

## DECREE of 19 February 2007

### **Criteria and arrangements to encourage the production of electrical energy by means of solar photovoltaic conversion, implementing article 7 of the legislative decree of 29 December 2003, No 387.**

THE MINISTER OF ECONOMIC DEVELOPMENT, in liaison with  
THE MINISTER FOR THE ENVIRONMENT AND THE PROTECTION OF LAND AND SEA,

Having regard to art. 7 (1) of the legislative decree of 29 December 2003, No 387, on the implementation of directive 2001/77/EC on the promotion of the electrical energy produced by renewable energy sources in the domestic electricity market, provides that the Minister of productive activities, in liaison with the Minister for the Environment and the Protection of Land and Sea, by agreement with the Unified Conference, adopts one or more decrees defining the criteria for encouraging the production of solar electrical energy;

Having regard to art. 7 (2) (d) of the legislative decree of 29 December 2003, No 387, provides that for the electricity produced by means of solar photovoltaic conversion the incentive criteria provide for a specific incentive tariff that is progressively reduced and of a duration that guarantees equitable remuneration of the investment and operating costs;

Having regard to the decrees of the Minister of productive activities in liaison with the Minister for the Environment and the Protection of Land of 28 July 2005 and 6 February 2006 (hereinafter referred to as: the interministerial decrees of 28 July 2005 and 6 February 2006), which were first implemented under the terms of art. 7 (2) (d) of the legislative decree of 29 December 2003, No 387;

Having regard to the law of 17 July 2006, No 233, converting into law, with amendments, the decree-law of 18 May 2006, No 181, laying down urgent provisions on the reorganisation of the powers of the Presidency of the Council of Ministers and of the Ministries, empowering the Government for the coordination of the provisions on functions and organisation of the Presidency of the Council of Ministers and of the Ministries;

Having regard to the legislative decree of 19 August 2005, No 192, and subsequent amendments and supplements, implementing directive 2002/91/EC on the energy performance of buildings;

Having regard to art. 52 of the legislative decree of 26 October 1995, No 504, and subsequent amendments and supplements, which provides, inter alia, that the electrical energy produced with systems powered by renewable sources not exceeding 20 kW is not subject to taxation;

Having regard to the decree of the President of the Republic of 12 April 1996 as amended and supplemented by the decree of the President of the Council of Ministers of 3 September 1999, which provides that for certain types of projects that are not located in conservation areas, including non-thermal industrial systems for the production of energy, steam and hot water, the competent authority verifies whether the characteristics of the project require that the environmental impact assessment procedure be carried out;

Having regard to art. 136 of the legislative decree of 22 January 2004, No 42, which identifies the buildings and areas of significant public interest subject to the provisions of title I of the third part of the same legislative decree;

Whereas the first results of the implementation of the interministerial decrees of 28 July 2005 and 6 February 2006 have shown the remarkable managerial complexity of the mechanism and an excessive imbalance in favour of the construction of large terrestrial systems;

Whereas photovoltaic systems can also be constructed with the associated modules on buildings;

Whereas photovoltaic systems with modules placed according to architectural integration or functional

criteria on elements of urban and street furniture, on the external surfaces of the shell of buildings or building structures, whatever their function and intended use, that are not located in conservation areas are not subject to the environmental impact assessment procedure because of the foregoing integration criteria;

Considered it necessary to make corrections to the mechanism introducing a simplified, stable and sustainable system of access to incentives;

Considered it appropriate to clarify that, under art. 52 of the aforementioned legislative decree of 26 October 1995, No 504, and subsequent amendments and supplements, photovoltaic systems with power not exceeding 20 kW are to be considered as non-industrial systems and therefore cannot be made subject to the environmental impact assessment procedure, provided they are not located in conservation areas;

Considered it necessary to direct the diffusion of photovoltaic technology towards more promising applications in terms of the potential for diffusion and the associated technological development and that permit reduced use of land, encouraging photovoltaic systems of which the modules are positioned or integrated in the external surfaces of the shell of buildings and in elements of urban and street furniture, while taking account of the higher costs of low-power systems and of certain specific applications;

Considered that photovoltaic energy should be supported as a matter of priority in combination with the efficient use of energy, in particular with arrangements organically connected with the provisions on the energy performance of buildings;

Having obtained the agreement of the Unified Conference mentioned in art. 8 of the legislative decree of 28 August 1997, No 281, laid down in the session of 15 February 2007;

Issues the following decree:

## **Art. 1. Purpose**

1. The present decree lays down the criteria and the arrangements for encouraging the production of electrical energy by solar photovoltaic systems, implementing art. 7 of the legislative decree of 29 December 2003, No 387.

## **Art. 2. Definitions**

1. The following definitions apply for the purposes of the present decree:

- a) A solar photovoltaic system (or photovoltaic system) is a system that produces electrical energy by means of the direct conversion of solar radiation through the photovoltaic effect; it mainly comprises a series of photovoltaic modules, hereinafter also referred to as modules, one or more inverters that convert direct current into alternating current and other minor electrical components;
- b1) A non-integrated photovoltaic system is a system with modules located on the ground or with modules located, with arrangements other than the types referred to in annexes 2 and 3, on elements of urban and street furniture, on the external surfaces of the shell of buildings or building structures, whatever their function and intended use;
- b2) A partially integrated photovoltaic system is a system of which the modules are positioned, according to the types listed in annex 2, on elements of urban and street furniture, on the external surfaces of the shell of buildings or building structures, whatever their function and intended use;
- b3) An architecturally-integrated photovoltaic system is a photovoltaic system of which the modules are integrated, according to the types listed in annex 3, in elements of urban and

street furniture, on the external surfaces of the shell of buildings or building structures, whatever their function and intended use;

