market, favoured by priority in dispatching[8]. In addition, the Grid Manager issues the green certificates to the producer, on request, and after the plant is qualified as a "plant using renewable energy sources". The green certificates constitute the proof that those who are subject to the minimum quota obligation have actually fulfilled their obligation. The green certificates can be sold on a parallel market separate from the electricity market, both within the context of a special sales centre set up within the company that manages the market and through negotiations between the holders of the green certificates and the producers or importers that are subject to the minimum quota obligation. In order to supply the operators with useful indications for evaluating the possibilities for pricing their green certificates, it was set down that the CIP 6/92 generating installations put into operation after 1 April 1999 have the right to green certificates. These are the property of the Grid Manager, however, and they are placed on the market at a fixed price, based on the difference between the purchase price of the related electricity (when also the incentive quota of the CIP 6/92 prices is recognized) and the proceeds of the sale of the same electricity.

Those who do not fulfil their obligation are subject to sanctions consisting in limits to their access to the general electric energy market.

The transparency of the system is guaranteed by periodic reports by the Grid Manager, including the available data regarding the amount of demand for green certificates (which corresponds with the minimum quotas) and the supply of green certificates both from non-CIP 6/92 plants and those in its possession. For the latter the projected market price is also reported.

Since the mechanism is designed to meet the objective of a minimum quota at the lowest cost for the consumers of electricity, there is competition not only among the operators, but also among the various technologies for exploiting renewable energy sources. The expectation is, therefore, that generating installations will be built that use the technologies that can be competitive. Nonetheless, there are certain mechanisms operating to support the more costly technologies; among these we should mention the programs in various regions for incentives in the form of grants as well as some government programs, such as those supporting the use of photovoltaic systems in building construction.

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[8] Before the start-up of the electric energy market, within which the renewable energy sources are given priority in dispatching, the Grid Manager developed both a market regulation scheme and a set of rules for dispatching. The first document indicates the means for affording priority in dispatching and regulates the green certificate mechanism. The second document introduces, as well, certain exemptions which favour plants fuelled by renewable sources, particularly those which cannot be programmed.

The Grid Manager, for his own part, has seen to activating every aspect necessary to ensure that the mechanism functions. In addition to the abovementioned periodic reports regarding the demand, the supply and the price of its own green certificates this body has also elaborated the procedure for obtaining the preliminary qualification of the installations as plants using renewable sources. The procedure regulates the issuing of a qualification for plants already in operation, of plants not yet in operation and of thermoelectric plants that use non-renewable and renewable sources in co-combustion.

The Grid Manager has also developed procedures for the issuing of green certificates, both for plants already in operation, based on the production recorded the previous year, and those not yet in operation. In this second case, the producer, besides furnishing valid data regarding the expected production figures, must demonstrate that it possesses the necessary authorisations to construct the plant and, in addition, supply guarantees in favour of the Grid Manager, in terms of electricity produced in other qualified plants already in operation, or in economic terms, proportionate to the cost of an equal value in green certificates.

In both cases, compensation mechanisms are provided should the actual production of electricity differ from that calculated in issuing the green certificates.

Concerning the functioning of the green certificate market, the Grid Manager keeps a record of the green certificates issued and the related transactions using a special computerized system. In fact, the number of green certificates each operator possesses is memorized in an "ownership account", an "electronic portfolio" within the Grid Manager's computerized system. A unique identification code is assigned to each *ownership account.* The *ownership account* is activated by the Grid Manager a) in favour of the producers that operate qualified generating installations, when the first green certificate is issued, b) in favour of the producers that are subject to the minimum quota obligation, when their self-certification regarding the production or importation of energy from non-renewable sources is received, c) in favour of the subjects that intend to trade green certificates, on the request of the operators themselves.

*3.2 Measures adopted: definition of the regulatory framework*

The principle regulatory issues, also addressed in the Directive, concern the authorisation procedures and access to the grid.

Regarding the authorisation procedures, the diffuse nature of the renewable energy sources and the fact that the related installations, relatively small in size, must necessarily be distributed around the country must be taken into consideration. This has led, within the context of a more generalized tendency towards decentralisation, to the widespread use of attributing administrative functions for the concession of authorisations to construct new installations to the Regions and local authorities.

Nonetheless, already with Law 10/91 the use of renewable energy sources was seen as in the public interest and works related to them were considered equivalent to the other public works declared not deferrable and urgent for the purpose of applying the law on public works.

