Italian Ministry for Economic Development

Italian National Renewable Energy Action Plan

(in line with the provisions of Directive 2009/28/EC and Commission Decision of 30 June 2009)

30 June 2010

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1. SUMMARY OF NATIONAL RENEWABLE ENERGY POLICY

Please give a short overview of the national renewable energy policy describing the objectives of the policy (such as security of supply, environmental, economic and social benefits) and the main strategic lines of action.

The development of renewable energy sources has been one of the priorities of Italy's energy policy for some time, together with the promotion of energy efficiency.

The objectives of such a policy are: energy supply security, reduction in energy costs for businesses and individual citizens, promotion of innovative technology, environmental protection (reduction in polluting and greenhouse gas emissions), and therefore, ultimately, sustainable development.
In the medium to long term, Italy aims to redress the balance of its energy mix, which is currently too dependent on imported fossil fuels. This process will also involve significant measures to relaunch the use of new-generation nuclear power.

According to the baseline trend scenario of the PRIMES model, which the European Commission has taken as a reference point, Italy's gross final energy consumption in 2020 could reach a value of 166.50 Mtoe, compared with the value of 134.61 Mtoe recorded in 2005. The 2009 update to the PRIMES model, which also takes into account the effect of the financial crisis, estimates Italy's 2020 gross final energy consumption at 145.6 Mtoe.
In a more efficient scenario, which takes into account more energy efficiency measures than the baseline scenario, Italy's gross final consumption in 2020 could remain within a maximum of 133.0 Mtoe (for an indicative description of the elements contributing to this planned reduction in consumption please see paragraph 5.2).

Italy's primary objective is therefore to make an extraordinary commitment to increasing energy efficiency and reducing energy consumption. This strategy will also be a determining factor in reaching the targets for reductions in greenhouse gas emissions and the proportion of total energy consumption to be covered by renewable sources.
The recent Italian Law No 99/2009 provided for the publication of an *Extraordinary Plan for Energy Saving and Efficiency*. This will involve various methods: promotion of distributed cogeneration, measures aimed at encouraging small and medium enterprises to produce their own energy, strengthening the energy efficiency credits scheme, promoting new buildings with significant energy-saving measures and energy retrofits of existing buildings, providing incentives for energy service companies, and promotion of new high-efficiency products.
All these objectives and measures could be brought together in the *National Energy Strategy*, defined during a planned National Conference on Energy and the Environment. The conference will also be an opportunity to establish an in-depth comparison with the various territorial bodies involved. Specifically for renewable energy, Italian Law No 13/09 provides that the Community targets for renewable energy use will be divided between the Italian regions, with shared methods for achieving these targets.
The recent Community Law of 2009 gave the Parliament authority for the implementation of Directive 2009/28/EC, establishing specific criteria for exercising this authority. According to these criteria, a statistical transfer mechanism will be put in

place between the regions in order to allow compliance with the aforementioned division of targets.
According to Directive 2009/28/EC, in 2020, 17% of Italy's final energy consumption must be covered by renewable sources. Taking the efficient scenario as a reference point, this means that in 2020 the final consumption of renewable energy must be 22.62 Mtoe[1].

In order to reach the objectives, there must be a consistent increase in the mobilisation of resources available within Italy, and particularly the use of renewable energy sources for heating and cooling and the use of biofuels in the transport sector.

As well as promoting renewable sources for heating and cooling and transport uses, the measures to be implemented will principally relate to electricity network management, further streamlining of authorisation procedures and the development of international projects. The involvement of and coordination between the various local authorities and bodies will be essential, as will the sharing of information.

We repeat, however, that Italy has already been putting significant emphasis on the mobilisation of renewable energies for some time. Numerous support mechanisms are therefore already available, ensuring remuneration for investment in various renewable energy and energy efficiency operations, and encouraging the growth of related industries.
Nevertheless, the targets and the scale of Directive 2009/28/EC do require a renewed commitment, based on principles which will ensure balanced development of the various sectors which contribute to reaching said targets, and with consideration of the cost-benefit ratio. Equally, there will be increased commitment in terms of infrastructure, research, training and, in general, every element which could contribute to the balanced growth in renewable energy use.
With this in view the Parliament has compiled implementation criteria for the directive. In line with these criteria, this Plan describes the measures to be added to those already in operation: the salient elements for each sector are summarised below.

By implementing all these measures effectively, and by combining the effects of individual actions, we can reach our goal. We must, however, bear in mind that:

- national measures alone are unlikely to be enough, and in order to achieve efficiency these should be integrated into international cooperation schemes;
- during this process action will be needed to overcome potential restrictions and criticalities, modify or improve certain measures, adapt the support schemes to the continually changing economic and energy-use situations, and take advantage of new technological applications.

There are numerous support mechanisms already in operation to make up for the insufficient level of remuneration for investment in the renewable energy and energy efficiency sectors, which has so far been provided solely by market mechanisms.

In order to achieve its own national objectives, Italy intends to strengthen and rationalise the existing support mechanisms, within a framework which integrates:

- efficacy in concentrating efforts along routes which will make the maximum contribution to achieving the objectives;

[1] *The final renewable energy consumption values given above do not include energy captured by pumps used in cooling. This contribution, which can be estimated at between 1 and 2 Mtoe, is not currently taken into consideration in targets due to uncertainties about its admissibility. If these uncertainities are resolved, it will represent an additional resource which could compensate for any smaller than expected contributions from other sources.*

- efficiency in introducing flexibility in incentives, limiting their contribution to what is strictly necessary to make up for market shortcomings;
- financial sustainability for the end consumer, the party which bears a large part of the burden of incentive schemes;
- careful consideration of all measures to be promoted in the three sectors in which action will be taken: heating, transport, electricity.

HEATING

There are various mechanisms, including indirect mechanisms, in place at national level for the promotion of renewable energy sources for heating and cooling. The main mechanisms are the following:

- tax relief of 55% on costs incurred for the installation of heat pumps, solar thermal systems or biomass systems (currently in place until the end of 2010);
- the obligation for new buildings, which are not yet fully operational, to cover a quota (50%) of their energy needs for domestic hot water with renewable sources, as well as using renewable energy systems for electricity production;
- tax relief measures for users connected to district heating networks using geothermal sources or biomass;
- the energy efficiency credits scheme, applicable to technologies such as solar thermal systems, biomass boilers and heat pumps, including geothermal heat pumps;
- excise duty exemption for solid biomass used to fuel domestic boilers.

Given the rapid rates of growth expected in the use of renewables for heating, over the next few years the above-mentioned mechanisms must be accompanied by further promotional schemes aimed at increasing the consumption of heat from the various sources and types of technology available.
The biomass sector is important, partly due to its specificities, and it will be promoted organically, by identifying measures aimed at increasing the availability and mobilisation of biomass, directing its application not only towards electricity generation but also more convenient forms for covering end-use: heat production to meet heating requirements and for cogeneration.
Standardised biofuels could be sent to civilian heating plants as a priority, whilst residual biomass will be promoted for centralised energy production.
Of course, developing the use of biomass does not mean that environmental considerations (emissions, sustainability) and competitiveness with other sectors (food, industry) can be put to one side.
Moreover, it will be necessary to evaluate the efficiency of biomass use along all supply chains, to subsequently prioritise the most efficient chains and applications.

TRANSPORT

Italian legislation's main instrument for mobilising renewable energy in the transport sector is the obligation for parties which make fuels available for consumption for automotive purposes to also make a certain proportion of transport biofuels available for consumption (biodiesel, bioethanol and its derivatives, ETBE and biohydrogen, under current legislation). This proportion is calculated as a percentage of the total energy content of the conventional fuel fed to the network during the previous year. The percentage is increased over time. In 2010, those subject to this obligation must use a quantity of biofuels equal to

3.5% of the total energy content of the conventional fuel fed into the network in 2009.
The Ministry for Agriculture, Food and Forestry is responsible for issuing annual certificates proving that this obligation has been fulfilled.

Looking to the future, the intention is to take action mainly through the obligatory minimum quota, in line with sustainability criteria and taking into account second- and third-generation biofuel development, as well as the social sustainability of biofuels. With the aim of encouraging compliance with minimum quota obligations, sustainability criteria could be applied in order to emphasise the greater value of second-generation biofuels, of those obtained from waste and other raw materials of non-food origin and of those which offer greater advantages in terms of avoiding greenhouse gas emissions or which guarantee that specific environmental objectives can be achieved.

In addition, measures will be introduced aimed at supporting the wholesale use of a 25% biodiesel mix (for example in public transport fleets) and steps will be taken, including through national regulations, to revise the technical regulations for a gradual increase in the percentage which can be mixed in the network.

ELECTRICITY PRODUCTION

The principal support mechanisms in force for electricity production from renewable sources are the following:

- incentive schemes for electricity produced by plants using renewable sources through the green certificate scheme, based on a minimum quota of new electricity production from renewable sources;
- incentive scheme based on fixed all-inclusive tariffs for electricity fed into the grid by renewable energy plants with a maximum power output of 1 MW (0.2 MW for wind energy), as an alternative to the green certificates;
- incentive scheme for photovoltaic and solar thermodynamic plants through the feed-in tariff mechanism;
- simplified means of selling energy produced and fed into the grid at fixed market prices;
- possibility of placing greater value on energy produced through the net metering mechanism for plants with a maximum power output of 200 kW;
- dispatch priority for renewable sources;
- connection to the electricity network within preset deadlines and under advantageous conditions for plant operators.

The current incentive schemes have proved capable of supporting constant growth in the sector, guaranteeing a sufficient degree of predictability in the return on investment, despite frequent changes to the regulatory framework, and aiding the financial viability of the projects.
These schemes therefore represent a consolidated mechanism within the national energy system which, the necessary adjustments being made, can be considered an important element of continuity in reaching the new Community objectives, including into the next stage.

Nevertheless, the strong growth predictions, and in particular the specific targets for the electricity sector, call for a long-term vision and, as well as rationalising the current incentives based on trends in the cost of the various technologies, the ability to promote

benefits in a wider production and employment context, using an approach of gradual reduction in charges and ever greater efficiency in comparison to the cost of conventional production.

Moreover, for some technologies or market sectors it is possible to achieve so-called grid parity in just a few years, by 2020, a concept which would clearly require a review of the incentive schemes and levels.
In this sense the future effect of the CO_2 emissions reduction policy is very significant. The changes to the system for allocating CO_2 quotas to the thermoelectric sector for the post-Kyoto period (starting from 2013) and the related sanctions could alter the levels of electricity prices and therefore bring about an increase in the market value of renewable energy, thus reducing the need for more powerful incentives. This is evidence of how the environmental externalities (renewable sources, reduction in greenhouse gases), although different, interact with each other. This interaction (whether positive or negative) must be carefully considered when outlining the approach to achieving targets.

These elements will be suitably considered in order to update the existing framework, in order to increase the quota of energy produced, making the support schemes more efficient and avoiding a parallel increase in production and in incentive scheme costs.
To this end the following measures are proposed:

- increase in the minimum quota for electricity from renewables to be made available on the market, through methods and within deadlines suitable for the new European targets;
- regular reviews (already provided for by current regulations) of the multiplication factors, all-inclusive tariffs (including possible amendment of the tariff admission threshold for each type of technology) and the feed-in tariff for solar energy, in order to take into account the expected reduction in component and plant costs and to expand the production base whilst limiting and regulating the economic impact on the electricity sector;
- advance planning (on a three-year basis) of reductions in incentives and application of new coefficient values and tariffs only to those plants which come into operation at least one year after these new values are introduced;
- possible methods for stabilising the price of green certificates, such as the introduction of a “price fluctuation margin”, which could provide more certainty for investors and allow better planning of resources and effects on the pricing system and tariffs;
- formulation of incentives in a way which is coherent with the need to improve some options for producers (for example, the type of location) and to reduce extra plant or system costs;
- improvement of the current monitoring of trading and information on prices, with the development, in particular, of a regulated futures market for “environmental” securities, in order to allow more far-sighted buying and selling strategies, absorb any temporary excess supplies more efficiently and avoid administrative market balancing;
- replacement of the concept of renewal, at least for some types of plants and operations, with remuneration higher than that guaranteed by transfer of the energy produced alone, including after the end of the current incentive period;
- with regard to biomass and bioliquids: possible introduction of priority allocations for purposes other than energy production; if biomass and bioliquids are to be allocated for energy production, there should be discrimination between those to be allocated for heat production or use in transport and those to be allocated for electricity

purposes, with waste biomass being particularly favoured for the latter, preferably for use in cogeneration systems; when applying this discrimination, pursuing efficiency targets in terms of the ratio between support costs and contribution to achieving targets, care will be taken not to penalise one energy purpose more than others;
- still with regard to biomass: particular attention will be paid to trends in raw material and operating costs, aiming to match the level of support available at European level;
- placing greater value on imported electricity which is declared renewable for the purposes of national targets.

In order to reward autoproduction, particularly small plants, more effectively, including autoproduction using renewable sources other than solar energy, the possibility could be assessed of replacing the feed-in tariff mechanism (all-inclusive tariffs for energy fed into the grid) with a feed-in premium system (lower tariffs paid but for all the energy produced).

Measures will be implementing with the aim of encouraging better integration of energy production from renewable sources with the development dynamics of the energy and industrial sector, by developing a national technological sector and combining renewable energy systems with operations to increase energy efficiency.

ELECTRICITY NETWORK DEVELOPMENT AND MANAGEMENT

The growth in the contribution from renewable energy to the electricity sector in order to reach European targets must be accompanied by a significant modernisation and expansion programme for the electricity transmission and distribution network, allowing:
- connections to power plants, in particular photovoltaic and wind power plants. The regions of southern Italy and the Italian islands have the greatest potential for such plants, but do not currently have a network infrastructure suitable for the expected and desired developments;
- energy dispatch, in particular for wind farms of considerable size connected to the electricity network;
- the spread of distributed generation;
- interconnections between Italy, with new electricity infrastructure, and countries in North Africa and the Balkan region.

For power plants using renewable sources, in particular non-programmable sources, the current legislation guarantees remuneration for missed renewable energy production in the event of problems caused by the grid's insufficient capacity to accept and dispatch said energy whilst ensuring the system's safety. This is however a solution which must be considered as contingent and dependent only on the need to avoid compromising the investments made.
In fact, it is necessary to move on to a concept of complete "harvesting" of all potential renewable production. This is to be achieved using accumulation / storage systems for the electrical energy which is produced but cannot be fed into the grid, allow the full potential to be used without giving rise to extra system costs.

Several mechanisms have already been introduced for the improved integration of non-programmable sources and greater rewards for investment in grid infrastructure. Current national legislation also allows the use of emergency measures. These include the appointment of Commissioners for the energy works considered to be of strategic

importance, in agreement with the regions, to be used when particularly complex criticalities arise. Sharing the distribution between territories of the various types of renewable technology with the regions will encourage the creation of infrastructure which – starting from regional commitments and therefore based on potential for use, restrictions and state of development of the grid – will be identified as necessary for electricity transportation.
To this end, and above all in light of the requirement to integrate the consistent growth in renewable energy generation (largely due to the wind farms planned for southern Italy and the islands) into the electricity system, it seems necessary to provide for a specific section in the national transmission network development plan, defining the necessary actions for the complete "harvesting" of all potential renewable production, in a way which is coherent with the targets set in the national action plan.
Of course we must also bear in mind the appropriate adaptation of the distribution networks.
Moreover, the possibility is being considered of making the body responsible for authorising renewable energy plants also responsible for authorising the network expansion necessary for the withdrawal of energy from the grid (with specific precautions in place). For transmission, this should be limited to those networks listed in the development plan section on renewables. This would contribute to the harmonised development of plants and networks, thus speeding up the development of the networks and infrastructure necessary for connecting up and making full use of all the potential energy production.

The intention is therefore to more systematically encourage the modernisation of distribution networks in line with smart grid concepts, further improve the forecast models for production from non-programmable renewable sources, and promote the integrated management of associated aspects including accumulation and generation systems and loads.

Finally, in collaboration with the Italian Regulatory Authority for Electricity and Gas, there will be an evaluation of price regulation mechanisms which reward network operators' ability to carry out priority works within short deadlines. These works could include those dependent on the development of renewable sources. Together with the same Authority, transport capacity booking mechanisms will examined, in order to prioritise projects which can actually be completed, based on the results of the authorisation procedure.

SIMPLIFICATION OF AUTHORISATION PROCEDURES

The streamlining of authorisation procedures represents an important step in the development of renewable energy sources.

Italian Legislative Decree No 387/2003 simplified the authorisation procedures for plants generating energy from renewable sources and the related infrastructure, allowing a single authorisation which is issued by the competent authority within 180 days of the application being made. This single authorisation also covers all the works to connect the plants to the electricity network and the other network infrastructure, including infrastructure used to improve the dispatch of the energy produced.
At the suggestion of the Ministries for Economic Development, the Environment and Cultural Heritage, the guidelines for the regions (as provided for by the same Legislative Decree No 387/2003) on issuing authorisations for electrical power production plants fed

by renewable sources were approved at a Joint Conference. The aim of these guidelines is to ensure uniform treatment across Italy, fixed deadlines for each stage, and a more transparent process. Article 12 of Legislative Decree No 387/03 is rather significant: it states that regions should adapt their respective rules within ninety days of the guidelines' entry into force, and that in the event of failure to adapt the rules within this deadline the national guidelines will apply. The process in question will therefore allow a move towards greater uniformity of the regulatory framework, minimising uncertainty and consequently reducing the potential for purely speculative applications.
Law No 244/07 introduced the option for some plants, below a certain power and located on non-sensitive sites, to follow even simpler procedures such as giving notification or a commencement notice. This option was extended by Italian Law No 73/10 and the Community Law of 2009.
That said, it is considered that for other cases the Services Conference tool will be adequate for ensuring coordination between the various responsible authorities. This tool could therefore be extended to large plants other than those which produce electricity, whilst maintaining the intention to allow small plants on non-sensitive sites to follow the simplified procedures of giving notification or a commencement notice.
Law No 99/2009 makes additional instruments available. Amongst other things it provides for the definition of standards, criteria and standardised procedures which the regional administrative bodies will have to adopt in order to identify the renewable resources available and authorise the construction and operation of various types of plant. However, the division of national targets between the regions and related implementation methods, provided for by the same Community Law of 2009, will represent useful guidance for the regions, which will therefore be encouraged to improve and accelerate their authorisation procedures in line with the commitments undertaken. A system for examining the policies and administrative procedures followed in each region could also be useful, in order to encourage the exchange of best practice.

INTERNATIONAL INITIATIVES

Italy aims to further develop its cooperation with EU Member States and countries outside and EU, allowing the development of initiatives which could also contribute to Italy's fulfilment of its renewable energy use obligation.
Given Italy's geographical position, agreements could target the Balkan region as a priority, continuing the work that has already started there, and the North African countries closest to the Mediterranean Sea.
The extension of electrical connections with these countries through Italy could encourage other European countries and establish suitable conditions for taking advantage of the significant energy production potential which already exists in North Africa, with solid advantages for the manufacturing sectors of the countries involved in this cooperation.
The related developments were outlined in the forecast document delivered to the Commission under Article 4(3) of Directive 2009/28/EC.

SOME DEDICATED TRANSVERSE MEASURES

- *Interregional operational plan for renewable energy sources and energy saving, within the Community Support Framework 2007-2013.*
  This plan, with a budget of €1.6 billion, will provide funding for operations in the

southern Italian regions, in the biomass sector, to produce technology for the use of renewable energy sources and for energy efficiency, and to develop innovative geothermal plants. A significant portion of these financial resources will fund the creation of new intelligent grids, which research has shown to be a priority operation, as well as exemplary public sector projects.

- *Kyoto Rotating Fund.*
  The fund grants soft loans to encourage the spread of high energy efficiency and low-emission technology. The rotating fund is worth €600 million, divided into three annual terms and aimed at financing operations related to renewables, energy efficiency, research and forest management.

RESEARCH, INNOVATION AND INDUSTRIAL SECTORS

Although the format of the Action Plan does not specifically cover research and innovation, it is nonetheless important to highlight the current and future efforts (for example the work on second- and third-generation biofuels) which are expected to lead to solutions capable of ensuring growth in the use of renewables, reductions in costs and the development of industrial and employment opportunities.

- *Industry Programme 2015.*
  The "energy efficiency" sub-programme makes resources available for innovative projects, particularly in relation to photovoltaic and wind energy. The thirty projects which won the call for bids currently involve 234 companies (of which 54% are small or medium enterprises) and 160 research organisations. This more than doubles the investment in research and development activity, 20% of which is taking place in southern Italy.
- *System research in the electricity sector.*
  The 2009-2011 three-year plan makes more than €200 million available for projects by research organisations and companies, a significant portion of which is aimed at renewables. The structural and continuous availability of resources makes this plan particularly valuable in the pursuit of medium- and long-term objectives.
- *National operational plan for research and competitiveness, within the Community Support Framework 2007-2013.*
  Within scientific and technological areas of strategic importance, this plan identifies the development of sectors which are coherent with the priority research areas identified at Community level. These include distributed generation, cogeneration, solar power, waste, biofuel, geothermal power, electrochemistry, rational energy uses, emissions reduction, and more.
- *Ministry for Agriculture, Food and Forestry call for bids for research funding for the bioenergy sector.*
  This call for bids makes resources available for research projects relating to the following subjects: optimisation of existing sectors using agronomic and genetic research and life-cycle assessments, development of manufacturing processes to obtain second-generation biofuels, development within the biodiesel sector of programmes to recover by-products, development within the biogas sector of programmes to recover waste products and the optimisation of biomass fermentation.

In general, the Italian Government intends to direct and expand the research and development support schemes, with the aim of strengthening Italian industry's competitiveness in those technologies and applications for which, given the significant potential for propagation, there is a production structure equipped with

the necessary know-how for further development.

MONITORING AND PUBLICATION OF INFORMATION

The development of renewable energy production and energy efficiency will be accompanied by monitoring and informative measures.
In particular, the monitoring will be based on statistics, both economic and social, in order to verify the progress made towards reaching targets, and to have constant up-to-date information on the costs and benefits of implementing specific measures and the Action Plan in general.

2. EXPECTED FINAL ENERGY CONSUMPTION 2010-2020

In this section, Member States are required to set out their estimates of gross final energy consumption of all types of energy (from both renewable and conventional sources), overall and for each sector, in the period up to 2020.

These estimates have to also take into account the expected effects of energy efficiency and saving measures to be introduced during the period. Under the heading 'reference scenario' a scenario has to be presented taking into account only the energy efficiency and savings measures adopted before 2009. Under the heading 'additional energy efficiency scenario' a scenario has to be presented taking into account all measures to be adopted from 2009. The elaboration of the other parts of the NREAP is based on this additional energy efficiency scenario.

The term 'consumption for heating and cooling' has to be understood as the derived heat produced (heat sold), plus the final consumption of all other energy commodities except electricity in end-use sectors such as industry, households, services, agriculture, forestry and fisheries. The notion of heating and cooling covers therefore also final energy consumption for processing. Electricity may also be used for heating and cooling in final consumption, but this electricity is covered in the electricity target, which is why it is excluded here.

According to Article 5(6) of Directive 2009/28/EC, for the purpose of measuring compliance with the 2020 target and the interim trajectory, the amount of energy consumed in aviation is to be considered to be no more than 6,18 % of the Member State's gross final energy consumption (4,12 % for Cyprus and Malta). The appropriate adjustments (if any) could be made in the table. The box shows how to calculate this.

BOX — How to calculate the 'aviation capping mechanism' in the Renewable Energy Directive
Assume Country A has a share of aviation energy consumption (AEC) of its total gross final energy consumption (GFEC) of X
X = AEC/GFEC Assume X > 6.18% In this case the cap implies that for the purpose of assessing compliance, GFECadjusted = GFEC – AEC + AECadjusted
where AECadjusted = 0.0618 * GFEC In other terms GFECadjusted = GFEC – AEC + 0.0618 * GFEC =
= GFEC – X * GFEC + 0.0618 * GFEC = = GFEC * (1.0618 – X) The 'adjustment' as a % of the real GFEC and as a function of X is therefore Adjustment = (GFEC – GFECadjusted)/GFEC = = X – 0.0618

NB: In the case of Cyprus and Malta, the figures of 4.12 % and 0.0412 should replace the figures of 6.18 % and 0.0618 respectively.

Table 1

Expected gross final energy consumption of Italy in heating and cooling, electricity and transport up to 2020 taking into account the effects of energy efficiency and energy saving measures 2010 -2020 (ktoe) (2)

	2005	2010		2011		2012		2013		2014	
	base year	reference scenario	additional energy efficiency	reference scenario	additional energy efficiency	reference scenario	additional energy efficiency	reference scenario	additional energy efficiency	reference scenario	additional energy efficiency
1. heating and cooling[1]	68,501	64,194	58,976	64,491	59,197	64,774	59,418	65,041	59,639	65,294	59,860
2. electricity [2]	29,749	29,505	30,704	29,908	30,856	30,344	31,009	30,814	31,161	31,317	31,313
3. transport as in Article 3(4)a[3]	39,000	36,467	37,054	36,848	36,745	37,190	36,437	37,494	36,129	37,759	35,821
4. Gross final energy consumption[4]	141,226	134,643	131,801	135,841	131,925	137,016	132,049	138,167	132,174	139,295	132,298
The following calculation is needed only if final energy consumption for aviation is expected to be higher than 6,18 % (4,12 % for Malta and Cyprus):											
Final consumption in aviation											
Reduction for aviation limit[5] Article 5(6)											
Total consumption after reduction for aviation limit											

(2) These estimates on energy efficiency and energy savings shall be consistent with other such estimates that Member States notify to the Commission, notably in Action Plans under the Energy Services Directive and the Energy Performance of Buildings Directive. If different units are used in those Action Plans the conversion factors applied should be indicated.

For the reference scenario the 2010, 2015 and 2020 values from the baseline scenario of the 2009 update of the *PRIMES Model-based Analysis of the 2008 EU Policy Package on Climate Change and Renewables* were interpolated.

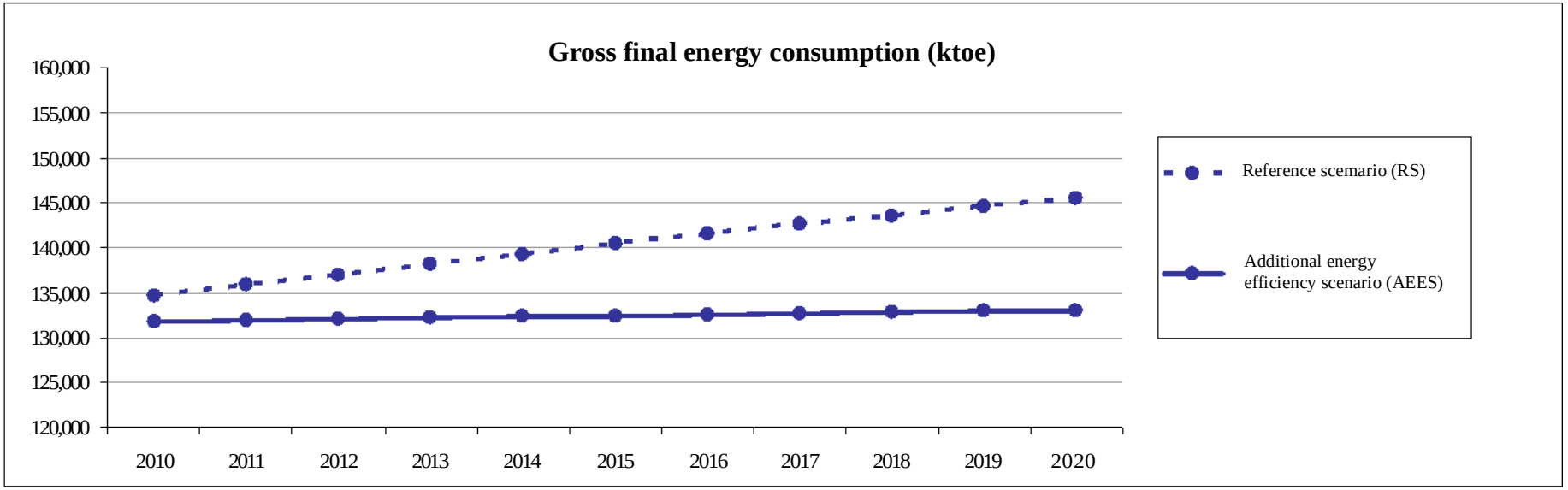
For the additional energy efficiency scenario, for the gross final energy consumption in the heating and cooling, electricity and transport as in Article 3(4)a, a linear progression between the 2008 and 2020 values is assumed. The total final consumption is given, for each year, by adding the final con sumptions in the heating and cooling and electricity sector calculated as shown above, plus the final consumptions in the transport sector calculated overall, excluding electricity, and not as in Article 3(4)a.

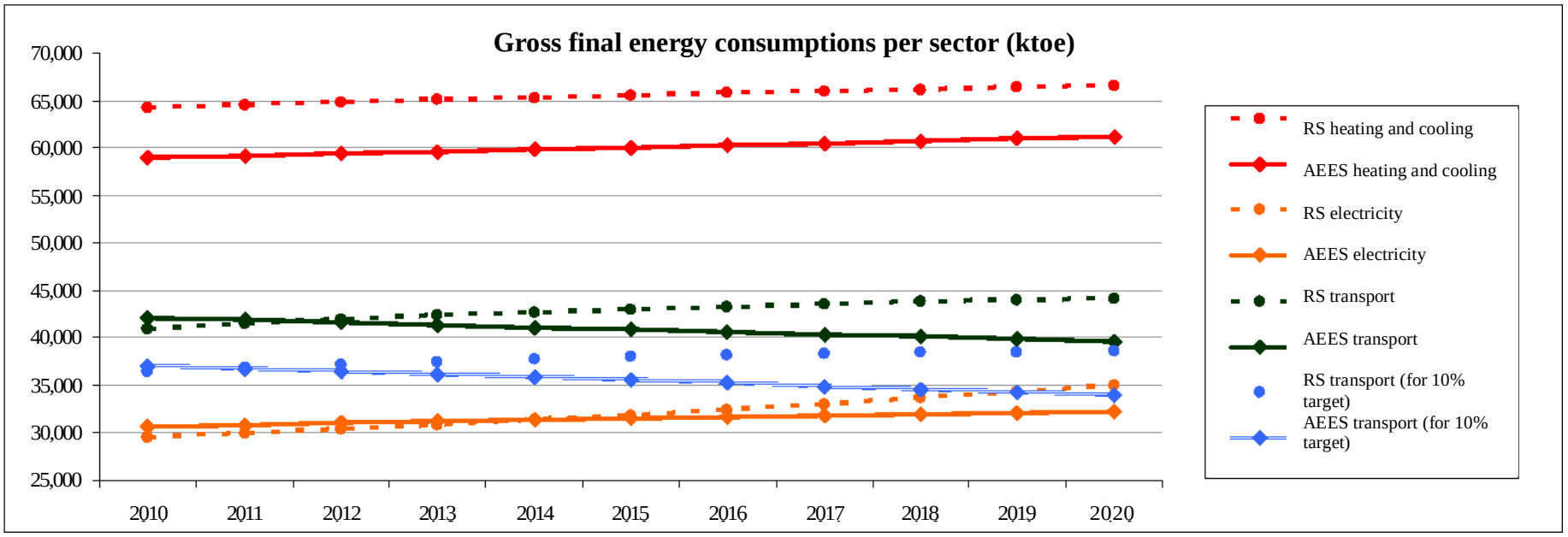
Table 1

Expected gross final energy consumption of Italy in heating and cooling, electricity and transport up to 2020 taking into account the effects of energy efficiency and energy saving measures 2010 -2020 (ktoe)

	2015		2016		2017		2018		2019		2020	
	reference scenario	additional energy efficiency	reference scenario	additional energy efficiency	reference scenario	additional energy efficiency	reference scenario	additional energy efficiency	reference scenario	additional energy efficiency	reference scenario	additional energy efficiency
1.heating and cooling[(1)]	65.532	60.081	65.755	60.301	65.963	60.522	66.157	60.743	66.335	60.964	66.499	61.185
2.electricity [(2)]	31.853	31.465	32.423	31.618	33.025	31.770	33.662	31.922	34.331	32.075	35.034	32.227
3.transport as in Article 3(4)a[(3)]	37.986	35.513	38.174	35.205	38.325	34.897	38.436	34.589	38.509	34.281	38.544	33.972
4.Gross final energy consumption[(4)]	140.399	132.422	141.480	132.546	142.536	132.670	143.570	132.794	144.580	132.918	145.566	133.042
The following calculation is needed only if final energy consumption for aviation is expected to be higher than 6,18 % (4,12 % for Malta and Cyprus):												
Final consumption in aviation												
Reduction for aviation limit[(5)] Article 5(6)												
Total consumption after reduction for aviation limit												

[(1)] It is the final energy consumption of all energy commodities except electricity for purposes other than transport, plus the consumption of heat for own use at electricity and heat plants and heat losses in networks (items '2. Own use by plant' and '11. Transmission and distribution losses' of Regulation (EC) No 1099/2008 (p. 23-24).
[(2)] The gross electricity consumption is national gross electricity production, including autoproduction, plus imports, minus exports.
[(3)] Transport consumption as defined in Article 3(4)a of Directive 2009/28/EC. Renewable electricity in road transport for this figure should be multiplied by a factor of 2,5, as indicated by Article 3(4)c of Directive 2009/28/EC.
[(4)] As defined in Article (2)f of Directive 2009/28/EC. This comprises final energy consumption plus network losses and own use of heat and electricity at electricity and heating plants (NB: this does not include consumption of electricity for pumped hydro storage or for transformation in electrical boilers or heat pumps at d istrict heating plants).
[(5)] According to Article 5(6) consumption for aviation has to be considered only up to 6,18 % (Community average), for Cyprus and Malta up to 4,12 % of gross final energy consum ption.


Gross final energy consumption (ktoe)
160,000
155,000
150,000
145,000
140,000
135,000
130,000
125,000
120,000
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Reference scemario (RS)
Additional energy efficiency scenario (AEES)


Gross final energy consumptions per sector (ktoe)
70,000
65,000
60,000
55,000
50,000
45,000
40,000
35,000
30,000
25,000
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
RS heating and cooling
AEES heating and cooling
RS electricity
AEES electricity
RS transport
AEES transport
RS transport (for 10% target)
AEES transport (for 10% target)

3. RENEWABLE ENERGY TARGETS AND TRAJECTORIES

3.1 NATIONAL OVERALL TARGET

Table 2

National overall target for the share of energy from renewable sources in gross final consumption of energy in 2005 and 2020 (figures to be transcribed from Annex I, Part A to Directive 2009/28/EC)

A.	Share of energy from renewable sources in gross final consumption of energy in 2005 (S_{2005}) (%)	4.92
B.	**Target of energy from renewable sources in gross final consumption of energy in 2020** (S_{2020}) (%)	17.00
C.	Expected total adjusted energy consumption in 2020 (from Table 1, last cell) (ktoe)	133,042
D.	Expected amount of energy from renewable sources corresponding to the 2020 target (calculated as B x C) (ktoe)	22,617

Member States may choose to look to the flexibility measures in Articles 6, 7, 8 and 11 of Directive 2009/28/EC with a view to making some of their own renewable energy consumption available to count towards the targets of other Member State(s) — or with a view to counting energy from renewable sources consumed in other Member State(s) towards their own targets. In addition they may use physical imports from third countries of electricity from renewable energy sources in accordance with the provisions of Articles 9 and 10 of Directive 2009/28/EC.

Any assessments of the renewable energy potential of your country can be attached in annex.

Any renewable energy targets at regional level or in major cities or in major energy consuming industries supporting the national renewable energy target fulfilment can also be attached in annex.

3.2 SECTORAL TARGETS AND TRAJECTORIES

According to Article 4(1) of Directive 2009/28/EC, Member States are required to set their targets for the share of energy from renewable sources in 2020 in the following sectors:

- *heating and cooling,*
- *electricity,*
- *transport.*

The total of the three sectoral targets, translated into expected volumes (ktoe) including the planned use of flexibility measures, has to be at least as high as the expected amount of energy from renewable sources that corresponds to the Member State's 2020 target (as reported in the last cell of Table 2).

The transport target, in addition, has to be compatible with the requirements of Article 3(4) of Directive 2009/28/EC for a 10 % share of renewable energy in transport. It should, however, be noted that the calculation of compliance with the target in Article 3(4) differs from the calculation of transport's contribution to the Member State's overall national target for renewable energy.

For the transport target, and not for the overall target:

- *Among petroleum products, only petrol and diesel count towards the* ***denominator****. This means that the kerosene/jet fuel used in aviation and the fuel oil used in shipping do not count (though the diesel used by some trains and some inland waterway vessels does),*
- *Biofuels from wastes, residues, non-food cellulosic material and ligno-cellulosic material count double towards the* ***numerator****,*
- *Electricity from renewable sources used in road vehicles counts 2,5 times towards the* ***numerator and the denominator****.* EN 15.7.2009 Official Journal of the European Union L 182/39

According to Article 3(4)c of Directive 2009/28/EC to calculate the contribution of electricity produced from renewable sources and consumed in electric vehicles, Member States may choose to use either the average share of electricity from renewable energy sources in the Community, or the share of electricity from renewable energy sources in their own country, as measured two years before the year in question. For the estimation of the average share of electricity from renewable energy sources in the Community, Member States may use the future scenarios prepared by/for the European Commission[2]*.*

[2] For example the scenario documented in Annex 4, p. 287, in '*Appendixes to Model-based Analysis of the 2008 EU Policy Package on Climate Change and Renewables*': http://ec.europa.eu/environment/climat/pdf/climat_action/analysis_appendix.pdf . In this scenario the EU- 27 average share of gross electricity production from renewable energy forms is 19,4 %, 24,6 % and 32,4 % for the years 2010, 2015 and 2020, respectively.

As well as setting sectoral targets for 2020, Member States must also describe the trajectory that they expect the growth of renewable energy use in each sector to follow between 2010 and 2020. The sectoral renewable targets in electricity and heating and cooling and the sectoral trajectories are estimations.

Table 3 requires Member States to furnish the information referred to above.

When filling in the table, Member States will wish to draw on the more detailed breakdown of expected renewable energy use required by Table 9. Calculation Tables 4a and 4b provide guidance in preparing Table 3.

The Directive requires Member States to publish and notify to the Commission their forecast for the use of the flexibility measures by 31 December 2009. Member States will wish to draw on this forecast in filling in the relevant parts of Table 4a. Member States are not, however, required to use the same figures in their Action Plans as they gave in their forecast documents. In particular, they may wish to adjust the figures in the light of the information contained in other Member States' forecast documents.

Table 3

National 2020 target and estimated trajectory of energy from renewable sources in heating and cooling, electricity and transport

(Calculation Tables 4a and 4b are expected to guide the preparation of Table 3)

(%)

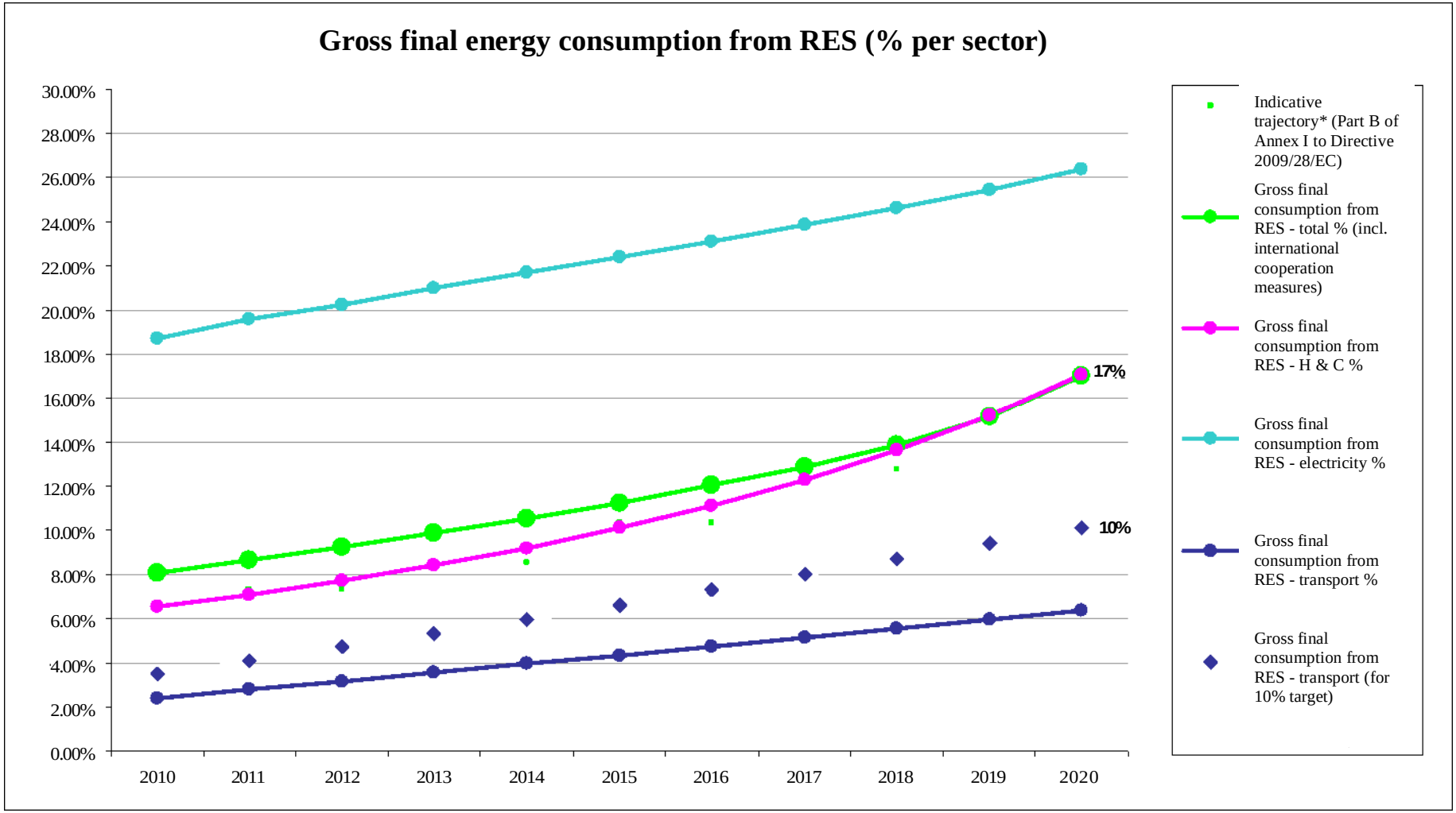
	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
RES-H&C [1]	2.80%	6.53%	7.09%	7.71%	8.41%	9.20%	10.09%	11.11%	12.28%	13.64%	15.22%	17.09%
RES-E [2]	16.29%	18.71%	19.57%	20.25%	20.99%	21.69%	22.39%	23.11%	23.85%	24.63%	25.46%	26.39%
RES-T [3]	0.87%	3.50%	4.12%	4.72%	5.35%	5.98%	6.63%	7.30%	7.98%	8.68%	9.40%	10.14%
Overall RES share [4]	4.92%	8.05%	8.65%	9.23%	9.86%	10.52%	11.24%	12.02%	12.88%	13.84%	15.13%	17.00%
Of which from cooperation mechanism [5]	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.21%	0.85%
Surplus for cooperation mechanism [5]	-	1.40%	1.57%	1.63%	1.68%	1.62%	1.39%	1.14%	0.82%	0.35%	0.00%	0.00%

[1] Share of renewable energy in heating and cooling: gross final consumption of energy from renewable sources for heating and cooling (as defined in Articles 5(1)b) and 5(4) of Directive 2009/28/EC) divided by gross final consumption of energy for heating and cooling. Line (A) from Table 4a divided by line (1) of Table 1.
[2] Share of renewable energy in electricity: gross final consumption of electricity from renewable sources for electricity (as defined in Articles 5(1)a and 5(3) of Directive 2009/28/EC) divided by total gross final consumption of electricity. Row (B) from Table 4a divided by row (2) of Table 1.
[3] Share of renewable energy in transport: final energy from renewable sources consumed in transport (cf. Article 5(1)c and 5(5) of Directive 2009/28/EC) divided by the consumption in transport of 1) petrol; 2) diesel; 3) biofuels used in road and rail transport and 4) electricity in land transport (as reflected in row 3 of Table 1). Line (J) from Table 4b divided by row (3) of Table 1.
[4] Share of renewable energy in gross final energy consumption. Row (G) from Table 4a divided by row (4) of Table 1.
[5] In percentage point of overall RES share.

The percentage values *from* and *for the cooperation mechanism* have been calculated, for each year, as the ratio between the surplus or deficit and the minimum trajectory of the gross final consumption of energy from renewable sources and the total gross final consumption. The minimum trajectory adopted was obtained by interpolating the intermediate targets provided by Part B of Annex I to Directive 2009/28/EC.

As Part B of Annex I to the Directive			2011-2012	2013-2014	2015-2016	2017-2018		2020
			$S_{2005} + 20\%$ $(S_{2020} - S_{2005})$	$S_{2005} + 30\%$ $(S_{2020} - S_{2005})$	$S_{2005} + 45\%$ $(S_{2020} - S_{2005})$	$S_{2005} + 65\%$ $(S_{2020} - S_{2005})$		(S_{2020})
RES minimum trajectory [1]			7.33	8.54	10.35	12.77		17.00
RES minimum trajectory (ktoe)			9,678	11,294	13,717	16,950		22,617

(1) As defined in Annex I.B to the Directive 2009/28/EC.



* According to Part B of Annex I of Directive 2009/28/EC, the indicative trajectory as per Article 3(2), in addition to the 2020 target, foresees a minimum quota for renewable energy for the mean average of each two-year period in the period 2011-2018. This quota is calculated by adding 20% (2011-2012), 30% (2013-2014), 45% (2015-2016) and 65% (2017-2018) of the difference between the Member State's target quota in 2020 and that of 2005 to the Member State's quota in 2005.