- c) The nominal power (or maximum, peak or nameplate power) of a photovoltaic system is the electrical power of the system determined by the sum of the individual nominal power ratings (or maximum, peak or nameplate power ratings) of each photovoltaic module that forms part of the same system, measured under nominal conditions, as defined in d);
- d) The nominal conditions are the test conditions of photovoltaic modules in which the performance of the actual modules is measured according to a protocol defined by the standards of CEI EN 60904-1 set out in annex 1;
- e) The electrical energy produced by a photovoltaic system is the electrical energy measured at the output of the inverter that converts direct current into alternating current, including the transformer (if any), before it is supplied to the electricity users of the responsible actor and/or fed into the electricity grid;
- f) The connection point is the point on the electricity grid, for which the grid manager is responsible, in which the photovoltaic system is connected to the electricity grid;
- g) The date of entry into operation of a photovoltaic system is the earliest date from which all the following conditions are met:
  - g1) The system is connected in parallel with the electricity system;
  - g2) The necessary meters are installed to calculate the energy produced and exchanged or sold with the grid;
  - g3) The relevant contracts for the exchange or sale of the electrical energy are active;
  - g4) All the obligations connected with control of the access to grids are met;
- h) The responsible actor is the actor who is responsible for the operation of the system and who is entitled, subject to the provisions of the present decree, to request and obtain the incentive tariffs;
- i) The project supervisor is the manager of the electricity services (GSE S.p.a.) who is already the manager of the national transmission network (rete di trasmissione nazionale S.p.a.), mentioned in the decree of the President of the Council of Ministers of 11 May 2004;
- j) Upgrading is the technological intervention carried out on a system that has been in operation for at least two years consisting in an increase in the nominal power of the system by adding photovoltaic modules of which the total nominal power is not less than 1 kW, in order to increase the production of said system, as defined in k);
- k) The additional production of a system is the increase, obtained following upgrading and expressed in kWh, of the electrical energy produced annually, mentioned in e), in relation to the annual average production before the intervention, as defined in l); for upgrading interventions only on systems that are not fitted with the unit that measures the energy produced, the additional production is equal to the electrical energy produced by the system following the upgrading intervention multiplied by the ratio between the increase in the nominal power of the system obtained following the upgrading intervention and the total nominal power of the system following the upgrading intervention;
- l) The average annual production of a system is the arithmetic mean, expressed in kWh, of the values of the electrical energy effectively produced, mentioned in e), in the last two solar years, not including any periods of downtime of the system beyond normal maintenance requirements;
- m) Complete overhaul is an industrial plant-technological intervention carried out on a system that has been in operation for at least twenty years that involves replacing with new components at

least all the photovoltaic modules and the inverter that converts direct current into alternating current;

- n) A small isolated grid is an electricity grid as defined by art. 2 (17) of the legislative decree of 16 March 1999, No 79, and subsequent amendments and supplements;
- o) The system of net metering is the service mentioned in art. 6 of the legislative decree of 29 December 2003, No 387, under the decision of the Authority for Electricity and Gas of 10 February 2006, No 28/06, and any subsequent updates.

2. Furthermore, the definitions given in art. 2 of the legislative decree of 16 March 1999, No 79, with the exception of subparagraph 15, and the definitions given in art. 2 of the legislative decree of 29 December 2003, No 387, also apply.

### **Art. 3. Requirements for the beneficiaries of the incentive tariffs**

- 1. The following can benefit from the tariffs mentioned in art. 6 and the premium mentioned in art. 7:
  - a) natural persons;
  - b) legal entities;
  - c) public actors;
  - d) co-owners of housing units and/or of buildings organised in a joint structure.

### **Art. 4. Requirements for the components and systems for the purposes of access to the incentive tariffs**

- 1. Within the limits set in art. 13, access to the incentive tariffs mentioned in art. 6 and to the premium mentioned in art. 7 is granted on condition that the photovoltaic systems comply with the requirements set out in the following subparagraphs and provided the same systems have not benefited from the incentive tariffs introduced by the interministerial decrees of 28 July 2005 and 6 February 2006.
- 2. The nominal power of the systems must not be less than 1 kW.
- 3. The photovoltaic systems must have come into operation on a date 10 (1) following new construction operations, complete overhaul or upgrading. Systems that have come into operation following upgrading are eligible for the incentive tariffs, but only for the additional production obtained following the upgrading intervention and are not eligible for the premium mentioned in art. 7.
- 4. The photovoltaic systems and the associated components must comply with the technical standards set out in annex 1 and must have been constructed with new components, or at least with components that have not already been used in other systems.
- 5. The photovoltaic systems must belong to the types mentioned in art. 2 (1) (b1), (b2) and (b3).
- 6. The photovoltaic systems must be connected to the electricity grid or to small isolated grids. Each individual photovoltaic system must be characterised by one single connection point to the electricity grid that is not shared with other photovoltaic systems.
- 7. Shall also be eligible for the incentive tariffs provided for by the present decree systems that came into operation in the period between 1 October 2005 and the date of entry into force of the legislative measure mentioned in art. 10 (1), provided they were constructed in compliance with the provisions of the interministerial decrees of 28 July 2005 and 6 February 2006 and provided such systems do not benefit and have not benefited from the tariffs mentioned in the

same interministerial decrees. The tariff provided for by art. 6 relating to the systems that come into operation in 2007 applies to the aforementioned systems, in relation to their nominal power.