In addition, Law 9/91 provided that the production of electricity from renewable energy sources be liberalised and that those intending to build generating installations using them had only to notify to that effect (having obtained, in any case, the other necessary permits and authorisations, relating to the construction, the environment, or the zoning).

In the Presidential Decree of 12 April 1996, amended by the Decree of the President of the Council of Ministers of 3 September 1999, the Regions were given the responsibility for deciding whether certain types of installations involving renewable energy sources (for example, thermal installations for producing steam and hot water with an overall heating capacity greater than 50 MW, wind generators, non-thermal industrial plants for producing energy, steam and hot water, diversion of surface waters and related works with a diversion greater than 200 litres per second or of underground water with diversion greater than 50 litres per second) should be required to undergo the procedure to determine their environmental impact, because of their characteristics and based on predetermined evaluation criteria. This procedure is, on the other hand, always required when the installations are located, even partially, within nature reserves or protected areas.

In fact, the Regions have adopted measures to implement these laws, in some cases, providing for the application of the procedure for evaluating the environmental impact and, in other cases, the application of a simplified procedure called "screening".

With Legislative Decree 112/98 the division of responsibility between National, Regional and Local Governments was completed with greater precision. Based on this decree the National Government is responsible for developing and defining the targets and strategies of national energy policy, as well as the adoption of bills to direct and coordinate a detailed energy program at the regional level. The Regions are in charge of the administrative functions concerning energy management, including those relating to renewable energy sources. The Local Authorities are attributed the task of controlling energy savings and rational energy use as well as those functions delegated to them through Regional legislation. In particular, in the context of the lines of strategy and coordination provided for in the Regional Energy Plans, the Provinces are attributed the responsibility for publishing and adopting programs for promoting renewable energy sources and energy savings.

Constitutional Law 3/01 further strengthens the role of the Regions in the area of national production, transmission and distribution of energy, establishing that these issues are the subject of concurring legislation, that is, the legislative power lies with the Regions, except when determining fundamental principles, which is reserved for legislation by the National Government.

In this regard, a draft bill was recently approved by the Council of Ministers to reform and reorganise the energy sector, in which the time limits set in the aforementioned Constitutional Law are detailed more precisely. The draft bill, under examination in Parliament, also contains important provisions for renewable energy sources. In that it is measure that is not yet in force, it will be discussed in the section dealing with planned measures.

### *3.3 Measures taken: connection to the grid*

Article 3 of Legislative Decree 79/99 stipulates that the Grid Manager, responsible for managing the transmission grid, has the obligation to connect all those that request access, without prejudice to the reliability and continuity of service and insofar as the technical rules and technical and economic conditions for access are respected as well as those of interconnection set by the Authority for Electricity and Gas. Article 9 of the same Legislative Decree places a similar obligation on the distribution system operators.

In implementation of this law, the Authority for Electricity and Gas issued Resolution No 50/02 "Conditions for providing connection service for electricity grids with tension greater than 1 kV whose managers are obliged to connect third parties"[9]. With this measure a process of redefinition of the rules for connection to the grid, by both users and plants, was begun. More precisely, the document provides that, within a given length of time, the grid managers should publish the instructions and contractual conditions for providing connection service by which it can be determined which are the parts of the connection installations pertaining to the connecting party and which are the parts pertaining to the grid manager. For some types of the latter it is foreseen that the conditions will be determined later to allow the related works to be built directly by the party requesting connection. In any case, the costs of connection to the grid are born by the requesting party.

### *3.4 Measures planned*

The current Parliament and Government have demonstrated the intention to provide realistic support of renewable energy sources, through the following bills:

A. Article 39 of Law 39/02 (Community Law 2001)

   With this law the Government is delegated to emanate, by September 2003, one or more Legislative Decrees for the transposition of Directive 2001/77/EC, respecting the following principles and criteria:

   a) identify the indicative targets for future consumption of electricity from renewable energy sources based on realistic forecasts, economically compatible with the development of the country;

   b) provide that the targets described in letter a) are met through production of electricity in generating installations located within the country, or through importation of electricity from renewable energy sources exclusively from countries that adopt measures to promote and provide incentives for renewable sources similar to those in force in Italy and which offer the same possibility to installations located in Italy;

   c) ensure that the support schemes are consistent with the principles of the electricity market and based on mechanisms that favour competition and the reduction of costs;

   d) simplify the administrative procedures for plant construction, respecting the division of responsibility among National, Regional and Local Governments;

   e) count waste, including the non biodegradable portion, among the energy sources approved to benefit from the special conditions reserved for renewable energy sources;

   f) provide that the application of the provisions of Article 43 does not lead to new or greater costs, nor lower revenues for the State.