Table 4a

Calculation table for the renewable energy contribution of each sector to final energy consumption

(ktoe)

	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
A. Expected gross final consumption of RES for heating and cooling	1,916	3,851	4,196	4,583	5,016	5,506	6,062	6,698	7,432	8,283	9,280	10,456
B. Expected gross final consumption of electricity from RES	4,847	5,744	6,038	6,279	6,541	6,791	7,045	7,306	7,576	7,861	8,167	8,504
C. Expected final consumption of energy from RES in transport	179	1,020	1,171	1,322	1,473	1,624	1,775	1,926	2,077	2,228	2,379	2,530
D. Expected total RES consumption [(1)]	6,942	10,615	11,406	12,184	13,031	13,921	14,882	15,930	17,085	18,372	19,826	21,490
E. Expected transfer of RES to other Member States	-	-	-	-	-	-	-	-	-	-	-	-
F. Expected transfer of RES from other Member States and 3rd countries	-	-	-	-	-	-	-	-	-	-	284	1,127
G. Expected RES consumption adjusted for target (D) - (E) + (F)	6,942	10,615	11,406	12,184	13,031	13,921	14,882	15,930	17,085	18,372	20,109	22,617

(1) According to Article 5(1) of Directive 2009/28/EC gas, electricity and hydrogen from renewable energy sources shall only be considered once. No double counting is allowed.

For the heating and cooling sector and for electricity sector, the gross final consumptions of RES correspond to the total gross production of energy from RES in the respective sectors (Table 10a-b and Table 11) and to the total amount from domestic production and imports for the transport sector (Table 12). Electricity from renewable sources consumed in the transport was taken into consideration only in the final consumptions of electricity (letter B in table 4a).

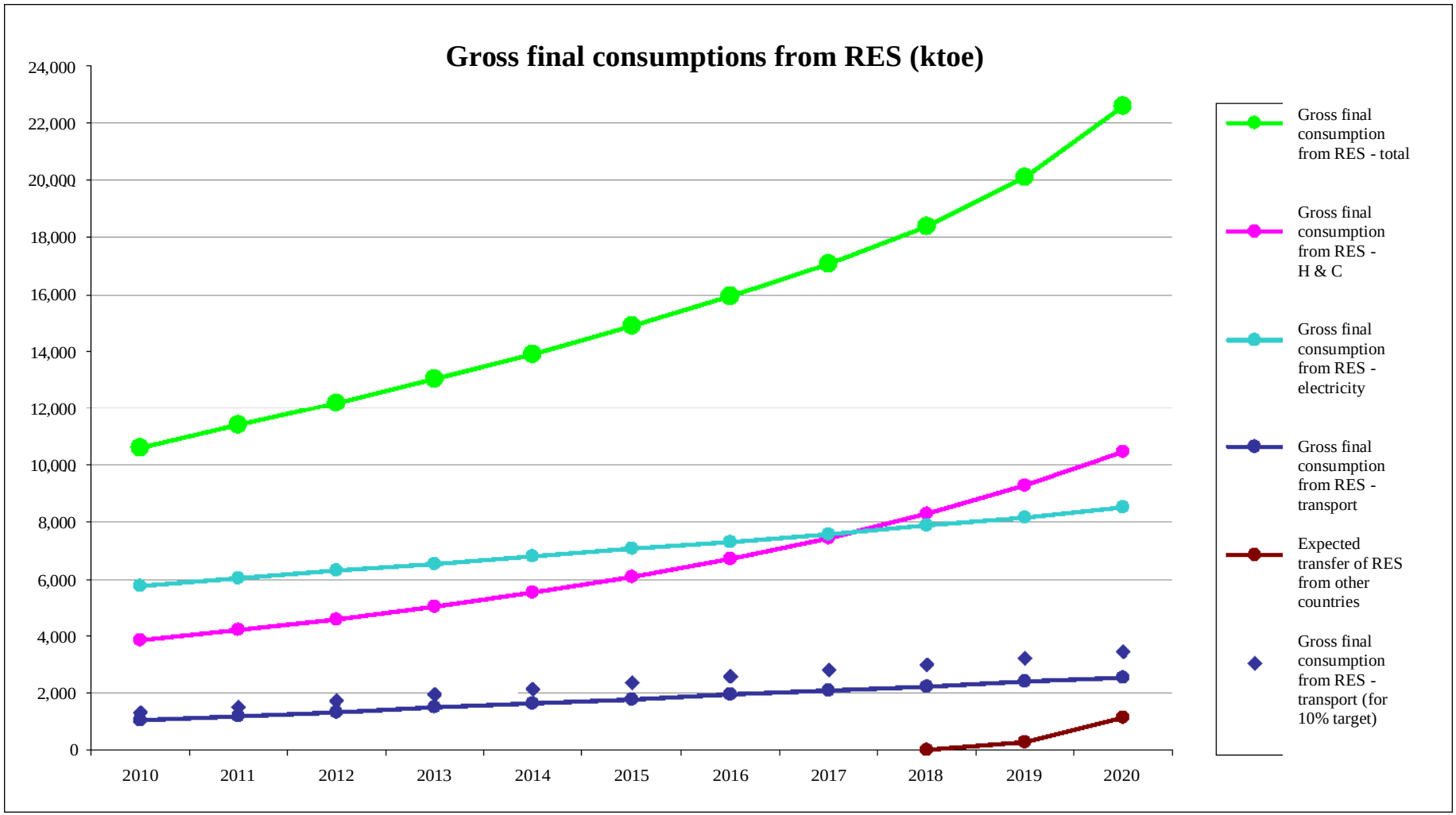

Gross final consumptions from RES (ktoe)
24,000
22,000
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Gross final consumption from RES - total
Gross final consumption from RES - H & C
Gross final consumption from RES - electricity
Gross final consumption from RES - transport
Expected transfer of RES from other countries
Gross final consumption from RES - transport (for 10% target)

Table 4b

Calculation table for the renewable energy in transport share

(ktoe)

	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
C. Expected RES consumption in transport[(1)]	318	1,190	1,367	1,532	1,702	1,870	2,040	2,210	2,381	2,552	2,725	2,899
H. Expected RES electricity in road transport[(2)]	-	6	13	20	28	37	45	55	65	75	86	98
I. Expected consumption of biofuels from wastes, residues, non-food cellulosic and ligno-cellulosic material in transport[(2)]	21	96	127	157	187	218	248	278	309	339	370	400
J. Expected RES contribution to transport for the RES-T target: (C) + (2.5 - 1) x (H) + (2 - 1) x (I)	338	1,295	1,513	1,719	1,931	2,143	2,356	2,570	2,786	3,004	3,223	3,445

[(1)] Containing all RES used in transport including electricity, hydrogen and gas from renewable energy sources, and excluding biofuels that do not comply with the sustainability criteria (cf. Article 5(1) last subparagraph). Specify here actual values without using the multiplication factors.
[(2)] Specify here actual values without using the multiplication factors.

The values given refer to the data in Table 12.

4. MEASURES FOR ACHIEVING THE TARGETS

4.1 OVERVIEW OF ALL POLICIES AND MEASURES TO PROMOTE THE USE OF ENERGY FROM RENEWABLE RESOURCES

Table 5: Overview of all policies and measures [Summarised version]

Name and reference of the measure	Type of measure*	Expected result**	Targeted group and/or activity***	Existing or planned	Start and end dates of the measure
MEASURES RELATING TO THE HEATING AND COOLING SECTOR					
Energy efficiency credits scheme	Regulatory	6 Mtoe of energy saved by 2012	Energy service companies, electricity and gas distributors, parties which have taken steps to appoint an energy manager	Existing (to be extended)	January 2005 – not given
55% tax relief for building refurbishment projects	Financial	not given	End users who own existing buildings	Existing (to be reviewed)	January 2007 – December 2010
Minimum quota of 50% of domestic hot water to be produced using renewable energy sources	Regulatory	% coverage of consumption	End users who own newly-constructed buildings or buildings to be refurbished	Planned	not given
Tax credit for district heating using geothermal or biomass energy	Financial	not given	End users who connect their properties to district heating networks connected to plants using geothermal or biomass energy	Existing	January 1999 - not given
MEASURES RELATING TO THE ELECTRICITY SECTOR					
Solar photovoltaic feed-in tariff	Financial	3000 MW by 2016 (target currently being updated)	Investors / End users	Existing	August 2005 – not given
Solar thermal feed-in tariff	Financial	2,000,000 m^2 of panels installed by 2016	Investors	Existing	May 2008 – not given
Green Certificates	Regulatory	Feeding electricity from renewable sources into the grid (in 2012, 7.55% of the energy from fossil fuels fed into the grid in the previous year)	Investors	Existing	April 1999 - not given
All-inclusive tariffs	Financial	not given	Investors / End users	Existing	January 2008 – not given
Minimum quota for electrical capacity installed using renewable sources	Regulatory	not given	End users who own newly-constructed buildings or buildings to be refurbished.	Planned	January 2011 - not given

MEASURES RELATING TO THE TRANSPORT SECTOR					
Minimum quota for transport biofuel use	Regulatory	4.5% of transport biofuels fed into the network in 2012	Parties which make fuels available for consumption for automotive purposes	Existing	January 2007 – not given
Reduction in excise for biofuels	Regulatory	not given	Investors	Existing	1995-2010
TRANSVERSE MEASURES					
Interregional Operational Plan on Energy	Financial	Creation of renewable energy plants, operations to increase energy efficiency	Investors / End users / Public authorities	Existing	June 2007-December 2015
Kyoto Fund	Financial	Creation of renewable energy plants, operations to increase energy efficiency and reduce emissions	Investors / End users / Public authorities	Planned	not given
International cooperation mechanisms	Financial	Availability of renewable energy equal to approx. 1.1 Mtoe by 2020	Other countries, Investors, TSOs	Planned	January 2016 – not given
Further simplification of authorisation procedures	Regulatory	not given	Investors / End users / Public authorities	Planned	2010-2020
Definition of technical specifications (e.g. performance standards for biomass fuels)	Regulatory	not given	Investors / End users	Planned	2010-2020
Support for the creation of district heating and district cooling networks	Regulatory	not given	Manufacturing areas / Residential areas	Planned	2010-2020
Training and informative campaigns	Soft	Changes in behaviour	Operators, designers, regions, local authorities, citizens, companies, etc.	Planned	2010-2020
Support for the development of the electricity network	Regulatory	not given	AEEG[#], TSOs, Electricity network operators, Distributors	Planned	2010-2020
Support for the integration of biogas into the natural gas network	Regulatory	not given	Agro-industrial system, gas transmission and distribution network operator	Planned	2010-2020
Sustainability criteria for bioliquids and biomass	Regulatory	not given	Operators	Planned	2010-2020

* Indicate if the measure is (predominantly) regulatory, financial or soft (i.e. information campaign).
** Is the expected result behavioural change, installed capacity (MW; t/year), energy generated (ktoe)?
*** Who are the targeted persons: investors, end users, public administration, planners, architects, installers, etc.? or what is the targeted activity/sector: biofuel production, energetic use of animal manure, etc.)?

[#] AEEG (Autorità per l'energia elettrica e il gas) is the Italian Regulatory Authority for Electricity and Gas

Table 5: Overview of all policies and measures [Detailed version]

Name and reference of the measure	Type of measure*	Expected result**	Targeted group and/or activity***	Existing or planned policies / measures	Start and end dates of the measure
Use of international cooperation mechanisms (Articles 6 to 11)	Promotion, through agreements with the countries concerned, of imports, statistical transfers and joint projects with Member States and other countries	Availability of renewable energy equal to approx. 1.1 Mtoe by 2020, produced by means other than domestic production.	Other countries, Operators, TSOs	1. Agreement with Albania being updated, aimed at: a) mutual recognition of certification methods for electricity from renewable sources; b) reciprocity of related incentive schemes; c) consequently, the possibility of recognising incentives for renewable electricity produced in Albania and imported to Italy. 2. Agreement made with Montenegro with the aim of supporting the creation of an interconnection between Italy and Montenegro and the connections between the Montenegrin network and neighbouring Balkan states. Agreement made with Serbia for the creation of renewable energy plants on Serbian territory and in neighbouring areas. Possible extension of recognition of incentives for renewable electricity produced in Montenegro, Serbia and neighbouring areas and imported to Italy. 3. Agreement in force with Switzerland for reciprocal recognition of guarantee of origin 4. Joint declaration signed with Tunisia for creation of an interconnection, for which a capacity quota for renewables is being considered. The intention is to extend the above-mentioned agreements in order to make them more useful in achieving the targets set by the directive. Equally, we will investigate the possibility of concluding agreements with Member States for joint projects and statistical transfers. When the countries of the Energy Community achieve acquis communitaire for the RES Directive, the mechanisms for joint projects and statistical transfers could also be extended to these countries.	Various start dates; end date 2020

Adaptation of support measures (Art. 3(3)a)	Updating and completion of regulations in terms of incentive schemes, with the introduction of more effective structural measures to support heat production from renewables and renewable energy for transport	Increase in domestic production to achieve the results shown in the tables	Producers and consumers of electricity, heat and energy for transport	Various types of incentive are available for the production of electricity from renewable sources (green certificates for large plants, all-inclusive tariffs for small plants, premium tariffs for solar energy). Transport biofuels are supported through the mechanism of the obligatory minimum quota for biofuel made available for consumption. For heat production, various types of incentive are available for some applications: some which are structural but as yet not very effective, others which are structural and effective and still others which are effective but fixed-term. In this context, the intention is as follows: - electricity production from renewable sources: to update and rationalise the incentives in accordance with effectiveness and efficiency criteria with regard to domestic / European market values of electricity. The specificities of the various sources will be taken into account, since some are free whilst others are expensive, and they have different environmental impacts; - sustainable transport biofuels: to plan the increase of the minimum quota; to promote second- and third-generation biofuels, to make good use of biofuels obtained from waste and from raw materials of non-food origin, to promote biomethane and electricity to power means of transport; - to promote cooperation agreements with third countries for importing sustainable raw materials; - heat production from renewable sources: to review and expand the support schemes, which are currently insufficient for more complex or industrial operations; to implement rules in relation to a minimum quota for new buildings' heat consumption to be covered by renewable sources; possibly to keep the tax relief mechanism for specific applications; to support the replacement of old boilers and chimneys with new high energy efficiency and low-emission biomass boilers.	Measures for electricity and transport biofuels are existing and to be updated; measures for heat production from renewables to be expanded in 2010; horizon to 2020.

Adaptation of authorisation and licence procedures relating to renewable energy plants (Art. 13(1))	Reorganise the regulatory framework for building and operating a plant, in order that the procedures take into account the size and specific nature of the energy source and installation site.	Increasingly simple procedures as the size of the plant and number of constraints on the installation site decrease.	Operators, citizens, regions and local authorities	Differentiated procedures exist for the construction of renewable energy production plants, as well as for the product of transport biofuels. In all cases, the competent authorities are the regions, provinces and municipalities. There are also regulations for the installation of heat production plants to serve buildings, but these require some clarification. Further measures to be introduced will be aimed at better specifying the procedures to follow depending on the source, size and location of the plant, in order to achieve as much simplification as possible whilst guaranteeing procedures which are harmonised at national level, however with their management still being the responsibility of the region, province or municipality, depending on the complexity of the project. In particular, actions will be supported to improve the level of strategic planning by the regions and to develop coherent infrastructure policies, above all for the electricity networks.	The updates and adaptations should be introduced in 2010; horizon to 2020.
Definition of technical specifications to be complied with in order for renewable energy systems and equipment to benefit from support schemes (Art. 13 (2, 6 and 7))	Similarly to what is in force for photovoltaic energy, as part of the regulations relating to incentives, technical characteristics will be specified that plants have to comply with, with particular attention paid to small plants producing heat and electricity	Confidence of users and increased reliability of plants	Operators, constructors of components and plants, users of plants	Electricity: since the incentives are for production and not for investment, establishing technical specifications has so far been avoided, it being in the operator's best interests to use efficient and reliable components and systems. An exception was made for photovoltaic energy and – for the heating sector – for solar thermal energy and small plants producing heat from biomass – which involve users who do not have sufficient technical knowledge. Attention to technical specifications will gradually be increased in accordance with Article 13(2) of the directive, and this will also serve purposes connected to the provisions of the directive in relation to training and information, and takes into account the fact that the targets require efficient use of renewable resources. In accordance with Article 13(6), minimum performance standards will be introduced for all uses of biomass, which will include environmental factors, in consideration of the collateral effects, in particular the production of fine dust.	The new specifications should be introduced in 2010; horizon to 2020.

Integration of renewable sources into buildings and related infrastructure (Art. 13 (3, 4 and 5)	Definition of the conditions under which the use of a certain quota of renewable energy should become obligatory in newly-constructed buildings or buildings undergoing significant refurbishment, including in line with the new buildings directive.	Increased use of renewable sources for electricity and heating and cooling. More attention paid to users' participation in energy production and above all efficient energy use.	Operators, designers, local authorities, citizens and companies.	For new buildings or new installation or refurbishment of heating plants, there is already an obligation for all categories of public and private buildings to ensure that at least 50% (20% for buildings in historic centres) of the annual primary energy requirement for the production of domestic hot water is covered by the use of renewable sources. The methods for applying this obligation, requested by a subsequent decree, have not yet been defined. Furthermore, the Italian Building Code provides that municipal building regulations must include a rule which requires the installation of renewable electricity production plants with a capacity equal to 1 kW for each accommodation unit, as long as this is technically feasible. For industrial buildings of 100 m^2 or more, the minimum requirement is 5 kW. These measures will be implemented, also taking into consideration hydrothermal, aerothermal and geothermal sources (including heat pumps, including those with absorption cycles, amongst the technologies which allow these sources to be used), in order to also make them more directly operational, and possibly to expand them in line with the forecast given in recent Directive 2010/31/EU on the energy performance of buildings (recast). In addition, the possibility will be investigated of introducing an obligatory minimum quota for use of renewable sources at the design and implementation stage of infrastructure used by manufacturing and residential areas, for example through the construction of heat transport networks or the use of geothermal heat. Equally, the intention is to support the creation of heat transport networks in those manufacturing areas in which largely biodegradable refuse and waste are produced.	The regulations in force should become operational in 2010. The planned extensions will be introduced within the deadlines provided by the new building directive. The horizon will be to 2020.

Spread of information and training (Art. 14)	Strengthening the actions already taken by public bodies in this regard	Greater awareness of the choices made by the administrations which manage authorisations. Confidence of users and increased reliability of plants	Operators, designers, regions, local authorities, citizens and companies	At national level, the ENEA* plays the role of National Energy Efficiency Agency as per Directive 2005/32/EC and supports regions and local authorities in local energy planning. The GSE, the Italian State-controlled energy services body, and its subsidiaries are authorised to provide consultancy services to public authorities in relation to specialised services in the energy field. These two organisations also ensure the monitoring of the renewable electricity sector. For biofuels this monitoring is carried out by the Ministry for Agriculture, Food and Forestry. The task of providing training is inserted in the national strategic framework's regional planning and, together with communication, in the interregional plan on energy 2007-2013 focusing on the areas of southern Italy. The plan is to strengthen and harmonise these duties, extending them to the renewable heat production sector and dividing them up more clearly, and ensuring that the statistical monitoring is carried out in an organic way using integrated models and that the informative actions are divided up based on the recipients. With regard to training, the ENEA is the body best suited to developing various training tools in collaboration with the regions and regional training bodies, such as e-learning courses aimed at installers, designers, end customers, training courses for trainers/teachers of courses approved by ISO standards and certified by CEPAS, Italy's professional development and training certification body. In this context ENEA could make use of the experience it is gaining through participation in the Community QualiCert scheme.	The measure could be started from 2010 onwards with a horizon to 2020.

* The ENEA (Ente per le nuove tecnologie, l'energia e l'ambiente) is the Italian National Agency for New Technologies, Energy and the Environment

Development of electricity infrastructure (Article 16(1, 3-6))	Regulations aimed at speeding up to development and modernisation of the networks and furthering the acceleration of authorisation procedures for electricity networks and infrastructure	Attenuation of problems relating to feeding energy from non-programmable sources into the electricity network	Electricity and gas authorities, TSOs, distributors, operators	In implementation of Directive 2001/77/EC, there are already measures in place aimed at facilitating the connection of renewable energy plants to the electricity network. However there are still problems relating to the development of the network, particularly in areas of the country in which there is a strong presence of non-programmable plants. Action is being taken and the intention is to strengthen the commitment to network development and expansion of distribution networks above all, for which pilot projects have been set up using resources from the interregional operational plan for renewable energy and energy saving. Other measures in progress include the simplification of the administrative procedures for network adaptation projects, the improvement of production forecasts for non-programmable sources and the promotion of systems whose energy exchange with the network can be predicted (currently limited to photovoltaic power). Plans for the future will be based on collaboration with the regions which contain the areas most suitable for the development of renewables. The plan is to "anticipate" the development of transmission networks, encourage the modernisation of distribution networks in line with smart grid design, encourage the integrated management of associated aspects which include accumulation and generation systems and loads, including electric vehicles. Further acceleration of the necessary investment in the national transmission network is also planned, by introducing a premium/penalty mechanism to be paid by the network operator and monitoring the timeliness of its actions.	The measures could be expanded starting from 2010, with a horizon to 2020.
Functioning of electricity transmission and distribution networks (Article 16(2, 7))	It does not seem necessary to introduce further regulatory measures, since the AEEG's regulatory intervention, based on the rules in force, is considered sufficient for improving the predictability of production from non-programmable sources (see previous point)				

Integration of biogas into the natural gas network (Article 16(7, 9, 10))	Incentive schemes	More efficient use of biogas, which is currently almost always used for in-situ production of electricity.	Operators, agro-industrial system, gas transmission and distributor network operators	Italian legislation already allows access rights to the gas system as long as the technical conditions for access and interconnection are met. Moreover, Article 1 of Directive 2009/73/EC provides that the related regulations must be applied in a non-discriminatory way to biogas, gas derived from biomass and other types of gas, insofar as these gases can be injected into the natural gas system and transported through this system without causing technical or safety-related problems. It will therefore be a matter of integrating the regulations in force to regulate and financially support the feeding-in of suitably treated biogas into the methane network, where this is technically possible, or, in the event of high concentrations of biogas, supporting the creation of networks to transport biogas to the natural gas network.	The measures could be expanded starting from 2010, with a horizon to 2020.
Development of infrastructure for district heating and district cooling (Article 16(11))	Regulatory	It is estimated that district heating could reach a contribution of approximately 0.9 Mtoe to the final consumption covered by renewables	Operators, local authorities and regions	The existing measures benefit users connected to district heating networks connected to plants fed by geothermal or biomass heat sources. The mechanism provides the end user with an incentive of €25.80/MWht and a further incentive of approximately €21.00/kWt installed in substations, to partially cover connection costs. In addition, schemes have been put in place which use the white certificates mechanism to promote cogeneration, including systems connected to district heating. District heating from renewable sources could take advantage of this mechanism, since on the basis of the current regulations it is possible to add the incentives for renewable electricity to those provided for the use of cogenerated heat. The additional measures must presumably better clarify the legal framework for district heating (for example, whether or not it falls under local public services) and promote support for extending it, under certain conditions, to other forms of renewable energy, which will optimise the cost-benefit ratio and take advantage of the reduction in local pollution. See also the comments in this regard in Article 13, paragraphs 3, 4 and 5.	The measures could be expanded starting from 2010, with a horizon to 2020.

Biofuels and other bioliquids – sustainability criteria and verification of compliance (Articles 17-21)				The sustainability criteria will be applied to the production of biofuels and bioliquids using a traceability system, which has already been implemented and covers every stage of the production cycle, as the basic tool. This tool will be developed with regard to biofuels and bioliquids derived from Community raw materials. In addition, a national verification and certification system will be developed which integrates all the necessary elements for identifying whether the directive's conditions for biofuel origins have been respected (Article 17 (3, 4, 5, 6)), and for reaching the evaluations required by Article 17(2), using a mass balance system and the methodology indicated in the directive. For biofuels obtained from waste, the traceability system must be integrated and harmonised with the Italian waste control and traceability system (SISTRI), to make it possible to follow the route taken by the waste until the biofuel product is obtained. In relation to biofuels and bioliquids produced outside the European Union or from raw materials from third countries, in addition to the national system, bilateral or multilateral agreements could also be used, to be concluded by the EU and approved by the Commission. As an alternative, certificates issued by an accredited body under voluntary certification schemes recognised by the Commission will be accepted.	The measures could be introduced starting from 2010, with a horizon to 2020.

* Indicate if the measure is (predominantly) regulatory, financial or soft (i.e. information campaign).
** Is the expected result behavioural change, installed capacity (MW; t/year), energy generated (ktoe)?
*** Who are the targeted persons: investors, end users, public administration, planners, architects, installers, etc.? or what is the targeted activity/sector: biofuel production, energetic use of animal manure, etc.)?

4.2 SPECIFIC MEASURES TO FULFIL THE REQUIREMENTS UNDER ARTICLES 13, 14, 16 AND ARTICLES 17 TO 21 OF DIRECTIVE 2009/28/EC

4.2.1 Administrative procedures and spatial planning (Article 13(1) of Directive 2009/28/EC)

When answering the following questions, Member States are requested to explain the current national, regional and local rules concerning the authorisation, certification and licensing procedures applied to plants and associated transmission and distribution network infrastructure for the production of electricity, heating or cooling from renewable sources, and to the process of transformation of biomass into biofuels or other energy products. Where further steps are needed to ensure that procedures are proportionate and necessary, Member States are requested also to describe planned revisions, expected results and the authority responsible to carry out such revisions. When information is technology specific, please indicate it. When regional/local authorities have a substantial role, please also explain it.

(a) List of existing national and, if applicable, regional legislation concerning authorisation, certification, licensing procedures and spatial planning applied to plants and associated transmission and distribution network infrastructure:

Legislative Decree No 112/1998 made the regions responsible for the administrative duties relating to energy - including renewable sources, electricity, oil and gas - which were not reserved for the State or assigned to local authorities.

Constitutional Law No 3/2001 altered the division of responsibilities between the State and the regions. As a result, within the renewable energy sector, the State has legislative power whilst the regions have administrative power.

Under the new system, matters relating to “production, transportation and national distribution of energy” are assigned to the concurrent legislation of the State and the regions. It therefore falls to the State to establish, through its own laws, the fundamental principles for each subject, and to the regions to exercise their legislative power within the limits of the fundamental principles expressly set out by the State. In addition to the principles of national legislation, there is the further requirement to comply with obligations arising from the Community legal system (very relevant for the energy sector as a whole) and the State’s exclusive governance of transverse aspects, including environmental protection and competition.

The regions also have the power to adopt regulations and fulfil administrative duties not assigned to the municipalities or provinces.

In line with the duties assigned to them, the regions have taken steps to govern the energy sector through their own regulatory measures. A list of current regional regulations is given in *Annex 4.2.1.A.*

ENERGY AND SPATIAL PLANNING

There is a great deal of overlap and interaction between spatial planning and planning in this sector (for energy use, waste, land reclamation, transport, water, etc.), and this can be particularly complex.

Law No 10/1991 *"Regulations for the implementation of the National Energy Plan in matters of rational energy use, energy saving and development of renewable energy sources"* introduced the Regional Energy Plan to the planning context. Using this measure, regions are planning their interventions in the energy field, governing the actions of local authorities and harmonising the decisions taken at the various levels of spatial planning. The Energy Plan contains the starting points, short-, medium- and long-term strategic objectives, practical instructions, tools available, legislative and regulatory reference frameworks, funding opportunities, constraints, obligations, and rights of economic operators in the sector, of large-scale consumers and of normal users. In brief, the Energy Plan represents the main reference point for public and private entities intending to take energy-related initiatives within the territory covered by the Plan.
The regional energy plans, although based on free entrepreneurial initiative, also aim to give some direction to operations in the sector. Moreover, as well as having environmental implications, energy choices must also be combined with spatial management decisions. It is not by chance that many of the plans are entitled "Regional Energy and Environment Plan".
The following table gives the dates of the most recent approved updates of the plans.
The autonomous province of Bolzano adopted a Provincial Energy Plan back in 1997.

2001	2003	2004	2005	2006	2007	2008	2009
Lazio	Lombardy Valle d'Aosta Trento Liguria Sardinia	Piedmont Umbria	Marche Calabria Veneto	Molise	Friuli Emilia-Romagna Apulia	Tuscany	Sicily Basilicata Abruzzo Campania

AUTHORISATION PROCEDURES

TYPE OF PLANT / NETWORK	SUBCATEGORY	MAIN REGULATORY REFERENCE	PROCEDURE	COMPETENT AUTHORITY
Electricity production plants	Plants above the thresholds given in table A annexed to Leg. Decree No 387/2003	• Leg. Decree No 387/2003	Single Regional (or Provincial) Authorisation	Region (or appointed Province)
	Plants below the thresholds given in table A annexed to Leg. Decree No 387/2003	• Presidential Decree No 380/2001	Commencement Notice	Municipality
	Small-scale cogeneration (capacity lower than 1 MW or 3 MWt)	• Law No 99/2009 as amended	Commencement Notice	Municipality
	Micro-cogeneration (capacity lower than 50 kW)	• Law No 99/2009	Notification (free building activity)	Municipality

	Integrated / fitted photovoltaic systems and individual wind turbines less than 1.5 m high	• Leg. Decree No 115/2008	Notification (free building activity)	Municipality
	Photovoltaic systems outside historic centres	• Decree-Law No 40/2010	Notification (free building activity)	Municipality
Heating and cooling systems	Fitted solar thermal systems	• Leg. Decree No 115/2008	Notification (free building activity)	Municipality
	Solar thermal systems outside historic centres without external accumulator tank	• Decree-Law No 40/2010	Notification (free building activity)	Municipality
	Heat pumps / biomass boilers	• Presidential Decree No 380/2001	Notification (free building activity) or Commencement Notice	Municipality
Biofuel production plants	Biodiesel production plants	• Law No 239/2004	Regional or Provincial Authorisation	Region (or appointed Province)
Electricity transmission and distribution networks	Power transmission lines in the national transmission network	• Decree-Law No 239/03 and Law No 239/04	Single Authorisation	Ministry for Economic Development
	Changes to power transmission lines of a maximum of 1500 m which do not move away from the original line for more than 40 m	• Law No 99/2009	Commencement Notice	Municipality
	Works other than those listed above	• Decree-Law No 239/03 and regional regulations	Single Authorisation	Region (or appointed Province)
Heat transmission networks	District heating / district cooling networks	• Leg. Decree No 20/2007	Single Regional (or Provincial) Authorisation	Region (or appointed Province)

The State regulatory references for authorisation procedures vary depending on whether the operation relates to electricity production, heating and cooling, biofuels or networks. The table above gives an overview of the main national regulations in force.

According to the specific type of works to be carried out, some of the authorisation procedures indicated in the table above and described in more detail below could also foresee the completion of the **environmental impact assessment** procedure. More specifically, these are the types of operation covered by Legislative Decree No 152/2006:

Projects subject to environmental impact assessment for which the State is responsible:

- power plants and other combustion plants with a heating capacity of at least 300 MW;
- off-shore wind power installations;
- hydroelectric power plants with installed capacity greater than 30 MW;
- installations to be used to hold back, regulate and accumulate water in a sustainable way for energy purposes, of a height greater than 10 m or which have a storage volume greater than 100,000 m^3;

- overhead electric power lines with nominal operational voltage above 150 kV and longer than 15 km;
- electric power lines in buried AC cables, and longer than 40 km.

Projects subject to environmental impact assessment for which the region is responsible:

- power plants for the production of electricity, steam and hot water with total heat capacity greater than 150 MW;
- on-shore wind power installations. A representative of the Italian Ministry for Cultural Heritage and Activities must be involved in the procedure for such projects;
- incineration plants for non-hazardous waste, with capacity greater than 100 t/day.
- overhead electric power lines with nominal voltage above 100 kV and longer than 10 km;

Projects subject to applicability screening for which the region is responsible:

- power plants for the production of electricity, steam and hot water with total heat capacity greater than 50 MW;
- non-thermal industrial installations for the production of electricity, steam and hot water with total capacity greater than 1 MW;
- industrial installations for the transportation of gas, steam and hot water which supply pipes with a total length greater than 20 km;
- wind power installations with total capacity greater than 1 MW;
- hydroelectric power plants with installed capacity greater than 100 kW;
- incineration plants for non-hazardous waste, with total capacity greater than 10 t/day.
- overhead electric power lines with nominal voltage above 100 kV and longer than 3 km.

For the implementation of plans and schemes which may have a significant environmental impact (including, for example, the Electricity Network Development Plan), Legislative Decree No 152/2006 also provides for screening for the applicability of the **Strategic Environmental Assessment** (SEA) defined under Directive 2001/42/EC.

The authorisation procedure for the production of electricity from renewable energy sources currently in force was introduced by Legislative Decree No 387/2003, implementing Directive 2001/77/EC. Article 12 of this regulation (included in *Annex 4.2.1.B*) provides that the construction and operation of electricity production plants powered by renewable sources, and modification, expansion, total or partial reconstruction, and reactivation operations and connected works, as well as those connected to infrastructure essential for the construction and operation of the same plants are subject to a **single authorisation**. This document concludes a procedure lasting a maximum of 180 days.

The main aim of introducing this procedure was the rationalisation and simplification of the authorisation procedure for production plants using renewable sources. In fact, the single authorisation is issued in accordance with the current regulations for the protection of the environment, landscape and historical / artistic heritage within a single procedure in which all the authorities concerned participate. Where necessary, the plant and connected infrastructure must comply with environmental impact assessment regulations.

The single authorisation grants the right to construct and operate the plant in accordance with the approved plans and, where necessary, with the declaration of public interest, necessity and urgency. The single authorisation is in itself a change to the urban planning instrument. The requirements of countryside protection plans remain mandatory.
The authorisation cites any conditions applicable to the construction and operation of the plant; it also defines the procedures to be followed for the rehabilitation of the site once the plant is decommissioned (or, for hydroelectric plants, procedures for fulfilling the obligation to take environmental recovery and reintegration measures). The single authorisation sets deadlines for the start and end of works, and once these have passed the authorisation ceases to be effective, unless it is extended.
The tool used to carry out this single procedure and bring together all the authorities concerned to give their opinions is the Services Conference, described in point (f) below.

Article 12 of Legislative Decree No 387/2003 provides for a **simplified procedure**; this simplified procedure applies to plants with a generation capacity below the thresholds indicated in table A included in an annex to Legislative Decree No 387/2003 and reproduced below:

TECHNOLOGY	THRESHOLD (kW)
Wind	60
Solar photovoltaic	20
Hydraulic	100
Biomass	200
Landfill gas, residual gases from purification processes and biogas	250

For plants which do not exceed the thresholds indicated above, the **commencement notice** requirement applies[3] in accordance with Presidential Decree No 380/2001. A decree from the Ministry for Economic Development, in consultation with the Ministry for the Environment, Land and Sea and in agreement with the Unified Conference, could define higher generation capacity thresholds and additional installation site characteristics to which the same commencement notice requirement would apply. The Community Law of 2009 made the Italian Government responsible for extending the use of commencement notices to renewable energy plants with a capacity below 1 MW.
Article 11 of Legislative Decree No 115/2008 introduced further simplification and rationalisation measures for:

a) photovoltaic systems fixed to or integrated into building roofs on the same slope and with the same orientation as the pitch and whose components do not alter the silhouette of the buildings themselves;
b) individual wind turbines with a maximum height no greater than 1.5 metres and a diameter no greater than 1 metre.

[3] For plants installed in buildings or on sites protected by town-planning constraints or heritage or countryside protection measures, the necessary local permits must be attached to the commencement notice, for example the countryside protection or National Park Authority clearance. There are two types of architectural restriction which apply to refurbishment work, both provided by the Cultural Heritage Code (Decree-Law No 42 of 22 January 2004). The first is the countryside protection measure, which is imposed by local authorities through the Regulatory Plans or at times through specific Countryside Plans. The other constraint is the cultural heritage protection measure, which protects elements of artistic, historical, archeological or ethnological value. This constraint applies to individual "objects", which include buildings, and is imposed by the state, through the Services of the Ministry for Cultural Heritage.

The installation of such systems is in fact considered an ordinary maintenance operation and is therefore not subject to the commencement notice requirement.
Decree-Law No 40 of 25 March 2010 recently amended Article 6 of Presidential Decree No 380/2001 by establishing that all photovoltaic panels serving buildings outside category A areas (historic centres) can be installed **without any authorisation being required.**
Lastly, Article 27(20) of Law No 99/2009 established that the installation and operation of micro-cogeneration systems (no larger than 50 kW) are subject only to notification, to be given to the competent authority under Presidential Decree No 380/2001. In accordance with Legislative Decree No 56/2010, the installation and operation of units of up to 1 MW or 3 MWt are subject to the **commencement notice** requirement.

The authorisation procedure for heating and cooling systems which use renewable energy sources varies depending on the type of system.

The installation of solar thermal systems is subject to the commencement notice requirement in accordance with the provisions of Articles 22 and 23 of Presidential Decree No 380/2001 (the Italian Building Code).
Article 11 of Legislative Decree No 115/2008 introduced further **measures to simplify** and rationalise the administrative and regulatory procedures. In particular it established that the installation of solar thermal systems fixed to or integrated in building roofs on the same slope and with the same orientation as the pitch, and whose components do not alter the silhouette of the buildings themselves, is considered an ordinary maintenance operation and is therefore **not subject to the commencement notice requirement**. In the event that the operation relates to a building subject to historical/artistic or countryside/environmental planning constraints, the installation of the system is subject to the opinion or authorisation required by the relevant regulations (Legislative Decree No 42/2004, Cultural Heritage Code) being issued before the work starts.
Moreover, Decree-Law No 40/2010 established that solar panels without an external accumulator tank serving buildings outside category A areas (historic centres) can be installed **without any authorisation being required.**

The installation of air-conditioning systems and heat pumps is "free building activity" in accordance with the provisions of Article 6 of Presidential Decree No 380/2001. These operations can therefore be carried out without any authorisation being required, except for the more restrictive provisions of regional regulations and planning instruments, and in any case in accordance with other regulations of sectors which have an effect on building regulations.

Article 27(39) of Law No 99/2009 provided for a decree to be issued which defines the requirements for the implementation of heat and cold production systems using geothermal resources (also known as geothermal probes) used for heating and cooling buildings, for which only a commencement notice is necessary.
It is nonetheless of note that Article 1(6) of Law No 239/04 states that the regions establish through their own laws, under Article 118 of the Constitution, the assignment of duties and administrative tasks assigned to the State.
For waste biomass the provisions of Legislative Decree No 152/06 remain in force.

The authorisation procedure for the production of biofuels is outlined in Law No 239/2004 reorganising the energy sector. According to the provisions of Article 1(8)c,

biodiesel is assimilated to other mineral oils. Biodiesel production and distribution plants are therefore obliged to comply with the regulations relating to authorisation, environmental protection, taxation and safety for mineral oil plants.
Before Law No 239/2004 came into force, mineral oil plants were obliged to obtain a licence for storage units with a capacity of less then 3,000 cubic metres from the Ministry for Economic Development and the Prefecture responsible for the territory. The law cited above amended the system to require authorisation rather than a licence, and made the regions responsible for this authorisation. The following activities are therefore subject to **regional authorisation**, under Article 1(56) of the aforementioned Law No 239/2004:

1. the installation and operation of new mineral oil processing and storage plants;
2. the decommissioning of mineral oil processing and storage plants;
3. changes to the total processing capacity of mineral oil processing plants;
4. changes by more than 30% to the total authorised storage capacity of mineral oil storage units.

The authorisation procedure provides that the region will obtain opinions and clearance from all the authorities concerned by the procedure and with responsibility for taxation, safety, environmental protection and State property, in accordance with the requirements of Presidential Decree No 420 of 18 April 1994, "Regulation simplifying the authorisation procedures for the installation of mineral oil processing and storage plants".

Regional authorisation does not apply to liquid mineral oil storage units with a total capacity at or below the following thresholds: 10 cubic metres of mineral oils for commercial storage units; 25 cubic metres of mineral oils for private storage units (whether used for industrial or agricultural heating).

The authorisation procedure for electricity transmission and distribution networks is defined by Decree-Law No 239/03 and Law No 239/04, with further clarification and simplification introduced by Law No 99/09 and subsequent laws. In brief, the construction and operation of electrical power lines which form part of the national electricity transport network are subject to a single authorisation, issued by the Ministry for Economic Development in consultation with the Ministry for the Environment, Land and Sea, provided that the agreement of the region or regions concerned is obtained. This single authorisation replaces authorisations, licences, clearance and consent documents under any name provided for by the regulations in force, as it represents the right to construct and operate this infrastructure in compliance with the approved plans. Other works are authorised by the regions, which may delegate this duty to the provinces.

Law No 99/2009 introduced **simplification measures** for operations on electrical power lines which involve changes to lengths no greater than 1,500 linear metres which use the same line, or which do not move away from the original line for more than 40 linear metres. Subsequent changes to the project are also subject to the commencement notice requirement when they do not take place in significant locations. Further simplifications were introduced by Law No 41/10 for the works and infrastructures which fall under the development plan.

The authorisation procedure for heat transmission networks using cogeneration is

defined by Legislative Decree No 20/2007 on the promotion of cogeneration. Article 8 of this decree provided the possibility of inserting works connected to, and infrastructure essential for, the construction and operation of cogeneration plants into the framework of the single authorisation applicable to these plants.

(b) Responsible Ministry(/ies)/authority(/ies) and their competences in the field:

Please see table under point (a).

(c) Revision foreseen with the view to take appropriate steps as described by Article 13(1) of Directive 2009/28/EC by 2010:

As described in the paragraphs above, there is no shortage of regulations governing the authorisation procedures for power plants construction and operation, and these regulations provide for differentiated routes, taking into account the size and location of the plants. However, it is possible to further simplify and integrate these regulations.

The spread of power production plants which use renewable energy sources will be coordinated with the need to develop and modernise the electricity network. In agreement with the regions, this may involve improving and streamlining the administrative procedures for network development. It should be pointed out that, once the guidelines for carrying out the authorisation procedure have been approved, the regions are obliged to adapt their regulations within ninety days of the guidelines' entry into force. In the event of failure to adapt the regulations within this deadline, the national guidelines will apply. Moreover, the same guidelines provide criteria for integrating plants into the landscape (in particular wind power systems). The regions could use these criteria as a basis for indicating areas and sites unsuitable for specific types of plant. There are also criteria for establishing any compensatory measures (financial or otherwise) for the benefit of the municipalities when the authorisation is granted. A process has therefore started which should lead to greater uniformity of the regulatory framework, minimising uncertainty and consequently reducing the potential for purely speculative applications.

Law No 13/2009 provided that the 2020 targets will be divided between the Italian regions, assuming that different energy sources will be developed in the various regions. This division, to be shared with the regional authorities, will also be useful for developing the electricity network as it could provide network operators with useful elements for planning investments on time and improving the process of choosing plant sites. This task is currently entrusted to individual energy producers, often without any consideration for logical infrastructure management.
With regard to the plants, the intention is to extend the range of works which can be carried out simply by giving notification or, for plants with a capacity up to 1 MW, by giving the so-called commencement notice. This extension will be implemented in relation to the specific types of plant and locations concerned. In collaboration with the regions, the possibility will be investigated of further simplifying the authorisation procedure for interventions on existing plants, in particular when these interventions achieve greater efficiency or higher energy-producing capacity by installing components which use more advanced technology.

Another innovation which should be introduced relates to renewable source technologies

which can be used to cover users' aggregate consumption. To this end, rules will be examined which could ensure that equipment and systems for electricity production, heating and cooling using renewable energy sources and district heating or district cooling systems are inserted where possible during the planning, design, construction and refurbishment of residential, industrial or commercial areas, as well as in the plans for urban infrastructure projects.

The above-mentioned updates to regulations will be defined by the government as part of the legislative measures to implement the directive.

(d) Summary of the existing and planned measures at regional/local levels (where relevant):

A summary of the regional regulations on energy and related matters (including details of authorisation procedures) is provided in *Annex 4.2.1.A.*

(e) Are there unnecessary obstacles or non-proportionate requirements detected related to authorisation, certification and licensing procedures applied to plants and associated transmission and distribution network infrastructure for the production of electricity, heating or cooling from renewable sources, and to the process of transformation of biomass into biofuels or other energy products? If so, what are they?

The main difficulty which may be encountered is the slow and multifarious nature of the authorisation procedures at regional, provincial and municipal level.
In fact, administrative decentralisation in this area has given rise to a rather problematic issue: the autonomous way in which each level of local government has implemented the general requirements for authorisation procedures established by national legislation.

In order to overcome this difficulty, the aforementioned national guidelines for carrying out the authorisation procedure, provided by Article 12 of Legislative Decree No 387/2003, were approved. These guidelines provide instructions on how the procedure for issuing the single authorisation should be carried out. They also give the necessary instructions for the correct integration into the landscape of on-shore renewable electricity production plants, with particular attention given to measures for the appropriate insertion of wind farms into the landscape. The guidelines also tackle the issue of optimising works to connect plants to the electricity network: it is anticipated that the network operator will take into account connection requests from plants within the same area in a coordinated manner and may, following an appropriate investigation of the matter, add a gathering station which could potentially be used by several plants to the estimate for connection.
When implementing these guidelines, the regions may indicate areas and sites which are unsuitable for specific types of plant, and are responsible for adapting regional regulations in line with national guidelines on this issue.
It should be pointed out that, regarding the biofuel sector, the regulatory measure providing criteria and methods for authorising the installation and operation of mineral oil processing and storage plants has not yet been established.

(f) What level of administration (local, regional and national) is responsible for authorising, certifying and licensing renewable energy installations and for spatial planning? (If it depends on the type of installation, please specify.) If more than one

level is involved, how is coordination between the different levels managed? How will coordination between different responsible authorities be improved in the future?

As illustrated under points (a) and (b), the regulations in this area require various administrative bodies to authorise the construction of the various types of plants and networks.

Several different authorities are often involved in the authorisation procedure, depending on the responsibilities of each authority, the nature of the plant and the restrictions on the site concerned.

To summarise what is indicated above in point (b), we can say that several authorities are involved in giving authorisation: the Ministry for Economic Development and the Ministry for the Environment, Land and Sea for the construction and operation of infrastructure which falls within the national transmission network development plan; the regions for network infrastructure which does not fall within the national transmission network development plan; the regions and provinces, when appointed by the regions, for renewable energy plants; the municipalities for works which can be carried out by giving notification or a commencement notice. With the exception of plants which can be created by giving simple notification, the authorities responsible for the protection of specific interests are also involved.

With regard to biodiesel, the authority involved is the region.