8. For the systems mentioned in subparagraph 7, the request for the granting of the relevant incentive tariff must be submitted within ninety days from the date of entry into force of the legislative measure mentioned in art. 10 (1) under penalty of loss of entitlement to the incentive tariffs. The request must be accompanied by the final entry into operation documentation listed in annex 4, with the following variants to point 5 of the same annex:
  - a) the text of point c) is replaced by the following: "compliance of the system with the provisions of art. 4 of the interministerial decree of 28 July 2005, as amended by the interministerial decree of 6 February 2006";
  - b) the text of point g) is replaced by the following: "g1) not to incur conditions that, within the meaning of the interministerial decree of 28 July 2005, art. 10, subparagraphs 2 to 5, entail the non-applicability of or the non-compatibility with the tariffs mentioned in art. 6;  
g2) to benefit [or not to benefit] from the tax deduction referred to in art. 2 (5) of the law of 27 December 2002, No 289, including extensions and amendments to the same deduction, which benefit involves a 30% reduction in the recognised incentive tariffs".
9. A further decree determines the criteria for encouraging the production of electrical energy by means of solar photovoltaic conversion in systems that are not connected to the electricity grid or to small isolated grids.

#### **Art. 5. Procedures for access to the incentive tariffs**

1. Actors who intend to construct a photovoltaic system and to benefit from the incentive tariffs mentioned in art. 6 must submit to the grid manager the preliminary draft of the system and request from the same manager a connection to the grid within the meaning of art. 9 (1) of the legislative decree of 16 March 1999, No 79, and art. 14 of the legislative decree of 29 December 2003, No 387. In the case of systems with nominal power not below 1 kW and not exceeding 20 kW, the actor must specify whether or not he intends to benefit from the system of net metering for the electrical energy produced.
2. The Authority for Electricity and Gas defines the arrangements and the deadlines according to which the grid manager communicates the delivery point and creates the connection of the system to the electricity grid, imposing penalties in the event of noncompliance and defining the arrangements according to which such conditions also apply to systems that have acquired the right to the incentive tariffs in the meaning of the interministerial decrees of 28 July 2005 and 6 February 2006. Pending such provisions, the standards in force apply *mutatis mutandis*.
3. Once the system has been completed, the actor who has constructed the system informs the grid manager that the work is complete.
4. Within sixty days from the date of entry into operation of the system, the responsible actor must send to the project supervisor a request for the granting of the relevant incentive tariff, together with the final entry into operation documentation listed in annex 4, without prejudice to the supplements defined in the provision mentioned in art. 10 (1). Noncompliance with the periods mentioned in the present subparagraph shall result in non-eligibility for the incentive tariffs mentioned in art. 6.
5. Within sixty days from the date of receipt of the request mentioned in subparagraph 4, together with all the documentation mentioned therein, the project supervisor, having verified compliance with the provisions of the present decree and taking into account art. 6, communicates to the responsible actor the recognised tariff.

6. The arrangements for the granting of the tariff mentioned in art. 6 and of the premium mentioned in art. 7 are set out in the provision mentioned in art. 10 (1).
7. Within the meaning of art. 12 (5) of the legislative decree of 29 December 2003, No 387, for the construction and operation of photovoltaic systems for which no authorisation is required, under the terms of the applicable national or regional legislation on the characteristics and location of the system, the single procedure mentioned in art. 12 (4) of the same legislative decree of 29 December 2003, No 387, does not apply, and the declaration of start of activity is sufficient for the same systems. If the acquisition of a single authorisation provision is necessary, by whatever name it may be known, the acquisition of the aforementioned provision replaces the single procedure mentioned in art. 12 of the legislative decree of 29 December 2003, No 387.
10. The aforementioned provisions also apply to systems that have acquired the right to the incentive tariffs within the meaning of the interministerial decrees of 28 July 2005 and 6 February 2006.
8. The systems mentioned in art. 2 (1) (b2) and (b3) and, within the meaning of art. 52 of the legislative decree of 26 October 1995, No 504, the photovoltaic systems with power not exceeding 20 kW are considered as non-industrial systems and are therefore not subject to the environmental assessment mentioned in the decree of the President of the Republic of 12 April 1996 as amended and supplemented by the decree of the President of the Council of Ministers of 3 September 1999, provided they are not located in conservation areas.
9. Within the meaning of art. 12 (7) of the legislative decree of 29 December 2003, No 387, photovoltaic systems can also be constructed in areas that are classified as agricultural by the town and country planning in force without the need to carry out the change in the intended use of the sites where the same photovoltaic systems are to be located.
10. The project supervisor has a computer platform for communications between the responsible actors and the same project supervisor, also relating to the premium mentioned in art. 7.

## Art. 6. Incentive tariffs and period of entitlement

1. The electrical energy produced by photovoltaic systems that were constructed in compliance with the present decree and came into operation in the period between the date of issue of the provision mentioned in art. 10 (1) and 31 December 2008 is eligible for an incentive tariff that, in relation to the nominal power and to the type of the system, mentioned in art. 2 (1) (b1), (b2) and (b3), has the value mentioned in the table below (values in euro/kWh produced by the photovoltaic system). The tariff specified on the basis of the same table is recognised for a period of twenty years from the date of entry into operation of the system and is constant at current prices throughout the twenty-year period.

		1	2	3
	Nominal power of the system P (kW)	Systems mentioned in art. 2 (1) (b1)	Systems mentioned in art. 2 (1) (b2)	Systems mentioned in art. 2 (1) (b3)
A	1 less than or equal to P less than or equal to 3	0.40	0.44	0.49
B	3 < P less than or equal to 20	0.38	0.42	0.46
C	P > 20	0.36	0.40	0.44