B. The economic and financial planning document for the period 2003-2006 provides that, "the objective of creating an adequate margin of safety between supply and demand for electricity will be pursued, *with regards to diversification of the sources, developing the use of those that are renewable...".*

[9] Previously the Authority for Electricity and Gas with Resolution 224/00 also defined the technical-economic conditions for providing exchange of electricity produced from photovoltaic installations with capacity of less than 20 kW

C. The previously cited Law 120/02, to ratify and implement the Kyoto protocol, provides that, in order to determine the national policies and measures necessary to achieve the objective of reduction of emissions at the lowest cost, the revision of CIPE Resolution No 137/98 should provide for *a greater use of renewable energy sources, including the construction of installations for producing energy from biomass, wind and photovoltaic generating installations for the production of electricity and plants for producing electricity with combustibles derived from solid municipal waste and biogases.* Reference was made previously to the contents of the CIPE Resolution concerning the aspects related to the production of electricity from renewable energy sources.

D. The draft bill to reform and reorganise the energy sector recently approved by the Council of Ministers indicates, among the general objectives of the energy policy, *an increase in the use of renewable sources,* ensuring a balance in the use of each of the types and giving priority to those with a lower environmental and territorial impact. In implementation of the provisions of Chapter V of the Constitution, as modified by Constitutional Law 3/01, the administrative functions and responsibilities exercised by the National Government, for the energy sector, are described in detail. In particular, it is provided that it is the National Government that must set the minimum national targets for renewable energy sources and energy conservation and quantify the minimum obligatory quota of electricity from renewable sources. The draft bill also carries a specific article for the promotion of electricity from renewable sources. It provides that, from 2005 to 2012, the minimum quota of electricity produced from plants using renewable energy sources which must be fed into the national electricity system during the following year, pursuant to Legislative Decree 79/99, is incremented each year by 0.35 percentage points, while respecting the safeguards described in Article 9 of the Italian Constitution. Monetary sanctions are also introduced for non-fulfilment, in the amount of 1.5 times the sum necessary to purchase enough green certificates to fulfil the obligation.

The estimation is that, only as an effect of the provisions incrementing the minimum quota, the internal production of electricity from renewable energy sources should increase up to approximately 70 TWh (including the share from waste) by 2012.

The Minister of Productive Activities

Rome,

*This circular will be published in the bulletin of the Ministry of Productive Activities*

# Procedure for issuing the Guarantee of Origin

# of electricity produced from renewable energy sources

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## 1. PURPOSE

Legislative Decree No 387 of 29/12/2003 "Implementation of Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market" assigns National Transmission Grid Manager S.p.A (GRTN S.p.A.) the responsibility of issuing the Guarantee of Origin of electricity produced from renewable energy sources (hereafter also called GO).

Based on the Decree of the President of the Council of Ministers of 11 May 2004, on 1 November 2005 National Transmission Grid Manager ceded to Terna the responsibility for dispatching, transmission and development of the national transmission grid, maintaining the task of promoting the development of renewable energy sources. The company name was changed to "Manager of the Electricity System – GRTN S.p.A." (hereafter GRTN).

The purpose of this document is to provide the operators with a technical and operational guide for requesting GRTN to issue a GO.

It should be noted that this procedure replaces the identification of the installations for the certification of origin of electricity produced from renewable energy sources provided for in Article 5, paragraph 9, of the Ministerial Decree of 11/11/1999.

To issue the Guarantee of Origin of electricity produced from renewable energy sources there is also currently in preparation a new computerised system with limited access that will permit the operators to request the GO directly via internet.

The Guarantee of Origin of electricity produced from renewable energy sources was introduced through Art. 11 of the abovementioned Legislative Decree. Here below in italics is the full text of the pertinent articles.