To ensure coordination between the administrative bodies made responsible for protecting various matters of public interest within a single administrative procedure, the authority responsible for the procedure convenes a Services Conference in order to facilitate horizontal and vertical coordination between the various administrations and entities involved. This very important tool, introduced by Law No 241/1990, brings together all the administrative bodies and entities potentially concerned by the evaluation and authorisation of the project in the same place, in order examine all the interests at play at the same time. The reasoned decision which concludes the procedure takes into account the prevailing opinions expressed.

The Services Conference tool is always used for electricity production plants fed by renewable sources which cannot be created by giving notification or a commencement notice. As part of the Conference, a single authorisation is issued for the construction and operation of electricity production plants fed by renewable sources and the connected works and essential infrastructure which is defined as being in the public interest, necessary and urgent. The outcome of the environmental impact assessment (EIA) applicability screening process for the project is also considered at the Services Conference, as is the result of the assessment itself, including the impact assessment if required. The conference's work can be suspended for a maximum of 90 days, until the required deadline for the conclusion of this process; once this deadline has passed the competent administrative body gives its opinion at the conference. The single authorisation replaces to all effects any authorisations, licences, clearance and consent documents under any name which are the responsibility of the administrative bodies involved. In general there are exceptions for licences to divert public water supplies or licences to use geothermal resources, which must usually be obtained outside the

Service Conference process.

The Services Conference tool is considered adequate for ensuring coordination between the various responsible authorities and therefore, within the context of the legislative measures to implement the directive, the possibility will be assessed of extending it to plants other than those for electricity production, whilst maintaining the intention to allow the simplified procedures of notification and commencement notice for small plants on non-sensitive sites. Equally, the authorisation procedures and responsibilities for construction and operation will be harmonised with the environmental procedures and responsibilities.

(g) How is it ensured that comprehensive information on the processing of authorisation, certification and licensing applications and on assistance to applicants made available? What information and assistance is available to potential applicants for new renewable energy installations on their applications?

Various measures introduced into Italian legislation by the transparency regulations set forth over the past fifteen years ensure that the public administrative bodies provide comprehensive information to the parties involved.

In order to ensure accurate and timely information is provided on regulatory provisions, matters of significant public and social interest, and the activities and services of the administrative bodies, Legislative Decree No 29/1993 introduced the establishment of a specific **Public Relations Office**.

Based on the principle of transparency in administrative activities, Law No 241/1990 created the role of **Procedure Manager**, a civil servant appointed to manage the administrative procedure. This manager is responsible for providing information on the progress of ongoing applications. The interested parties are informed of the manager's name at the start of the procedure.

In addition, each entity has taken steps to make suitable free-of-charge information services available to citizens (e.g. dedicated counters, websites, call centres etc.) to ensure adequate transparency and information.

With regard to energy production from renewable sources, the guidelines for the authorisation procedure for power plant construction and operation (mentioned in point (e) above) provide that the regions (or provinces if given this responsibility) must use their own websites or other means to publish information on the authorisation regime for the various types of plant, their capacities and locations, the authority responsible for giving authorisation, the documentation to be attached to the application and the methods and deadlines for concluding the related procedures, and provide the suitable application forms for the single authorisation. Equally, lists and plans of areas and sites declared unsuitable will be published on the websites of the regions and local authorities concerned. The authorisations issued for construction and operation will also be made public, in accordance with personal data protection rules.

The public authorities may use these communication and publicity methods for all authorisation procedures for the various types of plant and network they operate, in line with the regulations in force.

(h) How is horizontal coordination facilitated between different administrative bodies, responsible for the different parts of the permit? How many procedural steps are needed to receive the final authorisation/licence/permit? Is there a one-stop shop for coordinating all steps? Are timetables for processing applications communicated in advance? What is the average time for obtaining a decision for the application?

Horizontal and vertical coordination between the administrative bodies involved in authorisation procedures is ensured by convening the Services Conference described in point (f). This conference has the same purpose as the one-stop shop, since it allows the coordination, in a single procedure and for a single party, of all the assessments and actions required for plant installation.

The involvement of the entities concerned in this conference meets the objective of guaranteeing fixed deadlines for carrying out and concluding the authorisation process.

The table below shows the methods and deadlines for the Services Conference to issue the Single Authorisation for electricity production plants using renewable sources, except for the methods and deadlines required for a possible environmental impact assessment or other procedures related to sensitive interests, as provided by Article 12 of Legislative Decree No 387/2003:

	DEADLINE	ACTION
1	Within 15 days of presentation of the authorisation application	The competent administrative body, having verified that the supporting documentation is complete, informs the applicant that the procedure has started, or that the application is inadmissible as the required information has not been provided.
2	Within 30 days of acknowledgment of receipt of the application	The administrative body which initiated the procedure convenes the Services Conference.
3	Within 90 days of the start of the procedure	The administrative body which initiated the procedure, with the impetus of the other bodies concerned, takes steps to make a single request for any further documentation or clarifications considered necessary for the evaluation of the project. If the application does not provide the additional documentation within 30 days, the project is examined on the basis of the information available.
4	Within 180 days of acknowledgment of receipt of the (admissible) application	The procedure is concluded.

However, the average times actually taken to issue the authorisation exceed the deadlines set forth by the legislation, particularly in areas with a high concentration of applications. Under Article 2(a) of Law No 241/1900, the public authorities and the procedure manager are obliged to provide compensation for any unfair disadvantage caused by wrongful or negligent failure to meet the deadline for concluding the procedure.

(i) Do authorisation procedures take into account the specificities of the different renewable energy technologies? If so, please describe how. If they do not, do you envisage taking them into account in the future?

(j) Are there specific procedures, for example simple notification, for small-scale, decentralised installations (such as solar panels on buildings or biomass boilers in buildings)? If so, what are the procedural steps? Are the rules publicly available to citizens? Where are they published? Is the introduction of simplified notification procedures planned in the future? If so, for which types of installation/system? (Is net metering possible?)

As illustrated under point (a), for each type of plant or network the authorisation procedures already take into account the specificities of the different technologies and also foresee simplified measures for small-scale plants.

Nonetheless, as stated in point (c), the authorisation procedures will be simplified further and made more proportional to the specificities of the technologies and size of the plants.

(k) Where are the fees associated with applications for authorisation/licences/permits for new installations published? Are they related to the administrative costs of granting such permits? Is there any plan to revise these fees?

The fees involved in the application for plant / network authorisation are generally published on the websites of the administrative bodies responsible for the procedure. Each body regularly reviews and, if necessary, updates the amounts to be paid by applicants.

(l) Is official guidance available to local and regional administrative bodies on planning, designing, building and refurbishing industrial and residential areas to install equipments and systems using renewable energy sources in electricity and heating and cooling, including in district heating and cooling? If such official guidance is not available or insufficient, how and when will this need be addressed?

The competent ministries and the regions have approved suitable guidelines for the electricity production sector, as stated in point (e). One of the aims of these guidelines is to provide local authorities with guidance on the installation of plants in their areas.

In October 2009, the Ministry for Economic Development issued a guidance document for the very purpose of supporting public administrative bodies in matters relating to the spread of renewable energy sources. This document assigned a support role to the GSE, the Italian State-controlled energy services body.

More generally, as specified in point (c), other planned guidance schemes should be adopted to ensure that equipment and systems for electricity production, heating and cooling using renewable energy sources, and district heating or district cooling systems are inserted where possible during the planning, design, construction and refurbishment of residential, industrial or commercial areas, as well as in the plans for urban infrastructure projects.
Specific regulatory instruments could be introduced to untie any administrative or bureaucratic knots and streamline the development of new infrastructure, smart grids and smart cities.

The same incentive system could be used to guide operators when choosing locations for certain types of installation. As an example, the review of the system for ground-based photovoltaic plants is intended to establish a premium mechanism for operators whose plants occupy disused industrial areas or those eligible for environmental rehabilitation, rather than agricultural land, for example.

(m) Are there specific trainings for case handlers of authorisation, certification and licensing procedures of renewable energy installations?

Each public body responsible for the administrative procedures described in the points above independently plans training courses for the employees appointed to manage these procedures.

The aforementioned guidelines establish that the regions make applicants pay a fee in order to cover the application costs. It therefore follows that a possible increase in authorisation applications would make resources available for the expansion of the offices responsible for handling applications, including the possibility of additional training for case handlers.

4.2.2 Technical specifications (Article 13(2) of Directive 2009/28/EC)

(a) To benefit from support schemes do renewable energy technologies need to meet certain quality standards? If so, which installations and what quality standards? Are there national, regional standards that go beyond European standards?

In the future, requirements for operators wishing to access incentives to meet specific standards will gradually be introduced. These requirements will apply to all technologies which use renewable sources, starting from those based on small capacity plants.
The intention is therefore to implement the provisions of Article 16(3) of the directive, according to which Member States clearly define the technical specifications that renewable energy equipment and systems must meet in order to benefit from support schemes.
The following elements will be used for this purpose:

a) definition of harmonised technical requirements, starting from small capacity plants, which may be used by households or small and medium enterprises;
b) for plants which use biomass, the provision of minimum performance standards relating to both efficiency and emissions, taking environmental effects into consideration, in particular those connected to fine dust; moreover, in widespread applications, the biomass must promoted in "standardised" virgin form; attention will also be paid to the rules for the disposal of ash which, when produced by the combustion of virgin biomass, should not be considered special waste;
c) recourse to regulatory, technical and ecological quality measures in order to set the minimum requirements, as well as Community informative documents, where these have been transposed into Italian law or are in any case available.

To support the implementation of Article 16 of the directive, the development of the applicable technical regulations will be encouraged. In particular this may involve: the characterisation of renewable sources (including measurement methods) and, if applicable, quality assurance systems (particularly important for biomass and its derivatives); the planning of plants fed by renewable energy sources and their components; the installation of renewable energy plants and methods for their approval; the verification of the energy performance of systems and plants; the verification of energy-use and environmental sustainability.

Collaboration between the various levels of authority will be crucial, in order to avoid the creation of a complex and contradictory system, for example in the definition of minimum performance requirements.

If a certificate of conformity with technical specifications is required, this could be obtained from laboratories accredited under the European Cooperation for Accreditation (EA) scheme or those which have a mutual recognition agreement with the EA.
The technical specifications currently required for access to the various support schemes are described below.

FEED-IN TARIFF mechanism for photovoltaic plants (described in paragraph 4.3)
The technical standards with which photovoltaic plants and related components must

comply in order to access the Feed-In Tariff incentives are indicated in *Annex 4.2.2.A "Technical Specifications – Photovoltaic"*.

ENERGY EFFICIENCY CREDITS scheme (described in paragraph 4.4)

For the types of renewable energy plants which fall under the Energy Efficiency Credits Scheme, specific technical / quality standards must be respected.

This incentive scheme is accessed through the assessment of projects to increase energy efficiency, based on guidelines prepared by the Italian Regulatory Authority for Electricity and Gas (AEEG). There are three methods for evaluating the energy savings made possible by various types of intervention: standardised, analytical and final results-based. For the first two cases, the evaluation takes place using specific data record sheets to assess compliance with specific quality standards according to the technology used for the renewable sources. The data record sheets defined by the AEEG for interventions relating to renewable energy sources are listed below, divided up according to the type of technology and respective technical / quality standards.

DATA RECORD SHEETS	AEEG DECISION	TECHNOLOGY	TECHNICAL STANDARDS
Data record sheet No 7 "Use of photovoltaic systems with electrical capacity of less than 20 kW"	Decision No 234/02	Photovoltaic systems Electrical capacity < 20 kW	Certification is required to prove the compliance of photovoltaic cells with the standards: - CEI EN 61215 for crystalline silicon cells - CEI EN 61646 for amorphous silicon cells For all cases to which the standard CEI EN 61000-3-2 applies, the inverters must be constructed in accordance with this standard in relation to disturbances conducted on the AC side, and must in any case be compliant with all the product standards for this type of device.
Data record sheet No 8 "Use of solar collectors for domestic hot water production"		Solar collectors	The solar collectors considered acceptable for the energy credits scheme, with reference to Article 6(c) of the Ministerial Decrees of 24/04/2001 and 02/04/1998, implementing the "Method for certifying the characteristics and energy performance of buildings and connected systems", must have a thermal efficiency value above the set values according to the requirements of standard UNI 8212-9.
Data record sheet No 15 "Installation of external air source electric heat pumps in place of boilers in newly-constructed or refurbished residential buildings"	Decision No 111/04	External air source electric heat pumps	- Provision of Article 6 of the Ministerial Decree of 20/07/2004* - Minimum permitted COP value: 3.0 (set in accordance with standard UNI EN 255).
Data record sheet No 19 "Installation of high energy efficiency external air conditioners with refrigerating capacity of less than 12 kWf"	Decision No 70/05	External air conditioners with nominal refrigerating capacity of less than 12 kWf	- The conditioner must be labelled in accordance with standard EN 14511. - The nominal refrigerating capacity must be indicated with reference to the nominal conditions specified in EN 145 11, in relation to the model installed. - Provision of Article 6 of Ministerial the Decrees of 20/07/2004* The conditioners considered acceptable for the energy credits scheme, with reference to Annex 4 of Directive 2002/31/EC of 22 March 2002, are air-cooled conditioners with an EER value corresponding to efficiency class A. The appliances can be split or multi-split (Table 1.1), packaged (Table 1.2), or single-duct (Table 1.3).
Data record sheet No 21 "Civil applications of small cogeneration systems for winter and summer temperature control and production of domestic hot water"	Decision No 177/05	Low temperature geothermal heat and heat from cogeneration systems, geothermal systems and systems fed by plant products and organic and inorganic waste	- Article 6, Ministerial Decrees of 20 July 2004. - Standard CTI UNI 887 "Systems for cogeneration processes – Definitions and classification" - For plants fed by biomass: Presidential Decree of 8 March 2002 and subsequent updates.
Data record sheet No 21 "Civil applications of district heating systems for ambient temperature control and production of domestic hot water"		Low temperature heat from geothermal systems and systems fed by plant products and organic and inorganic waste	Article 6 of Ministerial Decrees of 20/07/2004*
Article 6 of the Ministerial Decrees of 20/07/2004 "Promotion of products, equipment and plant components in the context of the initiatives" is given in *Annex 4.2.2.B Technical Specifications – Energy Efficiency Credits*			

TAX RELIEF mechanism (described in paragraph 4.4)

As illustrated in paragraph 4.3, there are incentives for using solar panels for hot water production, high energy efficiency heat pumps (including those with low temperature geothermal installations), and heat generators fed by biomass, through a tax relief mechanism. The following table indicates the technical specifications which the various technologies must meet in order to benefit from this incentive, and the relevant regulatory reference.

OPERATION	REGULATORY REFERENCE	TECHNICAL SPECIFICATIONS
Installation of solar panels for hot water production	Ministerial Decree of 19 February 2007, as amended by Ministerial Decree of 26 October 2007 ("Buildings Decree"). Art. 8(1)	The panels must have a quality certificate which is compliant with standard UNI EN 12975 or UNI EN 12976 and issued by an accredited laboratory. Standards EN 12975 and EN 12976, when transposed by a national certification body of an EU Member State or Switzerland, are considered equal to standards UNI EN 12975 and UNI EN 12976.
Full or partial replacement of winter heating systems with systems equipped with high energy efficiency heat pumps and with low temperature geothermal installations	Ministerial Decree of 19 February 2007, as amended by Ministerial Decree of 26 October 2007 and coordinated with the Ministerial Decree of 7 April 2008 and 6 August 2009, implementing the 2008 Finance Act. Art. 9(2)a and (2)b Art. 9(2)a and (2)b	The coefficient of performance (COP) and, if the equipment also provides cooling in the summer, the energy efficiency ratio (EER) must be at least equal to the relevant minimum values set in Annex 1 of the Ministerial Decree (*Annex 4.2.2.C Technical Specifications – Heat Pumps*) Performance must be measured in accordance with standards: -UNI EN 14511:2004 for electric heat pumps; - EN 12309-2:2000 for gas absorption heat pumps (test values on the LHV); - EN 14511:2004 endothermic engine heat pumps. When electric heat pumps with inverters are installed, the relevant values given in annexes H and I are reduced by 5%.
Replacement of winter heating systems with systems equipped with heat generators fed by combustible biomass	Ministerial Decree of 11/03/2008 implementing Article 1(24)a of Law No 244/2007, for the definition of limits for annual primary energy requirements and heat transmission rates, in order to apply paragraphs 344 and 345 of Article 1 of Law No 296/2006. Art. 1(2)	Heat generators fed by combustible biomass must comply with the following conditions: a) a minimum nominal useful efficiency compliant with class 3 under European standard UNI-EN 303-5; b) compliance with emissions limits as per Annex 9 of the fifth part of Legislative Decree No 152/2006 as amended, or the more restrictive limits set by regional standards, where these exist; (*Annex 4.2.2.D Technical Specifications – Biomass Heat Generators*) c) use of combustible biomass which falls under those permitted under Annex 10 of the fifth part of Legislative Decree No 152/2006 as amended.

GREEN CERTIFICATES and ALL-INCLUSIVE TARIFF schemes (described in paragraph 4.3)

Technologies adopted to create renewable energy source plants, as defined in Article 1(2) of Legislative Decree No 387/2003, which benefit from an incentive scheme based on the green certificates and/or all-inclusive tariff scheme are not currently required to comply with any specific quality standards.

4.2.3 Buildings (Article 13(3) of Directive 2009/28/EC)

Please note that when referring to increasing the use of renewable energy sources in buildings, the supply of renewable electricity from the national grid should not be considered. The focus here is on increasing local supply of heat and/or electricity to individual buildings. The direct supply of heat or cooling through district heating and cooling in buildings could also be taken into account.

(a) Reference to existing national and regional legislation (if any) and summary of local legislation concerning the increase of the share of energy from renewable sources in the building sector:

Law No 10/1991 was the first national reference to incentive schemes for the use of renewable energy in the building sector. In addition to the rational use of energy and energy saving, this law included the development of renewable energy sources amongst its objectives. In particular, the law provided for the possibility of granting capital contributions for some specific technologies.
Presidential Decree No 412/1993, implementing Law No 10/1991, confirms the obligation for publicly-owned buildings or buildings for public use to meet their energy needs by favouring the use of renewable energy sources, unless there are technical or financial obstacles to this. With regard to power plants, this obligation applies to new installations or refurbishment projects. Annex D of the same Presidential Decree indicates the renewable energy technologies applicable to the various types of public buildings.

The development of national legislation on the increase in the energy share from renewable sources in the building sector has taken place in parallel to the definition of measures aimed at improving the energy efficiency of Italy's existing buildings.
Due to this link, the measures introduced at national level covered by this paragraph, can be divided into two main categories: "direct" measures (in the form of incentives and obligations which relate directly to renewable energy) and "indirect" measures, those specifically aimed at improving buildings' energy performance, but the achievement of which could contribute to the adoption of technology using renewable energy.
The measures currently in force are described below in accordance with these categories.

A) "Direct" measures

A.1) INCENTIVES

FEED-IN TARIFF mechanism for photovoltaic plants (described in paragraph 4.3)
With particular reference to buildings, with the aim of taking advantage of the potential of the external surfaces of buildings, thus limiting land use, an increased tariff is provided for photovoltaic modules which are integrated into the architecture of buildings.
In order to take into account the higher specific costs for small and medium-sized plants, typical of the application of this technology to buildings, the structure of the incentive tariffs is such that higher amounts are paid for the energy produced by small-scale plants.
For plants serving buildings, the mechanism also allows for a premium for efficient energy use. The premium consists of an increase of up to 30% in the incentive tariff and is subject to a reduction in the annual primary energy requirement of existing buildings

which undergo energy retrofits relating to the building envelope or, for new buildings, the achievement of an annual primary energy requirement of less than 50% of the legal limit.

TAX RELIEF mechanism (described in paragraph 4.4)
There are incentives for operations to install solar collectors for hot water production and to replace winter heating systems with systems equipped with high energy efficiency heat pumps, including with low temperature geothermal installations, in the form of a deduction from personal income tax (IRPEF) and corporate income tax (IRES) obligations of 55% of the costs incurred for these operations. The total deduction is divided into five equal instalments and deducted annually from tax obligations.
This tax relief only applies to operations carried out on existing buildings.
The tax relief mechanism, described in paragraph 4.4, is governed by the following decrees:
Ministerial Decree of 19/02/2007, *"Provisions relating to deductions for the costs of energy retrofits of buildings";*
Ministerial Decree of 26/10/2007, *"Provisions relating to deductions for the costs of energy retrofits of existing buildings, under Article 1(349) of Law No 296 of 27 December 2006"*;
Ministerial Decree of 07/04/2008, *"Provisions relating to deductions for the costs of energy retrofits of existing buildings, under Article 1(349) of Law No 296 of 27 December 2006"*;
The ENEA (Italian National Agency for New Technologies, Energy and the Environment) is responsible for managing this mechanism.
Law No 244/2007 (2008 Finance Act) extended the possibility of claiming tax relief on the costs incurred to 31 December 2010; the possibility of maintaining this tax relief scheme after this date is currently being examined.

Calls for bids for CAPITAL

Amongst the direct incentives for the use of renewable sources, financial support in the form of capital is available and is allocated to projects through suitable calls for bids.

One example of this support at national level is the recent call for bids issued by the Ministry of Economic Development which started a competitive public tendering procedure to provide funding for initiatives to create energy production plants using renewable sources to serve buildings owned by the administrative bodies of the State, regions, provinces, municipalities and mountain communities, located in the Convergence regions of Italy (Campania, Calabria, Apulia and Sicily). The call for bids, issued in order to implement the Interregional operational plan for renewable energy sources and energy saving, has a budget of €30 million to provide up 100% funding for projects with a unit costs of between €100,000 and €1 million. The types of project eligible for funding are photovoltaic systems, high energy efficiency cogeneration plants using renewable sources, wind energy installations using net metering, solar thermal systems, low temperature geothermal heat pumps, and biomass boilers.

Also at national level, there are several calls for bids issued by the Ministry for the Environment, Land and Sea including, for example, the "Sun in Public Buildings" project. This call for bids promotes the creation of solar thermal systems for low temperature heating in public buildings through the third-party financing mechanism in accordance with the definition given in Article 3(k) of Directive 2006/32/EC.

The maximum permitted percentage of public contribution is equal to 50% of the acceptable

cost of the investment. However, this percentage increases to 65% in the event that the applicant's share of the investment is covered through a third-party financing mechanism run by an AEEG-accredited ESCO (Energy Service Company).
The initiative, which is part of the Solar Energy Promotion Plan, has been in operation since 2007. It was initially allocated €10 million and has been extended thanks to refinancing under Decree No 712 of 05/08/2008 by the Directorate General for Environmental Protection, which provided an additional budget of €2 million. In addition, calls for bids for cofinancing energy efficiency and renewable source projects are issued fairly regularly by the regions.

A.2) OBLIGATIONS

Within the current landscape of national building regulations, there is an obligation to cover a minimum quota of energy needs for domestic hot water production using renewable sources (Legislative Decree No 192/2005) and an obligatory minimum installed capacity of electricity production plants to use renewable sources (Law No 244/2007).
For a detailed description of these obligations please refer to point (e) of this paragraph.

B) "Indirect" measures

Greater commitment to renewable energy in the building sector is also pursued indirectly through incentive schemes for the improvement of buildings' energy performance. In this context the following measures should be noted.

Tax relief for general energy retrofit works

In addition to the types of operation described above (solar thermal and high energy efficiency heat pumps), it also possible to deduct the costs of general energy retrofit works on existing buildings from tax obligations.
Access to this tax relief is subject to a reduction in the primary energy requirement for winter heating to below the maximum values imposed by law for new buildings (2007 limits) reduced by 20%. The reduction must be demonstrated by providing two energy certifications, one obtained before and one after the alteration works, the second of which must show that the heat transmission rates are below the legal limits set by Ministerial Decree No 26/01/2010.
Primary energy requirements could be limited by covering a share of the final consumption with the use of renewable energy, of which the primary energy consumption is considered to be zero. In cases where winter heating systems are replaced with systems using heat generators fed by biomass, a fossil energy share equal to 30% of the primary energy actually supplied to the plant is assumed. In addition, again in cases where biomass systems are installed, the opaque walls and door and window frames must have a heat transmission rate below the legal limits set by Ministerial Decree No 26/01/2010 to be eligible for the tax relief. These limits vary according to the geographical area.

Energy Efficiency Credits

The "Energy Efficiency Credits" or "white certificates" scheme consists of an incentive scheme for energy saving measures, imposing obligations on large electricity and natural gas distributors.
There are many possible actions to reduce energy consumption in the various types of building (industrial, tertiary and residential) and these allow technology using renewable

sources to be adopted. This technology includes solar collectors, photovoltaic panels, heat pumps, low temperature geothermal heat and heat from cogeneration plants, geothermal plants or plants fed by plant products and waste. For a detailed description of the mechanism please refer to paragraph 4.4.

(b) Responsible Ministry(/ies)/authority(/ies):

Various ministries are responsible for developing the widespread use of renewable energy sources in Italy, within the limits of their jurisdiction. With regard to the building sector, we can mention:

- The **Ministry for Economic Development**, which has energy, and therefore also renewable energy sources, within its jurisdiction. In particular, it is responsible for the transposition and implementation of the building energy certification policy.
- The **Ministry for Infrastructure and Transport**, which outlines the construction characteristics of public and private buildings, including in terms of limiting energy use and using renewable energy sources.
- The **Ministry for the Economy and Finance,** which, through the Revenue Agency, is the reference ministry for deductions from the IRPEF or IRES tax obligations following energy retrofits.
- The **Ministry for the Environment, Land and Sea**, which, as well as being the ministry which works in cooperation with the Ministry for Economic Development on many measures relating the renewable energy and energy efficiency, also controls the issuing of the Ecolabel mark, through the Institute for Environmental Protection and Research (ISPRA). The ministry also promotes calls for bids for the spread of renewable energy use in Italy, including in the building sector.

With regard to other responsible authorities we can state that:

- the **ENEA** is the body responsible for monitoring the tax relief schemes; the ENEA (Italian National Agency for New Technologies, Energy and the Environment) is a public body supervised by the Ministry for Economic Development in cooperation with other ministries. Its purpose is research activity, technological innovation and the provision of advanced services in the energy and sustainable economic development sector. It also fulfils the role of National Energy Efficiency Agency under the European directive on energy end-use efficiency.
- the **GSE** is the body responsible for managing the incentive schemes for electricity production from renewable sources; the GSE has also been given the task of supporting public administrative bodies in energy saving and the spread of renewable energy sources. The GSE (Gestore dei Servizi Energetici S.p.A.) is a State-controlled energy service company: its sole shareholder is the Ministry for the Economy and Finance which exercises shareholder's rights alongside the Ministry for Economic Development.

(c) Revision of rules, if any, planned by 2010

The existing measures relating to electricity and heat production in new buildings will be implemented, taking into consideration hydrothermal, aerothermal and geothermal sources (including heat pumps, including those with absorption cycles, amongst the technologies which allow these sources to be used), aiming to make them more directly operational and

possibly expand them in accordance with the recent Directive 2010/31/EU on the energy performance of buildings (recast).

The possibility will also be investigated of introducing an obligatory minimum quota for renewable energy use as early as the design and construction phase of infrastructure serving manufacturing and residential areas, for example through the construction of heat transport networks or the use of geothermal heat. Similarly, the intention is to support the creation of heat transport networks in manufacturing districts producing waste and refuse with a high proportion of biodegradable content.
For existing buildings, see the measures relating to incentives.

At the same time, some specific proposals for promoting renewable energy in the building sector will be carefully examined. One example is the possibility of paying premiums based on volume and offering discounts on development costs for construction firms which use renewable energy technologies, as already tested in several municipalities, with a good response.
For specific measures relating to public authorities see point (h).

(d) Summary of the existing and planned measures at regional/local levels:

The existing and planned measures at regional/local level will essentially be implemented by issuing calls for bids, imposing minimum levels of renewable energy use, establishing communication and training activities at local level and introducing even more simplified measures within regional/local jurisdiction.

(e) Are there minimum levels for the use of renewable energy in building regulations and codes? In which geographical areas and what are these requirements? (Please summarise.) In particular, what measures have been built into these codes to ensure the share of renewable energy used in the building sector will increase? What are the future plans related to these requirements/measures?

With reference to the minimum levels of renewable energy use in buildings provided by national regulations, Legislative Decree No 192/2005 as amended provides that, for all categories of public and private buildings, in cases of new construction or when new power plants are installed or existing power plants are refurbished, the heat energy production system must be designed and created in such a way that it covers at least 50% of annual primary energy requirement for the production of domestic hot water by using renewable sources. This limit is reduced to 20% for buildings located in historic centres. The methods for applying this obligation, required by the decree, have not yet been defined.
Legislative Decree No 192/2005 specifies that projects to build or refurbish new public and private buildings must make arrangements for the necessary works to connect the buildings to district heating networks, where a section of the network is present within less than 1000 metres, or when a plan for such a network has been approved in the context of the relevant planning instruments.

The Finance Acts of 2007 (*Law No 296/2006)* and 2008 (*Law No 244/2007*) introduced a new obligation to the Building Code (Presidential Decree No 380/2001) for the purposes of issuing building permits for new buildings.
In fact, a rule must be introduced in the common building regulations which imposes "*the installation of electricity production plants using renewable sources, to guarantee energy*

production of at least 1 kW per accommodation unit, as long as this is technically feasible. For industrial buildings of 100 square metres or more, the minimum energy production required is 5 kW".
The expiry date for this rule, initially planned for 1 January 2009, was extended to 1 January 2010 by Law No 14/2009 and to 1 January 2011 by Decree-Law No 194/2009.

When preparing measures to implement the directive, the plan is to implement the rules of Legislative Decree No 192/2005 and Presidential Decree No 380/01, also taking into account hydrothermal, aerothermal and geothermal sources (including heat pumps, including those with absorption cycles, amongst the technologies which allow these sources to be used), aiming to make them more directly operational and possibly expand them in accordance with the provisions of the next version of the revised directive on the energy performance of buildings. This process will guarantee the transposition to local level of national measures, whilst trying to encourage the harmonisation of building regulations, in order to avoid unjustified discrepancies in the authorisation of renewable energy systems.
The possibility will also be investigated of introducing an obligatory minimum quota for renewable energy use as early as the design and construction phase of infrastructure serving manufacturing and residential areas, for example through the construction of heat transport networks or the use of geothermal heat. Similarly, the intention is to support the creation of heat transport networks in manufacturing districts producing waste and refuse with a high proportion of biodegradable content.

In order to understand the implementation status at regional level of the principles introduced by Legislative Decree No 192/2005, an analysis was carried out in 2009 by the Italian National Monitoring Centre for Energy Saving (ON-RE), promoted by the CRESME research centre and the Legambiente environmental association in collaboration with SAIE Energia. The following table, giving a summary of regional regulations, is taken from the report of this analysis, as are the figures below, which show the municipalities and regions whose regulations have introduced obligations to install solar thermal plants for hot water production (Figure 1) and obligations to produce electricity using renewable sources (Figure 2).

Table 1 – Regional Regulations

Region	Regional Law	Energy Efficiency	Renewable Efficiency	Energy Certification
Trento	Provincial Law No 1 of 04/03/08 and Presidential Decree No 59 of 02/04/09	**Obligatory** minimum requirements: screening of glazed surfaces; maximum heat transmission rate of external walls 0.30 W/m^2 K	**Obligation** to install systems to cover 50% of domestic hot water using renewable energy and 20% of electricity using renewables	**Yes**
Lombardy	Decision of the Regional Executive No 8/8745 of 22/12/08	**Obligatory** minimum requirements: screening of 70% of glazed surfaces; maximum heat transmission rate of external walls 0.36 W/m^2 K	**Obligation** to produce 50% of domestic hot water using renewable energy and to connect to district heating network if present within 1000 metres	**Yes**
Liguria	Regional Law No 22 of 29/05/2007, revised 06/07 and Regional Law No 16 of 2009	**Obligatory** minimum requirements: screening of 70% of glazed surfaces; maximum heat transmission rate of external walls 0.40 W/m^2 K	**Obligation** to produce 50% of domestic hot water using renewable energy	**Yes**
Emilia-Romagna	Decision of the Regional Council No 156 of 04/03/08	**Obligatory** minimum requirements: screening of 50% of glazed surfaces; maximum heat transmission rate of external walls 0.36 W/m^2 K	**Obligation** to install systems to produce 1 kW from renewable energy for electricity and 50% of domestic hot water using renewable energy and to connect to district heating network if present within 1000 metres	**Yes**
Piedmont	Regional Law No 13 of 31/05/07 and Decision of the Regional Executive of 04/08/09	**Obligatory** minimum requirements **to be defined**	**Obligation** to produce 60% of domestic hot water using renewable energy	**Yes**
Apulia	Regional Law No 13 of 10/06/08 and Regional Law No 3 of 09/03/09	**Obligatory** minimum requirements **to be defined**	**Obligation** to install systems to produce 1 kW from renewable energy	**Yes**
Valle d'Aosta	Regional Law No 21of 18/04/08	**Obligation to be defined**	**Obligation to be defined**	**Obligation to be defined**
Lazio	Regional Law No 6 of 27/05/08	**No**	**Obligation** to install systems to produce 1 kW from renewable energy for electricity and 50% of domestic hot water using renewable energy	**Yes**
Umbria	Regional Law No 17 of 18/11/08	**No**	**Obligation** to install systems to produce 1 kW from renewable energy for electricity and 50% of domestic hot water using renewable energy	**Yes**
Tuscany	Regional Law No 1 of 03/01/05	**Guidelines** on the screening of glazed surfaces and heat transmission rates	**No**	**Yes**
Campania	Decision of the Regional Executive No 659 of 18/04/07	**Guidelines** on the screening of glazed surfaces and heat transmission rates	**No**	**No**

Source: Legambiente / CRESME ON-RE 2009

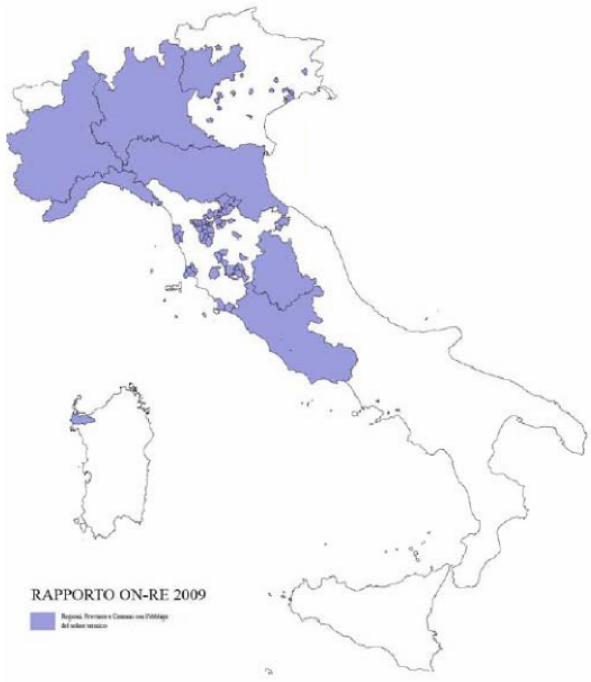


Figure 1

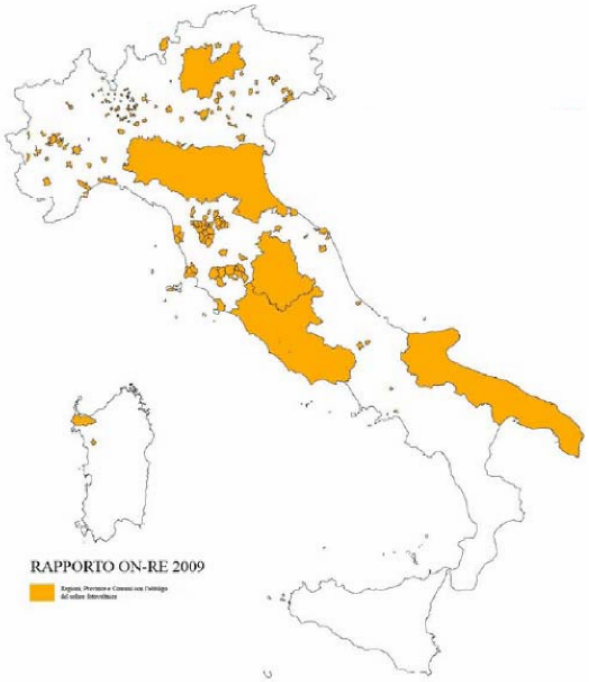


Figure 2

There were various developments in the overall picture of regional regulations in the months following the publication of the aforementioned study (on 29 October 2009); for example the region of Piedmont established obligatory minimum requirements for energy efficiency.

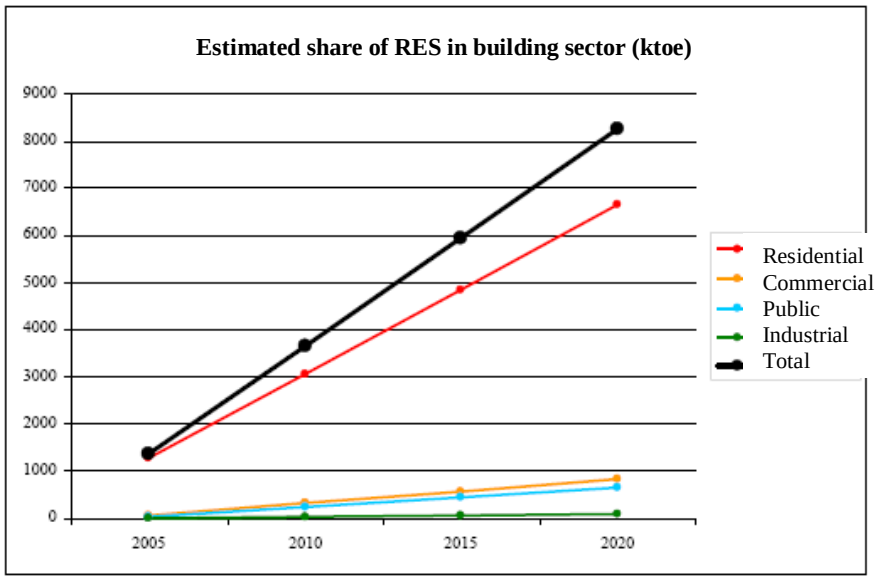
It should also be pointed out that some regional measures have been introduced in the form of framework laws and therefore are not yet considered to be fully implemented.

(f) What is the projected increase of renewable energy use in buildings until 2020? (If possible differentiating between residential — 'single-unit' and 'multiple unit', commercial, public and industrial.) (To answer this question you may use a table as Table 6 below. Data could be given yearly, or for selected years. Both heating and cooling and electricity consumption from renewable energy sources should be included.)

Table 6
Estimated share of renewable energy in the building sector

(%)

	2005	2010	2015	2020
Residential	93%	84%	82%	81%
Commercial	5%	9%	10%	10%
Public	2%	7%	8%	8%
Industrial	0%	1%	1%	1%
Total	1,363	3,658	5,954	8,250



(g) Have obligations for minimum levels of renewable energy in new and newly refurbished buildings been considered in national policy? If so, what are these levels? If not, how will the appropriateness of this policy option be explored by 2015?

Please see point (e)

(h) Please describe plans for ensuring the exemplary role of public buildings at national, regional and local level by using renewable energy installations or becoming zero energy buildings from 2012 onwards? (Please take into account the requirements under the EPBD).

Public bodies which intend to install renewable energy systems in buildings or to serve buildings can already benefit from incentive schemes in the same way that other operators can.

In addition, municipalities with populations of up to 20,000 residents can use the net metering service (described in paragraph 4.3) for electricity produced by municipal-owned renewable plants with a capacity of up to 200 kW, to cover their own consumption. In doing so municipalities do not have to take into account the obligation for the feed-in point and the point at which energy exchanged with the grid

is taken to coincide, but the network fees remain payable. The Ministry of Defence can also use the net metering service for electricity produced, including for renewable plants with a capacity of more than 200 kW, also without taking into account the obligation for the feed-in point and the point at which energy exchanged with the grid is taken to coincide.

However, the intention is to tackle the issue of integrating renewable sources alongside efforts to increase the energy efficiency of buildings. It is not by chance that the Extraordinary Energy Efficiency Plan, drafted in order to implement Law No 99/2009, provides for measures specifically aimed at encouraging energy efficiency and the use of renewable energy within public administrative bodies.
With the involvement of various authorities and public bodies, in-depth investigations are currently ongoing to identify means of carrying out economically sustainable operations. The first exemplary operations will be carried out in the southern Italian regions as part of the Interregional operational plan for renewable energy sources and energy saving, which makes resources available for this purpose. Other operations could be implemented across the whole of Italy using soft loans made available by the rotating fund put in place in order to implement Law No 296/06.
The framework could be completed by establishing a suitably regulated guarantee fund, with the involvement of a third party capable of evaluating the energy-use and economic effects of the operations. Another option is to introduce support systems which make the operations economically feasible for the ESCO as well. These could include, for example, white certificates of suitable value, the possibility of municipalities making sites or buildings available for the creation of renewable energy plants, the possibility of the operations benefiting from soft loans (for example through the Kyoto Fund), or other options still to be assessed.
The funding opportunities provided by the Interregional operational plan for renewable energy sources and energy saving could be useful for this purpose, as the plan covers actions to support energy production from renewable sources and energy saving in the context of increasing the energy efficiency of public buildings and energy demands or those to be used by the public.
The possibility will also be investigated of introduction instructions for public administrative bodies in order that, when purchasing new systems, they prioritise mechanisms and measures which minimise the “total cost of heating” (purchase cost and running costs) to be calculated over a minimum time period still to be defined.

(i) How are energy efficient renewable energy technologies in buildings promoted? (Such measures may concern biomass boilers, heat pumps and solar thermal equipment fulfilling eco-label requirements or other standards developed at national or Community level (cf. text of Article 13(6)).

For a description of the measures suitable for ensuring the efficiency of technology using renewable sources please refer to the details of the technical specifications which with the technology must comply in order to access incentive schemes, given in paragraph 4.2.2 (and related annexes: incentive tariff for photovoltaic, energy efficiency credits and/or tax relief for solar thermal, heat pumps and biomass heat generators) and to the provisions relating to information described in paragraph 4.2.4 (see in particular points (a) and (e))

In general we would emphasise the commitment to promoting efficient renewable

energy technologies within the energy systems of buildings with particular attention to heating and cooling, including through the use of aerothermal, geothermal and hydrothermal heat pumps.

4.2.4 Information provisions (Articles 14(1), 14(2) and 14(4) of Directive 2009/28/EC)

Current and future information and awareness raising campaigns and programmes, as well as planned revisions, and expected results have to be described. Member States should also indicate which responsible authority will monitor and review the effects of the programmes. When regional/local authorities have a substantial role, please also indicate and summarise it.

(a) Reference to existing national and or regional legislation (if any) concerning information requirements according to Article 14 of Directive 2009/28/EC:

According to Article 14 of Directive 2009/28/EC, the obligations and duties relating to information can be summarised as follows.

Information on support schemes

AEEG Decision No 312/2007 made the GSE, the State-controlled energy services regulator, responsible for the obligation to provide information on the legislative and regulatory provisions relating to renewable energy sources and high-efficiency cogeneration, and on the methods for integrating said forms of electricity production into the electricity system. The GSE carries out this task through its own website (www.gse.it), by writing informative guides and through a specific contact centre service. The information provided relates specifically to the support measures derived from national incentive schemes for renewable energy sources and cogeneration.

The introduction of an organic support system for heat production from renewable sources will be an opportunity to organise informative actions along the same lines as those in place for electricity production.

The support schemes based on regional and local calls for bids are generally accompanied by information campaigns promoted by the bodies who issue these calls for bids.

Information on the net benefits, costs and energy efficiency of equipment

Between 1998 and 2003 the energy labelling obligation was introduced for manufacturers of refrigerators, freezers, washing machines, dishwashers, lamps for domestic use, electric ovens, and air conditioners, in order to implement Community Directive 92/75/EEC. In addition, suppliers of these items are obliged to provide the public with a product sheet for each item of equipment on sale indicating: the manufacturer's trademark, model name, efficiency class on a scale from A to G, energy consumption, any Ecolabel which may have been assigned and the main characteristics of the product.

Information on certification systems for biomass boilers or stoves, solar photovoltaic or solar thermal systems, shallow geothermal systems and heat pumps

The legislation in force does not provide for a specific obligation for this type of

information. However, access to some incentive schemes for the use of biomass, solar photovoltaic or solar thermal for heat is subject to these systems being compliant with set requirements, measured in accordance with the relevant technical standards transposed into the standardisation system. Nevertheless, further information must be provided on these technical standards, as well as on certification systems for biomass boilers or stoves, solar photovoltaic or solar thermal systems, shallow geothermal systems and heat pumps. This subject, which is particularly relevant for energy production systems other than electric systems, will be tackled in parallel with the organisation of the incentive system for heat from renewable sources.

Information and guidance for designing, planning and construction

The legislation in force does not provide for a specific obligation for this type of information. In general the professional associations in this sector organise the distribution of information on installing systems fed by renewable energy sources. The opportunity to implement specific training measures could be better evaluated in terms of implementing current measures relating to the renewable energy use obligation for buildings, and the new provisions presented relating to a possible minimum quota for renewable energy as early as the design and construction stage for infrastructure serving manufacturing and residential areas (see paragraph 4.2.3, point (e)).

Information, awareness raising, guidance and training programmes

In order to implement Article 9 of Legislative Decree No 387/2003 and Article 1(119) of Law No 239/04, an information and training campaign relating to the electricity sector was launched.

Article 4 of Legislative Decree No 115/2008 appointed the ENEA as the National Energy Efficiency Agency. This body is also given the task of ensuring that information is provided to citizens, companies, public administrative bodies, and financial institutions on energy saving methods and on the mechanisms and legal and financial framework in place for the spread and promotion of energy efficiency, and of establishing energy auditing systems. These actions must be coherent with programmes run by the regions.
The same legislative decree provides for an update of the methods used to measure and bill for energy consumption. The possibility and usefulness of using the same instrument to spread information about renewable sources will be assessed.

With regard to information for public administrative bodies, a rule of Law No 99/09 has been implemented which appoints the GSE to provide these bodies with specialist services in the field of renewable energy and energy efficiency.