2. The electrical energy produced by photovoltaic systems that were constructed in compliance with the present decree and came into operation in any of the years in the period between 1 January 2009 and 31 December 2010, is eligible, in relation to the nominal power and the type of the system, for the incentive tariff mentioned in subparagraph 1, less 2% for each of the calendar years after 2008 with commercial rounding to the third decimal place, notwithstanding the period of twenty years. The value of the tariff is constant at current prices in the aforementioned period of twenty years.
3. With further decrees of the Minister for Economic Development in liaison with the Minister for the Environment and the Protection of Land and Sea, by agreement with the Unified Conference, to be issued every two years from 2009, the incentive tariffs for the systems that come into operation in the years after 2010 are redefined, taking into account the trend of prices of the energy products and components for photovoltaic systems and the results of the activities mentioned in articles 14 and 15.
4. In the absence of the aforementioned decrees, for the years after 2010 the tariffs defined by the present decree for the systems that come into operation in the year 2010 continue to apply.
5. The tariffs mentioned in subparagraphs 1 and 2 are increased by 5% with commercial rounding to the third decimal place in the following cases:
  - a) for photovoltaic systems in rows B) and C), column 1, of the table in subparagraph 1, of which the responsible actors use the energy produced by the system with arrangements that enable the same actors to acquire, with reference to the photovoltaic system alone, the title of autoproducer mentioned in art. 2 (2) of the legislative decree of 16 March 1999, No 79, and subsequent amendments and supplements;
  - b) for the systems of which the responsible actor is a public or *paritaria* (equal status) school of any type and level or a public health structure;
  - c) for systems that are integrated, within the meaning of art. 2 (1) (b3), in the external surfaces of the shell of buildings or building structures intended for agricultural use, replacing covers made of eternit or otherwise containing asbestos;
  - d) for systems of which the responsible actors are local authorities with a resident population less than 5,000 inhabitants on the basis of the most recent Istat census.
6. The entitlement to the increase mentioned in a), b), c) or d) of subparagraph 4 is not aggregable with the increases in the other points of the same subparagraph 4.
7. The obligations provided for by the tax rules on the production of electrical energy are excluded.

#### **Art. 7. Premium for photovoltaic systems in combination with an efficient use of energy**

1. The photovoltaic systems that are eligible for the incentive tariffs within the meaning of the present decree, operating according to a system of net metering and designed to supply, even partially, users located in or otherwise depending on housing units or buildings, as defined by art. 2 (1) of the legislative decree of 19 August 2005, No 192, and subsequent amendments and supplements, may benefit from an additional premium under the arrangements and conditions mentioned in the following subparagraphs.
2. Entitlement to the premium mentioned in subparagraph 1 applies if the responsible actor:
  - a) obtains an energy performance certificate relating to the building or housing unit mentioned in the legislative decree referred to in subparagraph 1, also indicating any interventions aimed at improving the energy performance of the building or housing unit and,

- b) following the date of entry into operation of the photovoltaic system, carries out interventions that are included among those specified in the same energy performance certificate that permit a reduction of at least 10% in the energy performance index of the building or housing unit in relation to the same index as specified in the energy performance certificate.

However, improvements due to the installation of the photovoltaic system are not considered in rating the above reduction. Until the date of entry into force of the national guidelines for the energy certification of buildings, mentioned in art. 6 (9) of the legislative decree of 19 August 2005, No 192, and subsequent amendments and supplements, the energy performance certificate is replaced by the energy performance qualification mentioned in the same legislative decree.

3. The execution of the interventions and the granting of the reduction in the energy requirements mentioned in subparagraph 2 are attested to by the production of a new energy certificate for the building or housing unit, according to the same arrangements mentioned in subparagraph 2.
4. Following the execution of the interventions, the responsible actor hands over to the project supervisor the energy certificates for the building or housing unit, mentioned in subparagraphs 2 and 3, requesting recognition of the premium.
5. The premium is recognised from the solar year following the date of receipt of the request mentioned in subparagraph 4, and consists in a percentage increase in the recognised tariff mentioned in art. 6 in equal proportion to half of the percentage reduction of the energy requirements achieved and attested to as provided for in subparagraph 3, with commercial rounding to the third decimal place. The aforementioned increase may not under any circumstances exceed 30% of the incentive tariff recognised on the date of entry into operation of the photovoltaic system. The increased incentive tariff is recognised for the entire remaining period of entitlement to the incentive tariff.
6. The execution of new interventions that achieve a reduction of at least 10% in the energy performance index of the building or housing unit in relation to the same index prior to the new interventions renews the entitlement to the premium, according to the same arrangements mentioned in the previous subparagraphs, notwithstanding the maximum limit of 30% mentioned in subparagraph 5.
7. The combined transfer of the building or housing unit and of the photovoltaic system that is eligible for the premium mentioned in the present article entails the concomitant granting of the entitlement to the incentive tariff and to the premium for the remaining period of entitlement.
8. The premium mentioned in subparagraph 1 also applies, subject to the 30% mentioned in subparagraph 5, to systems operating according to the system of net metering that are designed to supply, even partially, users located inside or otherwise depending on housing units or buildings, as defined by art. 2 (1) of the legislative decree of 19 August 2005, No 192, and subsequent amendments and supplements, if the aforementioned housing units or buildings have been subsequently completed by the date of entry into force of the present decree and achieve, on the basis of proper certification, an energy performance index of the building or housing unit that is at least 50% lower than the values shown in annex C, subparagraph 1, table 1, of the legislative decree of 19 August 2005, No 192, and subsequent amendments and supplements.

#### **Art. 8. Withdrawal and exploitation of the electrical energy produced by photovoltaic systems**

1. The electrical energy produced by photovoltaic systems with nominal power not exceeding 20 kW can benefit from the system of net metering. This arrangement continues to apply after the

end of the period of entitlement to the incentive tariff mentioned in art. 6.

2. The electrical energy produced by photovoltaic systems that do not benefit from the system of net metering, if it is fed into the electricity grid, is withdrawn according to the arrangements and the conditions set by the Authority for Electricity and Gas within the meaning of art. 13 (3) of the legislative decree of 29 December 2003, No 387, or sold on the market.
3. The benefits mentioned in subparagraphs 1 and 2 are additional to the tariffs mentioned in art. 6 and to the premium mentioned in art. 7.