***Article 11: Guarantee of Origin of electricity produced from renewable energy sources***

1. *Electricity produced in plants using renewable energy sources and the attributable production from hybrid plants has the right, on the request of the producer, to be issued a "guarantee of origin of electricity produced from renewable energy sources", hereafter called "guarantee of origin".*
2. *The Grid Manager is designated, pursuant to this decree, to issue the guarantees of origin described in point 1, as well as the green certificates.*
3. *The guarantee of origin is issued when the annual production, or the attributable production, is greater than 100 MWh, rounded off according to commercial principles.*



4. *In the case of plants using renewable energy sources, described in Article 2, paragraph 1, letters b) and c), the production eligible for a guarantee of origin is the same as that declared annually by the producer to the technical office of finance.*
5. *In the case of hybrid plants, the attributable portion of production is reported annually by the producer, in order to have the guarantee of origin issued, using a declaration substituting a notarized document signed by the legal representative, pursuant to Articles 21, 38 and 47 of Presidential Decree No 445 of 28 December 2000.*
6. *The guarantee of origin shows the location of the plant, the renewable energy source used to produce the electricity, the technology used, the capacity of the plant, the net production of electricity, or, in the case of hybrid plants, the attributable portion of production, referring to each calendar year. On the request of the producer and when the requisites are met, it also includes an indication of the green certificates assigned or any other certificate received in the context of the rules and regulations of systems certifying electricity from renewable energy sources, both*

*nationally and internationally, that are consistent with the provisions of Directive 2001/77/EC and recognised by the Grid Manager.*

7. *The guarantee of origin can be used only by the producers to which it is issued to demonstrate that the electricity guaranteed in this way was produced from renewable energy sources pursuant to this decree.*
8. *Subject to the provisions of Law No 675 of 31 December 1996, the Grid Manager will set up a computerised system with limited access, also to permit the verification of the data contained in the guarantee of origin of electricity produced from renewable energy sources.*
9. *The issuing by the Grid Manager of the guarantees of origin, of the green certificates or of other certificates pursuant to paragraph 6, is dependant upon a verification of the reliability of the data furnished by the requesting party and of their compliance with the provisions of this decree and of Legislative Decree No 79 of 16 March 1999 with subsequent implementing provisions. To these ends the Grid Manager can order inspections of the installations in operation or in construction, also by making use of the services of another organisation.*
10. *A Guarantee of Origin of electricity produced from renewable energy sources issued in other Member States of the European Union following the transposition of Directive 2001/77/EC is recognised also in Italy.*
11. *A Decree of the Minister of Productive Activities, in concert with the Minister of the Environment and Territorial Conservation, defines the conditions and instructions for recognition of the Guarantee of Origin of electricity produced from renewable energy sources issued by foreign countries, with which there are bilateral international agreements on the subject.*
12. *In carrying out the functions assigned in this article and assuming they are consistent with this decree, the Grid Manager safeguards the procedures introduced in Article 11 of Legislative Decree No 79 of 16 March 1999 and subsequent implementing provisions.*



13. *The Guarantee of Origin substitutes the certification of origin defined in the context of the directives described in paragraph 5 of Article 11 of Legislative Decree No 79 of 16 March 1999.*

***Article 2: Definitions***

*Paragraph 1 – a) renewable energy sources or renewable sources: non-fossil renewable energy sources (wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment*

*plant gas and biogases). In particular, by biomass it is meant the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste.*

***Article 20***

*Paragraph 3 – The organisations which import electricity from Member States of the European Union, subject to the obligation described in Article 11 of Legislative Decree No 79 of 16 March 1999 can request the Grid Manager, in relation to the portion of imported electricity produced from renewable energy sources, an exemption from that obligation. The request should be supported at least by a certified copy of the Guarantee of Origin issued, pursuant to Article 5 of Directive 2001/77/EC, in the country where the production plant is located. In the case of imports of electricity from third countries, the exemption from this obligation, related to the portion of imported electricity produced from renewable energy sources, is dependent upon the stipulation of an agreement between the Minister of Productive Activities and the Minister of the Environment and Territorial Conservation and the competent Ministers of the foreign country from which the electricity is imported, which provides that the imported electricity produced from renewable energy sources is guaranteed as such through a process similar to that described in Article 5 of Directive 2001/77/EC.*



## 2. GUARANTEE OF ORIGIN OF PRODUCTION FROM RENEWABLE ENERGY SOURCES

## 2.1 Classification of the installations using renewable sources for the request for GO.

A plant using renewable sources is formed by an integrated system of works and machinery intended to feed or activate one or more production groups generating electricity. The GO is issued to the production plant as a whole and not to the single production groups that comprise it. The types of production plants that can request a Guarantee of Origin of electricity produced from renewable energy sources are listed in Table 2.1.