With regard to training, the ENEA already offers a range of training courses aimed at schools, companies and universities, which could be specifically extended and strengthened in line with the directive. This action will be taken along the same lines as the actions in place for installers' certification, with which it could usefully be combined. In this context, new technologies such as e-learning could be used. The ENEA has created a dedicated infrastructure for IT-based training which includes a distance learning platform, video-conferencing systems, virtual classrooms and tools for producing content and for collaborative working.

(b) Responsible body/(ies) for dissemination of information at national/regional/local levels:

There are several bodies responsible for the dissemination of information.

Legislative Decree No 322/1989, which established the Italian national statistics system (SISTAN), identified the public bodies and organisations responsible for gathering and disseminating information on various subjects, including energy-related issues. In particular, the responsible bodies for information on renewable energy and energy efficiency are as follows:

- The Ministry for Economic Development (MED) is the body made responsible for managing general information on the national energy requirement and its coverage using various sources. In particular, the MED compiles the National Energy Balance Sheet on an annual basis and oversees the completion of statistical questionnaires which it then sends to Eurostat.
- TERNA is the company responsible, within the SISTAN system, for publishing annual statistics on electricity production and consumption, the monthly note on trends in electricity production and consumption, daily statistics on electricity requirements, and data on heat production from cogeneration.
- The ENEA is the body made responsible for drawing up the regional energy balance sheets and national energy efficiency indicators. In its role as National Energy Efficiency Agency, the ENEA is also given the task on ensuring information is provided on energy-saving methods, and on the mechanisms and legal and financial framework in place for the spread and promotion of energy efficiency.
- The GSE participates in the SISTAN system, together with TERNA, to process statistics on electricity production from renewable sources. More generally, as indicated in point (a), the GSE is the body responsible for disseminating information on renewable energy sources, particularly in relation to support schemes.

At national level, different institutions are involved in information activities, depending on the specific subject. These include the Ministry for Economic Development, Ministry for the Environment, Land and Sea, the GSE, the ENEA, etc.

In addition, at regional/local level, the competent administrative bodies promote information campaigns, above all in reference to initiatives set up by the same administrative bodies (e.g. local calls for bids for funding, etc.)

For details of the responsibilities for implementing the directive, please see point (a) above.

(c) Summary of the existing and planned measures at regional/local levels (where relevant):

The Italian regions have various responsibilities relating to energy and the environment. Information, awareness raising, communication and training measures are provided for within the following local and regional planning instruments:
- Regional Environmental and Energy Plan;
- ESF (European Social Fund) Regional Operational Programme.

In fact, these programmes foresee action to accompany the policies and incentive schemes for renewable energy, in order to make them as effective as possible.

(d)

(d-1) Please indicate how information is made available on supporting measures for using renewable energy sources in electricity, heating and cooling and in transport to all relevant actors (consumers, builders, installers, architects, suppliers of relevant equipment and vehicles).

Information on support measures is provided, first and foremost, by the institutions appointed to manage these same support measures: government ministries for national calls for bids; the GSE for information on support instruments; the ENEA for tax relief measures to encourage renewable energy and energy efficiency; regions, provinces or municipalities for training and support measures accessed through local calls for bids.

Information activities carried out by the competent institutions are often supported by information, training and awareness raising campaigns run by industrial associations (Confindustria, Confapi, Confartigianato, CNA, etc), service associations, companies (installers, ESCOs) and service companies, consumer associations (Adiconsum, Unione Consumatori, Federconsumatori, Cittadinanza Attiva, etc), and scientific, technical and non-profit organisations (FIRE, WWF, Legambiente, Greenpeace, Amici della Terra, Ises Italia, etc.).

The usual methods for disseminating information are:
- through websites which provide documents and, in general, links to other sites;
- through the creation of subject-specific guides and informative leaflets;
- through seminars and training courses.

(d-2) Who is responsible for the adequacy and the publishing of this information?

National institutions are responsible for the adequacy of the information they disseminate. Regional institutions often develop collaboration agreements with the ENEA and other bodies in order to guarantee the reliability of data and information.

(d-3) Are there specific information resources for the different target groups, such as end consumers, builders, property managers, property agents, installers, architects, farmers, suppliers of equipment using renewable energy sources, public administration?

In addition to the information provided by institutions as described in points (d-1) and (d-2) above, specific information is also available through trade associations and professional organisations. In particular, with regard to energy manager training, the ENEA and the Italian Federation for Rational Energy Use (FIRE) manage information and training activities relating to energy management, incentive schemes and good practice for energy efficiency.

(d-4) Are there information campaigns or permanent information centres in the present, or planned in the future?

There are ongoing information campaigns relating to previous objectives and those set by

Directive 2009/28/EC.
Permanent information centres may be set up by institutions with relevant responsibilities under the legislation in force or by organisations which are better spread across the country.

In the renewable electricity sector, the GSE has set up a specific contact centre to provide information on renewable energy sources, high-efficiency cogeneration and methods for integrating production into the electricity network, through dedicated withdrawal and net metering. This information may be accessed through several channels (telephone, email, fax and post) and also allows data to be collected, on a voluntary basis, for a customer satisfaction survey, following the methods set out by AEEG Decision No 139/07.

With regard to energy efficiency, the website www.efficienzaenergetica.acs.enea.it provides information on energy saving and the tax relief provided for by law. In addition, the specific "Energy Efficiency" Working Group within the ENEA fulfils requests for direct consultation or professional training from groups of technicians or users through meetings and conventions organised by trade associations, professional organisations or local bodies. The ENEA also refers people to a free-phone number (managed by Adiconsum) which responds over the phone to technical or procedural queries on the 55% tax relief provided by the most recent Finance Acts.
Finally, it should be noted that the ENEA fulfils the role of National Energy Efficiency Agency, and in this guise may also play a useful role in relation to information on renewable sources for heating.

(e) Who is responsible for publishing information on the net benefits, costs and energy efficiency of equipment and systems using renewable energy sources for heating, cooling and electricity? (Supplier of the equipment or system, public body or someone else?)

Suppliers are responsible for publishing information on the net benefits, costs and efficiency of their equipment and systems, following the methods indicated in the technical standards (UNI, CEI (Italian Electrotechnical Committee) etc.). In terms of public bodies, it is the ENEA which is responsible for publishing this information, as part of its role as National Energy Efficiency Agency.

(f) How is guidance for planners and architects provided to help them to properly consider the optimal combination of renewable energy sources, high-efficiency technologies and district heating and cooling when planning, designing, building and renovating industrial or residential areas? Who is responsible for that?

Through their social activities, trade associations contribute to spreading a culture of sustainability and compile guidance documentation for their members.

(g) Please describe the existing and planned information, awareness raising and training programmes for citizens on the benefits and practicalities of developing and using energy from renewable sources. What is the role of regional and local actors in the designing and managing these programmes?

Some information and awareness raising programmes carried out at national level are

summarised below:

- Sustainable Energy for Italy Campaign – The Ministry for the Environment, Land and Sea launched the Sustainable Energy for Italy Campaign in 2005 as part of the European "Sustainable Energy Europe" (SEE) campaign. After the first stage in 2005-2008, the SEE campaign was relaunched by the European Commission for a new three-year period from 2009 to 2011. The Ministry for the Environment, Land and Sea will continue to fulfil the role of National Focal Point for the campaign. One of the aims of the initiative is to increase awareness and modify energy production and use with a view to reaching the targets set by the Kyoto Protocol and the Community targets set for 2020. Annex 4.2.4 gives details of some initiatives planned as part of the SEE campaign. As part of the SEE campaign, the Covenant of Mayors was launched with the precise aim of directly involving local authorities in the fight against climate change and with a view to achieving the Community targets set for 2020. So far around 500 municipalities in Italy have formally joined this initiative.

- Information and education campaign supporting renewable energy sources, energy saving and efficient use of energy – In 2007 the Ministry for Economic Development and the Ministry for the Environment, Land and Sea signed an agreement with the Italian National Network of Local Energy Agencies (RENAEL) and the Italian Environmental Protection Agency (APAT) to organise and implement an information and education campaign supporting renewable energy sources, energy saving and efficient use of energy. The campaign is based on two main axes: raising awareness of the use of clean and environmentally-friendly technologies and guidance on efficient and rational energy use with the aim of having a significant impact on awareness amongst the target audience.

- Awareness raising campaign on solar thermal systems and energy saving in public buildings – The campaign "Raising awareness of solar thermal systems and energy saving in public buildings" aims to involve mayors and procedure managers within public administrative bodies in the obligation to introduce renewable and energy-saving technology to ongoing and future public calls for tender. In 2005 the Kyoto Club organisation launched "Operation10", an awareness raising campaign aimed at encouraging procedure managers within public administrative bodies to insert solar thermal systems and energy-saving technology into public calls for tender. Thanks to the support of the Ministry for the Environment, Land and Sea, the campaign offers a sustainable route for public administrative bodies by signing up to specific campaigns, supporting them in interpreting the legislation and gaining knowledge of the technologies on the market and the incentives they can benefit from in order to reduce the cost of investment.

- Promotion, awareness raising and training operations carried out under the Interregional operational plan for renewable energy sources and energy saving. This is a measure which accompanies the other lines of action of the plan and aims to improve knowledge, skills and social acceptability in matters of renewable energy and energy saving. This takes the form of information, awareness raising and promotional campaigns directed at people living in the Convergence regions of Italy, with particular reference to "areas of friction" and areas in which operations are located, not necessarily in relation to operations anticipated by the plan itself. The target audience

is not only the general public, but also the media, "opinion makers" in general, and those responsible for building management. The information programme is accompanied by training programmes for designers, manufacturers, maintenance technicians, installers, administrators and technicians working for the public administrative bodies, according to training modules which could be divided up by region or by province.

Centralised management is foreseen for the above-mentioned campaigns. However, said programmes are also supported by others in which the training, information and awareness raising campaigns are run directly by the regions and local bodies using their own resources. In such cases, the regional/local bodies are in charge of designing, organising and running the programmes. Finally, there are also various initiatives run on a regular basis by trade and environmental associations.

4.2.5 Certification of installers (Article 14(3) of Directive 2009/28/EC)

(a) Reference to existing national and/or regional legislation (if any) concerning certification or equivalent qualification schemes for installers according to Article 14(3) of the Directive 2009/28/EC.

The national regulations in force in this regard are principally found within the more general context of Ministerial Decree No 37 of 22/01/2008, which replaced Law No 46/1990 (with the exception of Articles 8, 14 and 16).

The decree applies (Article 1) to *systems serving buildings, regardless of their intended use*, and in particular: a) *systems for electricity production, transformation, transport, distribution and use* and c) *systems for heating, cooling, air-conditioning and refrigeration of any type or nature* and identifies (Article 3) the *qualified companies* and (Article 4) *technical and professional requirements* necessary for carrying out activities to install said systems.

At the end of the works, the designer or installer must issue a declaration for the system installed and for each component used. This declaration certifies compliance with the legislation in force and with the UNI and CEI standards and those of other standardisation bodies of EU Member States. The installation company draws up the document in relation to the works completed.

(b) Responsible body/(ies) for setting up and authorising certification/qualification schemes by 2012 for installers of small-scale biomass boilers and stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps:

Training and qualification schemes have been set up at European level for skills relating to the renewable energy sector (e.g. Windskill, SolTec), and Italian organisations have become partners in these schemes.

With specific reference to small-scale installers of biomass boilers or stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps, the ENEA is a partner in the European Qualicert project, promoted by all the European associations of renewable system manufacturers. This project intends to define installer profiles in order to establish a certification system which is compliant with the provisions of Article 14(3) of European Directive 2008/28/EC and its Annex 4.

In collaboration with the regions and with the involvement of trade associations, the ENEA can fulfil the role of the body appointed to define general programmes for installer training, in which said body trains the entities which will then be responsible for providing training, whilst the training itself should be carried out under the responsibility of the regions. With regard to certification in particular, this should be carried out by entities accredited by ACCREDIA in accordance with the current European legislation on certification.

The certification systems to be established will be voluntary.

(c) Are such certification schemes/qualifications already in place? If so, please, describe.

Some voluntary certification systems or equivalent qualification systems for designers, installers or inspectors of renewable energy systems (e.g. photovoltaic systems) are in place. The accredited bodies operate on the basis of a plan which defines in advance: general rules for issuing and maintaining the certification, requirements for qualification, and a professional code of ethics.

(d) Is information on these schemes publicly available? Are lists of certified or qualified installers published? If so, where? Are other schemes accepted as equivalent to the national/regional scheme?.

Information is publicly available, for example on the websites of the accredited bodies.

(e) Summary of existing and planned measures at regional/local levels (where relevant).

The regions will be involved in training activity aimed at the certification and qualification of skills in this sector.

4.2.6 Electricity infrastructure development (Article 16(1) and Article 16(3) to (6) of Directive 2009/28/EC)

Besides the current situation and already existing legislation, future actions, planned revisions, responsible bodies for it and expected results have to be described.

Management of the national transmission network (high and very high voltage) and electricity dispatch are reserved by law for the State and entrusted by the Ministry for Economic Development to the company TERNA S.p.A. - Rete Elettrica Nazionale (National Electrical Network). The conditions of service are contained in the Transmission and Dispatch Code, adopted by the assignee as a legislative obligation and approved by the Ministry and the AEEG.

The management of medium and low voltage networks and electricity distribution is also entrusted by the Ministry for Economic Development to distribution companies, identified as single assignees at municipal level. The main Italian distribution network operator is Enel Distribuzione.

The main reference legislation was issued by the Ministry for Economic Development, whilst the technical and economic regulations for this activity are the responsibility of the AEEG. The Italian Electrotechnical Committee (CEI) oversees all the technical standards.

Although the regulations in force facilitate the connection of renewable energy plants to the electricity network, the strong growth in installed capacity and connection requests and the amount of time necessary for developing networks (longer than the time required for developing individual plants) has brought about delays and bottlenecks. This is most noticeable where there are high concentrations of non-programmable plants, and causes limitations on the full use of the installed capacity.
Action is being taken to tackle this problem with regard to the transmission network, by speeding up the authorisation procedures for the construction of electrical power lines and collection stations for electricity from renewable sources.

For renewable power plants, particularly non-programmable plants, the current legislation also guarantees remuneration for missed renewable production in the event of problems caused by the network's insufficient capacity to accept and dispatch said energy whilst ensuring the system's safety. However, this is a solution which must be considered as contingent and dependent only on the need to avoid compromising the investments made.
In fact, we must move on to a concept of complete "harvesting" of all potential renewable production, by using accumulation / storage systems for the electrical energy which is produced but cannot be fed into the grid, with the aim of allowing the full potential to be used. The costs of operations to dispatch energy from non-programmable renewable sources will be analysed with the aim of reducing these as much as possible through optimised system management.
The plan for the future, starting from an arrangement to share the geographical distribution of the various renewable technologies with the regions - based on the potential for use, limitations and development status of the network - is to "anticipate" network development, promoting the creation of the electrical power lines presumed to be necessary to transport the electricity.

For this purpose, in light of the need to integrate the consistent growth in energy generation from renewable sources into the electricity system, growth caused mainly by the wind farms planned for southern Italy and the islands, it seems necessary to provide for a specific section in the national transmission network development plan, defining actions required for the complete "harvesting" of all potential renewable production, in a way which is coherent with the targets set in the national action plan.
Moreover, the possibility is being considered of making the body called upon to a authorise renewable energy plants also responsible for authorising, with specific precautions in place, the expansion of the networks – limited for transmission to those networks listed in the development plan section on renewables – necessary for the withdrawal of energy from the grid, in order to pursue a harmonised development of plants and networks.

At the same time an incentive or premium/penalty mechanism will be developed, like that introduced for the national transmission network through AEEG Decision No ARG/elt 87/10. This aim of this mechanism is to speed up operations to adapt and expand the networks, whilst monitoring the timeliness of operators' actions in order to identify any problems in advance and provide the necessary solutions.

With regard to the modernisation of the distribution networks in line with smart grid specifications, pilot projects have been set up using resources from the interregional operational plan for renewable energy and energy saving.
Other measures in place include the simplification of administrative procedures for network adaptation works, improvement of forecast models for production from non-programmable renewable sources, and the promotion of systems whose energy exchange with the network can be predicted (currently limited to photovoltaic power).
The intention is therefore to more systematically encourage the modernisation of distribution networks in line with smart grid concepts, further improve the forecast models for production from non-programmable renewable sources, and promote the integrated management of associated aspects including accumulation and generation systems and loads. From this point of view, synergies with programmes to spread the use of electric vehicles could be useful (in this regard the possibility could be assessed of extending the energy efficiency credits scheme to electric vehicles, as well as the development of smart grids).

Finally, in collaboration with the AEEG, transport capacity booking mechanisms will examined, in order to prioritise projects which can actually be completed, based on the results of the authorisation procedure.

(a) Reference to existing national legislation concerning requirements related to the energy grids (Article 16):

Connection to the electricity network

Legislative Decree No 79/1999, transposing European Directive 96/92/EC, establishes the obligation for distribution companies to connect all parties which request it to their own networks, without compromising the continuity of service.

For renewable energy plants, Legislative Decree No 387/2003, transposing European Directive 2001/77/EC, deals with issues relating to the connection of plants to the electricity network.

For high-efficiency cogeneration plants, the legislative reference for the connection service is Legislative Decree No 20/2007.

The regulation in force (AEEG Decision No ARG/elt 99/08 - Compendium of Rules for Active Connections (TICA)) defines the procedural methods and technical / financial conditions for connection to the electricity networks, with the obligation to connect third-party production plants.

With regard to low and medium voltage networks, the TICA specifies connection charges based on the distance from the connection point to the network, the capacity of the connection and the type of connection. These charges only apply to plants using renewable energy sources (RES) and high-efficiency cogeneration (HEC). Conventional plants refer to the conditions published by each operator and must pay the TICA charges or the operator's charges, whichever is higher.

For connections to high and very high voltage networks, the TICA does not set specific charges but requires the application of a reduction in the payments due for RES and HEC plants.

The contractual terms and conditions (CTCs) for the provision of this service are defined and published by each individual network operator. The CTCs define the conventional technical solutions adopted by the network operator to create the connection, the arrangements and response times, payments terms for the connection charges, and criteria for establishing the charges in order to cover the costs incurred by the network operator in managing the authorisation procedure. For TERNA, the CTCs are given in the Transmission and Dispatch Code.

The regulation also covers the resolution of disputes between producers and network operators, specifically relating to the connection of RES plants.

Technical rules for the connection service

The reference technical rules for connection differ according to whether the connection is to a low voltage network (up to 1 kV) or to a higher voltage network.

For network voltages above 1 kV, AEEG Decision No ARG/elt 33/08 "Technical conditions for connection to electricity distribution networks with a nominal voltage above 1 kV: Single technical rule for medium / high / very high voltage connections" recognises standard CEI 0-16 as the standard to which all network operators must refer when defining the connection project. The anticipated maximum values for connection capacity, depending on the network voltage, are the following:

Network voltage	Plant capacity
Low (< 1 kV)	< 100 kVA
Medium (< 35 kV)	< 6 MVA

The local network operator will manage the connection procedure for the producer up to a connection capacity of 10 MVA. For larger capacities the producer must apply to the national network operator, TERNA.

For connection to the low voltage distribution network, there is no AEEG decision which gives a single reference standard like for the medium and high voltage networks. In practice, the connection standard generally adopted is Enel Distribuzione's standard, since the company is the main distributor in the Italian market. These standards were developed when Enel was the national public body for electricity and are codified in Enel Specification DK 5940: "Criteria for connecting production plants to the Enel Distribuzione low voltage network". Each network operator must send AEEG the technical conditions for low voltage connections, and must publish these on its own website.

AEEG Decision No ARG/elt 333/07 "Compendium of quality regulations for distribution, measurement and sale of electricity for the regulation period 2008-2011" establishes rules for the quality of the distribution service.

A summary table is given below:

<table>
<tr><th>Network tension</th><th>Plant capacity</th><th>Legislative reference</th><th>Reference technical standard</th><th>Connection costs</th></tr>
<tr><td>Low</td><td>< 100 kVA</td><td rowspan="3">ARG/elt 99/08</td><td>DK 5940 for Enel Distribuzione, otherwise individual distributor's rules</td><td rowspan="2">Annex A, TICA, to Decision ARG/elt 99/08</td></tr>
<tr><td>Medium</td><td>< 6 MVA</td><td rowspan="2">ARG/elt 33/08, CEI 0-16</td></tr>
<tr><td>High / Very high</td><td>> 6 MVA</td><td>Network operator's CTCs</td></tr>
</table>

Energy dispatch and electricity network operation

The "Transmission network, dispatch, development and network security code" governs the relationship between TERNA S.p.A. and network users in reference to connection, management, planning, development and maintenance operations relating to the national transmission network, as well as the dispatch and measurement of electricity.

The Network Code also contains the operation rules set by the User Consultation Committee, a technical body established under the Prime Ministerial Decree No of 11 May 2004. The committee's members include representatives of the main categories of network user and its task is to update the rules included in the Network Code and to help resolve any disputes arising from the application of these rules.

The conditions imposed on distributor companies for the service of transmitting and distributing electricity fed into the network are described in Decision No ARG/elt 348/07 "Compendium of AEEG rules for the provision of services to distribute, measure and sell electricity for the regulation period 2008-2011 (Transport Compendium, TIT)".

The conditions for providing the public service of electricity dispatch within Italy, and for procuring the related resources based on its economic merit, are established in Articles 3 and 5 of Legislative Decree No 79/1999.

The "Compendium of AEEG rules for the physical and financial aspects of the dispatch service (settlement) (TIS)", approved by Decision No ARG/elt 107/09, governs the establishment of financial aspects relating to the annual settlement for withdrawal points not paid for on an hourly basis, and indicates the characteristics of withdrawal points and feed-in points which are subject to payment on an hourly basis, similar to payment by band.

Decision No ARG/elt 111/06 regulates the provisions relating to the dispatch service for electricity fed into the network, such as those of Articles 3 and 5 of Legislative Decree No 79/1999. This decision regulates the actual performance of purchase and sale contracts for electricity agreed through the bid system and governs the conditions for procurement by TERNA S.p.A. of the resources for dispatch and the conditions for providing the dispatch service.

The dispatch service is regulated by TERNA S.p.A. according to criteria contained in Decision No ARG/elt 115/08, which includes provisions relating to procedures and criteria applicable to activities carried out by TERNA, the Italian Energy Markets Regulator (GME) and the GSE which are instrumental in the AEEG's monitoring of the electricity market.

Production units fed by renewable sources have the right to priority dispatch, as established by law and regulated by Decision No ARG/elt 111/06.

In order to maintain secure operation, and to prevent conditions arising which present a system risk, the operator may use the load interruptibility service as defined in the TERNA network code. Decision No ARG/elt 5/10 regulates the conditions for dispatching electricity produced from non-programmable renewable sources.

This decision defines: remuneration terms for missed wind power production arising from the implementation of dispatch orders given by TERNA, the network services which wind power production units must provide in order to allow TERNA to adopt preventive security criteria which are less conservative than the current criteria, new provisions relating to the programming of large production units fed by non-programmable renewable sources, and provisions for TERNA to improve the dispatch service in relation to production from non-programmable renewable sources.
In addition, the decision provides that, for the remuneration of missed wind power production arising from the implementation of dispatch orders given by TERNA, the quantity of electricity which can be produced by a wind power production unit will be determined on the basis of forecast models implemented and managed by a third party, such as the GSE.

(b) How is it ensured that transmission and distribution grids will be developed with a view to integrating the targeted amount of renewable electricity while maintaining the secure operation of the electricity system? How is this requirement included in the transmission and distribution operators' periodical network planning?

Under the Ministerial Decree of 20/04/2005, TERNA compiles a "Network Development Plan" each year, in line with the need to cover the electricity demand and to provide the network service.

The development aims for the national transmission network (NTN) are defined on the basis of:

- trends in energy requirements and the forecast for the demand to be satisfied over the time period taken as a reference;
- the need to expand the interconnection networks with other countries;
- the need to reduce the risk of inter-zone congestion as much as possible;
- the requests for connection to the NTN submitted by eligible parties;
- any requests for operations on the NTN made by companies which own or have the right to use parts of the NTN.

The plan describes all the operations to be implemented and those being completed, including both operations listed in the previous development plan but not yet implemented, and operations from the most recent planning.

The Ministry for Economic Development is the body responsible for approving the development plan, subject to the completion by the Ministry for the Environment of the strategic environmental assessment (SEA) under Legislative Decree No 152/2006. When drawing up the Environmental Report, a key document in the SEA procedure, TERNA combines the results of the consultation with the regions regarding the joint search for sustainable locations for network development operations.

Due to the current state of the network infrastructure and the development of non-programmable electricity generation, the electricity network presents some criticalities, particularly in the southern Italian regions and the large islands. In these areas, limitations may arise in the capacity which can be carried along the existing lines, either due to a lack of effective meshing of the electricity network or the presence of generation higher than the local load. In the event of electricity network criticalities or unusual network systems the operator may need to limit electricity production from renewable sources.

In order to resolve these criticalities, the TERNA S.p.A. 2009 Development Plan has already defined forecast scenarios based on the growth in production and identified operations to be carried out on the infrastructure to encourage the future development of renewable energy sources.

In particular, scenarios have been developed regarding the growth in power generation from wind, with a forecast analysis of the limitations of the network in relation to production from existing wind power plants and from those which could become operational in the next few years. The restrictions on wind power production are essentially caused by an insufficient transmission capacity in the network sections to which the plants in question are connected. The main objective in planning is therefore to resolve the criticalities on the 150 kV network, which is normally the network used for connections to wind power plants. Interconnection with the 380 kV network will be used wherever possible to transfer the energy surplus, since its dimensions provide greater transmission capacity. To this end, new 380/150 kV transformer substations will be installed in the southern Italian regions.

To plan transmission network development which is coherent with the targets set for production from renewable sources, it seems necessary to provide for a specific section in the national transmission network development plan, defining the actions required for the complete “harvesting” of all production from renewable sources.

At the same time an incentive or premium/penalty mechanism will be developed, like that introduced for the national transmission network through AEEG Decision No ARG/elt 87/10. The aim of this mechanism will be to speed up operations to adapt and expand the networks, whilst monitoring the timeliness of operators' actions in order to identify any problems in advance and provide the necessary solutions.

In addition, following consultation document DCO 15/10 for the update of the TICA, the AEEG is assessing the possibility of requiring that network operators make maps available showing the HV networks and HV/MV substations, with up-to-date information on the available capacity. It may also require that distributor companies with more than 100,000 customers publish and send the MED their own network development plans, as is currently the case for TERNA.

(c) What will be the role of intelligent networks, information technology tools and storage facilities? How will their development be ensured?

Italian network operators and research organisations are currently investing in innovative technologies for the development, management, monitoring and control of distribution networks. In particular, the company Enel, as Italy's main distribution network operator, has gained a position of technological leadership which is also recognised at international level, and coordinates European research, development and demonstration projects relating to smart grids.

Italy is also participating in international smart grid development programmes, as a joint leader alongside South Korea and the USA.

As part of the "*Industry 2015*" programme, the MED has provided funding for operations to develop distributed generation. On 03/03/2009 funding of a total of €27 million was allocated to projects which demonstrated compliance with the ministry's directives, including three projects working on distributed generation.

The MED will also take action over the next few years through the "*Interregional operational plan for renewable energy sources and energy saving*", within the National Strategic Framework. This plan includes measure 2.4 "*Expansion and adaptation of transport networks for the spread of renewable energy sources and small-scale and micro-cogeneration*", the funding for which reaches €100 million, 50% covered by European funds (contribution from the ERDF) and 50% from Italian State funds.

In this context, on 05/02/2010, the MED launched the first operations to facilitate the use of electricity production from photovoltaic systems in southern Italy, through an agreement with Enel Distribuzione for the implementation of a three-year operations programme, costing €77 million. This aims to make the medium voltage distribution network system more favourable to the insertion and use of energy produced by small-scale photovoltaic systems (with an installed capacity of between 100kW and 1MW) in several pilot areas in Campania, Calabria, Apulia and Sicily.

With regard to distributed generation, the review of the "feed-in tariff" as an incentive for photovoltaic electricity production foresees a specific measure to promote systems for which the energy exchange with the network can be predicted,

including through the use of accumulation systems.

In addition to State funding and operator investment, the development of research activity and technological innovation relating to intelligent networks is guaranteed by the specific remuneration system for investment in electricity networks.

Through Decision No ARG/elt 39/10, the AEEG established incentives for investment in pilot projects for automation, protection and control systems for active MV networks (smart grids). The incentive, lasting 12 years, is equal to 9% of the net capital invested in the distribution service. The pilot project may involve active network users (owners of distributed generation plants), who may alter the plants in order to operate communication and control systems. The project may also foresee a supervisory control and data acquisition (SCADA) system for the dynamic analysis of energy flows in the network, as well as a bidirectional system for communication with end customers, to test out a demand response arrangement through price signals to end customers. Finally, it is possible to install a storage system, in combination with non-programmable renewable energy sources, in order to ensure a steady and predictable net feed-in profile.

In Decision No ARG/elt 04/10, the AEEG introduced the concept of the evolution of forecast systems for electricity production from non-programmable renewable sources. This decision anticipates real-time data acquisition via satellite for data on capacity, energy and primary source (such as, for example, the hydraulic flow rate and water levels for hydroelectric power plants, or the wind speed and direction for wind power production units). It also plans that the GSE will establish systems to control and monitor production and the condition of production sites. The aim of this project is to ensure the dispatch of wind energy whilst also guaranteeing network security.

(d) Is the reinforcement of the interconnection capacity with neighbouring countries planned? If so, which interconnectors, for which capacity and by when?

As part of the integrated planning between European electricity network operators, the "UCTE Transmission Network Development Plan" was published on 3 June 2008 in order to implement the "Third Energy Package" as anticipated by the European Commission. The plan and updates to it are available on the ENTSO-E (European Network of Transmission System Operators for Electricity) website. As well as TERNA, other private operators have shown an interest in creating interconnections between Italy and other countries, particularly towards the eastern Adriatic coast.

The figure below shows the main potential operations in Europe which affect Italy's interconnection capacity.

Possible main interconnectors.

The operations are divided between the work of two groups: the Central South Regional Forum, in which Italy has the role of coordinator, and the South East Regional Forum, of which Italy is a member.

For further details and dates, in particular for interconnections with third countries, please refer to the forecast document submitted under Article 4(3) of Directive 2009/28/EC.

Central South Regional Forum

In addition to Italy (which is also the coordinator), the following countries are members of the Central South Regional Forum: France (FR), Switzerland (CH), Germany (DE), Slovenia (SL) and Austria (AT). The main interconnection operations relate to the following borders:

Italy - France: installation of a power flow control device (phase shifting transformer (PST)) on the 220 kV network at the Italian Camporosso substation; a new direct current connection between Piossasco (IT) and Grande Ile (FR).

Italy - Switzerland: with the involvement of private investors, various projects are being investigated to increase the exchange capacity at the border. In particular, the next investment covers the interconnection between Verderio (Province of Lecco, Lombardy) and Sils (CH).

Italy - Austria: expansion of the main Lienz (AT) – Cordignano (IT) artery, a project

which has already been acknowledged as one of the Projects of European Interest identified by the "Trans-European Energy Networks" (TEN-E) programme in Decision 1364/2006/EC; and a new connection with the future station at Nauders (AT) is being investigated.

There are other more long-term projects involving France, Austria and Italy relating to the use of European corridors for rail transport in order to create new electricity network connections.

South East Regional Forum

With regard to the eastern European border, apart from the new connection which has been planned for between Italy and Slovenia, a new interconnection project with Montenegro is foreseen.

Italy – Montenegro: new direct current connection between the Italian hub at Villanova and Montenegro (the future hub at Tivat); full use of the connection is also guaranteed by internal developments planned in the Balkan region. Possible connections with Croatia and Albania are still at the preliminary investigation stage.

Italy – Slovenia: after the installation of the PST at the 220 kV electricity substation in Padriciano (IT) to securely manage the 220 kV connection at the Italian–Slovenian border, the installation of a similar device on the 380 kV level is planned for 2010 at the Slovenian Divacca substation; expansion of the capacity of the Italy – Slovenia interconnection is also planned, through a new 380 kV connection between Udine Ovest (IT) and Okroglo (SL), which has already been acknowledged as one of the Projects of European Interest identified by the "Trans-European Energy Networks" (TEN-E) programme in Decision 1364/2006/EC.

Italy – Croatia: the preliminary activity has been completed for the creation of a Candia – Konjsko 380 kV connection.

Italy – Albania: the preliminary activity has started for the creation of connections between Casamassima and Porto Romano, and Manfredonia and Kellmet, and authorisation has been obtained for the Brindisi – Valona 380 kV connection.

Amongst the possible interconnections with countries which are not ENTSO-E members, a new direct current connection is planned between Tunisia and Sicily in the Partanna – Cap Bon section.

(e) How is the acceleration of grid infrastructure authorisation procedures addressed? What is the current state and average time for getting approval? How will it be improved? *(Please refer to current status and legislation, bottlenecks detected and plans to streamline procedure with timeframe of implementation and expected results.)*

Decree-Law No 239/03 and Law No 239/04 provide that the construction and operation of electrical power lines which form part of the national electricity transport network are actions of primary national interest, and therefore subject to a single authorisation covering all the connected works and essential infrastructure. This authorisation is issued by the Ministry for Economic Development in consultation with the Ministry for

the Environment, Land and Sea, provided that agreement is given by the region or regions concerned. This single authorisation replaces authorisations, licences, clearance and consent documents under any name provided for by the regulations in force and covers all works and operations necessary to resolve interference with the other existing infrastructure, representing the right to construct and operate these infrastructures, works or operations in compliance with the approved plans. The Ministry for the Environment, Land and Sea looks after the environmental impact assessment and verifies the compliance of the works with the authorised plans. Within this single procedure, there is no change to the responsibilities of the Ministry for Infrastructure and Transport in relation to ascertaining that the works comply with the standards for this sector and the land use and building plans. Similarly to the system planned for energy production plants, the authorisation is issued following a single procedure completed within 180 days.

According to Law No 239/04, the works for which authorisation is not reserved for the State are authorised by the regions or provinces, which are called upon to regulate the authorisation procedures in accordance with the principles and deadlines anticipated for works authorised by the State.

With specific reference to renewable sources, Legislative Decree No 387/2003 establishes the obligation to give priority network connection rights to plants fed by renewable sources, including in cases in which the network is not technically capable of receiving the energy produced but suitable adaptations are possible. These adaptations must include all the necessary technical infrastructure for network operation and all the connection installations, including for autoproduction plants which transfer part of the electricity produced to the network.

Despite the regulatory requirements, the usual amount of time taken to obtain authorisation exceeds the planned 180 days, and procedures may even last two to three years. This delay is partly due to the need to acquire consent from the local communities along the route of the electrical power line, deal with any changes, and consequently update the technical assessments, including the environmental impact assessment. In addition to this extended period taken for the authorisation procedure, the amount of time required to construct electrical power lines is usually longer than the time typically required for the creation of renewable energy plants.

Several new regulatory measures have been brought in to deal with these problems. First of all, operations on electrical power lines which involve changes to a length no greater than 1,500 linear metres and use the same route can be carried out by giving a commencement notice. The same commencement notice requirement applies to changes inside electricity substations which do not involve increases in the buildings' cubic capacity, as long as these changes do not go against the planning instruments in force and comply with standards for electromagnetism and for the design, construction and operation of electricity lines, as well as the technical standards for this type of construction.

On the other hand, maintenance works on existing electrical power lines, consisting of the repair, removal or replacement of line components with parts with similar features, including in line with technological developments, do not require any authorisation.

Finally, new measures have recently been adopted aimed at speeding up the process of issuing authorisation. The government, in agreement with the regions and autonomous provinces, identifies urgent operations and interventions connected to the transmission, distribution and production of energy. Urgency is defined on the basis of economic development requirements, which can also lead to extraordinary means and powers being put in place.

(f) How is coordination between grid infrastructure approval and other administrative planning procedures ensured?

Coordination is potentially ensured by the arrangement for carrying out the authorisation procedure through the Services Conference, with the participation of all the administrative bodies concerned. However, even before this procedure begins, the network operator, as part of its work to compile the connection estimate, is obliged to provide, at no extra charge, all the information relating to the connection solution which will be necessary in order to prepare the documentation to be presented in the single authorisation application.
In the event that the single procedure is not foreseen, the network operator, as part of its work to compile the connection estimate, is obliged to provide the applicant with the elements necessary to obtain the relevant authorisations. Within 30 working days for low voltage connections, or 60 working days for medium voltage connections, of the date on which the acceptance of the connection estimate sent by the applicant is received, the distributor company is obliged to present any authorisation applications for which it is responsible, and to inform the applicant of this at the same time. Any delays in the network operator's actions are counted in the amount of time taken to complete the connection.

To better coordinate network development with authorisation procedures and planning the amount of transport capacity taken up, and to limit speculative actions, following the consultation document DCO 15/10 for the update of the TICA, the AEEG is assessing the possibility of allocating the transport capacity reservation following the acceptance of the specific minimum technical solution document, which contains the authorised plan for the connection works. Another possibility being examined by the AEEG is an "open season" available to the network operator, during which it prepares connection estimates, having collected all the connection requests made during a set period of time.

One measure recently approved by one chamber of the Italian parliament provides for the establishment of a deposit or bank guarantee to ensure that the works will be completed, to be defined by the Ministry for Economic Development.

(g) Are priority connection rights or reserved connection capacities provided for new installations producing electricity from renewable energy sources?

The current regulations provide that network operators give priority treatment to connection requests from, and the creation of connections to, plants fed by renewable energy sources or which use high-efficiency cogeneration over conventional installations (please see Decision No ARG/elt 99/08).

(h) Are any renewable installations ready to come online but not connected due to capacity limitations of the grid? If so, what steps are taken to resolve this and by when is it expected to be solved?

As stated above, there is an obligation to give priority network connection rights to plants fed by renewable sources, including in cases where the network is not technically capable of receiving the energy produced, but suitable adaptations are possible. These adaptations must include all the necessary technical infrastructure for network operation and all the connection installations, including for autoproduction plants which transfer part of the electricity produced to the network.

There are no significant problems in connecting plants which are already ready, apart from the delays in creating network infrastructure already discussed above. There is, however, some difficulty in identifying rapid connection solutions, especially in the southern Italian regions, caused by the very high number of connection requests, particularly from wind power and photovoltaic systems. It is anticipated that, using the different measures outlined above (commissioners, simplified procedures for simple operations, review of allocation of transport capacity, harmonisation of authorisation procedures for plants and infrastructure, division of targets between regions), this problem can be managed in terms of the simultaneous development of networks and power plants.

(i) Are the rules on cost sharing and bearing of network technical adaptations set up and published by transmission and distribution system operators? If so, where? How is it ensured that these rules are based on objective, transparent and non-discriminatory criteria? Are there special rules for producers located in peripheral regions and regions with low population density? *(Cost bearing rules define which part of the costs is covered by the generator wishing to be connected and which part by the transmission or distribution system operator. Cost sharing rules define how the necessary cost should be distributed between subsequently connected producers that all benefit from the same reinforcements or new lines.)*

In Decision No ARG/elt 99/08 (TICA), the AEEG established and made public the rules on bearing and sharing costs. These rules are based on the objective, transparent and non-discriminatory criteria given in Article 8 of the same decision. In the event of any dispute, Decision No ARG/elt 123/08 outlines the rules for resolving disputes between producers and network operators, under Article 14(2), section f-3, of Legislative Decree No 387/03.

(j) Please describe how the costs of connection and technical adaptation are attributed to producers and/or transmission and/or distribution system operators? How are transmission and distribution system operators able to recover these investment costs? Is any modification of these cost bearing rules planned in the future? What changes do you envisage and what results are expected? *(There are several options for distributing grid connection costs. Member States are likely to choose one or a combination of these. According to the 'deep' connection cost charging the developer of the installation generating electricity from renewable energy sources bears several grid infrastructure related costs (grid connection, grid reinforcement, and extension). Another approach is the 'shallow' connection cost charging, meaning that the developer bears only the grid connection cost, but not the costs of reinforcement and*

extension (this is built into the grid tariffs and paid by the customers). A further variant is when all connection costs are socialised and covered by the grid tariffs.)

The main regulatory reference in this regard is the TICA, adopted through AEEG Decision No ARG/elt 99/08.
When the connection application is submitted, the applicant must pay a fee in order to obtain the estimate. This fee is determined on the basis of the requested feed-in capacity. The subsequent stages vary depending on the network voltage.

Connection to the low / medium voltage network
For plants fed by renewable energy sources (RES) or high-efficiency cogeneration (HEC), the connection charge is calculated in the usual way, as described in Article 10 of the TICA. The connection charge is calculated on the basis of the connection capacity, type of connection (ground-based or aerial), distance as the crow flies between the connection point and the nearest transformer substation, and the accessibility of the site.

For plants which do not use RES or HEC, the charge is not defined by the TICA but by the network operator. This charge is equal to either the amount defined by the TICA for RES/HEC plants or the cost determined in accordance with the network operator's standard technical specifications, whichever is higher.

The network operator is obliged to send all costs for general connection solutions to the AEEG and to publish them, in accordance with transparency and non-discrimination criteria.

Connection to the high / very high voltage network
Operators of high and very high voltage networks are obliged to send their contractual terms and conditions (CTCs) for providing the connection service in accordance with the TICA to the AEEG and to publish them.

The CTCs define the payment terms and amount payable to cover the costs incurred by the network operator in managing the authorisation procedure. The CTCs also specify the technical solutions usually adopted by the network operator and the related costs referred to when establishing the estimate for each general technical solution.

In the majority of cases, the network operator referred to is TERNA S.p.A. (for capacities greater than 10 MW and for high and very high voltage connections).

Once the estimate, which contains the general minimum technical solution, has been accepted, and when the necessary authorisations are obtained, the applicant pays the network operator a fee to cover the administrative costs and costs relating to the technical analysis required in order to compile the specific minimum technical solution. This fee is equal is €2,500 + €0.50/kW, up to a maximum of €50,000. A discount of 50% of this amount is applicable for renewable energy plants, and 20% for high-efficiency cogeneration plants.

Once the specific minimum technical solution has been accepted, the applicant pays the network operator the connection charge, or part of it as defined by the CTCs, determined on the basis of the estimate of construction costs included in the specific

minimum technical solution. These charges may deviate from those defined in the general minimum technical solution by a maximum of 20%.

For RES plants, there is a reduction in the connection charge based on the nominal to maximum capacity ratio for the connection and a threshold value for the first kilometre of power line. For HEC plants, there is a reduction in the connection charge based on the nominal to maximum capacity ratio for the connection.

Finally, Decision No ARG/elt 99/08 provides that applicant should be given the option of carrying out the installation for the connection themselves, if a nominal voltage of more than 1 kV is provided, but only for parts of the installation which do not involve works on the existing electricity distribution network.

Any costs incurred by network operators in connecting RES plants which are not covered by RES producers will be reimbursed through the "New renewable energy and similar installations account", described in Article 56(2)e of Decision No ARG/elt 248/07 (Transport Compendium) and Article 13 of Decision No ARG/elt 281/05.

With regard to recovering investment costs, remuneration is given for investment in the distribution service as long as the investment is compatible with the system's efficiency and security and carried out in accordance with cost-effectiveness criteria.

For the regulation period 1 January 2008 - 31 December 2011, the remuneration rate for net capital investment in the distribution service is set at 7.0%, except for an increased remuneration rate for investments which became operational after 31 December 2007, as provided by AEEG Decision No ARG/elt 348/07, Article 11(4).

For the regulation period 1 January 2008 - 31 December 2011, remuneration is paid for investments in the electricity transmission service at a rate of 6.9%, with some exceptions. For operations to develop the transport capacity of transmission networks which became operational before 31 December 2007 and which are eligible for incentive schemes under Decision No 5/04, a 2% increase in the remuneration rate applies, until 31 December 2019; for new investments which became operational after 31 December 2007 the remuneration rate for capital investment is increased.

Each company holding a concession for the distribution service and transmission service must send the AEEG a report containing information on costs incurred for investments, amongst other things.

Any future modifications will be considered with reference to the specific characteristics of certain plants, for which the connection cost could represent a significant part of the total investment cost.

(k) Are there rules for sharing the costs between initially and subsequently connected producers? If not, how are the benefits for subsequently connected producers taken into account?

For LV and MV connections, this issue has been dealt with by introducing the "lump sum" cost set by the TICA. This rule provides for a considerable reduction in charges relating to connection works for RES / HEC plants in comparison to those payable for

conventional plants. All connections to RES / HEC plants will take advantage of this concession.

Even though the lump-sum cost depends on the specific nature of the connection, the charges payable by producers will be largely levelled out. Without the lump-sum cost introduced by the TICA there would be much larger discrepancies between charges payables by initially and subsequently connected producers.

There are no similar measures in place for high and very high voltage connections.

(l) How will it be ensured that transmission and distribution system operators provide new producers wishing to be connected with the necessary information on costs, a precise timetable for processing their requests and an indicative timetable for their grid connection?

New energy producers intending to be connected to the electricity network can refer to the TICA, as described in point (a) above.
For low and medium voltage connections, the deadlines for preparing the connection estimate, starting from the date on which the connection request is received, are the following:
- 20 working days for feed-in capacities up to 100 kW;
- 45 working days for feed-in capacities between 100 kW and 1,000 kW;
- 60 working days for feed-in capacities higher than 1,000 kW.

The estimate is valid for 45 working days and gives a list of the works which are strictly necessary in order to physically create the connection, which the applicant must make available at the connection point. The estimate must indicate the payment due for the connection, highlighting the portion, equal to 30% of the total, which the applicant must pay when it accepts the estimate, and the remaining portion which the applicant must pay after the completion of the necessary works to prepare the network installation infrastructure for the connection at the connection point.
The timeframe for completing the connection is 30 working days for simple works and 90 working days for complex works, increased by 15 working days for each kilometre of power line to be constructed at medium voltage, after the first kilometre.
When the connection installation has been completed, the distributor company announces this and declares that the connection can be brought into operation.
If, in order to create the connection, it proves necessary to carry out operations on the high voltage network, the timeframe for completing the connection is indicated by the distributor company in the connection estimate.