#### **Art. 9. Conditions for the aggregability of incentives**

1. The incentive tariffs mentioned in art. 6 and the premium mentioned in art. 7 are not applicable to the electricity produced by photovoltaic systems for the construction of which public incentives are or have been granted that are of a national, regional, local or Community nature in principal and/or with a contribution to the loan interest with early capitalisation and that exceed 20% of the cost of the investment. The incentive tariffs mentioned in art. 6 and the premium mentioned in art. 7 are applicable to the electricity produced by photovoltaic systems for the construction of which public incentives are or have been granted that are of a local, regional or Community nature in principal and/or with a contribution to the loan interest with early capitalisation, only in cases where the responsible actor of the building is a public or *paritaria* (equal status) school of any type and level or a public health structure.
2. The incentive tariffs mentioned in art. 6 and the premium mentioned in art. 7 are not aggregable with:
  - a) the green certificates mentioned in art. 2 (1) (o) of the legislative decree of 29 December 2003, No 387;
  - b) the titles derived from the application of the implementing provisions of art. 9 (1) of the legislative decree of 16 March 1999, No 79, and of art. 16 (4) of the legislative decree of 23 May 2000, No 164.
3. The incentive tariffs mentioned in art. 6 and the premium mentioned in art. 7 are not applicable to the electricity produced by photovoltaic systems constructed for the purposes of compliance with the obligations arising from the legislative decree of 19 August 2005, No 192, and subsequent amendments and supplements, or of the law of 27 December 2006, No 296, that came into operation on a date following 31 December 2010.
4. The incentive tariffs mentioned in art. 6 and the premium mentioned in art. 7 are not applicable to the electricity produced by photovoltaic systems for which the tax deduction referred to in art. 2 (5) of the law of 27 December 2002, No 289, has been recognised or requested, even in the case of extensions of and modifications to the same deduction.
5. This does not affect the entitlement to benefit from the reduction in the value added tax for the systems that use solar energy for the production of heat or energy mentioned in the decree of the President of the Republic of 26 October 1972, No 633, and in the decree of the Minister of Finance of 29 December 1999.
6. Within the meaning of art. 7 (2) (d) of the legislative decree of 29 December 2003, No 387, the incentive tariffs granted within the meaning of the present decree, including the premium mentioned in art. 7 and the benefits mentioned in art. 8, are intended to guarantee equitable remuneration of the investment and operating costs of photovoltaic systems.

#### **Art. 10. Arrangements for the granting of the incentive**

1. With a provision issued within sixty days from the date of entry into force of the present decree,

the Authority for Electricity and Gas updates the provisions issued to implement the interministerial decrees of 28 July 2005 and 6 February 2006 for the purposes of defining the arrangements, the periods and the conditions for the granting of the incentive tariffs mentioned in art. 6 and of the premium mentioned in art. 7 and for the verification of compliance with the provisions of the present decree, in particular articles 5 and 11.

2. With its own provisions the Authority for Electricity and Gas determines the arrangements with which the resources for the granting of the incentive tariffs mentioned in art. 6 and of the premium mentioned in art. 7 and for the management of the activities provided for by the present decree are covered by the proceeds from tariff component A3 of the electrical energy tariffs.

#### **Art. 11. Verifications and inspections**

1. Without prejudice to the other consequences provided for by the law, false declarations relating to the provisions of the present decree entail loss of entitlement to the incentive tariff on the entire production and for the entire period of entitlement to the same incentive tariff and loss of entitlement to the premium mentioned in art. 7. The project supervisor defines and implements arrangements for inspection, including by means of verifications of the systems, of the declarations made by the responsible actors.

#### **Art. 12. Objective of nominal power to be installed**

1. The national objective of accumulated photovoltaic nominal power to be installed is set at 3,000 MW by 2016.

#### **Art. 13. Maximum limit of the cumulative electrical power of all the systems that may be eligible for the incentive tariffs**

1. The maximum limit of the cumulative electrical power of all the systems that, within the meaning of the present decree, may be eligible for the incentive tariffs mentioned in art. 6 and the premium mentioned in art. 7 is set at 1,200 MW, without prejudice to subparagraph 2.
2. In addition to the systems that contribute to the attainment of the cumulative electrical power mentioned in subparagraph 1, all the systems that come into operation within fourteen months from the date, communicated by the project supervisor on his own Internet site, on which the power limit of 1,200 MW mentioned in subparagraph 1 is reached are entitled to the incentive tariffs mentioned in art. 6 and to the premium mentioned in art. 7. The aforementioned period of fourteen months is increased to twenty-four months only for the systems of which the responsible actors are public actors.
3. From the date of entry into force of the present decree, the project supervisor publishes on his own Internet site and continuously updates the accumulated power of the systems that have come into operation within the framework of the interministerial decrees of 28 July 2005 and 6 February 2006 and, separately, the accumulated power of the systems that have come into operation within the framework of the present decree.
4. With the decree of the Minister of Economic Development, in liaison with the Minister for the Environment and the Protection of Land and Sea, to be adopted within six months following the date of attainment of the limit mentioned in subparagraph 1, measures are defined for the attainment of the objective mentioned in art. 12.