TABLE 2.1 – CLASSIFICATION PLANTS USING RENEWABLE SOURCES

| PLANT TYPE | | PLANT SUB-TYPE | RENEWABLE SOURCE |
|---|---|---|---|
| *Marine* | | ▪ On – Shore | Tidal |
| | | ▪ Off - Shore | Wave |
| *Hydroelectric* | | ▪ flowing water<br>▪ reservoir<br>▪ basin<br>▪ aqueduct | Water Resources |
| *Wind* | | ▪ On – Shore<br>▪ Off - Shore | Wind |
| *Geothermal* | | | Geothermal Resources |
| *Solar* | | ▪ Photovoltaic<br>▪ Photo-thermoelectric | Sun |
| *Thermoelectric* | | ▪ steam (only for e.e.) | Waste (biodegradable portion) |
| | | ▪ steam with co-generation | Biogases |
| | | ▪ internal combustion (only for e.e.) | Liquid Bio-combustibles |
| | | ▪ internal combustion with co-generation | Woody Biomass |
| *Hybrid** | ▪ *Thermoelectric*** | | Conventional Source + Renewable Source |
| | ▪ *Other* | | |

** Hybrid plants are plants that produce electricity using both non-renewable and renewable sources, including plants with co-combustion. The plant sub-types could be the same as those for thermoelectric plants.*

*** Thermoelectric in co-combustion or with an integrated thermal cycle.*

As can be observed, 8 basic types of power plant deriving from the various typologies of renewable energy sources provided for in Article 2 of Legislative Decree No 387 of 29/12/2003 were singled out. Based on the decree one more type of plant was included: the hybrid plant. This type was further divided into thermoelectric hybrid plants which use co-combustion or have an integrated thermal cycle and other plant types (to be specified).

The above-mentioned 7 plant types using renewable sources will be used below to classify the plants that can request the granting of a Guarantee of Origin.

**2.2 Request for Guarantee of Origin**

The Operator may request the Guarantee of Origin of the electricity produced annually from renewable energy sources for a plant already in operation when the request is made to GRTN.

The GO can be requested for the net annual production of electricity of each specific installation using renewable energy sources, classified according to Table 2.1, if amount is greater than 100 MWh (rounded off according to commercial principles). In particular the GO can be requested:

1. on all electricity produced annually in plants using solar, wind, hydroelectric, marine, geo-thermoelectric, thermoelectric from woody biomass, bio-combustibles, or biogases;

2. on only the portion of electricity produced annually attributable to the biodegradable portion of waste (industrial and municipal) used in thermoelectric plants;

3. on only the portion of electricity attributable to renewable energy sources in hybrid plants.

The phases to be followed for obtaining the GO are the following:

**Phase 1: Request for identification of the plant using renewable energy sources for subsequent issuing of the GO (compiled by the Operator)**

The Operator requests that GRTN make a technical identification of the plant using renewable energy sources for the subsequent issuing of the GO, for each plant using renewable energy sources and for a given year, N, using the special request form and annexing the documents specified below. The request must be presented before 31 December of the year N.

**Phase 2: Technical identification of a plant using renewable energy sources (compiled by GRTN)**

The GRTN informs the Operator, within 90 days of receiving the request, that the plant has been identified as a plant using renewable energy sources for the subsequent issuing of the Guarantee of Origin (hereafter called IRGO identification). This IRGO identification will remain valid until the Operator presents a notification that the technical characteristics of the plant have been modified.

**Phase 3: Request for GO with reporting of the renewable production figures (compiled by the Operator)**

The Operator requests that GRTN issue the GO for the annual energy produced by the plant that received IRGO identification previously, providing a report of the gross and net production figures of renewable energy actually produced in the year N. The reporting of the production figures must be accompanied by the related UTF declaration and must be received by GRTN by 31 March of the year N + 1.