The table below summarises the standard procedures which each network operator must apply for low and medium voltage connections:

<table>
<tr><td colspan="8">DEADLINES</td></tr>
<tr><td colspan="8">C = plant capacity</td></tr>
<tr><td colspan="2">• 20 days if C • 100 kW
• 45 days if 100 kW < C • 1000 kW
• 60 days if C > 1000 kW</td><td colspan="2">• max. 30 days for LV
• max. 60 days for MV</td><td colspan="2">• max. 30 days (simple works)
• max. 90 days (complex works)
increased by 15 days/km for distances > 1 km</td><td colspan="2">• max. 10 days</td></tr>
<tr><td>D0</td><td>D1</td><td>D2</td><td>D3</td><td>D4</td><td>D5</td><td>D6</td><td>D7</td></tr>
<tr><td>â</td><td>â</td><td>â</td><td>â</td><td>â</td><td>â</td><td>â</td><td>â</td></tr>
<tr><td>Connection request</td><td>Estimate</td><td>Acceptance of estimate</td><td>Authorisation applications presented
(if managed by the distributor)</td><td>End of producer's works for connection</td><td>Connection completed</td><td>Installation works completed</td><td>Connection activated</td></tr>
<tr><td>applicant</td><td>distributor company</td><td>applicant</td><td>distributor company</td><td>applicant</td><td>distributor company</td><td>applicant</td><td>distributor company</td></tr>
<tr><td>â</td><td></td><td>â</td><td></td><td>â</td><td colspan="3">RESPONSIBILITY</td></tr>
<tr><td colspan="2">Payment made to obtain the estimate</td><td colspan="2">Payment of 30% of connection cost</td><td colspan="4">Payment of 70% of connection cost</td></tr>
</table>

For high and very high voltage connections, deadlines for preparing the connection estimate and the period for which the estimate is valid are defined in the CTCs for the connection service.

The estimate must indicate a general minimum technical solution for the connection to the plant and the connection charge, giving a breakdown of individual costs. The applicant can accept the estimate or, alternatively, ask for another estimate based on a different general minimum technical solution.

The deadline for completing the connection is defined in the CTCs, which can be consulted on the network operators' websites, in reference to network connection installations completed by the network operator.

An automatic compensation system is foreseen for every working day of delay in the event that the network operator fails to comply with the set deadlines for completing the connection, except where this is due to force majeure or caused by the applicant or a third party.

4.2.7 Electricity network operation (Article 16(2) and Article 16(7) and (8) of Directive 2009/28/EC)

(a) How is the transmission and distribution of electricity from renewable energy sources guaranteed by transmission and distribution system operators? Is priority or guaranteed access ensured?

In addition to the specific provisions for connection to the electricity networks, the regulations relating to electricity system access for production from renewable energy sources provide:

- for dispatch priority (the same price being offered) in the energy market for production units using renewable sources (non-programmable sources in particular), whilst at the same time ensuring the secure operation of the national electricity system;
- that those dispatching energy from production units using non-programmable renewable sources should determine up feed-in schedules using the best estimates for the quantities of electricity actually produced by these units, in accordance with the principles of diligence, prudence and foresight, and based on expert opinions;
- for the non-approval for the supply of resources in the dispatch service market of non-programmable renewable sources;
- for the utilisation of imbalances in the price of offers to sell electricity accepted on the "day-ahead market", in the relevant period and in the area in which the dispatch point is located;
- that, with regard to the use of resources provided outside market mechanisms for the balancing service, TERNA can make real-time changes to feed-in schedules, including those of non-approved units, when this is necessary to maintain network security (for example due to congestion in local networks) and that units approved for balancing cannot be used for the same purpose;
- that any changes imposed by TERNA in real time are valued at the same price for the imbalances, as established in paragraph 7.3.1.4 of the Transmission and Dispatch Code;
- for remuneration paid by TERNA for supply constraints, as established in section 7, paragraph 7.3.1.3 of the Transmission and Dispatch Code, in the event that limitations on the maximum production capacity of a production unit is announced before the deadlines set for the definition of network component non-availability plans.

The points above show how the Italian regulatory system is constructed in such a way so as to support the required growth in the quota of electricity produced from renewable sources, by requiring that these resources can be mobilised as much as possible. Therefore, the regulations on access to network services have also been configured with a view to attaining the objective of maximum mobilisation of the renewable resources present in Italy.
To this end:

- in practice, dispatch priority allows the formulation of offers to sell which are (practically) certain to be accepted on the energy markets;
- since the production units are not approved to supply resources in the dispatch service market, the acceptance of offers to sell translates into the formulation of an actual

feed-in schedule (which cannot be altered through the real-time supply of resources on the dispatch service market);
- the regime relating to imbalances (including when these arise from real-time changes imposed by TERNA) allows, in fact, the utilisation of all the electricity fed in at the sale price for electricity on the day-ahead market;

For this type of plant the network is therefore vital, not only for the withdrawal of the electricity they produce, but also for the services the network provides, which the above-mentioned plants need in order to operate properly.

However, due to the unpredictable nature of their production, non-programmable plants do not contribute to ensuring the security and reliability of the network, nor to the supply of resources for dispatch, except for their capacity to change the level of production in real time, only in response to security requirements which cannot be managed in any other way.

(b) How is it ensured that transmission system operators, when dispatching electricity generating installations, give priority to those using renewable energy sources?

Legislative Decree No 79/1999 and later Legislative Decree No 387/2003 establish the obligation for priority use and the right to priority dispatch for electricity produced by plants fed by renewable energy sources.
AEEG Decision No ARG/elt 111/06 establishes that, when there are several offers to sell at the same price, the following order of priority applies:
a) offers to sell from units which are essential for security purposes, during the hours in which they are declared to be essential;
b) offers to sell from production units fed by non-programmable renewable sources;
c) offers to sell from production units fed by renewable sources other than those under point (b);
d) offers to sell from production units using cogeneration;
e) offers to sell from production units listed under Law No CIP6/1992, Legislative Decree No 387/2003 or Law No 239/2004;
f) offers to sell from production units fed only by national primary energy fuel sources, up to an annual quota not exceeding fifteen percent of the overall primary energy necessary to produce the electricity consumed;
g) other offers to sell.

(c) How are grid- and market-related operational measures taken in order to minimise the curtailment of electricity from renewable energy sources? What kinds of measures are planned and when is implementation expected? *(Market and grid design that enable the integration of variable resources could cover measures such as trading closer to real time (changing from day-ahead to intra-day forecasting and rescheduling of generators), aggregation of market areas, ensuring sufficient cross border interconnection capacity and trade, improved cooperation of adjacent system operators, the use of improved communication and control tools, demand-side management and active demand-side participation in markets (through two-way communication systems — smart metering), increased distributed production and domestic storage (e.g. electric cars) with active management of distribution networks*

(smart grids).)

For plants fed by non-programmable renewable sources, measures to alter production are only taken in order to maintain the secure operation of the national electricity system.
TERNA is obliged to define the necessary monitoring procedures for the predictability of feeding in electricity produced by plants fed by non-programmable renewable sources. In order to apply these procedures, TERNA may ask the parties involved for historical data relating to the availability of the primary source and the feeding-in of electricity. TERNA also prepares a report to be sent to the Ministry for Economic Development and the AEEG containing a summary of the activity carried out and the critical aspects of production from non-programmable renewable sources in relation to the security of the national electricity system.

In addition to the criticalities which have become apparent in the dispatch of energy from non-programmable RES plants and the analysis of the potential development of wind power, an analysis has also been carried out of operations to develop the national transmission network with the aim of encouraging the development of non-programmable RES plants.

Thanks to the measures discussed above, the short-term aim is to improve the forecast capacity of production from non-programmable RES plants. In the long term, it is considered necessary to ensure the appropriate development of networks, using the measures discussed above, particularly in the Central Southern Italy and the large Italian islands. The table below shows the main operations planned.

Operation	Year
Central Southern Italy	
Operations on the HV network to collect electricity from wind power in Campania	2010
Operations on the HV network to collect electricity from wind power in Calabria	2011
"Feroleto-Maida" 380 kV electrical power line	2011
380 kV substations to collect electricity from wind farms between Foggia and Benevento	2011
Operations on the HV network to collect electricity from wind power in Apulia	2012
"Foggia-Benevento II" 380 kV electrical power line	2012
"Sorgente-Rizziconi" 380 kV electrical power line	2013
Operations on the HV network to collect electricity from wind power in Basilicata	2014
Sardinia	
"Sardinia-Mainland" HVDC 500 kV electrical power line	2009
"Selargius-Goni" 150 kV electrical power line	2012
Sicily	
150 kV substation at Castel di Lucio	2009
"Mineo SE – Mineo CP" 150 kV electrical power line	Long term

In order to maintain secure operation, and to prevent conditions arising which present a system risk, the operator may use the load interruptibility service as defined in the TERNA network code.

At the end of 2008 and throughout 2009, there was a significant increase in modulation activity imposed by TERNA, both at the planning stage and during real-time management. Consequently, a change was made to the rules for dispatch activity.

The conditions for the dispatch of electricity produced from non-programmable RES are

currently governed by AEEG Decision No ARG/elt 5/10.

This decision defines the remuneration terms for missed wind power production arising from the implementation of dispatch orders given by TERNA, the network services which wind power production units must provide in order to allow TERNA to adopt preventive security criteria which are less conservative than the current criteria, new provisions relating to the programming of large production units fed by non-programmable renewable sources, and improvements to the dispatch service in relation to production from non-programmable renewable sources. In addition, the decision provides that, for the remuneration of missed wind power production arising from the implementation of dispatch orders given by TERNA, the quantity of electricity which can be produced by a wind power production unit will be determined on the basis of forecast models implemented and managed by a third party, such as the GSE.

For other future operations please refer to the start of paragraph 4.2.6.

(d) Is the energy regulatory authority informed about these measures? Does it have the competence to monitor and enforce implementation of these measures?

The AEEG monitors connection, transmission and dispatch activity and enforces the related measures (by starting formal proceedings) when the parties responsible for this activity do not comply with the obligations defined in its resolutions.

(e) Are plants generating electricity from renewable energy sources integrated in the electricity market? Could you please describe how? What are their obligations regarding participation in the electricity market?

The general legislative framework was established by Legislative Decree No 387/2003. Without prejudice to dispatch priority, the electricity produced by plants with a capacity of 10 MVA or above is generally placed on the electricity market according to the related regulations and in line with dispatch rules. As for electricity produced by plants with a capacity below 10 MVA, and by plants of any capacity fed by non-programmable sources, this can also be withdrawn, at the producer's request, by the GSE (the energy services operator).

The application rules for access to the electricity system for production from renewable sources provides that:

- dispatch priority (the same price being offered) is guaranteed in the electricity markets for production from renewable sources (in particular for non-programmable plants), ensuring network operation security;
- those dispatching energy from production units using non-programmable renewable sources should determine up feed-in schedules using the best estimates for the quantities of electricity actually produced by these units, in accordance with the principles of diligence, prudence and foresight, and based on expert opinions (TERNA can report any significant and recurring discrepancies in the application of these principles to the AEEG, in order that the relevant measures can be taken);
- imbalances in the price of offers to sell electricity accepted on the "day-ahead market" can be utilised, in the relevant period and in the area in which the dispatch point is located;

- with regard to the use of resources provided outside market mechanisms for the balancing service, TERNA may make real-time changes to feed-in schedules, including those of non-approved units, when this is necessary to maintain network security (for example due to congestion in local networks).

(f) What are the rules for charging transmission and distribution tariffs to generators of electricity from renewable energy sources?

Distribution Charge

No distribution charge applies to electricity fed into the network.

Transmission Network Charge

For plants connected to medium voltage (MV) or low voltage (LV) networks, the distributor companies pay the producers a transmission network charge, which applies to the electricity fed into the network. The transmission network charge usually takes into account the lower transport costs associated with feeding electricity directly into the MV and LV networks, compared to those associated with electricity fed in the high voltage (HV) networks. In fact, in order to reach the end customers this electricity must also pay for the transmission costs, quantified by the transmission network charge. For 2009, this charge was equal to 0.344 euro cents/kWh for each kWh fed in, increased by a percentage factor which takes into account electricity losses in the distribution network, equal to 4.2% for the medium voltage network and 9.9% for the low voltage network.

4.2.8 Biogas integration into the natural gas network (Article 16(7) and Article 16(9) and (10) of Directive 2009/28/EC)

(a) How is it ensured that the charging of transmission and distribution tariffs does not discriminate against gas from renewable energy sources?

The reference regulations on national gas network access are contained in Legislative Decree No 164/2000, implementing Directive 98/30/EC, and provide that access to the existing system cannot be refused for any reason when this is requested for natural gas produced within Italy, in Italian waters or on the Italian continental shelf. The same decree provides that access cannot be refused if, in the event of a lack of connection capacity, the client covers the cost of the necessary works to overcome this lack of capacity. With regard to the possibility of using storage to optimise the system, the situation is the same as for national production. Specifications have also be established for the physico-chemical properties of the gas, to ensure its interchangeability and the interoperability of the transport and distribution networks, in line with European standards.
Moreover, Article 1(2) of Directive 2003/55/EC on the gas market expressly states that the access rules also apply to biogas and gas from biomass as long as these can be fed into the system without technical or safety problems.
This idea was taken up again by Article 1 of Directive 2009/73/EC, according to which the rules established by the directive also apply in a non-discriminatory way to biogas and gas from biomass or other types of gas, insofar as these gases can be injected into the natural gas system and transported through that system without posing any technical or safety problems. Nevertheless, when the aforementioned directive is transposed, there will an assessment of the potential need for more explicit provisions relating to biomethane.
In conclusion, restrictions on access to the transport network are based only on the technical / economic feasibility of the connection and on assessments of the security and production capacity of the source. The requirements which the gas must meet are determined purely on the basis of its physico-chemical properties. For these reasons, without prejudice to the full investigation which will take place when implementing Directive 2009/73/EC, the current system does not make any particular technical discrimination for gas produced from renewable sources.

(b) Has any assessment been carried out on the need to extend the gas network infrastructure to facilitate the integration of gas from renewable sources? What is the result? If not, will there be such an assessment?

There are no assessments on this subject, but we can point out that the gas transport and distribution network is very widespread in Italy. An initial analysis therefore shows that the obstacles relating to infrastructure (extension of the existing network) are much less significant than the economic obstacles (cost of the investment necessary for producing biogas, purifying it and feeding it into the gas network).

(c) Are technical rules on network connection and connection tariffs for biogas published? Where are these rules published?

At the moment there are no specific technical rules on connection or specific connection tariffs for biogas.

For the former, the need to define specific quality standards for biomethane will be assessed, possibly during the transposition of Directive 2009/73/EC.

In terms of incentive schemes, however, it is considered worthwhile planning support measures capable of overcoming the lack of economic competitiveness of gas produced from renewable sources in comparison to fossil source gas. This lack of competitiveness is partly caused by the significant costs of connection to the national gas network, which are currently covered by the producers. The most suitable scheme therefore seems to be the use of an incentive tariff for energy fed into the natural gas transport network through the biomethane energy carrier (meaning gas produced by the treatment / purification of biogas). The possibility will also be considered of allowing biomethane to be fed into the natural gas network, whilst providing incentives for its use for energy purposes at sites other than the production sites.

4.2.9 District heating and cooling infrastructure development (Article 16(11) of Directive 2009/28/EC)

(a) Please provide an assessment of the need for new district heating and cooling infrastructure using renewable energy sources and contributing to the 2020 target. Based on this assessment, are there plans to promote such infrastructures in the future? What are the expected contributions of large biomass, solar and geothermal facilities in the district heating and cooling systems?

The development of district heating and cooling, above all if these systems are combined with cogeneration, is considered useful for several purposes: energy saving and efficiency, reduction of urban pollution, economic development and employment.

The current support measures for district heating and cooling are listed under point (a) of the "Heating and cooling from renewable sources" section of paragraph 4.4.

As at 31/12/2009, the volume of heated space reached a total of 200 million cubic metres, with an energy supply of 5.7 billion kWh thermal, of which an estimated 15% comes from renewable sources.

A new boost to the development of district heating and cooling could be brought about by:
- utilisation of biomass from agriculture / forestry in mountain areas;
- utilisation for energy purposes of waste downstream of the reduction, reuse and sorting process, in accordance with the hierarchy sanctioned by European Directive 2008/98/EC;
- utilisation of waste biomass in agricultural and industrial areas;
- provision for geothermal heat transport networks, as early as the design and construction stages for infrastructure serving manufacturing and residential areas.

Operations aimed at getting the full use of the existing networks will be equally important (for example by making the most of the networks for summer cooling, and using the return pipe for low temperature applications).

To put these ideas into practice, it will be necessary, in one respect, to clarify the legal framework for district heating (for example, whether or not it falls under local public services). In another, new forms of direct and indirect support must be added to the existing measures.

Instruments are also being established which use the white certificates mechanism to promote cogeneration, including in combination with district heating. District heating / district cooling from renewable sources could take advantage of this mechanism, since under the current legislation it is possible to add these incentives for the use of cogenerated heat to those provided for electricity from renewable sources.

Additional measures, for which the involvement of local bodies will be crucial, could relate on the one hand to the introduction of a minimum quota for renewable energy use as early as the design and construction stages for infrastructure serving new manufacturing and residential areas, to be achieved, for example, by building heat transport networks or

using geothermal heat.

On the other hand, the regions and local bodies will be involved in a process of examining the local pollution levels and/or the local availability of biomass, factors which suggest that more use should be made of district heating and cooling. In such cases, operations will be planned which bring together the national support schemes (usually based on the energy produced and useful heat) with those established by local authorities, which could relate to the creation of networks.

Additionally, since district heating typically requires a high level of investment and has a long pay-back period, it could be worthwhile setting up guarantee funds allowing access to long-term credit lines to satisfy the increase in investment necessary for developing these networks.

On the other hand, the regions and local bodies will be involved in a process of examining the local pollution levels and/or the local availability of biomass, factors which suggest that more use should be made of district heating and cooling. Consequently operations will be planned which bring together the national support schemes (usually based on the energy produced and useful heat) with those established by local authorities, which could relate to the creation of networks, for example through long-term loans and guarantee funds.

4.2.10 Biofuels and other bioliquids — sustainability criteria and verification of compliance (Articles 17 to 21 of Directive 2009/28/EC)

The following part of the national action plan should explain Member States' future strategy regarding fulfilment of the sustainability criteria for biofuels and bioliquids and verification of compliance with the scheme.

(a) How will the sustainability criteria for biofuels and bioliquids be implemented at national level? *(Is there legislation planned for implementation? What will be the institutional setup?)*

The basic instrument for applying sustainability criteria to the production of biofuels and bioliquids will be the traceability and certification system covering every stage of the production cycle, from cultivation of the agricultural raw materials to the finished product or, for by-products of non-agricultural origin, starting from their place of origin. This system makes it possible to verify the production location and back up every subsequent stage with documentation certifying the product's sustainability.
An initial experiment on ensuring traceability in this way has already been carried out in Italy, in reference to one category of bioliquids (pure vegetable oils), for which traceability is one of the requirements if these products are to benefit from a specific incentive tariff for electricity production. The current traceability system for bioliquids obtained from raw materials produced in the Community provides a record of the whole supply chain which runs from the farm to the collection site, to the transformer station and finally to the party which uses the bioliquid.
Within this system it is planned that the Ministry for Agricultural, Food and Forestry Policy will create an online portal through which the parties involved in transforming pure vegetable oils into electricity can carry out all the necessary actions to check the traceability of the supply chain.

In addition to implementing the above-mentioned scheme, with regard to biofuels and bioliquids obtained from raw materials produced in Italy, in the Community or outside the Community, the intention is to develop a national verification and certification system. This system would bring together all the elements necessary for identifying whether the "on/off" conditions of the directive (Article 17(3) to (6)) have been met, and provide the assessments required by Article 17(2), using a mass balance system and the methodology indicated in the directive. The system would take into account the possible application of the sustainability verification to biofuels obtained from the transformation of oil blends.

For biofuels obtained from waste, the traceability system must be integrated and harmonised with the waste traceability control system (SISTRI), making it possible to follow the route taken by the waste until the biofuel product is obtained.

The Ministry for Agricultural, Food and Forestry Policy has compiled a study which applies the method for calculating the reduction in greenhouse gas emissions brought about by the use of biodiesel, comparing the values obtained with the standard greenhouse gas emissions reduction values given in Annex 5 of Directive 2009/28/EC. The supply chains analysed in the study relate to biodiesel from Italian and French rape seed, biodiesel

from Italian soy beans, biodiesel from palm oil from Malaysia, and biodiesel from Italian sunflower seeds. The method and calculation of the values obtained will be useful for verifying that the main types of biodiesel meet the sustainability requirements of the directive. The method could possibly be used for other types of biofuel.

For biofuels produced outside the European Union or from raw material from third countries, bilateral or multilateral agreements could be established, potentially concluded by the EU and approved by the Commission in under Article 18(4) of Directive 2009/28/EC.
Alternatively, products or raw materials from countries outside the EU could be accompanied by a certificate issued on the basis of a voluntary certification scheme recognised by the Commission. In the absence of such agreements or voluntary schemes, in order to verify compliance with the sustainability criteria for biofuels given in Article 18 of Directive 2009/28/EC, the product must be accompanied by a certificate issued by an accredited body in accordance with parameters set and regulated by national legislation.

With regard to second-generation biofuels, waste production will be utilised and research and development activity aimed at the production of biofuels from ligno-cellulosic material will be promoted. To this end the Ministry for Agricultural, Food and Forestry Policy has funded applied research activity to take place over the next three years.

(b) How will it be ensured that biofuels and bioliquids that are counted towards the national renewable target, towards national renewable energy obligations and/or are eligible for financial support comply with the sustainability criteria set down in Article 17(2) to (5) of Directive 2009/28/EC? (*Will there be a national institution/body responsible for monitoring/verifying compliance with the criteria?*)

Regarding the sustainability criteria set down in Article 17(6) (*raw materials cultivated in the Community shall be obtained in accordance with Council Regulation (EC) No 73/2009*), we point out that in Italy a higher incentive for electricity production is provided precisely for vegetable oils which can be traced in accordance with Council Regulation (EC) No 73/2009. The Ministry for Agricultural, Food and Forestry Policy is therefore finalising a traceability verification procedure. The salient point of this procedure is the computer-based tracking of raw materials and secondary products through the computer system already developed by the Italian Farming Payment Agency (AGEA) to map farms for the provision of payments under the common agricultural policy. The procedure for verifying that sustainability criteria have been met will be defined during the transposition of Directive 2009/28/EC.
See also the comments under point (a).

(c) If a national authority/body will monitor the fulfilment of the criteria, does such a national authority/body already exist? If so, please specify. If not, when is it envisaged to be established?

The national body responsible for monitoring / verifying compliance with the criteria set by the directive will be appointed during the transposition of Directive 2009/28/EC. Any costs necessary for the creation and implementation of the control and monitoring system could be covered by the end users of the certification system.
See also the comments under point (a).

(d) Please provide information on the existence of national law on land zoning and national land register for verifying compliance with Article 17(3) to (5) of Directive 2009/28/EC. How economic operators can access to this information? (*Please provide information on the existence of rules and distinction between different land statuses, like biodiversity area, protected area etc; and on the competent national authority who will monitor this land register and changes in land status*.)

The Framework Law on Protected Areas No 394/1991 introduced land zoning based on natural value into the national legislative setup and imposed differentiated types of use, enjoyment and protection.

The protected areas are areas subject to a specific protection regime. They can be any portion of land whose "*physical, geological, geomorphological and biological*" features mean that it has "*significant natural and environmental value*". Granting protected area status to an area means that the portion of land concerned is covered by a specific legal and management framework aimed at preserving and safeguarding its integrity.

Article 2 of the Framework Law on Protected Areas No 394/1991 establishes three types of protected area: national parks[4]; regional and interregional natural parks[5] and nature reserves[6]. This classification was added to by subsequent measures which, taking into account the 1971 Ramsar Convention, the Birds Directive 79/409/EEC (transposed in Law No 157/1992) and the Habitats Directive 92/43/EEC (transposed in Presidential Decree No 357/1997), established the following types of area: wetlands of international importance[7]; special protection areas (SPAs)[8]; sites of Community importance (SCIs)[9] later called special areas of conservation (SACs)[10]; other protected natural areas[11]; land and sea

[4] Areas of land, river, lake or sea which contain one or more ecosystems which are intact or partially altered by human intervention, one or more physical, geological, geomorphological or biological formations of international or national significance due to their natural, scientific, aesthetic, cultural, educational or recreational value, such that they require state intervention in order to preserve them for current and future generations.

[5] Areas of land, river, lake and potentially stretches of sea facing the coast, of natural and environmental value, which represent, within one or more neighbouring regions, a homogenous system, identified by its natural features, landscape and artistic values and cultural traditions of the local populations.

[6] Areas of land, river, lake or sea which contain one or more significant species of flora and fauna, or which present one or more ecosystems which are important for biodiversity or the preservation of genetic material. Nature reserves can be managed by the state or the regions, according to the significance of the natural elements they represent.

[7] Swamps, marshes, peat bogs and natural or man-made areas of water, whether permanent or temporary (including areas of seawater where the depth at low tide does not exceed six metres), which are important in terms of their ecological, botanical, zoological, limnological or hydrological profile, for waterfowl in particular. According to the Ramsar Convention (ratified by Italy with Presidential Decree No 448 of 13 March 1976 and Presidential Decree No 184 of 11 February 1987), these areas are added to a list and protected in order to ensure the conservation of the most important national wetland ecosystems.

[8] Areas of land suitable, due to their size and/or geographical location, for the conservation of the bird species listed in Annex 1 to the "Birds" Directive 79/409/EEC, concerning the conservation of wildfowl.

[9] Sites designated by the state through a regulatory, administrative or contractual deed in which the necessary conservation measures are applied in order to maintain or restore, to an adequate conservation status, the natural habitats and/or populations of the species for which the natural site is designated.

[10] Natural sites, with defined geography and marked boundaries, which contain areas of land or water which are characterised by their geographical, abiotic and biotic, natural or semi-natural characteristics (natural habitats) and which make a significant contribution to conserving, or restoring, a type of natural habitat or species of wild flora or fauna as per Annex 1 and 2 of the Habitats Directive 92/43/CE relating to the conservation of natural and semi-natural habitats and wild flora and fauna in an adequate state in order to protect the biodiversity of the Palearctic by protecting the Alpine, Apennine and Mediterranean environments.

[11] Areas (oases run by environmental associations, suburban parks etc.) which are also indicated by Law 394/1991 but do not fall within any of the previous categories. These are divided into publicly run areas, those set up through regional laws or similar measures, and privately run areas, set up through formal public measures or contractual deeds such as concessions or similar.

research areas[12].
The protection regime applicable to the protected area is defined in general by the respective reference regulations and is closely linked to the specific features of the environmental asset to be protected. The specific conservation rules to be applied within each protected area are established in a regulatory or administrative instrument. This instrument (Park Plan, Protected Area Management Rules, etc.) governs, on a case-by-case basis, which human activities should be banned, limited or allowed within the protected area, based on the compatibility of objectives in the collective public interest with the conservation and enhancement of the environmental asset.

Information relating to the conservation regimes and restrictions in place for a given portion of land are generally made available to the parties concerned by the body which manages the protected area, through its website or offices.

With regard to the national land register, Italian legislation provides for:
- through the Framework Law on Protected Areas No 394/1991, the creation of the Official List of Protected Areas. This list includes all the protected natural areas of land and sea, and is regularly updated by the Ministry for the Environment, Land and Sea;
- through Article 117 of Legislative Decree No 152/2006, the creation of a Protected Areas Register within the Management Plan of each river basin district under Directive 2000/60/EC;
- through the Decree of 1 April 2008 of the Ministry for the Environment, Land and Sea, the establishment of a National Register of Agroforestry Carbon Reservoirs. The aim of this register is to bring together data from the Italian Land Use Inventory, Italian Carbon Stock Inventory, Italian Census of Forest Fires and National Inventory of Forests and Forest Carbon Reservoirs[13].

For the assessment of which areas of land are vulnerable, we must recall that Article 3 Law No 394/1991 provided for the preparation of the "Nature Map"[14], aimed at determining the state of Italy's natural environment, estimating the natural value and vulnerability of the country, and defining spatial planning guidelines. Alongside the creation of this map, ISPRA (the Higher Institute of Environmental Protection and Research) has over recent years started a study on changes in land use and vegetation cover in Italian territory, based on a comparison and photointerpretation of images contained in the "Corine Land Cover" database[15].

Information on the Official List of Protected Areas, the National Register of Agroforestry Carbon Reservoirs and the Nature Map is available from the Ministry for the Environment, Land and Sea. The registers of protected areas established within each river basin district are available from the relevant river basin district authority. The Corine Land Cover database can be accessed through the ISPRA website.

[12] Areas indicated by Laws 394/1991 and 979/1982, for which conservation through the establishment of protected areas is considered a priority.
[13] There is currently a National Forest Inventory which quantifies the sizes and features of national forest ecosystems.
[14] The Higher Institute of Environmental Protection and Research (ISPRA) started preparing this map, which is still being drawn up with various scales of representation, in collaboration with the Regional Land Protection Agencies. The Nature Map is a useful instrument for drafting spatial planning guidelines, for environmental impact assessments, in the creation of ecological network, for studies relating to biodiversity and for other objectives which require knowledge of the land.
[15] This database, created through a joint initiative of the European Environment Agency and the European Commission, allows the photointerpretation of satellite images and the classification of ground cover, as well as the identification of changes in ground cover.

(e) As far as protected areas are concerned, please provide information under which national, European or international protection regime they are classified.

With regard to the classification of the protected areas listed under point (d), we can give the following overview:

- National parks, regional and interregional parks, nature reserves, oases and land and sea research areas are subject to a protection regime established by national legislation.
- SCIs, SPAs and SACs are subject to a protection regime established by European legislation.
- Ramsar areas are subject to a protection regime established by international legislation.

(f) What is the procedure for changing the status of land? Who monitors and reports at national level on land status changes? How often are the land zoning register updated (monthly, annually, bi-annually, etc.)?

The authority responsible for changing the status of land is the body in charge of managing the area in question (see point (d)).

(g) How is compliance with good agro-environmental practices and other cross-compliance requirements (required by Article 17(6) of Directive 2009/28/EC) ensured and verified at national level?

The principle of cross-compliance[16], introduced into European legislation with Council Regulation (EC) No 1782/2003, was recently confirmed within a new framework for support schemes aimed at farmers under the common agricultural policy by the new Council Regulation (EC) No 73/2009.

In Italy, the methods for applying cross-compliance and the related control system, governed by Council Regulation (EC) No 1266/2008, are implemented directly by the regions, which are responsible for verifying cross-compliance. In particular:
- the Ministry for Agricultural, Food and Forestry Policy, through Ministerial Decree No 16809 of 24 November 2008, governs the cross-compliance regime of the Common Agricultural Policy (CAP);
- on 23 June 2009, the Farming Payment Agency (AGEA), published Circular No 957 in order to apply European and national legislation on cross-compliance.

The AGEA or regional payment agencies are responsible for implementing the cross-compliance verification included in the Rural Development Plans 2007-2013[17]. These

[16] According to this principle, farmers who do not comply with set requirements for public, animal and plant health, environmental protection and animal wellbeing are subject to a reduction in payments or exclusion from direct support. In fact, this principle makes all farming payments subject to compliance with obligatory management criteria and the maintenance of land in good agricultural and environmental condition; in the event of failure to respect the rules imposed, there is a reduction in direct aid, which can lead to the complete suspension of aid.

[17] Article 5(3) of Ministerial Decree 1787/2004 provides that the AGEA is responsible for implementing the system of controls as per paragraphs 1 and 2, which are carried out by the payment agencies, and guarantees through the national farming information system (SIAN), that the conditions of Article 9 of Council Regulation (EC) No 796/2004 are respected.

agencies can appoint specialists (private companies, local health authorities, regional environment agencies etc.) to carry out the cross-compliance controls.
Control of compliance with good agro-environmental practices and cross-compliance requirements is guaranteed through the verification of specific check-lists prepared by the regional payment agencies. This control may be delegated by the payment agencies to other bodies (e.g. local health authorities, provincial authorities). If it is ascertained that cross-compliance rules have been violated, the AGEA or regional payment agencies set a deadline by which the matter must be put right, and if the farmer fails to do so, or if the violation is such that the situation cannot be returned to conditions which comply with the violated rules, the AGEA proceeds to reduce the direct payments. The reduction in aid, up to its complete curtailment, takes into account the gravity, scope, duration and frequency of the violation committed.

(h) Do you intend to help develop voluntary 'certification' scheme(s) for biofuel and bioliquid sustainability as described in the second subparagraph of Article 18(4) of Directive 2009/28/EC? If so, how?

The Ministry for Agricultural, Food and Forestry Policy, with the support and involvement of producers' representatives, has commissioned a study on methods of verifying the compliance of biofuels and bioliquids with sustainability criteria. The possibility is being assessed of transposing the results of this study into the national legislative setup. The study also foresees the primary sector analyses necessary in order to support the choices by the responsible administrative bodies and leaves open the possibility of taking some crucial elements of the procedure for verifying compliance with sustainability criteria from the reference standard UNI 22005:2008 for the food and agriculture sector.

With the aim of contributing to the development of voluntary certification schemes for biofuel and bioliquid sustainability, the possibility could be assessed of requiring operators to provide a "*Chain of Custody certificate based on the mass balance*". The outline for this certificate could be taken from the British Renewable Transport Fuels Obligation (RTFO).

4.3 SUPPORT SCHEMES TO PROMOTE THE USE OF ENERGY FROM RENEWABLE RESOURCES IN ELECTRICITY APPLIED BY THE MEMBER STATE OR A GROUP OF MEMBER STATES

Support schemes can be regulatory, providing for targets and/or obligations. They may provide financial support either for investment or during the operation of a plant. There are also soft measures like information, education, or awareness-raising campaigns. As soft measures are described above, this assessment should focus on regulatory and financial measures.

Please describe existing schemes with legal reference, details of the scheme, duration (indicating start and end dates), past impact and explain whether any reform or future schemes are planned and by when. What are the expected results?

The support schemes currently in place for the production of electricity from renewable sources are described below.

Regarding the current situation, some corrections are expected to be introduced to the existing framework, aimed at increasing energy production, yet still increasing the efficiency of the support schemes, in order to avoid a parallel increase in production and in incentive costs. To this end the following actions are planned:
General actions:

- review of the feed-in tariffs for solar plants, all-inclusive tariffs (including a possible review of the threshold for tariff eligibility for each technology), multiplication factors and reference price for green certificates, in order to avoid excessive or insufficient remuneration;
- planned and progressive reduction of incentives (for example through adjustment according to the production costs of each technology): advance planning of reductions in tariffs / coefficients (on a three-year basis) and application of new values only to those plants which come into operation at least one year after the introduction of these values;
- replacement of the concept of renewal, at least for some types of plants and operations, with remuneration, including after the end of the current incentive period, higher than that guaranteed by transfer of the energy produced alone;
- with regard to biomass and bioliquids: possible introduction of priority allocations for purposes other than energy production; if biomass and bioliquids are to be allocated for energy production, there could be discrimination between those to be allocated to heat production or use in transport and those to be allocated for electricity purposes, with waste biomass being favoured in particular for the latter, preferably to be used in cogeneration systems; in this discrimination, pursuing efficiency targets in terms of the ratio between support costs and contribution to achieving targets, care will be taken not to penalise one energy purpose more than other options;
- still with regard to biomass: particular attention will be paid to trends in the cost of the raw material and operating costs, aiming to match the level of support available at European level.

Green certificates:

- increase in the minimum quota for electricity from renewable sources (whilst at the same time reviewing the exemption criteria for the obligatory quota);
- evaluation of the possibility of introducing a "fluctuation margin" for the price of green certificates, which would guarantee a minimum price to be used when planning operations;
- improvement of the current monitoring of trading and information on prices, with the development of a regulated futures market, in order to allow more far-sighted buying and selling strategies, absorb any temporary excess supplies more efficiently and avoid administrative balancing;
- review of the exemptions from the minimum quota for electricity production from renewable sources, designed to avoiding revenue positions, rewarding renewable source and cogeneration plants and making use of imported electricity declared to be renewable, with or without a guarantee of origin, to meet national targets.

In order to better reward autoproduction, in particular by small plants, including technologies which use renewable sources other than solar energy, the possibility could be evaluated of replacing the feed-in tariff mechanism (all-inclusive tariffs for energy fed into the grid) with a feed-in premium system (lower tariffs paid but for all the energy produced).

In general, measures will be considered which are aimed at encouraging the development of the renewable energy technology sector, widespread and small-scale installations, and the combination of renewable source energy plants with operations to improve energy efficiency.

With regard to incentive schemes for imported electricity (which could also be taken into account in order to limit the costs of reaching the targets), it is considered that incentives for this energy could be lower than those paid for energy produced in Italy, due to the lower production costs which are possible in countries with greater accessible potential.

REGULATION

Regulation can set target(s) and obligations. In case there is such an obligation please detail it:

To promote the use of renewable sources for electricity production, Italian national legislation currently provides for targets and obligations. Specifically, the legislation has established:

1. a national target for the nominal accumulated photovoltaic capacity to be installed by 2016, equal to 3000 MW (being updated to 8000 MW by 2020 in line with the expected new decree on photovoltaic energy);
2. a national target for the accumulated capacity from solar thermal plants to be installed by 2016, corresponding to 2,000,000 m^2 of accumulated capture surface;
3. the obligation to feed a predetermined minimum quantity of electricity from renewable energy sources into the electricity system.

1. PHOTOVOLTAIC target

(to which the FEED-IN TARIFF mechanism for PHOTOVOLTAIC energy is linked)

(a) What is the legal basis for this obligation/target?
The legal basis is the third version of the "Feed-In Tariff" (currently awaiting the competent Ministries' signatures, following approval by the Joint Conference in July 2010) which sets the national target at 8000 MW of nominal accumulated photovoltaic capacity to be installed by 2020.

(b) Are there any technology-specific targets?
The target set is specifically linked to photovoltaic technology.

(c) What are the concrete obligations/targets per year (per technology)?
There are no annual targets.

(d) Who has to fulfil the obligation?
(e) What is the consequence of non-fulfilment?
(f) Is there any mechanism to supervise fulfilment?
(g) Is there any mechanism to modify obligations/targets?
[Not relevant]

2. SOLAR THERMAL target
(to which the FEED-IN TARIFF mechanism for SOLAR THERMAL energy is linked)

(a) What is the legal basis for this obligation/target?
The legal basis is Article 11 of Ministerial Decree No 11/04/2008, which sets a national target for accumulated capacity from solar thermal plants, including the solar part of hybrid plants, to be installed by 2016, equal to 2,000,000 m^2 of accumulated capture surface.

(b) Are there any technology-specific targets?
The target set is specifically linked to solar thermal technology.

(c) What are the concrete obligations/targets per year (per technology)?
There are no annual targets.

(d) Who has to fulfil the obligation?
(e) What is the consequence of non-fulfilment?
(f) Is there any mechanism to supervise fulfilment?
(g) Is there any mechanism to modify obligations/targets?
[Not relevant]

3. Obligation to feed in ELECTRICITY FROM RENEWABLE SOURCES
(to which the GREEN CERTIFICATES mechanism is linked)

(a) What is the legal basis for this obligation/target?
The legal basis is Legislative Decree No 79/1999 as amended, which introduced the obligation for producers and importers of electricity produced from non-renewable sources to feed an annual minimum quota of electricity, produced by plants fed by renewable sources which became operational after 1 April 1999, into the national electricity system. The quota is equal to a percentage of the electricity produced or imported from conventional sources in the previous year. Plants producing electricity through cogeneration or using certain types of

fuel or which fall below the 100 GWh threshold are exempt from the obligation. Producers and importers which are subject to the obligation can fulfil it by feeding electricity produced from renewable sources into the grid or by buying green certificates from other producers which verify that the equivalent quota has been produced.
An update is planned in accordance with the criteria listed at the start of paragraph 4.3.

(b) Are there any technology-specific targets?
There are no technology-specific targets.

(c) What are the concrete obligations/targets per year (per technology)?
The obligation to feed electricity from renewable sources into the grid was initially set by Legislative Decree No 79/1999 at 2% of the electricity produced or imported from conventional sources in the previous year.
This quota has gradually been increased: Legislative Decree No 387/2003 introduced an annual increase of 0.35 percentage points, effective for the 2004-2006 three-year period; Law No 244/2007 raised this increased to 0.75 percentage points annually, for the period 2007-2012. Subsequent decrees may establish further adjustments to the annual increases of the obligatory quota.
There are no distinct annual targets / obligations per technology.

(d) Who has to fulfil the obligation?
In accordance with Legislative Decree No 79/1999, producers and importers of electricity produced from non-renewable sources currently have to fulfil the obligation. Plants producing electricity through cogeneration or using certain sources, and those which have an annual production of less than 100 GWh are exempt.

(e) What is the consequence of non-fulfilment?
Article 4 of Legislative Decree No 387/2003 provides that, in the event of non-fulfilment of the obligation or failure to deliver the required information, the Regulatory Authority for Electricity and Gas (AEEG) shall apply the sanctions provided under Law No 481/1995 to the defaulting party.

(f) Is there any mechanism to supervise fulfilment?
The GSE, the energy services regulator, has been appointed to supervise fulfilment of the obligation.

By 31 March of each year *n*, the conventional electricity producers and importers which are subject to the obligation provide self-certification of the data and information necessary to calculate the amount of energy which is subject to the obligation, which refer to production and imports during the previous year *n-1*, together with green certificates corresponding to the annual obligatory quota for production in the year *n-2*.

The GSE informs those subject to the obligation of the result of its verification. A positive result is given if the green certificates provided are of an equal or greater value than the quota for feeding in renewable electricity applicable to each applicant. In the event of a negative result, the party subject to the obligation must make up the difference highlighted by the GSE verification within 30 days, by acquiring green certificates on the market for the missing amount and sending these to the GSE.
In the event of non-fulfilment of the obligation or failure to deliver the information (self-certification), the GSE gives the AEEG the names of the defaulting parties.

(g) Is there any mechanism to modify obligations/targets?

The legislation provides for a regular review of the obligatory quota.
The obligatory quota, initially set by Legislative Decree No 79/1999 at 2%, has gradually been increased. Legislative Decree No 387/2003 introduced an annual increase of 0.35 percentage points, effective for the 2004-2006 three-year period; Law No 244/2007 raised this increased to 0.75 percentage points annually, for the period 2007-2012. Subsequent decrees may establish further adjustments to the annual increases of the obligatory quota.

FINANCIAL SUPPORT

Financial support can be classified in various ways. Examples are financial support for investment, capital grants, low interest loans, tax exemptions or reductions, tax refunds, tender schemes, renewable energy obligations with or without green certificates (tradable green certificates), feed-in tariffs, feed-in premiums, voluntary schemes.

For any scheme you use, please give a detailed description answering the questions below.

The following financial support schemes are described below:
1. Feed-in tariff;
2. Green certificates;
3. All-inclusive tariffs;
4. Support schemes contained in the Interregional Operational Plan on Energy;
5. Kyoto Fund.

1. FEED-IN TARIFF for PHOTOVOLTAIC and SOLAR THERMAL energy

The description of the feed-in tariff for solar photovoltaic energy is subject to revision on the basis of the new decree being issued.

(a) What is the name and a short description of the scheme?

The incentive mechanism for solar energy, whether photovoltaic or obtained through thermodynamic cycles, is known in Italy as the "*Conto Energia*" (feed-in tariff) and consists of the provision of an incentive tariff proportional to the energy produced by plants (*feed-in premium*), in addition to the sale price or value, through net metering or the producer's own consumption, of the energy produced.
Photovoltaic plants with a minimum capacity of 1 kW connected to the electricity network are eligible for a premium, which varies according to the plant size, installation type, integration with architecture and technological innovation, for a duration of twenty years.
Solar thermal plants with a capture surface of at least 2,500 m^2, equipped with a heat collector system with a capacity of at least 1.5 kWh thermal per square metre of capture surface, which in non-industrial areas do not use toxic, very toxic or harmful substances either as a heat-carrying fluid or collection medium, have the right to receive a premium in proportion to the energy produced due to the solar part of the installation only, which varies according to the share of net production not due to the solar part (integration portion), for a duration of 25 years.

(b) Is it a voluntary or obligatory scheme?

The feed-in tariff is a voluntary scheme.

(c) Who manages the scheme? (*Implementing body, monitoring authority*)

The Ministry for Economic Development issues decrees on this subject (in consultation with the Ministry for the Environment, Land and Sea in agreement with the State / region / local bodies conference).
The Regulatory Authority for Electricity and Gas (AEEG) is body which issues measures to implement the ministerial decrees in order to establish the methods, deadlines and conditions for the provision of incentive tariffs and for verifying compliance with the decrees' requirements.
The GSE, the energy services regulator, body which implements the feed-in tariff scheme by approving plants, providing the incentives and carrying out verifications.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The costs of funding energy production from renewable sources is currently covered by the revenue from tariff component A3 on the electricity bill.

(e) How is long-term security and reliability addressed by the scheme?

The feed-in tariff is a support scheme which guarantees constant remuneration at current currency values for the electricity produced by plants for a set period of time (20 years for photovoltaic plants, 25 years for solar thermal plants).
Moreover, the scheme is subject to regular adjustments which take into account the trends in the prices of energy products and components for photovoltaic plants as well as the results of monitoring and promoting technology used to create the plants, with the intention of limiting the medium- and long-term costs to the community. In any case, the incentive tariff paid when the plant becomes operations remains fixed for the whole entitlement period.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

Photovoltaic – The tariffs indicated in the third version of the "Feed-In Tariff" provide for a scheduled decrease during 2011 and are curtailed by 6% annually in 2012 and 2013.
The third version of the "Feed-In Tariff" replaced the previous version, defined by the Ministerial Decree of 19 February 2007, which was in turn preceded by the first "Feed-In Tariff" of the Ministerial Decrees of 28 July 2005 and 6 February 2006.

In particular, the second "Feed-In Tariff", defined by the Ministerial Decree of 19 February 2007, had already introduced the following changes:

- abolition of the preliminary stage of the procedure to access to the incentive tariffs;
- abolition of the annual limit on the amount of capacity eligible for the incentive;
- abolition of the 1000 kW limit as the maximum capacity of a single plant eligible for the incentive;
- definition of tariffs which specifically encourage small-scale applications and/or those which are integrated into the architecture of structures or buildings.
- definition of premium tariffs for photovoltaic plants combined with efficient energy use.