#### **Art. 14. Monitoring of diffusion, dissemination of the results and information activities**

1. By 31 October of each year, the project supervisor sends to the Ministry of Economic Development, to the Ministry for the Environment and the Protection of Land and Sea, to the regions and autonomous provinces, to the Authority for Electricity and Gas and to the Observatory mentioned in art. 16 of the legislative decree of 29 December 2003, No 387, a report on the activities carried out and the results achieved following the implementation of the interministerial decrees of 28 July 2005 and 6 February 2006 and of the present decree.
2. With separate reference to the interministerial decrees of 28 July 2005 and 6 February 2006 and to the present decree, the report mentioned in subparagraph 1 provides, for each region and autonomous province and for each type of system, the location of the photovoltaic systems, the power annually brought in operation, the associated energy production, the values of the incentive tariffs granted, the cumulative amount of the incentive tariffs granted in each of the previous years and any other data deemed to be useful.
3. If, within thirty days following the date of sending, the project supervisor does not receive comments from the Ministry of Economic Development or the Ministry for the Environment and the Protection of Land and Sea, the report mentioned in subparagraph 1 is made public.
4. The project supervisor publishes on his own site a series of photographs of examples of the photovoltaic systems that have come into operation, using the photographs transmitted within the meaning of art. 5 (4).
5. Also for the purposes of art. 15, the project supervisor and the ENEA organise on a significant sample of systems of which the responsible actors are public actors and in a way that represents the different technologies and applications a system for the collection of the technological and operational data. The same project supervisor, through a specific protocol by agreement with the Ministry of Public Education, with the ANCI, with the UPI and with the UNCEM, organises a technical-operational system to facilitate, for interested academic establishments, the start of the procedures for the request of incentive tariffs according to the arrangements laid down in art. 5.
6. The project supervisor promotes information actions aimed at encouraging accurate knowledge of the incentive mechanism and of the associated arrangements and conditions of access mentioned in the present decree, also intended for public actors, even together with the protocol mentioned in subparagraph 5, and for the actors who might finance the systems.

#### **Art. 15. Technological monitoring and promotion of the development of technologies**

1. The ENEA, in coordination with the project supervisor, carries out technological monitoring in order to assess the performance of the technologies used for the construction of the photovoltaic systems set up within the framework of the interministerial decrees of 28 July 2005 and 6 February 2006 and within the framework of the present decree, mentioning the technological innovation requirements. An annual report, also including an analysis of the performance indices of the systems grouped according to zone, according to the technology of the photovoltaic modules and of the inverter that converts direct current into alternating current and according to the type of the actual systems, is transmitted by 31 December of each year to the Ministry of Economic Development and to the Ministry for the Environment and the Protection of Land and Sea.
2. In order to encourage the development of innovative technologies for photovoltaic conversion that also increase the conversion efficiency of the components and of the systems, also on the basis of the activities mentioned in subparagraph 1 and art. 14, the Minister of Economic Development, in liaison with the Minister for the Environment and the Protection of Land and Sea, by agreement with the Unified Conference, adopts the actions required to promote the development of the aforementioned technologies and of the companies, within the nominal power limit of 100 MW, in addition to the power mentioned in art. 13, subparagraphs 1 and 2.

## **Art. 16. Final provisions**

1. The provisions of the interministerial decrees of 28 July 2005 and 6 February 2006 continue to apply exclusively to photovoltaic systems that have already obtained, by 2006, entitlement to the incentive tariffs defined by the same decrees. To this end, in both subparagraphs 2 and 3 of art. 2 of the interministerial decree of 6 February 2006 the words "for each of the years from 2006 to 2012 inclusive" are therefore replaced by: "until 2006 inclusive".
2. The actors who have obtained entitlement to the incentive tariffs in the meaning of the interministerial decrees of 28 July 2005 and 6 February 2006 must send the project supervisor notice of the start of work, of the end of work and of entry into operation within ninety days from the respective deadlines provided for by art. 8 of the interministerial decree of 28 July 2005. If the dates of the start of work, end of work and entry into operation fall before the date of entry into force of the present decree and have not already been communicated, the aforementioned period of ninety days starts from the date of entry into force of the present decree.
3. In case of loss or waiver of the entitlement by actors who have been allowed to benefit from the incentive tariffs introduced by the interministerial decrees of 28 July 2005 and 6 February 2006, from the date of entry into force of the present provision the associated lists or rankings are not applied.
4. The power made available following the loss of entitlement to the incentive tariffs mentioned in the interministerial decrees of 28 July 2005 and 6 February 2006 or if the systems are not constructed should be considered as included in the limit mentioned in the previous art. 13 (1).
5. The deadlines set for the start of the work and for the end of the work of construction of the photovoltaic systems that have been granted entitlement to the incentive tariffs in the meaning of the interministerial decrees of 28 July 2005 and 6 February 2006 may be postponed, upon a request by the responsible actor submitted to the project supervisor, for a period of time not exceeding six months, but exclusively in the case of proven delay in the issue of the authorisations required for the construction and operation of the system, beyond the control of the responsible actor.
6. Without prejudice to art. 4 (7), actors who have submitted requests for access to the incentive tariffs introduced by the interministerial decrees of 28 July 2005 and 6 February 2006 and who have not been allowed to benefit from the same tariffs because of the attainment of the annual available power limit do not have any priority for the purposes of access to the incentive tariffs mentioned in the present decree. Such actors may have access to the incentive tariffs mentioned in the present decree subject to the associated provisions.
7. The present decree comes into force on the day following the date of publication in the Official Gazette of the Italian Republic.

Rome, 19 February 2007

The Minister of Economic Development

Bersani

The Minister for the Environment and the Protection of Land and Sea

Pecoraro Scanio

## **Annex 1**

**The photovoltaic modules must be tested and checked by accredited laboratories for the specific tests required to check the modules, in accordance with standard UNI CEI EN ISO/IEC 17025. Such laboratories must be accredited by the EA (European Accreditation Agreement) or must have signed mutual recognition agreements with the EA..**

Photovoltaic systems must be constructed with components that meet the following two conditions:

a)  $P_{cc} > 0.85 * P_{nom} * I / I_{stc}$ ,

where:

- $P_{cc}$  is the power in direct current measured at the output of the photovoltaic generator, with accuracy greater than  $\pm 2\%$ ;
- $P_{nom}$  is the nominal power of the photovoltaic generator;
- $I$  is the radiation [ $W/m^2$ ] measured on the plane of the modules, with accuracy greater than  $\pm 3\%$ ;
- $I_{stc}$ , equal to  $1,000 W/m^2$ , is the radiation in standard test conditions;

This condition must be checked for  $I > 600 W/m^2$ .

b)  $P_{ca} > 0.9 * P_{cc}$ ,

where:

$P_{ca}$  is the active power in alternating current measured at the output of the inverter that converts the direct current generated by the photovoltaic modules into alternating current, with accuracy greater than  $2\%$ .