**Phase 4: Issuing the GO to the Operator (done by GRTN)**

The GRTN issues the Guarantee of Origin of electricity produced from renewable energy sources, with reference to the specific plant with previous IRGO identification, to the Operator for the year N pursuant to Legislative Decree No 387/03, Article 11. The GO for the year N is issued to the Operator within 30 days of the presentation of the request. In addition as provided in Article 11 of the abovementioned decree, paragraph 6, "only at the request of the producer and if there are the requisites, this will include, as well, an indication of any green certificates obtained or of other certificates issued in the context of rules and regulations of national or international systems for certification of energy from renewable sources, consistent with the provisions of Directive 2001/77/EC and recognised by the Grid Manager".

For the years following year N phases 3 and 4 will be repeated, at the voluntary request of the Operator. For example, for the year N + 1:

- The Operator should report the gross and net production of renewable energy actually produced in the year N + 1 accompanying it with the related UTF declaration. The declaration must be received by GRTN by 31 March of the year N + 2;
- GRTN will issue the GO for the year N + 1 to the Operator within 30 days of the presentation of the request.

**Phase 6: Modification of the technical characteristics of the plant by the Operator**

In the case of variations in the characteristics of the plant, including its closure, the Operator must notify the GRTN of the technical modifications made. In this case the procedure must start again from Phase 2.

## REQUEST FOR IRGO IDENTIFICATION (PHASE 1 –MADE BY THE OPERATOR)

With regards to Phase 1 of the request for IRGO identification the Operator must provide GRTN with a request for the technical identification of the plant for subsequent issuing of the GO, for each individual installation. An example of the request to be presented to GRTN is shown in Annex A1.

The request must be accompanied by:

1. a Report of Technical Identification[10] (RTI) of the characteristics of the IRGO plant using renewable energy sources including the technical annexes identified below; the (RTI) must be furnished (at least the part in text) on CD in PDF format;
2. the Technical Specifications Form referring specifically to the type of plant (see forms B1 to B4 included in Annex B[11]).

Because of the need to provide continuity with the certification of origin from renewable sources of the energy produced, issued by the Grid Manager pursuant to Article 5, paragraph 9 of the MICA Decree of 11 November 1999, the requests for issuing the GO are examined by the Commission formed within the GRTN organisation to grant IAFR qualification and to subsequently issue the green certificates[12].

When completed the requests should be sent, with the required annexes, to the following address:

**Manager of the Electricity System – GRTN S.p.A.**
**Commission for Qualification of Plants using Renewable Energy Sources**
**Viale Marasciallo Pilsudski, 92**
**00197 Rome**

PROCEDURE FOR ISSUING

THE GO

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[10] The Report of Technical Identification (RTI) corresponds with the report of technical recognition (RTR) developed to qualify the new IAFR installations (the concept of "identification" was used for plants using renewable energy sources existing prior to 01/04/1999 and the concept of "recognition" for IAFR installations built after 01/04/1999 which acquire the right to receive green certificates).

[11] The forms include the technical instructions necessary to fill them out

[12] See Technical Procedure for IAFR Qualification, Edition 2, Rev. 01 of 01/11/2005 available on the website.

Each GO request will be identified by the GRTN with a sequential number (N IRGO) for reference later when issuing the GO.
The Report of Technical Identification (RTI) of the plant using renewable energy sources must carry at least the following:

1. a brief general description of the plant that must identify the type of plant, according to the classification described above in paragraph 2.1, and the renewable energy source used;
2. the technical characteristics of the plant, the average gross and net production figures for the past 10 years[13], the grid tension and the name of the manager of the grid to which the plant is connected. The following documents and graphs must be annexed to the RTI (minimum requirement): the chorography, the general layout plan, the functional diagram of the plant, the electric single-line diagram for identifying the points of delivery of the electricity, the UTF declaration made when the electric workshop was opened;
3. photographic documentation of the plant comprised of at least 5 photographs (maximum 10) that are characteristic both of the productive installation and of its territorial location (the photos should be provided in digital form on a CD in the standard photographic formats together with the RTI; the maximum dimension of each photo should not exceed 1 MB);
4. in the case of thermoelectric plants that use industrial and municipal waste the calculation of the amount of electricity attributable to the biodegradable portion of the waste, for which the GO is being requested, must be shown in detail; suggested guidelines for recognising the biodegradable portion of industrial and municipal waste are provided in Annex C[14];
5. in the case of hybrid plants, the calculation of the amount of electricity attributable to the biodegradable portion of the waste for which the GO is being requested must be shown in detail;
6. the Operator's request, as provided for in Article 11, paragraph 8, of Legislative Decree No 387/03, to include in the GO, or not, an indication of any green certificates obtained or of other certificates issued in the context of rules and regulations of national or international systems for certification of energy from renewable sources, consistent with the provisions of Directive 2001/77/EC and recognised by GRTN.