The third "Feed-In Tariff" in turn introduced the following innovations, amongst other things:

- a new, more specific structure of capacity categories for which different tariffs are paid;

- dedicated and/or premium tariffs for photovoltaic plants using innovative ways of integrating with architecture and for concentrated photovoltaic plants;
- a premium for systems whose exchange with the network can be predicted;
- restriction on the premium for plants combined with efficient energy use, limiting it to efficiency improvement works relating to the building envelope only.

The Ministry for Economic Development, in consultation with Ministry for the Environment, Land and Sea, in agreement with the Joint Conference, defines the new tariffs valid for the years after 2013 through decrees to be issued every two years. The tariff levels take into account trends in the prices of energy products and components for photovoltaic plants as well as the results of monitoring and promotion of technology used to create the plants.

Solar thermal - The tariffs given in the Ministerial Decree of 11 April 2008 are curtailed by 2% annually for each of the calendar years in the period from 1 January 2013 until 31 December 2014. The Ministry for Economic Development, in consultation with Ministry for the Environment, Land and Sea, in agreement with the Joint Conference, defines the new tariffs valid for the years after 2013 through decrees to be issued every two years, taking into account trends in the prices of energy products and components for solar thermal plants.

(g) Does support differ according to technology?

The feed-in tariff incentive scheme is applied using different rules and tariffs for photovoltaic plants compared to solar thermal plants.

(h) What are the expected impacts in terms of energy production?

Photovoltaic – The target of 3000 MW of photovoltaic capacity to be installed and connected to the electricity network by 2013 could translate to a contribution of approximately 3.6 TWh annually in terms of electricity production.

Solar thermal – The target of 2,000,000 m^2 of accumulated capture surface of solar thermal plants to be installed and connected to the network by 2016 could translate to a contribution of approximately 0.5 TWh annually in terms of electricity production.

(i) Is support conditional on meeting energy efficiency criteria?

The support scheme is not conditional on meeting energy efficiency criteria.
However, photovoltaic plants which are eligible for the feed-in tariff incentives, operating under a net metering system and used, even partially, to supply power for use within housing units can benefit from a percentage increase (up to a maximum of 30%) in the tariff paid, if the housing unit is renovated in order to improve the energy efficiency of the building envelope or if the plant is used to supply power to particularly efficient new buildings. (This measure is being updated in line with the new decree under discussion).

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

Photovoltaic – The feed-in tariff for photovoltaic energy is regulated by the third version of the "Feed-In Tariff" which replaced the previous decrees (Ministerial Decrees of 19 February 2007, 28 July 2005 and 6 February 2006).

Solar thermal – The feed-in tariff for solar thermal energy is regulated by the Ministerial Decree of 11 April 2008.

(k) Is this a planned scheme? When would it be operational?

No, the feed-in tariff is an existing scheme.

(l) What start and end dates (duration) are set for the whole scheme?

Photovoltaic – The feed-in tariff for photovoltaic energy was introduced for the first time by the Ministerial Decree of 28 July 2005 and started on 15 September 2005.
The third "Feed-In Tariff" sets a maximum cap of 3000 MW for the capacity which is eligible for the incentive (of which a maximum of 300 MW may be made up of photovoltaic systems integrated using innovative technology and 200 MW from concentrated photovoltaic plants). Once these capacity limits have been reached, the tariff will nonetheless be provided for a further 14 months (24 months for public bodies).

Solar thermal – The start date for the support scheme was 30 April 2008; the scheme will end 14 months (24 months for public bodies) after the limit of 1,500,000 m^2 of capture surface has been reached.

(m) Are there maximum or minimum sizes of system which are eligible?

Photovoltaic – all plants with a capacity of 1 kW or more which are connected to the national electricity network can benefit from the feed-in tariff for photovoltaic energy.

Solar thermal – all plants with a capture surface of at least 2,500 m^2 and equipped with a heat collector system with a capacity of at least 1.5 kWh thermal per square metre of capture surface can benefit from the feed-in tariff for solar thermal energy.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

Photovoltaic – The incentive tariffs can be cumulated with national, regional, local or European incentives in capital grants or interest rate subsidies which do not exceed 30% of the total investment cost in the following cases:
- plants with a capacity below 3 kW;
- plants erected on public buildings or those used by recognised non-profit organisations;
- plants located in areas undergoing upgrade works;
- photovoltaic plants with innovative features;
- concentrated photovoltaic plants.

For plants erected on public healthcare buildings and schools the accumulation limit is set at 60%.

Solar thermal – The incentive tariffs can be cumulated with national, regional, local or European incentives in capital grants which do not exceed 10% of the total investment cost or interest rate subsidies with advance funding which do not exceed 25% of the total cost of the investment. If these thresholds are crossed, the feed-in tariff incentives are reduced by applying a multiplication coefficient:

- for capital grant incentives: equal to X (where 10% < X < 70%), the tariffs are multiplied by the coefficient (70-X)/60 which is < 1;
- for interest rate subsidy incentives equal to Y (where 25% <Y < 70%), the tariffs are multiplied by the coefficient (70-Y)/45 which is < 1.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

The regions can issue calls for bids based on regional and European funds (Regional Operational Plans under ERDF for the period 2007-2013) which offer capital grants or interest rate subsidies for the creation of photovoltaic plants.

Specific questions for feed-in premiums:

It is considered that for solar energy, the incentive tariffs are provided on the electricity produced and are additional to the income from the consumption or transfer of the same electricity.

(a) What are the conditions to get the premium?

Photovoltaic – Access to the incentive tariffs is allowed on the condition that the photovoltaic plants comply with the requirements of the third "Feed-In Tariff".

Solar thermal – Access to the incentive tariffs is allowed on the condition that the solar thermal plants:

- became operational after 14 July 2008 and
- are designed, constructed and run in accordance with the provisions of the Ministerial Decree of 11 April 2008.

Any natural or legal person can benefit from the feed-in tariff scheme. Applications may be made at any time of year.

(b) Is there a cap on the total volume of electricity produced per year or of installed capacity that is entitled to the premium?

Photovoltaic – The third "Feed-In Tariff" currently sets a cap of 3000 MW for the capacity which is eligible for the incentive (of which a maximum of 300 MW may be made up of photovoltaic installations integrated using innovative technology and 200 MW from concentrated photovoltaic plants). Once these capacity limits have been reached, the tariff will nonetheless be provided for a further 14 months (24 months for public bodies).

Solar thermal – The maximum limit for the accumulated electrical capacity of all the solar thermal plants, including the solar part of hybrid plants, which can get the incentive tariffs corresponds to 1,500,000 m^2. No increase to this limit is currently planned, since there is still ample availability. There is no limit on the total volume of electricity produced per year.

(c) Is it an alternative to fixed tariff?

The incentive mechanism for solar energy, whether photovoltaic or obtained through thermodynamic cycles, consists of providing an incentive tariff in proportion to the energy produced by the plants.

In addition to the income from the incentive, which is commensurate to the energy produced, the plants can also turn the energy to account by:

- using all or part of it themselves;
- selling the electricity fed into the grid: this may take place through the usual instruments for selling electricity (bilateral contracts, sale on the commodities exchange) or by

transferring the electricity to the GSE through the so-called "dedicated withdrawal" mechanism (in general this is not an additional incentive but rather an easy way to access the electricity market; although for plants smaller than 1 MW there are guaranteed minimum prices).
- "net metering" (an alternative to selling as described in the previous point, and only permitted for plants with a capacity no greater than 200 kW): this mechanism consists of the option to offset the energy fed in against that withdrawn from the electricity network on an annual basis; the offsetting is based on the economic value of the energy at the moment it is actually fed into or withdrawn from the network; the energy exchanged with the network (the value of the fed-in or withdrawn energy, whichever is lower) is not liable for system charges.

(d) Is it a technology-specific scheme? What are the premium levels for each?

Photovoltaic – all plants with a capacity of 1 kW or more which are connected to the national electricity network can benefit from the feed-in tariff for photovoltaic energy. Specific tariffs are reserved for photovoltaic modules which are integrated with the architecture of buildings using innovative methods, and for concentrated photovoltaic plants. Other specific tariffs will be defined for photovoltaic plants using "innovative technology".

Solar thermal – all plants with a capture surface of at least 2,500 m^2 and equipped with a heat collector system with a capacity of at least 1.5 kWh thermal per square metre of capture surface can benefit from the feed-in tariff for solar thermal energy.

(e) Is there a floor and/or a cap for the premium? Please specify.

Photovoltaic – Electricity produced by photovoltaic plants which become operational in 2010 can receive the incentive tariff provided by the second "Feed-In Tariff" which, depending on the nominal capacity and type of plant, has the following values:

	Incentive Tariff (€/kWh)		
Plant capacity (kW)	Not integrated	Partially integrated	Fully integrated
1 • C • 3	0.384	0.422	0.470
3 < C • 20	0.365	0.404	0.442
C > 20	0.346	0.384	0.422

From 2011 the tariffs of the third "Feed-In Tariff" will come into force in accordance with the table below. A 6% reduction in the tariffs is planned for 2012 and 2013.

	CORRESPONDING TARIFF					
	A)		B)		C)	
Capacity interval	Plants which become operational after 31 December 2010 and before 30 April 2011		Plants which become operational after 30 April 2011 and before 30 August 2011		Plants which become operational after 30 August 2011 and before 31 December 2011	
	Photovoltaic plants erected on buildings	Other photovoltaic plants	Photovoltaic plants erected on buildings	Other photovoltaic plants	Photovoltaic plants erected on buildings	Other photovoltaic plants
[kW]	[€/kWh]	[€/kWh]	[€/kWh]	[€/kWh]	[€/kWh]	[€/kWh]
1• C• 3	0.402	0.362	0.391	0.347	0.380	0.333

3<C• 20	0.377	0.339	0.360	0.322	0.342	0.304
20<C• 200	0.358	0.321	0.341	0.309	0.323	0.285
200<C• 1000	0.355	0.314	0.335	0.303	0.314	0.266
1000<C• 5000	0.351	0.313	0.327	0.289	0.302	0.264
C>5000	0.333	0.297	0.311	0.275	0.287	0.251

In 2011 photovoltaic plants which are integrated into the architecture using innovative methods can receive the tariffs in the table below, with an annual 2% reduction for 2012 and 2013:

Capacity interval		Corresponding tariff
[kW]		[€/kWh]
A	1• C• 20	0.44
B	20• C• 200	0.40
C	C>200	0.37

In 2011, the following tariffs are provided for concentrated photovoltaic plants, with an annual 2% reduction for 2012 and 2013:

Capacity interval	Corresponding tariff
[kW]	[€/kWh]
1• C• 200	0.37
200• C• 1000	0.32
C>1000	0.28

These tariffs may be increased in the following cases (which cannot be used in combination):

- by 5% for plants located in industrial and commercial areas, worked out mines or dumps, areas used for refuse or contaminated sites;
- by 5% for plants constructed by municipalities of less than 5000 inhabitants;
- by 10% for plants installed as a replacement for asbestos-containing coverings;
- by 20% for systems whose exchange with the network can be predicted;
- by a maximum of 30% for plants operating under net metering for use within housing units, if the housing unit undergoes works to improve the energy efficiency of the building envelope or if the plant is used to supply power to particularly efficient new buildings.

Solar thermal – The electricity produced by the solar part only of solar thermal plants is eligible for an incentive tariff which, for the integration portion (share of net production not due to the solar source), has the following values:

	Incentive tariff (€/kWh)		
Integration portion	Up to 0.15	Between 0.15 and 0.50	Above 0.50
Incentive in addition to sale price	0.28	0.25	0.22

(f) For how long is the premium price guaranteed?

Photovoltaic – The tariffs are paid for a period of 20 years starting from the date on which

the plant becomes operational.

Solar thermal – The tariffs are paid for a period of 25 years starting from the date on which the plant becomes operational.

(g) Is any tariff adjustment foreseen in the scheme?

Photovoltaic – The tariffs provide for an annual reduction of 6% for 2012 and 2013, with the exception of integrated plants using innovative methods and concentrated plants, for which the planned reduction is 2% annually. It is planned that the tariffs will be updated by 31 December 2012 for the years after 2013.

Solar thermal – The tariffs indicated in the Ministerial Decree of 11 April 2008 are reduced by 2% annual for each calendar year in the period from 1 January 2013 to 31 December 2014. Starting in 2013, the Ministry for Economic Development in consultation with Ministry for the Environment, Land and Sea, in agreement with the Joint Conference, will define new tariffs valid for the years after 2014 through decrees to be issued every two years.

2. GREEN CERTIFICATES

(a) What is the name and a short description of the scheme?

Green Certificates (GCs) are tradable commodities, issued by the GSE, which verify that electricity has been produced from renewable sources by new, expanded (in which case the certificate relates only to the increase in production) or restructured plants which became operational after 1 April 1999. These certificates are used to fulfil the obligation to feed a minimum quota of electricity from renewable sources into the electricity system. GCs represent an incentive for the production of electricity from renewable sources since a market is created between those who produce electricity from renewable sources and have GCs, and those who have to demonstrate each year that they have fulfilled their obligation by showing an appropriate number of GCs (1 GC verifies that 1 MWh has been produced). GCs can be traded using bilateral contracts or within a specific trading system established by the energy markets regulator (GME S.p.A.), the so-called "green certificates exchange".

GCs are valid for three years. The GCs will be issued for a period of 15 years (for plants which became operational after 2007).

In addition to the income from the sale of GCs, the plants can also turn the energy to account by:

- using all or part of it themselves;
- selling the electricity fed into the grid: this may take place either through the usual instruments for selling electricity (bilateral contracts, sale on the stock market) or by transferring the electricity to the GSE through the so-called "dedicated withdrawal" mechanism (in general this is not an additional incentive but rather an easy way to access the electricity market; although for plants smaller than 1 MW there are guaranteed minimum prices).
- "net metering" (an alternative to selling as described in the previous point, and only permitted for plants with a capacity no greater than 200 kW): this mechanism consists of the option to offset the energy fed in against that withdrawn from the electricity network on an annual basis; the offsetting is based on the economic value of the energy at the moment it is actually fed into or withdrawn from the network; the

energy exchanged with the network (the value of the fed-in or withdrawn energy, whichever is lower) is not liable for system charges.

For an explanation of the obligation to produce electricity from renewable sources please see the comments at the start of this paragraph 4.3 (regulation).

(b) Is it a voluntary or obligatory scheme?

The green certificates mechanism is a voluntary scheme based on the obligation introduced by Legislative Decree No 79/1999 to feed a certain amount of electricity from renewable sources into the electricity network.

(c) Who manages the scheme? *(Implementing body, monitoring authority)*

The GSE, the energy services regulator, has been appointed to implement and monitor the Green Certificate Scheme. The AEEG is responsible for regulating the market and imposing any sanctions.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

(e) How is long-term security and reliability addressed by the scheme?

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

In accordance with the description given in point (a), the burden of covering this incentive measure falls directly to the parties under obligation, who must buy the GCs. However, the burden also falls indirectly on energy prices and therefore end customers, even though there is no specific item within the electricity tariff to cover this measure.
Law No 244/2007 introduced a rule to be used in the event that the supply of GCs exceeds the demand: at the producers' request GSE withdraws the GCs which will expire that year, in excess of those required to fulfil the obligation. The Ministerial Decree of 18/12/2008 introduced another temporary security rule necessary for absorbing an excessive supply of GCs caused by the insufficient increase to the minimum quota, a rule which is more effective in safeguarding the investments of renewable energy producers: at the holders' request the GSE withdraws the GCs for production relating to the years up to 2010, for the three-year period 2009-2011. The costs incurred by the GSE in implementing this rule are covered by the A3 electricity tariff component.

The support scheme is periodically revised.
The period for the issue of GCs has been increased from 8 (Legislative Decree No 79/1999) to 12 (Legislative Decree No 152/2006) to 15 years (Law No 244/2007).
The scheme differs according to technology (Law No 244/2007) and this differentiation has already been revised (Law No 99/2009).
Law No 244/2007 also provided that the multiplication coefficients for the issue of green certificates can be revised through ministerial decrees every three years to ensure that remuneration is adequate.

For updates to the mechanism please refer to the start of paragraph 4.3.

(g) Does support differ according to technology?

The support mechanism differs according to the technology used.
In fact, Law No 244/2007 introduced a table of multiplication coefficients on the basis

of which the number of GCs issued varies according to the renewable source used.

	Source	Coefficient
1	Wind power, for plants larger than 200 kW	1.00
1a	Offshore wind power	1.50
3	Geothermal	0.90
4	Wave and tidal power	1.80
5	Hydro	1.00
6	Biodegradable waste, biomass other than that included in the point below	1.30
7	Biomass and biogas produced by local agriculture or forestry	1.80
8	Landfill gas and residual gases from purification processes and biogas other than those included in the point above	0.80

(h) What are the expected impacts in terms of energy production?

The impact is commensurate to the obligatory quota. For an explanation of the obligation to produce electricity from renewable sources please see the comments at the start of this paragraph 4.3 (regulation).

(i) Is support conditional on meeting energy efficiency criteria?

The green certificates mechanism is not currently conditional on meeting energy efficiency criteria. This possibility will be considered, in particular with regard to biomass.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

Yes, the green certificates scheme for renewable energy was introduced by Legislative Decree No 79/1999, then revised by: Legislative Decree No 387/2003, Legislative Decree No 152/2006, Law No 296/2006, Law No 244/2007, Law No 222/2007 and Law No 99/2009.

The main decree which regulates the system is the Ministerial Decree of 18/12/2008.

(k) Is this a planned scheme? When would it be operational?

No, the scheme is already operational.

(l) What start and end dates (duration) are set for the whole scheme?

The support scheme started in 2001 and does not currently have an end date.

(m) Are there maximum or minimum sizes of system which are eligible?

Plants with a capacity of at least 1 kW which are connected to the electricity network are eligible for the GC mechanism. However, plants with a capacity of up to 1 MW (0.2 MW for wind power) may opt for the all-inclusive fixed tariff.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

According to the legislation in force, the same project cannot be supported by more than one support measure.

Law No 244/2007, as amended by Law No 99/2009, establishes that "*The production of electricity by plants fed by renewable sources which became operational after 30 June 2009 have the right to access the incentive schemes described in Articles 143 to 157 on the condition that these plants do not benefit from other national, regional, local or municipal state incentives, whether these relate to the feed-in tariff, capital grants or interest rate subsidies with advance funding, granted after 31 December 2007*".

There are exceptions for certain plants which use local biomass, or small-scale plants, which can accumulate incentive contributions up to a maximum of 40% of the investment cost.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

The regions can issue calls for bids based on regional and European funds (Regional Operational Plans under ERDF for the period 2007-2013) which offer capital grants or interest rate subsidies for the creation of plants fed by renewable sources, in line with the national rules on the accumulation of incentives.

Specific questions for tradable certificates:

(a) Is there an obliged share of electricity produced from renewable sources in the total supply?

(b) Who has the obligation?

The obligation to produce electricity from renewable sources is described at the start of this paragraph 4.3 (regulation).

(c) Are there technology-specific bands?

The scheme varies according to the source used. Please see point (g) of the previous section.

(d) Which technologies are covered by the scheme?

All technologies for energy production from renewable sources, except for solar technologies for which there is a specific mechanism (feed-in tariff).

(e) Is international trade in certificates allowed? What are the conditions?

International trade in green certificates is not currently planned.
However, there are plans for international agreements on the mutual recognition, under set conditions, of green certificates issued in the countries which sign the agreement. In particular, a 2006 agreement with Albania provides for mutual recognition of certification methods for electricity from renewable sources and related incentive systems based on the green certificate market mechanism (corresponding to physical imports of energy).
In general, however, the incentives that Italy could potentially pay for electricity produced from renewable sources outside the country and imported into Italy must be lower than those paid for energy produced in Italy, according to economic efficiency criteria which take into account the lower production costs which are possible in countries with greater accessible potential.
This criterion will however be applied in a dynamic way, in order to mitigate the need to contain costs with the need to meet targets.

(f) Is there a floor bottom price?

(h) What is the average price for certificates? Is it made public? Where?

The Energy Markets Regulator (GME), which manages the GC market, publishes all the information on exchanging certificates (quantities and prices) online.

No real floor bottom price has been set for green certificates, since the price is determined by the market, according to the principle of supply and demand.
Nonetheless, the Ministerial Decree of 18/12/2008 established that, in order to prevent an excessive supply, during the three-year period and at the holders' request, the GSE can

withdraw the GCs for production referring to years up to 2010. The withdrawal price is the average price over the previous three years for exchanges of all GCs regardless of the reference year, either on the GME-regulated market or through bilateral contracts. The 2010 withdrawal price for GCs is €88.90/MWh.

There is also a reference price, which is the price at which the GSE puts GCs onto the market (the regulations allow for this possibility in order to deal with demand which exceeds supply) which, per MWh of electricity, is equal to €180 minus the annual average electricity transfer price for the previous year (defined by the AEEG). The GC reference price set by the GSE for 2010 is €113.8/MWh.
In the event of excessive supply, where the price paid by the GSE to withdraw GCs is lower than the GSE's selling price, it is probable that a GC market will develop between a minimum price, equal to the price paid by the GSE to withdraw GCs, and a maximum price equal to the GSE's selling price.

(g) Is there a penalty for non-fulfilment?
Yes, Article 4 of Legislative Decree No 387/2003 provides that, in the event of non-fulfilment of the obligation or failure to deliver the required information, the AEEG shall apply the sanctions provided under Law No 481/1995 to the defaulting party.

(i) What is the trading scheme for certificates?
Trading in green certificates may take place through bilateral or multilateral contracts or within a specific trading system established by the energy markets regulator (GME). Green certificates are valid for three years: certificates issued for electricity production in a given year (GC reference year) can also be used to fulfil obligations in the following two years.

(j) How long can a plant participate in the scheme?
Plants which became operational after 31/12/2007 can receive green certificates for a period of fifteen years. To ensure that the incentive actually has this duration, the period during which the incentive is applicable is not considered to include any breaks in production deemed necessary by the competent authorities due to problems connected to network safety or disasters.

3. ALL-INCLUSIVE TARIFFS

(a) What is the name and a short description of the scheme?
The all-inclusive tariffs are tariffs paid for solar energy fed into the network. The value of the tariffs covers both the incentive and the sale price for the energy fed into the network. The tariffs are paid for a period of 15 years.
This mechanism, introduced by Law No 244/2007 as an alternative to the green certificates mechanism, is only applicable to plants which became operational after 31 December 2007 and have a capacity no greater than 1 MW (200 kW for wind power).

(b) Is it a voluntary or obligatory scheme?
The all-inclusive tariff is a voluntary scheme.

(c) Who manages the scheme? *(Implementing body, monitoring authority)*
The all-inclusive tariff is managed by the energy services regulator, the GSE.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The difference between the cost incurred by the GSE to buy the energy fed into the network under the all-inclusive tariff scheme and the income received by the GSE from selling that energy on the market is covered by the revenue from tariff component A3 on the electricity bill.

(e) How is long-term security and reliability addressed by the scheme?

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme differs according to technology (Law No 244/2007) and this differentiation has already been revised (Law No 99/2009).
Law No 244/2007 also provided that the tariffs can be revised through ministerial decrees every three years to ensure that remuneration is adequate.
For updates to the mechanism please refer to the start of paragraph 4.3.

(g) Does support differ according to technology?

The support mechanism differs according to the technology used. The current tariffs are the following:

	Source	Tariff level (euro cent/kWh)
1	Wind power for plants smaller than 200 kW	30
3	Geothermal	20
4	Wave and tidal power	34
5	Hydraulic power other than that covered by the previous point	22
6	Biogas and biomass, excluding liquid biofuels, with the exception of pure vegetable oils which can be traced through the integrated management and control system provided for by Council Regulation (EC) No 73/2009 of 19	28
8	Landfill gas and residual gases from purification processes and liquid biofuels excluding pure vegetable oils which can be traced through the integrated management and control system provided for by Council Regulation (EC) No 73/2009 of 19 January 2009	18

(h) What are the expected impacts in terms of energy production?

It is anticipated that this type of incentive could make a signification contribution to the growth in the number of small- and medium-capacity renewable energy plants across Italy, although it is difficult to quantify the related energy production in 2020.

(i) Is support conditional on meeting energy efficiency criteria?

No, the support is not conditional on meeting energy efficiency criteria.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

(k) Is this a planned scheme? When would it be operational?

This is an existing measure: it was introduced by Law No 244/2007 and revised by Law No 99/2009. The Ministerial Decree of 18/12/2008 regulates the scheme.

(l) What start and end dates (duration) are set for the whole scheme?

The all-inclusive tariff mechanism has been operational since 1 January 2008. No end

date has currently been set for this support scheme.

(m) Are there maximum or minimum sizes of system which are eligible?
The tariffs only apply to plants connected to the electricity network with a capacity greater than 1 kW, up to a maximum of 1 MW (200 kW for wind power).

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?
No, apart from by plants fed by certain types of biomass.

(o) Are there regional/local schemes? If so, please detail using the same criteria.
The regions can issue calls for bids based on regional and European funds (Regional Operational Plans under ERDF for the period 2007-2013) which offer capital grants or interest rate subsidies for the creation of plants fed by renewable sources, in line with the national rules on the accumulation of incentives.

Specific questions for feed-in fixed tariffs:

(a) What are the conditions to get the fixed tariff?
The tariffs only apply to plants connected to the electricity network with a capacity greater than 1 kW up to a maximum of 1 MW (200 kW for wind power), which became operational after 31 December 2007.

(b) Is there a cap on the total volume of electricity produced per year or of installed capacity that is entitled to the tariff?
No.

(c) Is it a technology specific scheme? What are the tariff levels for each?
The scheme varies according to the source used. Please see point (g) of the previous section.

(d) Are there other criteria differentiating tariffs?
No.

(e) For how long is the fixed tariff guaranteed?
The all-inclusive tariff are paid for a period of fifteen years. To ensure that the incentive actually has this duration, the period during which the incentive is applicable is not considered to include any breaks in production deemed necessary by the competent authorities due to problems connected to network safety or disasters (Article 16(6) of the Ministerial Decree of 18/12/2008).

(f) Is there any tariff adjustment foreseen in the scheme?
Law No 244/2007 provided that the tariffs can be revised through ministerial decrees every three years to ensure that remuneration is adequate.

4. SUPPORT SCHEMES CONTAINED IN THE INTERREGIONAL OPERATIONAL PLAN ON ENERGY

(a) What is the name and a short description of the scheme?
The Interregional Operational Plan (POIN) on "*Renewable Energy and Energy Saving*" is

a financial support plan for incentivising the production of renewable energy and energy saving measure in the following Italian regions: Sicily, Calabria, Apulia, Campania, Basilicata, Molise, Abruzzo and Sardinia. This plan is structured along three priority axes:

a. Axis 1: Energy production from renewable sources
b. Axis 2: Energy efficiency and system optimisation
c. Axis 3: Technical assistance and supporting actions.

The plan is implemented through 15 lines of action activated through calls for bids. An outline of the plan is given in *Annex 4.3*.

(b) Is it a voluntary or obligatory scheme?

The Interregional Operational Plan on Energy, and the lines of action included in it, can be considered voluntary.

(c) Who manages the scheme? *(Implementing body, monitoring authority)*

The Apulia Region is responsible for managing and implementing the operational plan. Three intermediate bodies have also been identified, two of which are part of the Ministry for Economic Development and the third part of the Ministry for the Environment.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The funding for the Interregional Operational Plan (POIN) on "*Renewable Energy and Energy Saving*" is covered by European Union Structural Funds (SF) and the Italian Underused Areas Fund (FAS).

(e) How is long-term security and reliability addressed by the scheme?

The operational plan relates to the 2007-2013 planning cycle for the European and national cohesion policy. The support schemes activated under the plan will however remain operational until the end of the plan itself.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The plan is subject to regular revision. In fact, there are adjustment mechanisms in place to respond to difficulties encountered in the implementation and the spending performances achieved by the various measures. The scheme has only been operational for a few months and therefore has not been amended so far.

(g) Does support differ according to technology?

The various lines of action are currently being implemented or started, and in principle they could offer differentiated support according to technology, without prejudice to the limits on accumulating this support with other national support instruments.

(h) What are the expected impacts in terms of energy production?

In terms of energy production the expected impacts are the following:

Gross additional energy production from biomass, of which:	
- electrical	1,200,000 MWh
- thermal	0.5 Mtoe
Gross additional energy production from photovoltaic	12,000 MWh

Gross additional energy production from high temperature geothermal	175,000 MWh
Gross additional energy production from renewable sources in the smaller islands and protected natural areas, of which:	
- *electrical*	36,000 MWh
- *thermal*	0.1 Mtoe

(i) Is support conditional on meeting energy efficiency criteria?

In general the support schemes provided for in the operational plan are not conditional on meeting energy efficiency criteria, with the exception of any specific criteria which may be included in the calls for bids which implement the schemes.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

(k) Is this a planned scheme? When would it be operational?

The operational plan falls within the National Strategic Framework (NSF), is an existing measure and is already at the implementation stage.

(l) What start and end dates (duration) are set for the whole scheme?

The operational plan relates to the 2007-2013 planning cycle for the European and national cohesion policy. The expenditure of funds under the plan and verification of implementation of the plan itself are postponed until 2015.

(m) Are there maximum or minimum sizes of system which are eligible?

In general the support schemes provided for in the operational plan do not foresee a maximum or minimum eligible size, with the exception of any specific criteria which may be included in the calls for bids which implement the schemes.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

The various support measures provided by the plan cannot be cumulated.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

The plan is established in addition to other schemes.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

In general the support provided by the plan is in the form of capital grants.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

The operational plan identifies the various public and private beneficiaries of each measure.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

Each of the actions provided for by the plan will be implemented through calls for bids and/or public tendering procedures.

Specific questions for tendering:

(a) What is the frequency and size of the tenders?

(b) Which technologies are specified?

(c) Is it integrated with grid development?

No specific frequency is planned. So far several measures closely linked to renewable energy have been activated (the smart grid measures described above, a measure relating to renewable energy use in public buildings).

5. KYOTO ROTATING FUND

(this fund is not only for supporting electricity production from renewable sources, but also numerous other sectors, including the heat production from renewable sources, as described in paragraph 4.4)

(a) What is the name and a short description of the scheme?

The rotating fund foresees the allocation of loans to be granted in order to support measures aimed at implementing the Kyoto Protocol and the United Nations Framework Convention on Climate Change. The following measures can be financed by the fund:

- *Distributed micro-cogeneration*: installation of high-electrical- and thermal-efficiency micro-cogeneration plants as defined by Legislative Decree No 20/2007 (implemented the EU directive on the promotion of cogeneration for energy and heat production), which are fed by natural gas, solid plant biomass, liquid plant-based biofuel or biogas, or which use co-firing of natural gas and biomass (solid, liquid, gaseous);
- *Renewables*: installation of small-scale plants to use renewable sources to generate electricity or heat;
- *Electric motors*: replacement of industrial electric motors with a nominal power greater than 90 kWe with high-efficiency motors;
- *End use*: measures to save energy and increase energy end-use efficiency;
- *Nitrous oxide*: elimination of nitrous oxide emissions from industrial and agricultural processes;
- *Research*: pilot projects for research and development of new technologies and new energy sources with low or zero greenhouse gas emissions.
- *Sustainable forest management.*

(b) Is it a voluntary or obligatory scheme?

The Kyoto fund and the measures it provides may be considered voluntary.

(c) Who manages the scheme? *(Implementing body, monitoring authority)*

The Ministry for the Environment, Land and Sea, which holds the Kyoto Rotating Fund, has appointed the bank Cassa Depositi e Prestiti S.p.A. to manage the fund, and in particular to run the information gathering, preliminary investigation and economic / financial investigation stages of applications for access to tax benefits. An evaluation committee has been set up within the Ministry for the Environment, Land and Sea to carry out the technical assessments. Some regions take part in the investigation stage, but only for measures relating to micro-cogeneration, renewable energy and energy end use.

The management and monitoring procedures are currently being defined and will be published in the circular which launches the programme.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The 2007 Finance Act (Law No 296/2006) provided the Kyoto Rotating Fund with a budget of €200 million per year for three years.

(e) How is long-term security and reliability addressed by the scheme?

The rotating fund, established to contribute to reduction in CO_2 emissions into the atmosphere, could be reorganised according to requirements for meeting the reduction targets set by European commitments.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme is at the start-up stage. The revision and monitoring procedures are currently being defined and will be published in the circular which launches the programme.

(g) Does support differ according to technology?

No.

(h) What are the expected impacts in terms of energy production?

The scheme was set up in order to contribute to the reduction of CO_2 emissions into the atmosphere; no estimates have been made for the expected impacts in terms of energy production specifically.

(i) Is support conditional on meeting energy efficiency criteria?

No.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

Yes, it is an existing scheme and is regulated by the Decree by the Minister of the Environment of 25/11/2008 and the Decree by the Minister for the Economy of 17/11/2009.

(k) Is this a planned scheme? When would it be operational?

The fund should be operational starting from 2010.

(l) What start and end dates (duration) are set for the whole scheme?

The rotating fund has a budget to cover the three-year period 2010-2012.

(m) Are there maximum or minimum sizes of system which are eligible?

Under the decree, the types of investment which can be supported by the fund, except those which refer to ***Research*** and ***Sustainable forest management***, are as follows:

- ***Renewables:*** investment in individual operations in newly constructed small-scale plants using a single renewable sources is eligible for the following types of plant: wind power plants with a nominal installed capacity of between 1 kWp and 200 kWp; hydroelectric plants with a nominal installed capacity of between 1 kWp and 200 kWp; solar thermal plants with a capture surface no greater than 200 m^2; thermal plants using solid plant biomass (pellets or chips) with a nominal thermal capacity (kWt) of between 50 kWt and 450 kWt; and photovoltaic plants which are integrated or partially integrated with buildings with a nominal capacity of between 1 kWp and 40 kWp;

- *Electric motors:* investment in the replacement of motors with a nominal power greater than 90 kW with high-efficiency equipment is eligible;
- *End use:* investment in individual operations is eligible for the following types of operation: on the envelope of existing buildings, parts of existing buildings or existing housing units, relating to vertical, horizontal or sloping opaque structures, transparent enclosures including glass panes and frames, openable panels and similar, including doors and windows even if these are not openable, which mark the limits of the heated space from the outside and from non-heated spaces; 1) for direct heating from district heating powered by cogeneration plants with a nominal capacity of up to 500 kWe fed by natural gas, solid plant biomass, liquid plant-based biofuel or biogas, or which use co-firing of natural gas and biomass. This type of operation is only eligible if it includes both the creation of the cogeneration plant and the creation of the district heating network connected to it, including the connections to buildings; 2) for heating buildings using low temperature geothermal systems with a capacity of up to 1 MWt; 3) cogeneration plants with a nominal capacity of up to 5 MWe fed by natural gas, solid plant biomass, liquid plant-based biofuel or biogas, or which use co-firing of natural gas and biomass.
- *Nitrous oxide:* investment in the production cycles of companies producing adipic acid and agroforestry companies is eligible.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

For the types of investment covered by the fund, the level of support for firms which are beneficiaries cannot exceed the *de minimis* State aid quota, as per Commission Regulation (EC) No 1998/2006 of 15 December 2006.
With reference to the above-mentioned measures and maximum permitted unit costs, the percentage which can be financed by the fund is 90% for public entities; for private entities and firms the percentage is set at 70%. The soft loans take the form of specific loans with a duration of between three and six years, with quarterly, continuous, deferred repayments with an interest rate determined by the Decree by the Minister for the Economy and Finance of 17 November 2009 "*Interest rate applicable to loans granted on the basis of the Rotating Fund to support measures implementing the Kyoto Protocol on climate change*" provided for by Article 1(1111) of Law No 296/2006.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

The plan does not foresee any regional/local schemes. However, the resources provided by the fund may be distributed at regional level or to autonomous provinces.

(p) Are there regional/local schemes? If so, please detail using the same criteria.

The plan does not foresee any regional/local schemes. However, the resources provided by the fund may be distributed at regional level.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The Kyoto Rotating Fund provides low interest loans.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

The beneficiaries vary according to the type of measure. The list of beneficiaries is as follows:

- *physical persons*: all subjects with legal capacity, other than firms or legal persons governed by private law, which do not usually and continually carry out commercial activity or other activity subject to value-added tax;
- *legal persons governed by private law:* all subjects whose status as a legal entity is recognised by current legislation, including foundations and associations with legal entity status.
- *public bodies:* regions, provinces, municipalities, mountain communities and other bodies whose status as a legal entity is recognised by law, including associations, unions and consortia of local bodies, regional or local energy saving agencies, and universities and research centres as well as their consortia;
- *apartment blocks:* under Book 3, Section 7, Article 2 of the Italian Civil Code, including at least ten housing units.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

No calls for bids are planned for access to the rotating fund. The soft loans are accessed through the presentation of an application for the related investigation to be carried out by the Cassa Depositi e Prestiti S.p.A. bank and are dependent on the annual availability of the fund.

6. Tax system

The tax system represents another support instrument for the production of electricity and cogeneration using biomass.

According to the Tax Authority Circular No 37/D of 28 December 2008, cogeneration plants fed by vegetable oils with CN codes 1507 to 1515 under the goods nomenclature established by Commission Regulation (EEC) No 2658/87 of 23 July 1987 as amended are exempt from excise duty on the portion of vegetable oil used to produced electricity. This portion is calculated on the basis of data on the plant's electricity production and specific consumption levels, established at a flat rate or ascertained through experimental tests and possibly chemical analyses.

Moreover, under Law No 203/2008, from 1 January 2009 to 31 December 2009 vegetable oils used for energy purposes in greenhouses are exempt from excise duty. Energy production from biomass and photovoltaic sources constitutes agricultural income and is therefore eligible for the relative benefits, under the conditions specified by the Tax Authority (Circular No 32/E of 6 July 2009).
Incentives for production by photovoltaic plants enjoy an advantageous tax regime, particularly for plants serving housing and operating under the net metering scheme (Circular No 46/E of 19 July 2007).

4.4 SUPPORT SCHEMES TO PROMOTE THE USE OF ENERGY FROM RENEWABLE RESOURCES IN HEATING AND COOLING APPLIED BY THE MEMBER STATE OR A GROUP OF MEMBER STATES

Please follow the structure of point 4.3 and apply the questions to the support measures provided for renewable energy use in the heating and cooling sector.

The main mechanisms in operation at national level to promote the use of renewable resources for heating and cooling, including indirectly, are the energy efficiency credits and tax deductions.
The various types of technology which can benefit from these mechanisms include solar thermal installations, biomass boilers, heat pumps (aerothermal, hydrothermal, geothermal), low-temperature geothermal systems, geothermal cogeneration systems, and those fed by biomass and waste.
A detailed review of the two mechanisms is given later in this paragraph.
Further incentives are provided by the various forms of tax breaks which are listed at the end of this paragraph, and by the obligation for new buildings to cover a quota of energy requirements for domestic hot water by using renewable sources, described in paragraph 4.2.3.
The following paragraphs discuss the current support mechanisms at length.

However, an illustration is also provided below of the planned adaptation and expansion measures for the heating and cooling sector, aimed at reaching the targets set by Directive 2009/28/EC.

From this perspective the following considerations are important:

- it is necessary to rebalance the intended uses of biomass from simple electricity generation to more rational and convenient forms (above all in line with the need for resources to be made available to cover the final consumption), such as heat production to cover heat usage, or cogeneration;
- it is necessary to use technologies with high performance levels and limited emissions levels, both in large-scale plants fed by renewable sources and connected to district heating networks and in small domestic installations; domestic systems using wood biomass are a particular cause for concern due to the PM10 emissions into the atmosphere, as assessed through the Regional Air Quality Improvement Plans in accordance with Article 8 of Legislative Decree No 351/1999: the spread of this type of system must therefore be appropriately regulated so that the systems comply with ambient air quality criteria;
- an incentive is required for the standardisation of fuel used, at least for civil plants in which it seems more logical to use virgin biomass, relegating industrial waste to large-scale plants; in this regard it is pointed out that there are specific technical standards for wood-based biomass for heating: pellets, chips, briquettes and logs[18];
- particular attention must be paid to the recording of heating/cooling.

[18] 1) Standard UNI/TS 11263:2007 Solid biofuels - Characteristics of pellets for energy purposes.
2) Standard UNI/TS 11264:2007 Solid biofuels - Characteristics of wood for burning, briquettes and chips.
These standards refer to the classification method specified in UNI CEN/TS 14961:2005

In the context of heating and cooling use, it is also essential to combine the use of renewable sources with operations to increase energy efficiency and the promotion of rational and informed use of technology and resources. For this reason, when expanding the incentive system for renewable resources in the heating and cooling sector, particular attention must be paid to the energy saving potential, the possibility of carrying out detailed monitoring of renewable energy use for heating and cooling, and the involvement of all stakeholders at the various levels of the supply chains through information and training campaigns. This has a double purpose: raising awareness of the opportunities in this sector amongst users and developing a rational approach to the mobilisation of resources, from the planning and scheduling, designing and provision of the plants until their final management.

In light of these considerations, the planned approach involves the integration of incentive policies with the obligations described above.

For some applications, the tax deduction instrument has proven to be particularly effective. The deduction will expire at the end of 2010: its results are being analysed, including its macroeconomic effects, as well as the actual cost to the State, in order to evaluate its restructuring and extension. It is clear that a more efficiently organised system of incentives for heating and cooling using renewable sources is synergic to the attainment of targets. To this end, the following possible actions are proposed:

- revision of the tax deduction provision with a reduction in the level of deductible expenditure (for example 36% instead of 55%), more careful calibration of the caps on deductible expenditure, and revision of the number of annual instalments benefiting from the deduction (for example: a period of between three and ten years, to be chosen by the taxpayer);
- adaptation and expansion of the white certificates mechanism, with the intention of making it economically feasible for operations with a pay-back period of less than 10 years and capable of making significant energy savings, carried out by companies including energy service companies. Moreover, the wider involvement of these subjects (ESCOs/ESPCOs) is essential for the success of the mechanism, and the results obtained must be analysed in order to identify any adjustments which could lead to possible further progress. The instrument can also be used as a total or partial alternative to tax deductions (for example for operations carried out for the benefit of public bodies or bodies in general which would not significantly benefit from tax deductions due to a low income or IRPEF / IRES debt). Additionally, in order to broaden the spectrum of operations which are eligible for this mechanism, and consequently the subjects which can benefit from it, the possibility will be assessed of lowering the minimum thresholds for eligible projects;
- activation of mechanisms following a similar logic to the tax deductions for operations with long pay-back periods or small-scale operations carried out by subjects other than companies. The resources for this could be found using the same methods used to cover the costs connected to white certificates (which currently fall under the tariffs for electricity and natural gas);
- plans to set up guarantee funds to facilitate access to credit to fund medium- and large-scale plants producing heat energy from renewable sources (district heating systems, including network development, but also industrial applications and large centralised plants serving buildings, especially tertiary buildings, including solar cooling);

- still within the context of economic support instruments, the tax regime should be clarified for certain products through dialogue with the relevant offices of the Ministry for the Economy and Finance (for example: wood chips are liable for VAT at 20% even when used for energy purposes, unlike similar products to be used for energy purposes; it should be ascertained that cogeneration is not at a disadvantage compared to simple electricity generation, provided that the overall performance is better).

In general, in the revision and expansion of external mechanisms, as well as for the potential establishment of additional instruments to promote renewable energy sources for heating and cooling, the technologies and solutions which allow the greatest reductions in consumption of non-renewable energy must be encouraged, including by introducing incentives based on performance criteria.

With regard to equipment which uses biomass, the plan is to also introduce minimum performance standards for emissions, for example by specifically promoting the replacement of open fireplaces with low-emission efficient devices. At the same time, provisions should be made for the application of quality standards for solid biomass, particularly for domestic use (chips, pellets, briquettes, wood for burning) to ensure that consumers can choose quality products, and that the market develops and is transparent.

Mechanisms will also be assessed for raising awareness of energy efficiency and rational energy use amongst beneficiaries of incentives for heating and cooling from renewable sources.

1. ENERGY EFFICIENCY CREDITS

REGULATION

Regulation *can set target(s) and obligations. In case there is such an obligation please detail it:*

(a) What is the legal basis for this obligation/target?

The legal basis for the energy efficiency credits scheme is established in the Ministerial Decrees of 24/04/2001, 20/07/2004 and 21/12/2007.

(b) Are there any technology-specific targets?

(c) What are the concrete obligations/targets per year (per technology)?

There are no technology-specific targets, but national quantitative targets have been set for reductions in primary energy consumption.
Several technologies which use renewable sources in the heating and cooling sector are included amongst the possible operations which could be carried out in order to fulfil the obligation.
The table below shows the annual targets updated by the Ministerial Decree of 21/12/2007, expressed in the million tonnes of oil equivalent (Mtoe) energy unit.

Year	Electricity [Mtoe/year]	Gas [Mtoe/year]
2008	1.2	1.0
2009	1.8	1.4
2010	2.4	1.9
2011	3.1	2.2
2012	3.5	2.5

(d) Who has to fulfil the obligation?

For each year after 2007, the national targets are divided between the electricity and natural gas distributors which had at least 50,000 end customers connected to their distribution networks on 31 December of the two years before the year to which the obligation refers (instead of the previous threshold of 100,000 customers on 31 December 2001). The division is based on the ratio between the quantity of electricity/natural gas distributed by each of these companies and the total energy distributed by the same, both quantities referring to the previous year.

A subsequent decree by the Minister for Economic Development, in consultation with the Ministry for the Environment, Land and Sea and with the agreement of the Joint Conference, defined the means for applying the Ministerial Decrees of 20/07/2004, as updated by the Ministerial Decree of 21/12/2007, to distributors with fewer than 50,000 end customers connected to their distribution networks.

(e) What is the consequence of non-fulfilment?

Under the Ministerial Decree of 21/12/2007, in the event of non-fulfilment the AEEG applies the sanctions provided by Law No 481/1995. The AEEG informs the Ministry for Economic Development, the Ministry for the Environment, Land and Sea, the energy markets regulator and the region or competent local body of the non-fulfilment and the sanctions applied.

(f) Is there any mechanism to supervise fulfilment?

According to the Ministerial Decree of 21/12/2007, the AEEG checks that each distributor holds credits corresponding to the annual target assigned to each of them, which may be increased by additional quotas arising from offsetting or updates to national quantitative targets. It then informs the Ministry for Economic Development, the Ministry for the Environment, Land and Sea and the energy markets regulator of the credits received and outcome of the verification.