The measurement of the  $P_{cc}$  and the  $P_{ca}$  must be carried out in conditions of radiation ( $I$ ) on the plane of the modules higher than  $600 W/m^2$ .

If in the course of said measurement it is found that the working temperature of the modules, measured on the rear face of the same, is higher than  $40^\circ C$ , correction of the temperature of the same power is permitted. In this case, the above condition a) becomes:

a)  $P_{cc} > (1 - P_{tpv} - 0.08) * P_{nom} * I / I_{stc}$ ,

where:

$P_{tpv}$  indicates the thermal losses of the photovoltaic generator (taken from the datasheets of the modules), while all the other losses of the same generator (optic, resistive, voltage drop on diodes, connection fails) are typically taken as being equal to  $8\%$ .

Note:

The thermal losses of the photovoltaic generator  $P_{tpv}$ , based on the known temperature of the photovoltaic cells  $T_{cel}$ , can be determined by:

$$P_{tpv} = (T_{cel} - 25) * y / 100$$

or, based on the known ambient temperature  $T_{amb}$ , by:

$$P_{tpv} = [T_{amb} - 25 + (NOCT - 20) * /800] * y / 100,$$

where:

$y$  = coefficient of temperature of power (this parameter, supplied by the constructor for modules in crystalline silicon, is typically equal to  $0.4 \div 0.5\%/^\circ C$ );

NOCT = Nominal working temperature of the cell (this parameter, supplied by the constructor, is typically equal to  $40 \div 50\%/^\circ C$ , but it can reach  $60^\circ C$  for modules in the rear chamber);

$T_{amb}$  = Ambient temperature; in the case of systems in which one face of the module is exposed to

the outside and the other face is exposed to the inside of a building (as in skylights), the temperature is to be considered as the average of the two temperatures;

$T_{cel}$  = The temperature of the cells of a photovoltaic module; it can be measured by means of a thermoresistive sensor (PT100) attached to the back of the module.

The photovoltaic systems and the associated components, of which the types are discussed in the present decree, must, where relevant, comply with the requirements set out in the following technical standards, including any variants, updates and extensions issued at a later date by the standards organisations mentioned:

CEI 64-8: Standards for electrical plant utilising nominal voltage of no more than 1000 V in alternating current and 1500 V in direct current;

CEI 11-20: Electric energy production systems and uninterruptible power systems connected to category I and II networks;

CEI EN 60904-1(CEI 82-1): Photovoltaic devices Part 1: Measurement of photovoltaic current-voltage characteristics

CEI EN 60904-2 (CEI 82-2): Photovoltaic devices – Part 2: Requirements for reference solar cells

CEI EN 60904-3 (CEI 82-3): Photovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data

CEI EN 61727 (CEI 82-9): Photovoltaic (PV) systems – Characteristics of the utility interface

CEI EN 61215 (CEI 82-8): Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval

CEI EN 61646 (82-12): Thin-film terrestrial photovoltaic (PV) modules - Design qualification and type approval

CEI EN 50380 (CEI 82-22): Datasheet and nameplate information for photovoltaic modules

CEI 82-25: Guide to the construction of photovoltaic generation systems connected to medium- and low-voltage electrical grids;

CEI EN 62093 (CEI 82-24): Balance-of-system components for photovoltaic systems - Design qualification natural environments

CEI EN 61000-3-2 (CEI 110-31): Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current  $\leq 16$  A per phase)

CEI EN 60555-1 (CEI 77-2): Disruptions in the supply networks produced by domestic electrical devices and similar equipment - Part 1: Definitions;

CEI EN 60439 (CEI 17-13): Low voltage switchgear and controlgear assemblies;

series made up of:

CEI EN 60439-1 (CEI 17-13/1): Low-voltage switchgear and controlgear assemblies – Part 1: Type-tested and partially type-tested assemblies;

CEI EN 60439-2 (CEI 17-13/2): Particular requirements for busbar trunking systems (busways);

CEI EN 60439-3 (CEI 17-13/3): Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use - Distribution boards;

CEI EN 60445 (CEI 16-2): Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals and of terminations of certain designated conductors, including general rules for an alphanumeric system;

CEI EN 60529 (CEI 70-1): Degrees of protection provided by enclosures (IP Code);

CEI EN 60099-1 (CEI 37-1): Surge arresters – Part 1: Non-linear resistor type gapped surge arresters for a.c. systems;

CEI 20-19: Rubber-insulated cables with nominal voltage not exceeding 450/750 V;

CEI 20-20: Polyvinylchloride-insulated cables with nominal voltage not exceeding 450/750 V;

CEI EN 62305 (CEI 81-10): Protection against lightning;

series made up of:

CEI EN 62305-1 (CEI 81-10/1): General principles;

CEI EN 62305-2 (CEI 81-10/2): Risk management;

CEI EN 62305-3 (CEI 81-10/3): Physical damage to structures and life hazard;

CEI EN 62305-4 (CEI 81-10/4): Electrical and electronic systems within structures;

CEI 81-3: Average values of the number of lightning strikes by year and by square kilometre;

CEI 0-2: Guide to the definition of planning documentation for electrical systems;

CEI 0-3: Guide to the completion of the declaration of conformity and associated annexes for law No 46/1990;

UNI 10349: Heating and cooling of buildings. Climatic data;

CEI EN 61724 (CEI 82-15): Photovoltaic system performance monitoring – Guidelines for measurement, data exchange and analysis;

CEI 13-4: Electrical energy measurement systems - Composition, accuracy and verification;

CEI EN 62053-21 (CEI 13-43): Electricity metering equipment (a.c.) – Particular requirements – Part 21: Static meters for active energy (classes 1 and 2);

EN 50470-1 and EN 50470-3 being assessed for national acceptance with CEI;

CEI EN 62053-23 (CEI 13-45): Electricity metering equipment (a.c.) – Particular requirements – Part 23: Static meters for reactive energy (classes 2 and 3);

CEI 64-8, part 7, section 712: Solar photovoltaic (PV) supply systems.