**REQUEST FOR THE GUARANTEE OF ORIGIN (PHASE 3 – MADE BY THE OPERATOR)**

The Operator requests that GRTN issue a GO for the plant that has already received IRGO identification and communicates the gross and net renewable energy actually produced in the year



[13] In the case in which this data is not available a best estimate value should be indicated or the average based on the past years which are actually available.

[14] It should be noted that the means of calculation and the evaluation of the quota of electricity to be assigned to the biodegradable portion of the waste is, in any case, the exclusive responsibility of the Operator

N, an example of the request to be presented to GRTN is provided in Annex A2. The production data must be received by GRTN, as previously stated, before 31 March of the year N+1.

When completed, the requests should be sent, with annexed the UT F declaration or the self-certification if the plant is exempt from presenting the UTF declaration, to the following address:

**Manager of the Electricity System – GRTN S.p.A.**
**Commission for Qualification of Plants using Renewable Energy Sources**
**Viale Marasciallo Pilsudski, 92**
**00197 Rome**

### 2.3 Request for Guarantee of Origin for installations in operation which have already received IAFR qualification

In the case in which the installation has already been qualified as an IAFR installation in operation for a specific category of activity[15] by GRTN, the Operator must, in any case, present the request for identification in Phase 1, indicating the qualification number N IAFR.

In this case the Operator is not necessarily required to present the RTI again in document form with the required technical annexes because the Report of Technical Recognition (RTR) previously presented for the qualification as a plant using renewable energy sources will be utilised again. The Operator will have to annex the RTI (or the RTR) on a CD in pdf format with the photographic documentation of the plant as described in point 3 of the preceding paragraph 2.2.

We emphasize that the installation will, in general, be automatically identified by GRTN as IRGO unless they are thermoelectric or hybrid plants using industrial or municipal waste where the Operator will be required to present the RTI to identify quantitatively the biodegradable portion of the waste for which the GO is to be issued.



[15] See Technical Procedure for IAFR Qualification (Edition No 2, Revision 01 of 1 November 2005).

### 2.4 Request for Guarantee of Origin for installations already having certification of origin (ex CPR provided for in Art. 5, par. 9, of the MICA Decree of 11/11/1999)

The Operators that have already obtained the CPR Certificate of Origin from GRTN as per Article 5, paragraph 9, of the MICA Decree of 11/11/1999, must present the request for technical identification of the plant beginning with Phase 1 as indicated in paragraph 2.2, giving reference to the CPR number previously assigned by GRTN.

In this case the Operator is not necessarily required to present the RTI again in document form with the required technical annexes because the Technical Report previously presented for the CPR identification will be utilised again but must, in any case, annex the Technical Report previously presented for the CPR on a CD in pdf format with the photographic documentation of the plant as per point 3 of the preceding paragraph 2.2.

## 3. LOCATION VISITS FOR TECHNICAL INSPECTIONS

If it is deemed necessary, the GRTN, giving the Operator adequate notice, can make technical inspections at the plant to verify that the requirements for issuing the GO are met.
In addition, even after the GO has been issued, the GRTN reserves the right to make inspections of the plants to check for the required requisites and to verify, also by sampling, what the Operator has declared. If, from the results of these inspections, it should be found that the declarations by Operators which have already obtained the GO are false, they will automatically lose the benefits gained through the false declarations, pursuant to Article 75 of Presidential Decree No 446/2000, with the possibility of even more serious legal sanctions.

## 4. ANNEXES

**Annex A1 – Form Request for Technical Identification of the Plant for Issuing the Guarantee of Origin**
**Annex A2 – Form Request for the Guarantee of Origin**
**Annex B – Technical Specifications Form for the Plant using Renewable Energy Sources**
**Annex C – Indications for Calculating the Energy Attributable to the Biodegradable Portion**

## 5. REFERENCES

1) **Community Directive 2001/77/EC**
2) **Legislative Decree No 387 of 29/12/2003**
3) **GRTN: Technical Procedure for IAFR Qualification, Edition No 2, Rev. 01 of 01/11/2005**