(g) Is there any mechanism to modify obligations/targets?

The Ministerial Decree of 21/12/2007 provides that national quantitative targets for the years after 2012, in accordance with Article 9(1) of Legislative Decree No 79/1999 and Article 16(4) of Legislative Decree No 164/2000, will be set by a decree by the Minister for Economic Development, in consultation with the Ministry for the Environment, Land and Sea and with the agreement of the Joint Conference to be issued before 31 December 2011.

FINANCIAL SUPPORT

Financial support can be classified in various ways. Examples are financial support for investment, capital grants, low interest loans, tax exemptions or reductions, tax refunds, tender schemes, renewable energy obligations with or without green certificates (tradable

green certificates), feed-in tariffs, feed-in premiums, voluntary schemes.

For any scheme you use, please give a detailed description answering the questions below.

(a) What is the name and a short description of the scheme?

The "Energy Efficiency Credits" (EECs) or "white certificates" scheme provides an incentive for energy saving and energy efficiency projects in various industrial sectors, service industries and the residential sector. It imposes obligations on large electricity and natural gas distributors.

These projects can be carried out by energy services companies (ESCOs), electricity or gas distributors or parties which have appointed an energy saving and rational energy use manager.

The AEEG assesses the projects presented, certifies the consequent energy savings and then authorises the energy markets regulator to issue energy efficiency credits for the appropriate amount of certified energy savings.

Electricity and gas distributors can either fulfil the obligation to increase energy end-use efficiency by implementing energy efficiency projects and consequently obtaining energy efficiency credits, or by buying energy efficiency credits for other parties, through bilateral contracts or within a specific trading system established by the energy markets regulator (GME).

(b) Is it a voluntary or obligatory scheme?

The "energy efficiency credits" scheme is obligatory.

(c) Who manages the scheme? *(Implementing body, monitoring authority)*

The implementing body for the "energy efficiency credits" scheme is the AEEG which, in addition to regulating and monitoring the scheme, is responsible for checking that distributors reach their targets, and applying sanctions if they do not. However, the GME, which organises and manages the credit trading market, is responsible for issuing the EECs.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

According to Article 6 of the Ministerial Decree of 21/12/2007, the costs incurred by distributors in implementing these projects will be covered by the tariff components for electricity and natural gas transportation and distribution, if these projects involve a reduction in the consumption of electricity or natural gas and only for the part not covered by other resources.

(e) How is long-term security and reliability addressed by the scheme?

The costs incurred by distributors liable for this obligation in implementing projects aimed at reducing the consumption of electricity or natural gas will be covered by the tariff components for electricity and natural gas transportation and distribution, but only for the part not covered by other resources.

The same distributors also receive a tariff contribution for each EEC handed over from the Electricity Sector Compensation Fund (CCSE). The cost to the CCSE of providing these contributions is covered by the account for charges arising from measures and operations to promote the energy end-use efficiency of electricity when type 1 EECs are handed over, and by the account for measures and operations to save energy and the account for the

development of renewable sources in the natural gas sector, both set up within the CCSE, when type 2 and type 3 EECs are handed over.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

There are regular revisions of both the national quantitative obligations to increase the energy end-use efficiency and the tariff contribution paid to distributors for each EEC handed over.
The AEEG drafts and publishes a quarterly report on the progress of certified energy savings. The report contains information and statistics and, in particular, data on the certification of savings made in each region, divided up into the standardised analytical data sheets in force, as well as a list of certified savings made for final results-based operations with the savings made or expected.
The AEEG periodically updates the technical data sheets used for quantifying energy savings.

(g) Does support differ according to technology?

The financial support is given for the primary energy savings made, which depend on the technology used in the energy saving operation implemented.

(h) What are the expected impacts in terms of energy production?

The expected impact of this support scheme relates to the increased energy end-use efficiency and therefore primary energy savings.

(i) Is support conditional on meeting energy efficiency criteria?

The EEC scheme is based on the promotion of measures to increase energy end-use efficiency in accordance with energy efficiency criteria.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

(k) Is this a planned scheme? When would it be operational?

This is an existing measure. It is regulated by the Ministerial Decree of 21/12/2007.

(l) What start and end dates (duration) are set for the whole scheme?

The “energy efficiency credits” scheme has been operational since 1 January 2005. The Ministerial Decree of 21/12/2007 set targets for reductions in primary energy consumption until 2012. Obligations for the years after 2012 will be defined by a subsequent ministerial decree.

(m) Are there maximum or minimum sizes of system which are eligible?

To be eligible for the EEC scheme, the operations carried out must be on a scale which allows a minimum primary energy saving, expressed in tonnes oil equivalent. The minimum dimensions for the energy saving projects are defined in Article 10 of AEEG Decision No 103/03 as amended and vary, according to the applicable methodology for determining the recognised saving, from 25 toe/year to 200 toe/year.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

According to Article 6 of Legislative Decree No 115/2008, from 1 January 2009 incentive measures of all types established by the State to promote energy efficiency can be

cumulated with the white certificates on the basis of cost and equal remuneration of investments. Otherwise, under Article 6 of the Ministerial Decree of 18/12/2008, in relation to the electricity saving quota only, the EECs cannot be cumulated with the incentive system provided for electricity production from renewable sources, based on the green certificates and all-inclusive tariff. According to the Ministerial Decree of 19/02/1007, the energy efficiency credits scheme cannot be cumulated with the feed-in tariff provided for photovoltaic plants.
Under the Ministerial Decree of 24/10/2005, "Directives to regulate the issue of green certificates for energy production in accordance with Article 1(71) of Law No 239/2004", the EECs cannot be cumulated with green certificates for cogeneration plants connected to district heating networks.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

There are no similar regional schemes. However, the regions provide support for various operations based on the financial resources available on a case-by-case basis, in accordance with the rules on the accumulation of support measures.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The energy efficiency credits scheme involves issuing qualifying entities with tradable certificates which verify reductions in energy consumption have been made through increases in energy efficiency.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

Energy services companies, electricity or gas distributors and parties which have appointed an energy saving and rational energy use manager can benefit from this scheme. The scheme is aimed at operations using technologies connected to the efficient use of energy and energy saving. In particular, these operations allow the adoption of certain renewable source technologies utilising:

- Solar collectors.
- Air-source electric heat pumps.
- Air-source conditioning units with a nominal cooling capacity below 12 kWf.
- Low-temperature geothermal heat and heat from cogeneration plants and plants fed by plant products and organic and inorganic waste.
- Low-temperature geothermal heat and heat from plant products and organic and inorganic waste.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The deadline for operators to apply for the savings made to be verified and certified varies depending on whether the project is a standardised, analytical and final results-based, according to the timeframes given in Article 12 of AEEG Decisions No 103/03. The same applies to the deadline for the subsequent request for EECs to be issued.

Specific questions for tradable certificates:

(a) Is there an obliged share of electricity produced from renewable sources in the total supply?

There is no obliged share of energy produced from renewable sources. However, national quantitative targets have been set for reductions in primary energy consumption.

(b) Who has the obligation?

For each year after 2007, the national targets are divided between electricity and natural gas distributors which had at least 50,000 end customers connected to their distribution networks on 31 December of the two years before the year to which the obligation refers.

(c) Are there technology-specific bands?

(d) Which technologies are covered by the scheme?

There are no differences according to the technology used. The only distinction made is according to the type of operation carried out to achieve the primary energy saving:

1) Type 1 EECs, proving that primary energy savings have been made through operations to reduce the final consumption of electricity;
2) Type 2 EECs, proving that primary energy savings have been made through operations to reduce the consumption of natural gas;
3) Type 3 EECs, proving that savings have been made in forms of primary energy other than electricity and natural gas which are not used for automotive purposes;
4) Type 4 EECs, proving that savings have been made in forms of primary energy other than electricity and natural gas which are used for automotive purposes;

Under the Ministerial Decree of 21/12/2007 and Legislative Decree No 115/2008, distributors may use all four types of credit to fulfil their obligations. Distributors may obtain the tariff reimbursement by handing over type 1, 2 and 3 credits.

(e) Is international trade in certificates allowed? What are the conditions?

No international trade in these certificates in foreseen.

(f) Is there a floor bottom price?

There is no floor bottom price for the EECs. Their value is linked to the price set by the market or by bilateral agreements.

Distributors liable for the obligation are paid a tariff reimbursement for each type 1, 2 or 3 credit handed over. This reimbursement, equal to €100/toe of primary energy saved up to 2008 inclusive, is index-linked to the value of the tariff contribution in force in the previous year and the variations in energy prices for domestic end customers (electricity, natural gas and diesel for heating).

In particular, the update formula introduced allows the contribution to vary in inverse proportion to the recorded variation in the average energy price, in order to maintain a constant level of incentivisation for energy saving.

For 2009, the contribution was €88.92/toe of primary energy saved, and for 2010 it will be €92.22/toe of primary energy saved.

(g) Is there a penalty for non-fulfilment?

In the event of non-fulfilment the AEEG applies the sanctions provided by Law No 481/1995. The AEEG informs the Ministry for Economic Development, the Ministry for the Environment, Land and Sea, the energy markets regulator and the region or competent local body of the non-fulfilment and the sanctions applied.

(h) What is the average price for certificates? Is it made public? Where?

Each EEC certifies that additional primary energy savings have been made equal to one tonne oil equivalent (toe) and has a commercial value which varies according to trends in

the "EEC market" (in 2009 the value fluctuated between 70 and 90 €/toe).

(i) What is the trading scheme for certificates?

The EECs may be traded through bilateral contracts or within a specific trading system established by the energy markets regulator (GME).

(j) How long can a plant participate in the scheme?

The timeframe for participation in the EEC scheme is linked to the duration of the operations implemented by the qualifying entities. The duration of the operations is usually determined by ministerial decrees and is set at five years for most operations and eight years for operations involving the building envelope and the application of bioclimatic architecture. Law No 99/2009 extended the period for which EECs can be provided for operations which plan to install high-efficiency cogeneration plants to ten years.

2. TAX DEDUCTIONS

FINANCIAL SUPPORT

Financial support can be classified in various ways. Examples are financial support for investment, capital grants, low interest loans, tax exemptions or reductions, tax refunds, tender schemes, renewable energy obligations with or without green certificates (tradable green certificates), feed-in tariffs, feed-in premiums, voluntary schemes.

For any scheme you use, please give a detailed description answering the questions below.

(a) What is the name and a short description of the scheme?

Promotion of the use of renewable energy sources in heating and cooling through technologies such as solar thermal, high-efficiency heat pumps, low-temperature geothermal systems and biomass heaters is also achieved as part of the wider measure to incentivise energy saving in the building sector. The incentive system consists of the possibility of deducting 55% of the costs incurred for certain energy retrofit operations on existing buildings from personal income tax (IRPEF) or corporate income tax (IRES) obligations.

Solar thermal installations, high-efficiency heat pumps and low-temperature geothermal systems are automatically eligible for the tax benefit, whereas other operations must allow the annual primary energy requirement for the building's winter heating to be reduced to below 20% of the legal limits for newly-constructed buildings (2007 limits: tables given in Annex C of the Ministerial Decree of 19/02/2007 "Buildings Decree").

The reduction can also be achieved by installing technology which uses renewable energy. In particular, when biomass heaters are installed, the calorific value of the biomass is considered equal to the primary energy actually supplied to the plant multiplied by 0.3.

The costs incurred in installing solar panels for hot water production and replacing winter heating systems with systems equipped with high-efficiency heat pumps (including low temperature geothermal systems) are in any case eligible for the tax break, regardless of the reduction in energy needs achieved, as long as the systems comply with the specified quality standards (see paragraph 4.2.2).

The deduction can be split over 5 years.

(b) Is it a voluntary or obligatory scheme?

It is a voluntary scheme.

(c) Who manages the scheme? *(Implementing body, monitoring authority)*

The ENEA is responsible for managing and monitoring the tax deductions. Parties wishing to take advantage of the tax break must send documentation to the ENEA giving proof of the work carried out.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The tax benefits for energy saving operations are covered by the annual and multiannual State budget, established by the same Finance Act which introduced the measure (Law No 296/2006).

(e) How is long-term security and reliability addressed by the scheme?

The possible extension of the support scheme will be assessed when Italy's annual budget is announced.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

Introduced for 2007, the scheme was extended until 2010 and altered, for example, by introducing the possibility for operations to replace winter heating systems with systems equipped with high-efficiency heat pumps to benefit from the tax deduction.

To ensure that the scheme is monitored, Article 11 of the Ministerial Decree of 19/02/2007 as amended ("Buildings Decree"), which contains measures to implement the mechanism, provides that the ENEA will process information from the documents received from applicants and send a report on the results of these operations to the Ministry for Economic Development, the Ministry for the Economy and Finance, the regions and the autonomous provinces of Trento and Bolzano by 31 December of each year.

(g) Does support differ according to technology?

The tax break consists of an income tax deduction of 55% of the costs incurred and is the same for all types of technology, although the cap on deductions does differ. As indicated in point (a), access to the benefit is automatic for operations which plan to install solar panels or high-efficiency heat pumps, whilst biomass heaters must achieve a certain improvement in energy performance in order to be eligible.

(h) What are the expected impacts in terms of energy production?

The express aim of the mechanism is to reduce primary energy consumption. An estimate of the contribution made by renewable sources in terms of primary energy savings is expected at the end of the current incentive period (2010).

(i) Is support conditional on meeting energy efficiency criteria?

Please see point (a) of this paragraph.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

(k) Is this a planned scheme? When would it be operational?

(l) What start and end dates (duration) are set for the whole scheme?

The scheme has been operational since 2007 when it was introduced by Article 1(344, 346, 347) of Law No 296/2006 (2007 Finance Act).

Law No 244/2007 (2008 Finance Act) extended the measure until 31 December 2010 and amended it.
The provisions for implementing the provisions of the earlier measures and methods for applying the tax benefits to the above-mentioned types of technology are defined by the decrees named in paragraph 4.2.3.

(m) Are there maximum or minimum sizes of system which are eligible?
There is a limit on the amount of expenditure to which the deduction can be applied, which varies depending on the type of project. The relevant values are given below:

TYPE OF PROJECT	MAXIMUM DEDUCTION
energy retrofit of existing buildings	€100,000 (55% of €181,818.18)
solar panel installation	€60,000 (55% of €109,090.90)
winter heating system replacement	€30,000 (55% of €54,545.45)

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?
As specified by the Ministerial Decree of 19/02/2007 as amended ("Buildings Decree"), these deductions cannot be cumulated with other tax benefits provided by other provisions of national law for the same project. Nevertheless, the incentive is compatible with the request for energy efficiency credits as per the Decrees of 24/07/2004 from the Minister for Economic Development, in consultation with the Minister for the Environment, Land and Sea and with specific incentives provided by regions, provinces and municipalities.
It is however specified that these deductions cannot be cumulated with the premium for photovoltaic plants combined with efficient energy use established under the Ministerial Decree of 19/02/2007 defining "Criteria and means for incentivising electricity production through photovoltaic conversion of sun energy, implementing Article 7 of Legislative Decree No 387 of 29 December 2003" as amended.

More generally, State-operated incentive schemes of any kind for the promotion of energy efficiency cannot be cumulated with other Community, regional or local contributions, except for the possibility of cumulating measure with energy efficiency credits (EECs).

(o) Are there regional/local schemes? If so, please detail using the same criteria.
An extension of the tax deduction scheme at local level is not foreseen. However, the regions may of course take action using their own means to promote energy saving and the use of renewable technologies for heating, in accordance with the rules on accumulation.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)
The support available consists of the opportunity to deduct costs incurred for projects from tax obligations.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

All resident and non-resident taxpayers who own, on whatever basis, a building on which a project is carried out can benefit from the tax deduction, even those with corporate income.

Specifically, the following parties are eligible for the tax break:
- natural persons, including those practising professions;
- taxpayers who receive corporate income (natural persons, partnerships, corporations);
- associations of professionals;
- public and private bodies which do not carry out commercial activity.

Natural persons can benefit from the tax break, including:
- owners of property rights to the building;
- apartment blocks, for operations on the communal jointly-owned parts of the building;
- tenants;
- persons in possession of a right-of-use for a building.

The eligible renewable energy technologies are solar thermal, high-efficiency heat pumps including those with low-temperature geothermal systems, and biomass heaters.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

[Not relevant]

Heating/ cooling from renewable sources

Please address the following additional points:

(a) How are the support schemes for electricity from renewable energy sources adapted to encourage the use of CHP from renewable energy sources?

Incentives for electricity production by cogeneration plants using renewable sources are currently compatible with access to energy efficiency credits to the value of the energy saving achieved through useful heat produced.

(b) What support schemes are in place to encourage the use of district heating and cooling using renewable energy sources?

The following support schemes are currently available to renewable source plants connected to district heating networks:
- Green Certificates under Legislative Decree No 20/2007 as amended, which are only for cogeneration plants fed by any fuel and connected to district heating which have covered the fees provided for by Law No 239/2004.
- Green Certificates under Law No 102/2009, for cogeneration plants connected to agricultural district heating systems.
- The energy efficiency credits scheme introduced by the Ministerial Decree of 24/04/2001 as amended, based on the attainment of precise national targets for increasing energy end-use efficiency by applying efficient technology and systems. In particular, through Decision No EEN 9/10 the Authority introduced technical data sheet 22a, to be used to quantify energy savings made by using district heating systems for air conditioning and domestic hot water production in the civil sector.

- Regional calls for bids for the creation of networks in the southern Italian regions ("Renewable Energy and Energy Saving Interregional Operational Plan"), providing loans for operations on heat distribution networks, in particular networks fed by cogeneration and those used for district heating and cooling.
- Tax incentives, introduced by Law No 448/1998 as amended for the benefit of users connected to district heating networks connected to plants fed by geothermal or biomass sources. This mechanism pays the end user an incentive of 50 £/kWht (25.8 €/MWht) for the energy provided by district heating networks fed by geothermal or biomass sources, and an additional incentive of approximately 21.00 €/kWt installed in substations to partially cover the connection costs. The relevant regulatory references can be found in Art. 8(10) of Law No 448/1998; Art. 4 of Decree-Law No 268/2000; Art. 60 of Law No 342/2000; Art. 29 of Law No 388/2000; Art. 6 of Decree-Law No 356/2001; Art. 21(7) of Law No 289/2002; Art. 17(1) of Decree-Law No 269/2003; and Circular 95/E of 31.10.2001.

(c) What support schemes are in place to encourage the use of small-scale heating and cooling from renewable energy sources?

The main support scheme to encourage the use of small-scale plants in heating and cooling is the tax deduction mechanism described in the sections above and in paragraph 4.2.3.
Still with regard to small-scale plants, the premium available for photovoltaic plants combined with efficient energy use is of note. This premium is applicable if there is a reduction in primary energy needs for air conditioning and hot water production in buildings equipped with photovoltaic systems (paragraph 4.2.3 and 4.3). Also of note is the "Sun in Public Buildings" project, promoting solar thermal systems as part of the solar energy promotion programme run by the Ministry for the Environment, Land and Sea (paragraph 4.2.3).

(d) What support schemes are in place to encourage the use of heating and cooling from renewable energy sources in industrial applications?

The energy efficiency credits scheme introduced by the Ministerial Decree of 24/04/2001 as amended, based on the attainment of precise national targets for increasing energy end-use efficiency by applying efficient technology and systems.

In relation to support schemes for renewable sources in heating and cooling, an updated analysis of national and regional calls for bids and capital contributions will be given in a subsequent document (the points mentioned in paragraph 4.2.3 are valid for these schemes).

Other

Although they do not strictly fit into the support scheme outline set out by the NREAP template, it is considered necessary to mention the following forms of tax break:

1) excise duty exemption for biomass used for heating (which actually represents the main incentive for domestic use of this type of fuel, since it allows it to be economically viable in comparison to fossil fuels);
2) reduced VAT (at 10%) for heat/energy production plants and distribution networks and electricity from solar photovoltaic and wind power [Presidential Decree No 633 of 26 October 1972, "Establishment and Regulation of Value-Added Tax"];
3) agricultural income for the production and transfer of electricity and heat from agro-

forestry and photovoltaic renewable sources and the fuel obtained from plant production, which mainly comes from the fund established by agricultural entrepreneurs [Law No 266/2005 (2006 Finance Act) Art. 1(423)].

4.5 SUPPORT SCHEMES TO PROMOTE THE USE OF ENERGY FROM RENEWABLE RESOURCES IN TRANSPORT APPLIED BY THE MEMBER STATE OR A GROUP OF MEMBER STATES

Please follow the structure of point 4.3 and apply the questions to the support measures provided for renewable energy use in the transport sector. Please make distinctions according to transport modes (such as road transport, non-road land transport).

The support measures already in place are described below.

Looking to the future, the intention is to take action mainly through the obligatory minimum quota, in line with sustainability criteria and taking into account second- and third-generation biofuel development, as well as the social sustainability of biofuels. With the aim of encouraging compliance with minimum quota obligations, sustainability criteria could be applied in order to emphasise the greater value of second-generation biofuels, of those obtained from waste and other raw materials of non-food origin and of those which offer greater advantages in terms of avoiding greenhouse gas emissions or which guarantee that specific environmental objectives can be achieved (biomethane, B100, PVO etc.).

Measures will be introduced aimed at supporting the wholesale use of a 25% biodiesel mix (for example in public transport fleets) and steps will be taken, including through national regulations, to revise the technical regulations to ensure a gradual increase in the percentage which can be mixed in the network.
There will be an examination of the option to extend the obligation mechanism to biomethane, and place greater importance on the use of biogas for energy in the transport sector, particularly biogas produced from waste, residue, cellulosic material of non-food origin and ligno-cellulosic material. The first step to be taken to promote this type of use must be a careful assessment of the technical issues relating to biogas use for automotive purposes.
Finally, there may be an assessment of whether the energy efficiency credits scheme could be extended to the growth of electric vehicle use.

Certificates for making biofuels available for consumption

REGULATION

Regulation *can set target(s) and obligations. In case there is such an obligation please detail it:*

In order to promote the use of biofuels for automotive purposes, national legislation currently provides for an obligation to make a quota of biofuels available for consumption, in relation to the amount of fuel made available for consumption during the previous year. This obligation must be fulfilled by fuel suppliers who have made petrol and diesel available for automotive purposes during the previous year.

"Certificates for making biofuels available for consumption" were established in order to monitor the fulfilment of this obligation. The certificates are issued on an annual basis by the Ministry for Agriculture, Food and Forestry (MIPAAF). One certificate verifies that 10 Gcal of biofuel have been made available for consumption.

The certificates are tradable, so it is possible for those liable for the obligation to make biofuel available to fulfil the legal obligation by buying certificates from other parties who have too many.
The certificates are traded through bilateral negotiations and subsequent notification to the MIPAAF certification system.

(a) What is the legal basis for this obligation/target?
The legal basis for the obligation is found in Decree-Law No 2 of 10 January 2006 which was amended and converted by Law No 81 of 11 March 2006. Article 2c establishes the percentage of biofuel which must be made available at 1, 2 and 3% respectively for 2007, 2008 and 2009, and sets a target of 5.75% for 2010. The Decree of 25 January 2010 raised the obligatory quota for the years 2010 to 2012 (see point (c) below).

(b) Are there any technology-specific targets?
No, the obligation can be fulfilled using biodiesel, bioethanol and its derivatives, ETBE and biohydrogen, within the maximum thresholds for the amounts which can be mixed in the network.

(c) What are the concrete obligations/targets per year (per technology)?
Each year, those who made fuel available for consumption during the previous year are obliged to make a certain quota of biofuels available for consumption.
The quantity of energy from biofuels which must be made available for consumption during the year is determined by the obligatory quota in force for the year and the energy content of the petrol and diesel made available for consumption during the previous year. The obligation is deemed to have been fulfilled when the subject concerned has achieved at least 75% of the obligation for the year, but the requirement remains for the subject to make up the remaining part of the obligation during the following year.
The most recent obligatory quotas were set by the Ministerial Decree of 25/01/2010.

The obligatory quota has increased as follows:

- 3.5% for 2010
- 4% for 2011
- 4.5% for 2012

(d) Who has to fulfil the obligation?
Operators which make petrol and diesel, produced from non-renewable primary sources and intended for automotive purposes, available for consumption are subject to the obligation.

(e) What is the consequence of non-fulfilment?
Ministerial Decree No 100/2008 establishes fines to be paid in the event of non-fulfilment of the obligation to make biofuels available. To take into account the severity of the infringement, various levels of fine are applicable, calculated on the basis of the varying percentage weight of the missing certificates for making fuel available:

- a fine of €600 is applied for each missing certificate falling within the first 25% of the obligatory quantity to be made available by each subject concerned;
- a fine of €700 is applied for each missing certificate falling within the second 25% of the obligatory quantity to be made available by each subject concerned;
- a fine of €800 is applied for each missing certificate falling within the third 25% of the obligatory quantity to be made available by each subject concerned;
- a fine of €900 is applied for each missing certificate falling within the fourth 25% of the obligatory quantity to be made available by each subject concerned;

(f) Is there any mechanism to supervise fulfilment?

The MIPAAF issues the "certificates for making biofuels available for consumption", and uses these to verify that each party subject to the obligation has fulfilled it by the 31 May of each year. Verification takes place through administrative checks and spot checks of the certificates for making biofuels available for consumption held by each party subject to the obligation. The online portal specifically created by the MIPAAF will also be used for these checks.

In collaboration with the Italian Customs Agency and Financial Police, the MIPAAF verifies that self-certification has been correctly carried out through administrative checks and spot checks at the operators' premises.

(g) Is there any mechanism to modify obligations/targets?

The Ministry for Economic Development can modify the obligatory quotas for the years after 2012, in consultation with the other competent ministries.

Specific questions for tradable certificates:

(a) Is there an obliged share of electricity produced from renewable sources in the total supply?

Please see point (c) of the previous section.

(b) Who has the obligation?

Please see point (d) of the previous section.

(c) Are there technology-specific bands?

Please see point (d) of the previous section.

(d) Which technologies are covered by the scheme?

All biofuels.

(e) Is international trade in certificates allowed? What are the conditions?

No, the current legislation does not foresee international trade in these certificates.

(f) Is there a floor bottom price?

No.

(g) Is there a penalty for non-fulfilment?

Please see point (d) of the previous section.

(h) What is the average price for certificates? Is it made public? Where?

The price for certificates depends on the free trading activity between the parties, within the limits and under the conditions established by the body which imposes sanctions in the event of non-fulfilment. The price for certificates is not published.

(i) What is the trading scheme for certificates?
The certificates can be exchanged through bilateral trading.

(j) How long can a plant participate in the scheme?
Biofuel production plants can participate in the scheme for as long as the authorisations issued for their construction and operation remain valid.

Additional points

(a) What are the concrete obligations/targets per year (per fuel or technology)?
There is not strictly any differentiation according to the type of fuel used to fulfil the obligation described in point (c), any of the individual fuel types can be used indifferently.

(b) Is there differentiation of the support according to fuel types or technologies? Is there any specific support to biofuels which meet the criteria of Article 21(2) of the Directive?
No.

Excise benefit for biofuels

(a) What is the name and a short description of the scheme?
Legislative Decree No 504/1995, the Excise Act (T.U.A.) and Legislative Decree No 26/2007 "*Implementation of Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity*" defined the regulatory framework for the taxation of energy products.

Article 21 of the Excise Act provides that excise applies to every energy product used for automotive purposes as a fuel (including biofuel) or additive.

There are specific excise rates, per unit of weight or volume, for conventional energy products such as petrol, kerosene, diesel, fuel oil, liquefied petroleum gas, natural gas, coal, lignite and coking coal. When other energy products are used as motor fuel or fuel, they are taxed "per equivalence", i.e. they are subject to excise in accordance with the rate for the equivalent product (motor fuel or fuel) which has been replaced in that particular use.

"Innovative" motor fuels and fuels are also considered other products, including:
- biodiesel (diesel-type methyl ester extracted from a vegetable oil, to be used as motor fuel);
- bioethanol (ethanol extracted from biomass or the biodegradable fraction of refuse and waste, to be used as motor fuel);
- biomethanol (methanol extracted from biomass, to be used as motor fuel);
- Ethyl tert-butyl ether or ETBE (ETBE obtained from bioethanol), considered to be a biofuel at 47%;
- additives and reformulators produced from biomass for petrol and diesel.

In this regard, national legislation includes several provisions aimed at reducing the final cost of biofuels, through a tax reduction (excise reduction): the tax measures concentrate on biodiesel and fuels which can be obtained from ethanol of plant origin.

The table below shows the rates currently in force for biofuels for automotive purposes (Article 22a of Legislative Decree No 504/1995 as amended):

<table>
<tr><th>Product</th><th>Quota eligible for the benefit</th><th>Taxable amount</th><th>Excise [€]</th></tr>
<tr><td>Biodiesel for automotive use, in mixtures with diesel (in line with the maximum quantities which can be allocated - eligible quota[19])</td><td>18,000 t (2010)</td><td>1000 l</td><td>84.60</td></tr>
<tr><td>Bioethanol derived from products of agricultural origin, for fuel use alone or in mixtures with energy products</td><td rowspan="4">€3.8 million limit (2010) reduced to €0.1 million (from 2011)</td><td>1000 l</td><td>289.22</td></tr>
<tr><td>Ethyl tert-butyl ether (ETBE) derived from alcohols of agricultural origin, alone or in mixtures with energy products</td><td>1000 l</td><td>298.92</td></tr>
<tr><td rowspan="2">Additives and reformulators produced from biomass, alone or in mixtures with energy products</td><td rowspan="2">1000 l</td><td>289.22 (for petrol)</td></tr>
<tr><td>245.32 (for diesel)</td></tr>
</table>

The current limit on the quota of biodiesel eligible for the reduced excise rate was set for 2010 by the 2010 Finance Act (Law No 191/2009) at 18,000 tonnes; the same law reduced the annual limit on expenditure on the eligible quotas to €0.1 million, effective from 2011.

(b) Is it a voluntary or obligatory scheme?

This is a voluntary scheme, and Italian and European companies which produce biofuels can participate in allocating the excise benefits, as long as they meet the relevant requirements.

(c) Who manages the scheme? *(Implementing body, monitoring authority)*

The Customs Agency issues calls for bids for the allocation of excise benefits.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The funding is made available by the State budget.

(e) How is long-term security and reliability addressed by the scheme?

The current support scheme providing a reduction in excise is based on an experimental programme which will end on 31.12.2010.

[19] **Interministerial Decree No 156 of 3 September 2008**, defines, amongst other things, the quantities to which operators can apply the benefit over several years, prioritising products made through sector agreements or framework contracts.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

It is anticipated that the benefits will be adjusted according to trends in biofuel production costs.

(g) Does support differ according to technology?

No.

(h) What are the expected impacts in terms of energy production?

It is expected that the amount of biofuels made available for consumption will increase.

(i) Is support conditional on meeting energy efficiency criteria?

No.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The most recent legislation on this matter is Law No 191 of 23/12/2009, "Provisions for forming the annual and multiannual State budget".

(k) Is this a planned scheme? When would it be operational?

At the moment there are no incentives foreseen for after 31/12/2010.

Additional points

(a) What are the concrete obligations/targets per year (per fuel or technology)?

As described in point (a) above, currently 18,000 tonnes of biodiesel can benefit from reduced excise duty.

Bioethanol, ETBE and additives and reformulators produced from biomass can benefit from reduced excise duty up to a limit of €3.8 million in 2010, which will be reduced to €0.1 million from 2011 onwards.

(b) Is there differentiation of the support according to fuel types or technologies? Is there any specific support to biofuels which meet the criteria of Article 21(2) of the Directive?

Please see point (a). With regard to support for biofuels which meet the criteria of Article 21(2) of the Directive, please refer to the start of paragraph 4.5.

4.6 SPECIFIC MEASURES FOR THE PROMOTION OF THE USE OF ENERGY FROM BIOMASS

Biomass has an important role as primary energy in all the three sectors: heating and cooling, electricity and transport. National biomass strategy is crucial to plan the role and the interaction of uses between the energy end uses and interaction with other non-energy sectors. Therefore Member States are required to assess their domestic potential and increased mobilisation of domestic and imported biomass resources. The impact on and the interaction with other non-energy sectors (as the food and feed industry, pulp and paper industry, construction industry, furniture industry etc.) should be analysed.

Various studies have been carried out in order to evaluate the potential of biomass and its energy use. Some examples of studies on this subject are given in *Annex 4.6*.

Action to promote the use of wood and similar energy crops will be outlined. This action will be aimed in particular at encouraging the spread of small-scale plants which do not have a negative impact on the amount of land which can be used for crops, and the growth of local entrepreneurship.
The above-mentioned intention to establish priority biomass uses for purposes other than energy use is recalled here. This intention meets the criteria for rational use of resources, taking into account the efficiency of supply chains and the sustainable use of solid biomass.

4.6.1 Biomass supply: both domestic and trade

Under this point Member States should assess the supply of domestically available biomass and the need for imports.

There should be a distinction between biomass (A) from forestry — (1) direct and (2) indirect supply; (B) from agriculture and fisheries — (1) directly provided and (2) by-products/processed crops; and (C) from waste — (1) biodegradable fraction of municipal solid waste, (2) biodegradable fraction of industrial solid waste and (3) sewage sludge. Data is required for the above-mentioned first subcategories, while more detailed information is optional. However the aggregated figures shall reflect the following categorisation and give information in the units of Table 7. The role of imports (EU and non-EU) and exports (if possible, EU and non-EU) must be reflected.

Please note that wood chips, briquettes and pellets can be either from direct supply or from indirect supply from forestry. If information on pellets is included in the table, it should specify whether the raw material comes from direct or indirect supply.

In the case of biogas and biofuels the amount of raw feedstock should be detailed in Table 7, not the amount of processed feedstock. It is understood that for imports and exports the amount of biomass feedstocks for biofuels is more difficult to ascertain, and estimations may be necessary. Alternatively, if the information on imports is given on the basis of biofuel imports, it must be specified in the table.

Table 7: Biomass supply in 2006

Sector of origin		Amount of domestic resource[20] [t]	Imported		Exported	Net amount	Primary energy production (ktoe)
			EU	Non-EU	EU/Non-EU		
(A) Biomass from forestry[21]	*Of which:*						
	(1) direct supply of wood biomass from forests and other wooded land for energy generation	2,200,000 [t_{dm}] (a)					880 (a)
	Optional — if information is available you can further detail the amount of feedstock belonging to this category: (a) fellings (b) residues from fellings (tops, branches, bark, stumps) (c) landscape management residues (woody biomass from parks, gardens, tree rows, bushes) (d) other (please define)						
	(2) indirect supply of wood biomass for energy generation						
	Optional — if information is available you can further detail: (a) residues from sawmilling, woodworking, furniture industry (bark, sawdust) (b) by products of the pulp and paper industry (black liquor, tall oil) (c) processed wood-fuel (d) post consumer recycled wood (recycled wood for energy generation, household waste wood) (e) other (please define)						

[20] Amount of the resource in m^3 (if possible, otherwise in appropriate alternative units) for category A and its subcategories and in tonnes for categories B and C and their subcategories.

[21] Biomass from forestry should also include biomass from forest-based industries. Under the category of biomass from forestry processed solid fuels, such as chips, pellets and briquettes should be included in the corresponding subcategories of origin.

(B) Biomass from agriculture and fisheries	*Of which:*						
	(1) agricultural crops and fishery products directly provided for energy generation	2,675,000 [t_{dm}] (b)					883 (b)
	Optional — if information is available you can further detail: (a) arable crops (cereals, oilseeds, sugar beet, silage maize) (b) plantations (c) short rotation trees (d) other energy crops (grasses) (e) algae (f) other (please define)						
	(2) Agricultural by-products/processed residues and fishery by-products for energy generation	500,000 [t_{dm}] (c)					150 (c)
	Optional — if information is available you can further detail: (a) straw (b) manure (c) animal fat (d) meat and bone meal (e) cake by-products (incl. oil seed and olive oil cake for energy) (f) fruit biomass (including shell, kernel) (g) fishery by product (h) clippings form vines, olives, fruit trees (i) other (please define)						
(C) Biomass from waste	*Of which:*						
	(1) Biodegradable fraction of municipal solid waste including biowaste (biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, and comparable waste from food processing plants) and landfill gas	2,437,500 [t] (d)					561 (d)
	(2) Biodegradable fraction of industrial waste (including paper, cardboard, pallets)	500,000 [t] (e)					150 (e)
	(3) Sewage sludge						

t_{dm} = tonne of dry matter
(a) ENEA figure, assuming that 0.2 t_{dm}/ha are mobilised and NCV = 0.4 toe/ t_{dm};
(b) ERSE estimate, assuming an NCV of 0.33 toe/ t_{dm};
(c,e) ERSE estimate based on ISPRA data (analysis of waste inventory, assuming an NCV of 0.33 toe/t_{dm});
(d) According to ISPRA, in 2006 the amount of waste was 32.5 Mt. Assuming that 50% of this waste is unsorted share and that 50% is organic, the organic fraction of municipal solid waste is 8.1 Mt. Assuming that 70% goes to landfill, there remain 2.4 Mt of organic municipal solid waste which can be used for energy purposes (NCV = 0.23 toe/t_{dm}).

Table 7a: Estimated biomass domestic supply in 2015 and 2020

Sector of origin		2015		2020	
		Expected amount of domestic resource	Primary energy production (ktoe)	Expected amount of domestic resource	Primary energy production (ktoe)
(A) Biomass from forestry:	(1) direct supply of wood biomass from forests and other wooded land for energy generation	4,000,000	1,600	10,000,000	4,000
	(2) indirect supply of wood biomass for energy generation	0	0	0	0
(B) Biomass from agriculture and fisheries:	(1) agricultural crops and fishery products directly provided for energy generation	1,600,000	640	4,000,000	1,600
	(2) agricultural by-products/processed residues and fishery by-products for energy generation	6,480,000	1,960	16,200,000	4,900
(C) Biomass from waste:	(1) Biodegradable fraction of municipal solid waste including biowaste (biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, and comparable waste from food processing plants) and landfill gas	2,610,000	720	6,520,000	1,800
	(2) Biodegradable fraction of industrial waste (including paper, cardboard, pallets)	606,000	220	1,510,000	550
	(3) Sewage sludge	0	0	0	0

For the assessment of the biomass required for the production of biogas from animal manure a yield figure of 350 m^3/t has been assumed.

Table 8: Current agricultural land use for production of crops dedicated to energy in 2006

Agricultural land use for production of dedicated energy crops	Area (ha)
1. Land used for short rotation trees (willows, poplars)	5.105 [a]

[a] Source: AIEL, the Italian Association of Employment Economists

4.6.2 Measures to increase biomass availability, taking into account other biomass users (agriculture and forest-based sectors)

– Mobilisation of new biomass sources

(a) Please specify how much land is degraded.

The 2005 National Forest Inventory indicates that Italy's forests today cover approximately 10.5 million hectares, and represent 1.5 million cubic metres of epigeal biomass (growing stock), the annual growth of which is approximately 30 million cubic metres. Within the inventory the forested areas are distinguished, in accordance with the FAO definitions, between: forest (8,759,200 ha; 29.1% of Italian territory) or other wooded areas (1,708,333 ha; 5.6% of Italian territory).

When these data are compared with those of the National Forest Inventory taken two decades earlier (in 1985 the recorded forested area was 8,675,000 ha, of which 2,161,000 ha was covered by shrubs and other minor small trees), it is clear that the forested area has expanded, due to afforestation and reforestation and, above in the last decades, the process of natural recolonisation of abandoned agricultural land, mainly in hilly and mountainous areas. This development has now been in progress since the 1950s and is confirmed by the Corine Land Cover survey[22].

Although the data on forested areas seem to show a positive trend, it must be highlighted that the ISTAT inventory includes burnt forest areas, which are still classified as forested areas. The Italian Annual Statistics Report for 2006 showed that 15,398 ha of forest had been burned. This area can therefore be taken into consideration when estimating the amount of degraded land to which measures aimed at increasing biomass availability should be applied.

It must also be highlighted that, conversely, the Fifth General Census of Agriculture conducted in 2000 recorded a reduction in forested areas within farmland and/or forestry businesses, which indicates a gradual abandonment of forest management on private land.

(b) Please specify how much unused arable land there is.

In order to evaluate the amount of unused arable land the ratio between Total Agricultural Land (TAL) and Agricultural Land in Use (ALU) was analysed, as were the data on Agricultural Land Not in Use (ALNU) given in the ISTAT Fifth General Census of Agriculture.

The Fifth General Census of Agriculture of 2000 recorded 19,605,518.7 ha of TAL, and 13,206,296.8 ha of ALU. According to these data, the Agricultural Land in Use represents approximately 67% of the Total Agricultural Land.

[22] The CORINE programme (COoRdination of INformation on the Environment), was launched by the Council of the European Communities in 1985. Its primary aim is to dynamically inspect the state of the environment within the Community, in order to guide common policy, investigate its effects and suggest any corrective action. Within the CORINE programme, the CORINE Land Cover project is specifically aimed at surveying and monitoring land cover, on a scale appropriate for Community needs, paying particular attention to landscape protection requirements. Carrying out this programme involves taking satellite images to create a digital map of land cover at a scale of1:100,000.

It is clear from an analysis of how the ALU:TAL ratio has changed over time (through comparison of census data from 1990 to 2000) that there has been a gradual reduction in ALU compared to TAL, indicating a gradual loss of agricultural soil and a type of "non-management" of the land.

A phenomenon clearly exists of abandonment of land, with significant socio-economic and environmental implications. The Fifth General Census of Agriculture also shows that there are 917,263.6 ha of Agricultural Land Not in Use (ALNU), to which measures aimed at increasing biomass availability should be applied.

(c) Are any measures planned to encourage unused arable land, degraded land, etc. to be used for energy purposes?

Numerous initiatives have been established as part of the 2007-2013 National Strategic Plan (PSN) for Rural Development and regionally-funded Rural Development Programmes (PSR) under the common agricultural policy (CAP), in order to make the best use of agricultural areas through better land management and to respond to the challenges set by the Health Check.

The CAP Health Check involved updating the strategic objectives of the PSN and PSR with new resources aimed, amongst other things, at the "*climate change*", "*renewable energy*" and "*biodiversity*" sectors.

The National Strategic Plan has defined the following four axes of action in order to achieve the strategic targets set:
Axis 1 – Making the agricultural and forestry sector more competitive;
Axis 2 – Improving the environment and rural space;
Axis 3 – Quality of life in rural areas and diversification of the rural economy;
Axis 4 – Leaders.
As part of the action along these axes there is planned support for investment targeted, amongst other things, at the afforestation of agricultural land and non-agricultural areas, as well as the transformation of land into forest systems (for example see measure 223).

In general, agricultural policies must be promoted in favour of dedicated production (short rotation crops and similar) including the use of marginal land, and the collection of waste such as straw.
Synergies should also be promoted with the measures put in place for hydrogeological consolidation and the rural development funds, with the aim of promoting the sustainable use of Italian forests.

(d) Is energy use of certain already available primary material (such as animal manure) planned?

The incentive schemes already planned (particularly the Green Certificates and All-Inclusive Tariff) are aimed at the use for energy purposes of all by-products from the agricultural and agri-foodstuffs sectors, especially through the use of distributed generation in order to convert certain cost components into opportunities for additional income for the primary sector.

In particular, there will undoubtedly be strong growth in energy production from biomass by the crop and livestock farming and agro-industry sectors, once the incentive systems have been implemented in full.

In fact, with regard to animal manure, the limits imposed on nitrogen concentration in droppings and the identification of areas vulnerable to nitrates under Directive 91/676/EEC have created significant difficulties in the management of animal manure disposal. The possibility of using animal manure for energy purposes therefore offers a double benefit: it fulfils the need to increase electricity and heat production to achieve the targets set by Directive 2009/28/EC and at the same time it allows the nitrate content present in animal manure (in the form of digestate) to be reduced, thus making it easier to comply with the limits set by Directive 91/676/EEC.

Recently the so-called *energy option* has been growing ever more popular in Italy, including for the disposal of poultry droppings. There are over 157 million birds present in Italy's poultry sector, 56% of which are broiler chickens, and the estimated production of poultry droppings is more than 1,728,000 tonnes per year.

The use of the energy potential of waste for electricity / heat production and biogas is also increasing in line with Directive 2009/98/EC. Electricity production from the biodegradable fraction of waste is eligible for the incentives provided for electricity production from renewable sources. It should also be noted that, as brought to light by the National Waste Monitoring Centre's study entitled "Reducing greenhouse gases: potential provided by the waste processing sector", recovering energy from waste contributes to reductions in greenhouse gases, either due to the reduction in waste going to landfill or the replacement of energy which would otherwise have been produced using fossil fuels.

When Directive 2009/28/EC is transposed into national legislation, the possibility will be assessed of clarifying and potentially simplifying the legislative framework for certain waste, residue and by-products of farming, agri-foodstuffs and forestry activity, as well as the rules for non-virgin biomass management, in order to promote the use of material which is already available. For example, this simplification could encourage biogas production from food and agri-industrial waste, thus reducing the need for financial support (and therefore allowing incentives to be reduced).

(e) Is there any specific policy promoting the production and use of biogas? What type of uses are promoted *(local, district heating, biogas grid, natural gas grid integration)*?

Italian legislation supports biogas production through the Green Certificates and All-Inclusive Tariff incentive mechanisms. These schemes are described in detail in paragraph 4.3 of this Plan.

For the possibility of feeding biogas into the natural gas network please refer to paragraph 4.2.8 of this Plan.

Another interesting way of mobilising biogas is its energy use in the transport sector, particularly biogas produced from waste, residue, cellulosic material of non-food origin and ligno-cellulosic material. The first step to be taken to promote this type of use must be a careful assessment of the technical issues relating to biogas use for automotive purposes.

(f) What measures are planned to improve forest management techniques in order to maximise the extraction of biomass from the forest in a sustainable way?[23] How will forest management be improved in order to increase future growth? What measures are planned to maximise the extraction of existing biomass that can already be put into practice?

Numerous possibilities have been established as part of the 2007-2013 National Strategic Plan (PSN) for Rural Development and regionally-funded Rural Development Programmes (PSR) under the common agricultural policy (CAP), in order to make the best use of agricultural areas through better land management and to finance initiatives aimed at proper forest management.