In the case of photovoltaic systems with power greater than 3 kW constructed according to the types of interventions that are valid for the purposes of recognition of architectural integration (article 2 (1) (b3)), by way of derogation from the certifications requested above, photovoltaic modules are accepted that are not certified according to the standards CEI EN 61215 (for modules in crystalline silicon) or CEI EN 61646 (for thin film modules) only if certified products are not commercially available that contribute towards the type of integration planned for the specific system. In this case, a declaration is requested of the constructor that the product is designed and constructed to be able to pass the tests required by standard CEI EN 61215 or standard CEI EN 61646. The declaration must be supported by certificates issued by an accredited laboratory, obtained on similar modules, where available, or supported by adequate technical argumentation. The laboratory must be accredited by the EA (European Accreditation Agreement) or must have signed mutual recognition agreements with the EA.

Insofar as they are compatible with the above-listed standards, the technical documents issued by the grid managers with application provisions for the connection of photovoltaic systems connected to the electricity grid are also applicable.

## **Annex 2**

### **TYPES OF INTERVENTIONS VALID FOR THE PURPOSES OF THE RECOGNITION OF PARTIAL**

## **ARCHITECTURAL INTEGRATION (ART. 2 (1) (B2))**

- Photovoltaic modules installed on flat roofs and terraces of buildings. If there is a peripheral railing, the maximum quota, in relation to the median axis of the photovoltaic modules, must not exceed the minimum height of the same railing.
- Photovoltaic modules installed on roofs, covers, facades, railings or parapets of buildings coplanar with the support surface without the replacement of the materials that constitute the support surfaces themselves.
- Photovoltaic modules installed on elements of urban furniture, acoustic barriers, cantilever roofs, pergolas and sheds coplanar with the support surface without the replacement of the materials that constitute the support surfaces themselves.

## **Annex 3**

### **TYPES OF INTERVENTIONS VALID FOR THE PURPOSES OF THE RECOGNITION OF ARCHITECTURAL INTEGRATION (ART. 2, (1) (B3))**

- Replacement of the covering materials of roofs, roofing, facades of buildings with photovoltaic modules having the same inclination and architectural function as the covered surface.
- Cantilever roofs, pergolas and sheds in which the covering structure is made up of the photovoltaic modules and the associated support systems.
- Parts of the covering of buildings in which the photovoltaic modules replace the transparent or semi-transparent material designed to permit the natural lighting of one or more internal openings.
- Acoustic barriers in which some of the sound insulation panels are replaced by photovoltaic modules.
- Elements of lighting systems in which the surface exposed to the solar radiation of the reflecting elements is made up of photovoltaic modules.
- Shading devices of which the structural elements are made up of the photovoltaic modules and the associated support systems.
- Railings and parapets in which the photovoltaic modules replace the coating and covering elements.
- Windows in which the photovoltaic modules replace or supplement the glazed surfaces of the windows themselves.

- Shutters in which the photovoltaic modules constitute the structural elements of the shutters.
  
- Any surface described in the previous list of types on which the photovoltaic modules constitute a coating or covering that adheres to the surface itself.

## **ANNEX 4**

### **DOCUMENTATION TO BE ATTACHED TO THE REQUEST FOR THE GRANTING OF THE INCENTIVE TARIFF (ART. 5 (4))**

#### **FINAL ENTRY INTO OPERATION DOCUMENTATION**

1. Final draft documentation of the system, carried out in accordance with standard CEI-02, signed by a professional or technician who is on the official professional register. The final draft documentation must be accompanied by detailed graphs and at least five photographs on a computer support that give, through different shots, a complete picture of the system, its details and the overall setting of which it is part and support the declarations in the meaning of point d) of the declaration below that replaces a notarial act.
2. Technical datasheet that gives the location and the nominal power of the system, the voltage in direct current at the input of the inverter that converts direct current into alternating current, the voltage in alternating current at the output of the inverter that converts direct current into alternating current, the characteristics of the photovoltaic modules and of the inverter that converts direct current into alternating current, the anticipated annual production of electrical energy and the arrangements to ensure compliance with the technical requirements set out in annex 1 to the present decree.
3. List of the photovoltaic modules giving the model, the brand and the registration number and the converters of the direct current into alternating current, showing the model, the brand and the registration number.
4. System test certificate.
5. Declaration replacing the authenticated notarial act signed by the responsible actor, attesting:
  - a) the nature of the responsible actor, with reference to art. 3;
  - b) the type of intervention of the system (new construction, upgrading, complete overhaul);
  - c) the compliance of the system and of the associated components with the provisions of art. 4;
  - d) the type of the system, in relation to those defined in art. 2 (1) (b1), (b2) and (b3), with reference, for (b2) and (b3), to the specific types referred to in annexes 2 and 3, and, where appropriate, of the specific application, with reference to art. 6 (4);
  - e) the date of entry into operation of the system in relation to the definition of art. 2 (1) (g);
  - f) whether or not the system operates under the system of net metering;
  - g) not to incur conditions that, in the meaning of art. 9 (1), (2) and (3) and (4), entail non-applicability of or non-compatibility with the tariffs mentioned in art. 6 and the premium mentioned in art. 7.
6. A copy, where appropriate, of the waiver of opening of the electrical workshop.