– **Impact on other sectors**

(a) How will the impact of energy use of biomass on other sectors based on agriculture and forestry be monitored? What are these impacts? (If possible, please provide information also on quantitative effects.) Is the monitoring of these impacts planned in the future?

(b) What kind of development is expected in other sectors based on agriculture and forest that could have an impact on the energy use? (E.g. could improved efficiency/productivity increase or decrease the amount of by-products available for energy use?)

The impact of energy use of biomass on other agriculture and forestry sectors could be monitored on the basis of information held by the MIPAAF and trends in land uses monitored through photo interpretation. A sample-based survey should be carried out in hilly and mountainous areas and amongst firms which are potential biomass consumers, in order to assess the quantity, type and provenance of the biomass used for energy purposes as accurately as possible.

[23] Recommendations are given in the July 2008 report by the Standing Forestry Committee ad hoc Working Group II on mobilisation and efficient use of wood and wood residues for energy generation. The report can be downloaded at: http://ec.europa.eu/agriculture/fore/publi/sfc_wgii_final_report_072008_en.pdf

4.7 PLANNED USE OF STATISTICAL TRANSFERS BETWEEN MEMBER STATES AND PLANNED PARTICIPATION IN JOINT PROJECTS WITH OTHER MEMBER STATES AND THIRD COUNTRIES

Under this subchapter the expected use of cooperation mechanisms between Member States and Member States and third countries has to be described. This information should draw on that provided in the forecast document referred to in Article 4(3) of the Directive 2009/28/EC.

In order to meet the targets set by Directive 2009/28/EC, Italy intends to develop its domestic potential and resources as much as possible and, in the context of growing integration with the European and Mediterranean energy market, to also use means other than domestic production. Italy has already assessed the possibilities of using imports, and informed the Commission of this analysis in the forecast document provided in accordance with Article 4(3) of the Directive.

To this end, the potential contribution of statistical transfers will be evaluated.
With regard to joint projects, the following table summarises the above-mentioned forecast document's estimates for quantities of renewable electricity which could be imported annually following the completion of the planned interconnection infrastructure.

Third Country	Start of imports	TWh from RES/year	Mtoe from RES/year
Switzerland	*	4	0.344
Montenegro and Balkan states connected to the Montenegrin network	2016	6	0.516
Albania	2016	3	0.258
Tunisia	2018	0.6	0.052

* Italy currently imports renewable energy from the Swiss Confederation, even though this is not covered by joint projects. The amount given in the table, however, refers to the estimated maximum import amount which could be reached from 2018 onwards.

For further information please refer to the paragraph on support schemes for electricity.

4.7.1 Procedural aspects

(a) Describe the national procedures (step by step) established or to be established, for arranging a statistical transfer or joint project (including responsible bodies and contact points).

(b) Describe the means by which private entities can propose and take part in joint projects either with Member States or third countries.

(c) Give the criteria for determining when statistical transfers or joint projects shall be used.

(d) What is going to be the mechanism to involve other interested Member States in a joint project?

(e) Are you willing to participate in joint projects in other Member States? How much installed capacity/electricity or heat produced per year are you planning to support? How do you plan to provide support schemes for such projects?

For joint projects, please see the paragraph on incentives for electricity and the forecast document provided in accordance with Article 4(3) of the directive.
For statistical transfers, implementation measures have not yet been defined, since the feasibility of these measures depends on the actual willingness of other states to participate.

4.7.2 Estimated excess production of renewable energy compared to the indicative trajectory which could be transferred to other Member States

Please use Table 9 filling in the required information.

No excess production is foreseen until 2020, although it is possible in the previous period.

4.7.3 Estimated potential for joint projects

(a) In which sectors can you offer renewable energy use development in your territory for the purpose of joint projects?

(b) Has the technology to be developed been specified? How much installed capacity/electricity or heat produced per year?

(c) How will sites for joint projects be identified? (For example, can local and regional authorities or promoters recommend sites? Or can any project participate regardless its location?)

(d) Are you aware of the potential for joint projects in other Member States or in third countries? (In which sector? How much capacity? What is the planned support? For which technologies?)

(e) Do you have any preference to support certain technologies? If so, which?

Please refer to the forecast document.

4.7.4 Estimated demand for renewable energy to be satisfied by means other than domestic production

Please use Table 9 filling in the required information.

Table 9

Estimated excess and/or deficit production of renewable energy compared to the indicative trajectory

(ktoe)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimated excess in forecast document	-	-	-	-	-	-	-	-	-	-	-
Estimated excess in NREAP	1,839	2,077	2,157	2,220	2,143	1,843	1,511	1,092	465	0	0
Estimated deficit in forecast document	-	-	-	-	86	-	860	-	1,170	-	1,170
Estimated deficit in NREAP	0	0	0	0	0	0	0	0	0	284	1,127

The excess and deficit production (second and fourth rows of table 9) is calculated as the difference between the expected total RES consumption and the minimum trajectory calculated in accordance with Annex 1(B) of the directive (to other Member States if positive, from other Member States if negative). See table 4a.

5. Assessments

5.1 TOTAL CONTRIBUTION EXPECTED OF EACH RENEWABLE ENERGY TECHNOLOGY TO MEET THE BINDING 2020 TARGETS AND THE INDICATIVE INTERIM TRAJECTORY FOR THE SHARES OF ENERGY FROM RENEWABLE RESOURCES IN ELECTRICITY, HEATING AND COOLING AND TRANSPORT

The contribution of each renewable energy technology to the trajectory and 2020 targets in the electricity, heating and cooling and transport sectors should be estimated giving a possible future scenario without necessarily establishing any technology target or obligation.

For the electricity sector, both the expected (accumulated) installed capacity (in MW) and yearly production (GWh) should be indicated by technology. For hydro, a distinction should be made between plants of less than 1 MW, between 1 and 10 MW, and over 10 MW installed capacity. For solar power, details should be given separately for contributions from photovoltaic solar and concentrated solar power. Wind energy data should be indicated for onshore and offshore separately. For biomass, a distinction should be made between solid, gaseous and liquid biomass for electricity.

When assessing the heating and cooling sector, estimates of both installed capacity and production should be given for geothermal, solar, heat pumps and biomass technologies, with a breakdown for the latter category for solid, gaseous and liquid biomass. The contribution from district heating plants using renewable energy sources should be estimated.

The contribution from different technologies to the renewable energy target in the transport sector should be indicated for ordinary biofuels (both bioethanol and biodiesel), biofuels from wastes and residues, biofuels from non-food cellulosic material or from ligno-cellulosic material, biogas, electricity from renewable energy sources and hydrogen from renewable energy origin.

In case you have estimations on developing the use of certain technologies by regions, could you please indicate that after the table?

Table 10a-b

Estimation of total contribution (installed capacity, gross electricity generation) expected from each renewable energy technology in Italy to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity 2010-2020

	2005		2010		2011		2012		2013		2014	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Hydro:	15,466	43,768	16,580	42,141	16,702	42,127	16,824	42,113	16,946	42,099	17,068	42,085
< 1MW	391	1,851	444	1,737	465	1,791	485	1,845	506	1,900	526	1,954
1MW – 10 MW	1,947	7,391	2,250	7,459	2,350	7,692	2,450	7,926	2,550	8,160	2,650	8,394
> 10MW	13,128	34,525	13,886	32,946	13,888	32,643	13,889	32,341	13,890	32,039	13,892	31,737
Of which pumping	1,334	1,268	2,399	2,739	2,419	2,738	2,439	2,737	2,459	2,736	2,479	2,735
Geothermal	711	5,325	754	5,632	770	5,744	787	5,856	804	5,967	820	6,079
Solar:	34	31	2,505	1,976	3,511	3,327	4,014	4,048	4,526	4,779	5,038	5,524
photovoltaic	34	31	2,500	1,967	3,500	3,300	4,000	4,006	4,500	4,711	5,000	5,417
concentrated solar power	0	0	5	9	11	27	14	43	26	68	38	107
Tide, wave, ocean	0	0	0	0	0	0	0	0	0	0	0	0
Wind:	1,639	2,558	5,800	8,398	6,420	9,358	7,040	10,318	7,760	11,529	8,409	12,575
onshore	1,639	2,558	5,800	8,398	6,420	9,358	7,040	10,318	7,660	11,279	8,280	12,239
offshore	0	0	0	0	0	0	0	0	100	250	129	336
Biomass:	937	4,675	1,918	8,645	2,108	9,658	2,298	10,672	2,488	11,685	2,679	12,699
solid	653	3,477	1,026	4,758	1,087	5,072	1,149	5,386	1,210	5,701	1,272	6,015
biogas	284	1,198	453	2,129	528	2,518	602	2,907	677	3,296	752	3,685
bioliquids [(1)]	0	0	439	1,758	493	2,068	547	2,378	601	2,689	655	2,999
Total	18,787	56,356	27,556	66,791	29,511	70,214	30,963	73,007	32,524	76,059	34,013	78,962
Of which in CHP	382	2,388	420	2,695	478	3,011	536	3,327	594	3,643	652	3,959

(1) Take into account only those complying with the sustainability criteria (cf. Article 5(1) of Directive 2009/28/EC last subparagraph).

Please see note on the next page.

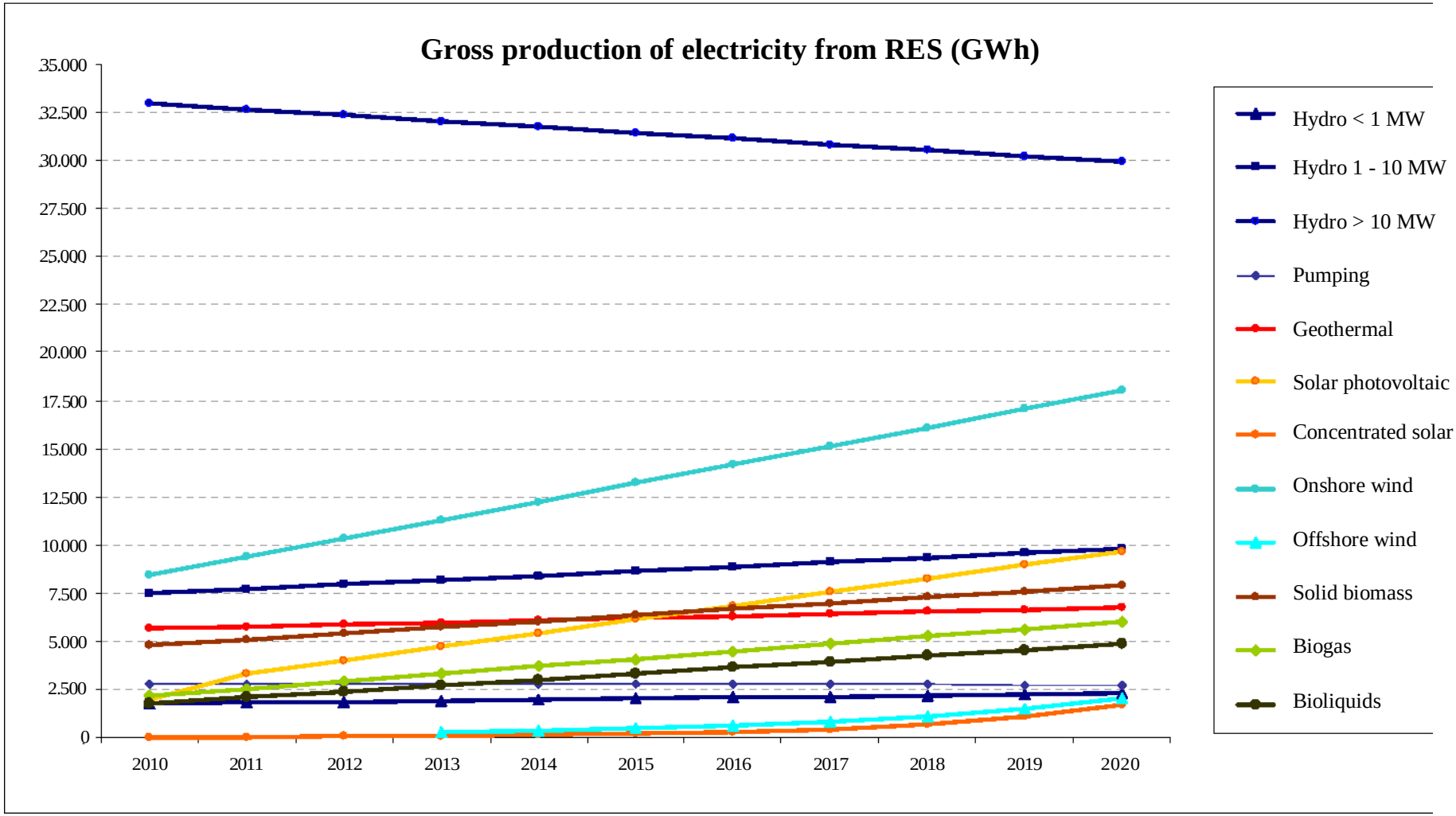
	2015		2016		2017		2018		2019		2020	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Hydro:	17,190	42,070	17,312	42,056	17,434	42,042	17,556	42,028	17,678	42,014	17,800	42,000
< 1MW	547	2,009	568	2,063	588	2,117	609	2,172	629	2,226	650	2,281
1MW – 10 MW	2,750	8,627	2,850	8,861	2,950	9,095	3,050	9,329	3,150	9,562	3,250	9,796
> 10MW	13,893	31,434	13,894	31,132	13,896	30,830	13,897	30,528	13,899	30,225	13,900	29,923
Of which pumping	2,499	2,734	2,519	2,733	2,540	2,733	2,560	2,732	2,580	2,731	2,600	2,730
Geothermal	837	6,191	853	6,303	870	6,415	887	6,526	903	6,638	920	6,750
Solar:	5,562	6,292	6,096	7,097	6,655	7,960	7,243	8,916	7,888	10,017	8,600	11,350
photovoltaic	5,500	6,122	6,000	6,828	6,500	7,533	7,000	8,239	7,500	8,944	8,000	9,650
concentrated solar power	62	170	96	269	155	427	243	677	388	1,073	600	1,700
Tide, wave, ocean	0	1	1	1	1	1	1	2	2	3	3	5
Wind:	9,068	13,652	9,740	14,769	10,430	15,940	11,145	17,184	11,892	18,526	12,680	20,000
onshore	8,900	13,199	9,520	14,159	10,140	15,119	10,760	16,080	11,380	17,040	12,000	18,000
offshore	168	453	220	610	290	820	385	1,104	512	1,486	680	2,000
Biomass:	2,869	13,712	3,059	14,726	3,249	15,739	3,440	16,753	3,630	17,766	3,820	18,780
solid	1,333	6,329	1,394	6,643	1,456	6,957	1,517	7,272	1,579	7,586	1,640	7,900
biogas	826	4,074	901	4,463	976	4,853	1,051	5,242	1,125	5,631	1,200	6,020
bioliquids [(1)]	710	3,309	764	3,619	818	3,929	872	4,240	926	4,550	980	4,860
Total	35,526	81,918	37,061	84,952	38,640	88,098	40,271	91,409	41,993	94,965	43,823	98,885
Of which in CHP	710	4,275	768	4,591	826	4,907	884	5,223	942	5,539	1,000	5,855

[(1)] Take into account only those complying with the sustainability criteria (cf. Article 5(1) of Directive 2009/28/EC last subparagraph).

The trajectories have been drawn based on 2009 statistics or on the year in which production is anticipated to start, hypothesising linear growth for the technologies already installed in 2009 (for photovoltaic the capacity and production values for 2010 and 2011 are based on short-term forecasts). For the technologies planned to become operational in future years (concentrated solar thermodynamic systems, off-shore wind farms and wave power stations) the hypothesis is for growth at a constant rate.

Hydroelectric production includes pumping stations relating to natural supplies only; the capacities indicated for the three categories include the fraction of capacity from pumping stations which practically attributable to natural supplies only. The capacities installed in 2005, including the capacity of pumping stations also fed by natural supplies (therefore excluding the "pure pumping" stations) are 419 MW (Capacity<1MW), 1,986 MW (1MW<C<10MW) and 14,920 MW (C>10MW) respectively, giving a total of 17,326 MW.

Production by thermoelectric plants fed by solid biomass, biogas and bioliquids includes the renewable production by co-combustion plants and production relating to the biodegradable fraction only for plants fed by waste; the capacities indicated include the parts practically attributable to co-combustion plants and production relating to the biodegradable fraction only for plants fed by waste.


Gross production of electricity from RES (GWh)
35.000
32.500
30.000
27.500
25.000
22.500
20.000
17.500
15.000
12.500
10.000
7.500
5.000
2.500
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Hydro < 1 MW
Hydro 1 - 10 MW
Hydro > 10 MW
Pumping
Geothermal
Solar photovoltaic
Concentrated solar
Onshore wind
Offshore wind
Solid biomass
Biogas
Bioliquids

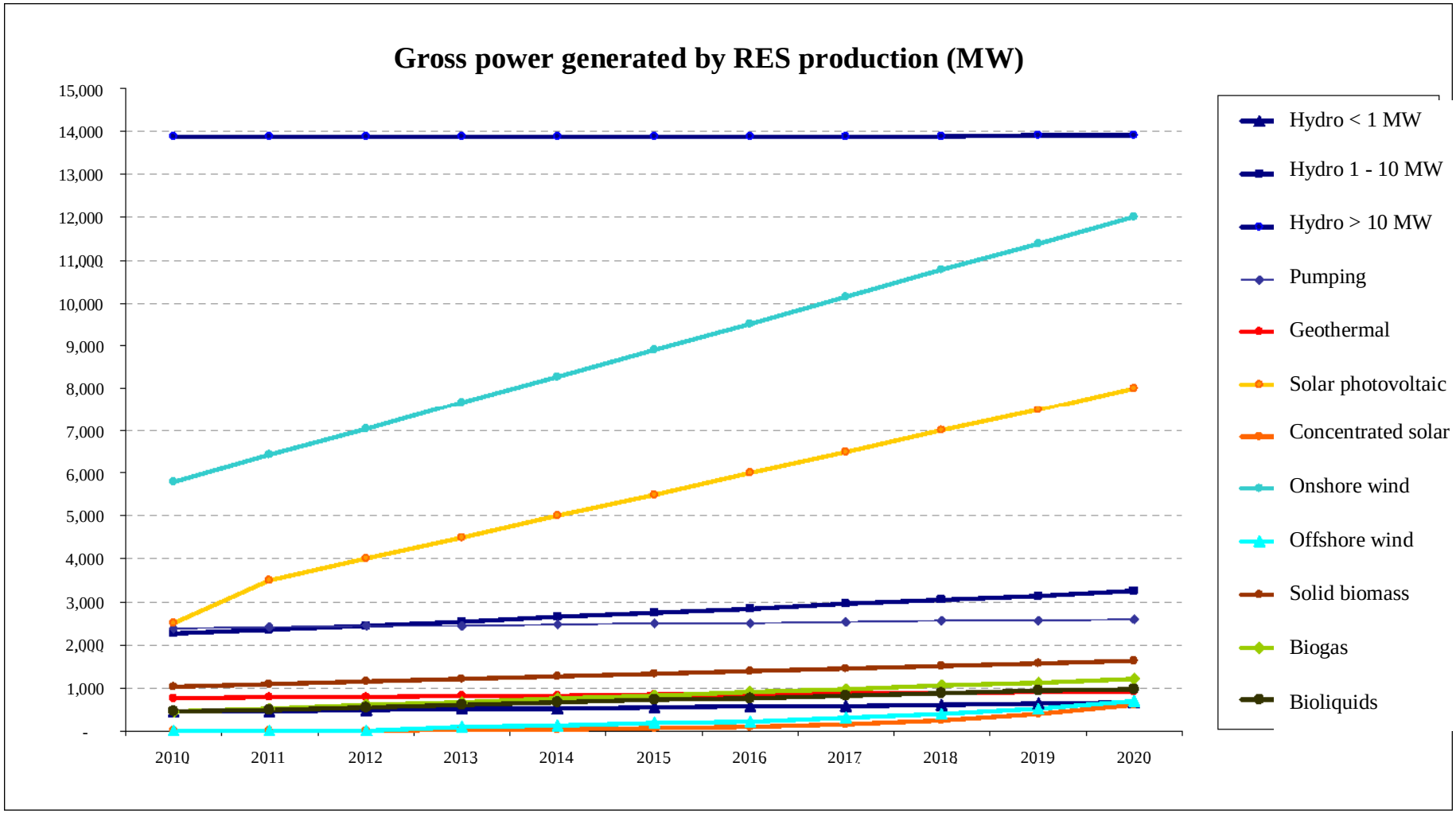

Gross power generated by RES production (MW)
15,000
14,000
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Hydro < 1 MW
Hydro 1 - 10 MW
Hydro > 10 MW
Pumping
Geothermal
Solar photovoltaic
Concentrated solar
Onshore wind
Offshore wind
Solid biomass
Biogas
Bioliquids

Table 11

Estimation of total contribution (final energy consumption(5)) expected from each renewable energy technology in Italy to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling 2010-2020

(ktoe)

	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Geothermal (excluding low temperature geothermal heat in heat pump applications)	213	226	232	239	246	253	260	268	275	283	292	300
Solar	27	113	148	192	250	326	424	552	719	936	1,218	1,586
Biomass:	1,655	2,239	2,449	2,679	2,932	3,212	3,521	3,863	4,243	4,666	5,139	5,670
solid	1,629	2,206	2,406	2,624	2,862	3,121	3,404	3,713	4,050	4,417	4,817	5,254
biogas	26	26	33	41	52	66	83	105	132	167	211	266
bioliquids (1)	0	7	10	14	18	25	33	45	61	82	111	150
Renewable energy from heat pumps:	21	1,273	1,368	1,473	1,588	1,715	1,857	2,016	2,195	2,398	2,631	2,900*
— of which aerothermal	16	1,127	1,204	1,285	1,373	1,466	1,566	1,672	1,786	1,907	2,037	2,175
— of which geothermal	4	40	52	67	87	112	145	187	242	313	404	522
— of which hydrothermal	2	105	112	120	128	137	146	156	167	178	190	203
Total	1,916	3,851	4,196	4,583	5,016	5,506	6,062	6,698	7,432	8,283	9,280	10,456
Of which DH (2)	80	144	173	208	250	300	360	433	520	624	749	900
Of which biomass in households (3)	1,145	1,471	1,610	1,762	1,928	2,109	2,308	2,525	2,763	3,024	3,308	3,620

(1) Take into account only those complying with the sustainability criteria (cf. Article 5(1) last subparagraph of Directive 2009/28/EC).
(2) District heating and/or cooling from total renewable heating and cooling consumption (RES-DH).
(3) From the total renewable heating and cooling consumption.
(5) Direct use and district heating as defined in Article 5(4) of Directive 2009/28/EC.
The trajectories have been drawn based on the hypothesis of a constant rate of growth starting from the values for 2008
* The estimates do not include the energy captured by pumps used in cooling, estimated at between 1 and 2 Mtoe.

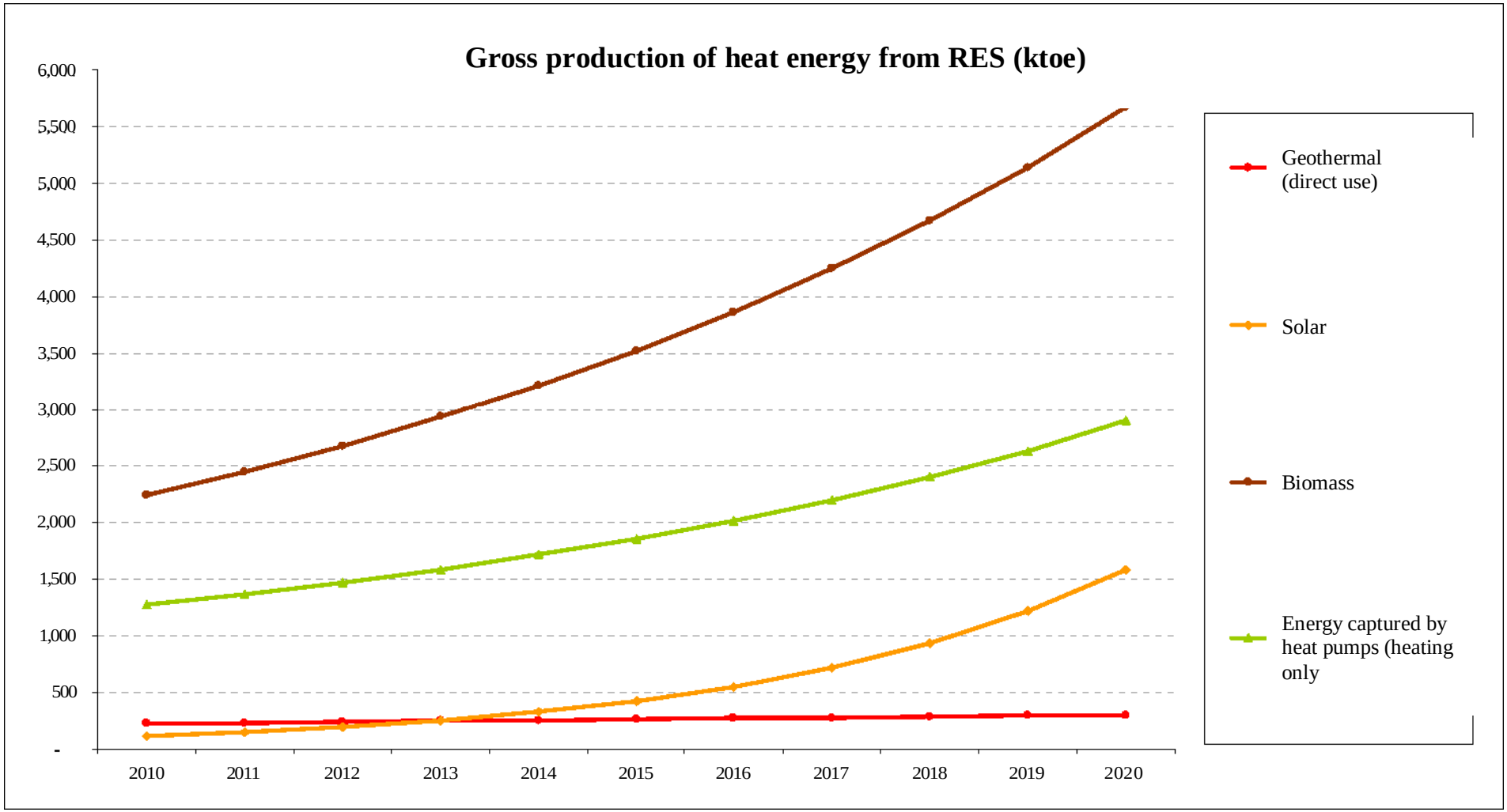
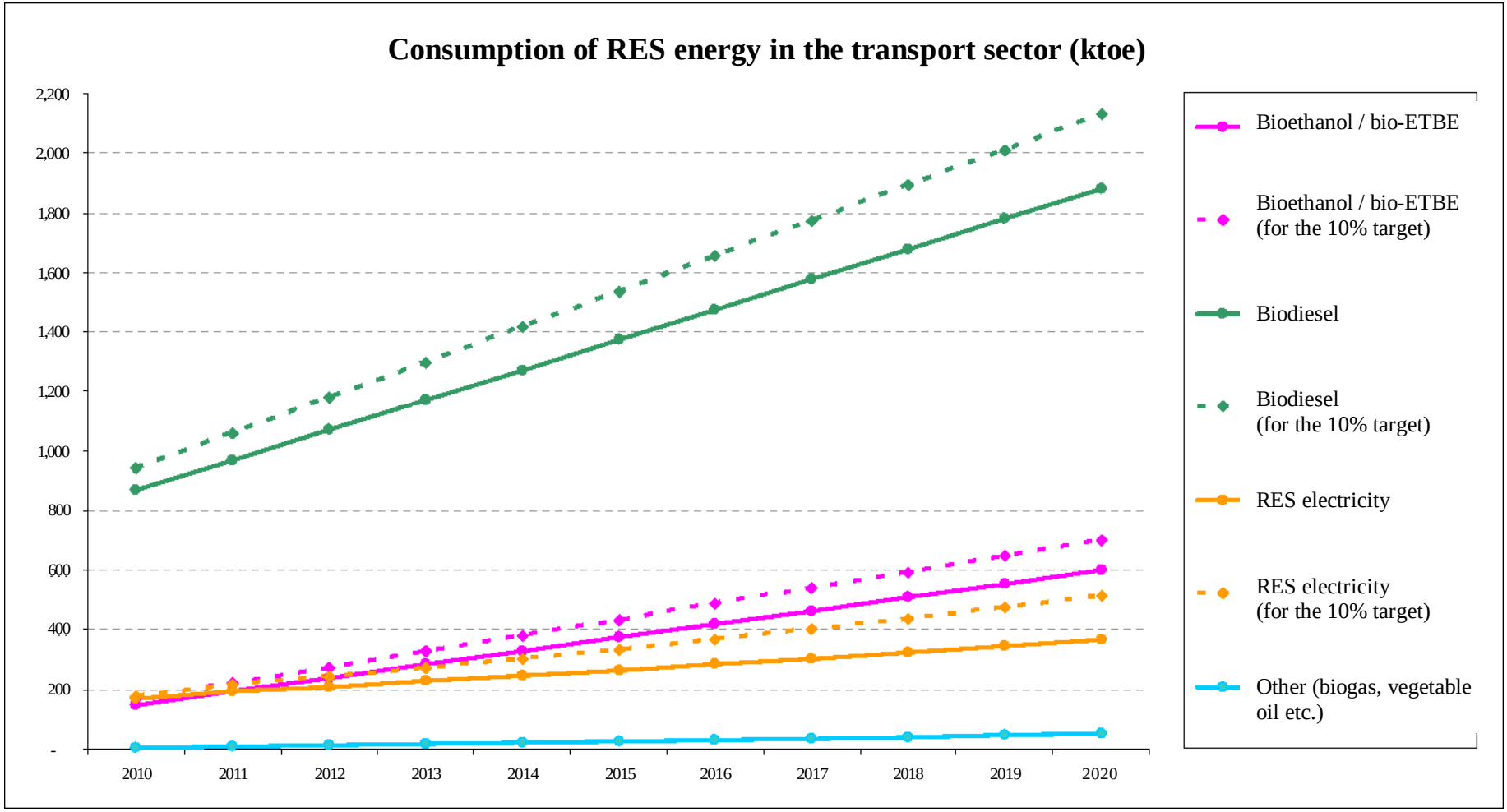

Gross production of heat energy from RES (ktoe)
6,000
5,500
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
-
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Geothermal (direct use)
Solar
Biomass
Energy captured by heat pumps (heating only

Table 12

Estimation of total contribution (~~installed capacity. gross electricity production~~)*expected from each renewable energy technology in Italy to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport se ctor 2010-2020 (6)

	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bioethanol/bio-ETBE	0	148	193	238	284	329	374	419	464	510	555	600
Of which Biofuels (1) Article 21(2)	0	19	27	35	44	52	60	68	76	84	92	100
Of which imported (2)	0	18	36	55	73	91	109	127	145	164	182	200
Biodiesel	179	868	969	1,070	1,172	1,273	1,374	1,475	1,576	1,678	1,779	1,880
Of which Biofuels (1) Article 21(2)	21	72	90	108	126	143	161	179	197	214	232	250
Of which imported (3)	0	73	145	218	291	364	436	509	582	655	727	800
Hydrogen from renewables	0	0	0	0	0	0	0	0	0	0	0	0
Renewable electricity	139	170	195	210	228	246	265	284	303	324	346	369
Of which road transport	0	6	13	20	28	37	45	55	65	75	86	98
Of which non-road transport	139	164	182	189	200	209	219	229	239	249	260	271
Others (as biogas, vegetable oils, etc.) - please specify	0	5	9	14	18	23	27	32	36	41	45	50
Of which Biofuels (1) Article 21(2)	0	5	9	14	18	23	27	32	36	41	45	50
Total	318	1,190	1,367	1,532	1,702	1,870	2,040	2,210	2,381	2,552	2,725	2,899

(1) Biofuels that are included in Article 21(2) of Directive 2009/28/EC.
(2) From the whole amount of bioethanol/bio-ETBE.
(3) From the whole amount of biodiesel.
(6) For biofuels take into account only those compliant with the sustainability criteria (cf. Article 5(1) last subparagraph).
*[*ENGLISH TEXT: "Estimation of total contribution expected from each renewable energy technology in [Member State] to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport sector 2010-2020(6)"]*
The trajectories for biofuels and total electricity (renewable or otherwise) consumed by the transport sector have been drawn based on a hypothesis of linear growth starting from the 2008 statistics. For biogas the initial reference point is 2009, identified as the last year of zero consumption. For the calculation of electricity produced from renewable sources and consumed in the transport sector in accordance with Article 3(4)c of Directive 2009/28/EC, the estimated average quota of electricity from renewable sources for Italy for the two years before the year in question is used.


Consumption of RES energy in the transport sector (ktoe)
2,200
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
-
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Bioethanol / bio-ETBE
Bioethanol / bio-ETBE (for the 10% target)
Biodiesel
Biodiesel (for the 10% target)
RES electricity
RES electricity (for the 10% target)
Other (biogas, vegetable oil etc.)

5.2 TOTAL CONTRIBUTION EXPECTED FROM ENERGY EFFICIENCY AND ENERGY SAVING MEASURES TO MEET THE BINDING 2020 TARGETS AND THE INDICATIVE INTERIM TRAJECTORY FOR THE SHARES OF ENERGY FROM RENEWABLE RESOURCES IN ELECTRICITY, HEATING AND COOLING AND TRANSPORT

The answer to this requirement should be included in Table 1 under chapter 2.

Please see the above-mentioned table.

Based on the 2009 update of the PRIMES study, which takes into account the financial crisis and consumption limitation measures planned when it was published, Italy's gross final consumption in 2020 can be calculated under Directive 2009/28 at 145.6 Mtoe[24].

In order to formulate the hypothesis for gross final consumption in 2020, it was assumed that additional effort would be made to improve energy efficiency, in line with the provisions of Law No 99/2009. These additional efforts could reduce Italy's gross final consumption in 2020 to 133.0 Mtoe[25].

For information and as an example only, certain elements which contribute to this reduction in consumption are indicated here.
The savings made thanks to the additional efforts, equal to 12.5 Mtoe, are split between the three sectors of the directive as follows:

SECTOR	Reduction in final consumption [ktoe]
Electricity	2,027
Heating / Cooling	5,314
Transport	5,183
TOTAL	12,524

The saving in electricity consumption is the result of two opposite effects:

1. A reduction in electricity consumption in comparison to the PRIMES 2009 scenario, largely due to:
   - increased use of high-efficiency electric motors and inverters;
   - more rapid replacement of the electrical domestic appliances currently installed (including air conditioners) with more efficient appliances;
   - increased use of efficient lighting systems (including through the use of suitable control systems), in particular in the industrial and tertiary sectors and in street lighting;

[24] Under Directive 2009/28, this value does not include energy consumed for pumping, estimated at approximately 0.78 Mtoe.
[25] Unlike the value given in the consultation document, the gross final consumption given here also includes the electricity consumed in the conversion of petrol products and the useful heat produced by new cogeneration plants (which was previously counted as a reduction in gross final consumption), as deduced from the recent Eurostat publications on energy consumption. The improved efficiency of cogeneration is shown by the reduction in primary energy consumption, thus contributing to the target for reducing primary energy consumption as foreseen by the "Climate and Energy Package".

- increased use of efficient IT systems (e.g. virtual servers) and related devices (e.g. efficient UPS); which also lead to a reduction in energy consumption for computer room cooling;
- operations to reduce loss from the electricity distribution and transmission networks;
- replacement of fully electric water heaters with equipment which uses another primary source (solar panels, heat pump, natural gas or biomass);
- replacement of fully electric heating systems with systems which use another primary source (heat pump, natural gas or biomass, including through district heating).

2. An increase in electricity consumption in comparison to the PRIMES 2009 scenario, due to the effect of:

- increased use of water heaters and heating systems based on heat pumps, replacing existing systems based on other energy sources (e.g. natural gas);
- widespread use of electric cars ("plug-in" cars);
- increase in public transport run on electricity.

In the increased efficiency scenario, the savings made in heating and cooling are the result of the following actions to improve energy efficiency:

- reduction in the energy consumed for heating thanks to work on the building envelope (e.g. insulation, heat recovery) of existing residential and tertiary-use buildings;
- reduction in heat loss through the chimney in heating and domestic hot water production systems in residential and tertiary-use buildings;
- replacement of current biomass boilers with more efficient equipment which allows biomass consumption to be reduced whilst maintaining the same performance;
- heat recovery in industrial processes with high energy content.

The basis for the transport demand is the PRIMES 2009 hypotheses, which foresee a 2020 demand for 1,102 Gpkm for passengers (equal to 17,947 km per capita), and a demand for 273,9 Gtkm for freight (equal to 163 tkm per thousand GDP). It should be noted that in both cases PRIMES foresees an increase in the service demand compared with 2010 (+9% in the transport demand met by private cars, +18% in road freight transport, +9% in rail transport, +8.6% in air transport).

In the efficient scenario, this transport demand is met using energy saving technology. Summarising as much as possible, four types of action will take place:

- introduction of electric plug-in cars, allowing savings in petrol/diesel;
- more rapid replacement of the current pool of private cars and light goods vehicles with new vehicles which meet the CO_2 emission limits proposed by Regulation COM(2009) 593/3 (even tighter than those set by Regulation No 443/2009), which was used as a reference for the baseline scenario;
- implementation of a package of measures additional to those planned in the reference scenario, which may relate to technology, behaviour, legislation or infrastructure;
- increase in the availability of public transport run on electricity, such as trains and underground trains.

5.3 ASSESSMENT OF THE IMPACTS

Assessment of the economic, environmental, employment and industrial impacts and identification of the costs and benefits of the full implementation of the policies outlined in this plan will be important when defining the methods for implementing these policies. However, it is clear that accurate quantitative assessments may only be carried out once these implementation methods have been precisely defined. The action to update and expand incentives and other measures will be defined when rules are prepared for transposing the directive, a process which will also use cost-performance and fairness criteria.

A system will then be introduced to monitor the impact, allowing dynamic analysis of the costs and benefits arising from the support measures, in order to identify any areas where corrective action is needed.

5.4 PREPARATION OF THE NATIONAL RENEWABLE ENERGY ACTION PLAN AND THE FOLLOW-UP OF ITS IMPLEMENTATION

(a) How were regional and/or local authorities and/or cities involved in the preparation of this Action Plan? Were other stakeholders involved?

This Action Plan was prepared by the Ministry for Economic Development with the agreement of the Ministry for the Environment, Land and Sea and the Ministry of Agriculture, Food and Forestry, with support from the Energy Services Regulator (GSE S.p.A.). The scenarios for 2020 energy consumption were prepared with the support of ERSE S.p.A. (ENEA Research on the Electricity System).
In June 2010 a consultation process took place on an earlier version of the National Renewable Energy Action Plan and a more accessible summary of it. The following stakeholders were involved in this consultation: regions and local bodies, the electricity and gas authority (AEEG), energy research firms, technical standards bodies, trade associations, environmental associations, non-profit technical and scientific associations and trade unions. In addition, the above-mentioned documents (the Action Plan and its summary) were published on the Ministry for Economic Development website, thus opening up the consultation process to other parties.
The Ministry for Economic Development received approximately 50 official responses containing approximately 500 comments.
Once all the remarks received had been examined, the Action Plan was revised as considered necessary. However, these revisions did not substantially change the structure of the original document, on which there was general agreement.
In order to ensure that the national target set by Directive 2009/28/EC is achieved, Italy has decided to divide the national commitment to developing renewable energy between the regions.

(b) Are there plans to develop regional/local renewable energy strategies? If so, could you please explain? In case relevant competences are delegated to regional/local levels, what mechanism will ensure national target compliance?

Italian Law No L. 10/1991 *"Regulations for the implementation of the National Energy Plan in matters of rational energy use, energy saving and development of renewable energy sources"* introduced the Regional Energy Plan instrument to the planning context. Using this plan, regions are planning their interventions in the energy field, governing the actions of local authorities and harmonising the decisions taken at the various levels of spatial planning. The Energy Plan contains the starting points, short-, medium- and long-term strategic objectives, practical instructions, available instruments, legislative and regulatory reference frameworks, funding opportunities, constraints, obligations, and rights of economic operators in the sector, large-scale consumers and normal users. In brief, the Energy Plan represents the main reference point for public and private entities intending to take initiatives in the energy field within the territory covered by the plan.
The regional energy plans, although based on free entrepreneurial initiative, also aim to direct action in the sector. Moreover, as well as having environmental implications, energy choices must also be combined with spatial management decisions. It is not by chance that

many of the plans are entitled “Regional Energy and Environment Plan”.
The following table gives the dates of the most recent approved updates of the plans.
The autonomous province of Bolzano adopted a Provincial Energy Plan back in 1997.

2001	2003	2004	2005	2006	2007	2008	2009
Lazio	Lombardy Valle d’Aosta Trento Liguria Sardinia	Piedmont Umbria	Marche Calabria Veneto	Molise	Friuli Emilia-Romagna Apulia	Tuscany	Sicily Basilicata Abruzzo Campania

With regard to mechanisms aimed at ensuring national targets are met, we recall what has been stated in various parts of this document: Law No 13/09 provides that the Community targets for renewable energy use will be divided, using shared methods, between the Italian regions. This division will take place as part of the development of means to achieve the national targets, taking into account the general approach of the Action Plan, which is largely shared by the regions and local bodies, and the criteria for transposing Directive 2009/28/EC, established by the 2009 Community Law.

(c) Please explain the public consultation carried out for the preparation of this Action Plan.

Please see point (a).

(d) Please indicate your national contact point/the national authority or body responsible for the follow-up of the Renewable Energy Action Plan?

The Ministry for Economic Development, in consultation with the Ministry for the Environment and Land and, with regard to biomass, biofuels and bioliquids, with the Ministry for Agriculture, Food and Forestry, with operational support from the Energy Services Regulator (GSE).

(e) Do you have a monitoring system, including indicators for individual measures and instruments, to follow-up the implementation of the Renewable Energy Action Plan? If so, could you please give more details on it?

Statistical, technical, economic and environmental elements and effects on industry connected to the development of the Action Plan will be monitored by the Ministry for Economic Development, in consultation with the Ministry for the Environment and Land and, with regard to biomass, biofuels and bioliquids, with the Ministry for Agriculture, Food and Forestry, with operational support from the Energy Services Regulator (GSE). The effectiveness and efficiency of mechanisms and measures will also be monitored.

In particular, the GSE will implement and manage a specific Italian Renewable Energy Monitoring System (SIMERI), for statistical monitoring of renewable energy in the three sectors covered by the Action Plan (electricity, heat, transport), aimed at verifying the extent to which targets have been reached. This system will be able to track the development of the various sectors over time, in accordance with the rules established by Council Regulation (EC) No 1099/2008, using Eurostat. This system will also allow appropriate gradual checks on the fulfilment of targets to be met at regional level.

ANNEXES

Annex 4.2.1.A

List of main national and regional legislation relating to energy

NATIONAL LEGISLATION

- **Law No 308 of 29.05.1982**,
  Rules on limiting energy consumption, the development of renewable energy sources and the operation of electrical power stations fed by fuels other than hydrocarbons.

- **Law No 349 of 08.07.1986**,
  Establishment of the Ministry for the Environment and rules on environmental damage.

- **Law No 455 of 29.10.1987**,
  Conversion into law, with amendments, of Decree-Law No 364 of 31 August 1987, defining urgent measures for refinancing energy saving initiatives established under Law No 308 of 29 May 1982, and the general plan for methanisation in southern Italy in accordance with Law No 784 of 28 November 1980.

- **Law No 241 of 07.08.1990,**
  New rules relating to administrative procedures and right to access to administrative documents.

- **Law No 9 of 09.01.1991**,
  Rules for the implementation of the new National Energy Plan: institutional aspects, hydroelectric power stations and power lines, hydrocarbons and geothermal energy, autoproduction and tax provisions.

- **Law No 10 of 09.01.1991**,
  Rules for the implementation of the new National Energy Plan in relation to rational energy use, energy saving and the development of renewable energy sources.

- **Ministerial Decree of 15.02.1991**,
  Directives to the regions and autonomous provinces of Trento and Bolzano to standardise the assessment criteria for applications, procedures and means for granting and providing the contributions established by Law No 10 of 9 January 1991.

- **Legislative Decree No 112 of 31.03.1998**,
  Transfer of duties and administrative tasks from the State to the regions and local bodies, in order to implement Chapter 1 of Law No 59 of 15 March 1997.

- **Legislative Decree No 79 of 16.03.1999**,
  Implementation of Directive 96/92/EC defining common rules for the internal electricity market.

- **Ministerial Decree of 22.12.2000**,
  Loans granted to municipalities for the construction of solar photovoltaic buildings of high architectural value.

- **Constitutional Law No 3 of 18.10.2001**,
  Amendments to Title 5 of the Constitution.

- **Presidential Decree No 380 of 06.06.2001,**
  Single text of legislative and regulatory provisions relating to building.

- **Legislative Decree No 387 of 29.12.2003**,
  Implementation of Directive 2001/77/EC relating to the promotion of electricity produced from renewable energy sources in the internal electricity market.

- **Legislative Decree No 42 of 22.01.2004,**
  Cultural Assets and Countryside Code, under Article 10 of Law No 137 of 6 July 2002.

- **Law No 239 of 23.08.2004**,
  Reorganisation of the energy sector, and delegation to the Government of the structure of current provisions relating to energy.

- **Legislative Decree No 59 of 18.02.2005**,
  Full implementation of Directive 96/61/EC relating to the integrated prevention and reduction of pollution.

- **Ministerial Decree of 28.07.2005,**
  Criteria for incentivising the production of electricity through photovoltaic conversion of solar energy.

- **Ministerial Decree of 24.10.2005**,
  Directives to regulate the issue of green certificates for energy production in accordance with Article 1(71) of Law No 239 of 23 August 2004.

- **Ministerial Decree of 06.02.2006.**
  Criteria for incentivising the production of electricity through photovoltaic conversion of solar energy.

- **Legislative Decree No 152 of 03.04.2006**,
  Environmental standards.

- **Ministerial Decree of 07.04.2006**,
  Criteria and general technical standards for regional rules for the agronomic use of livestock manure in accordance with Article 38 of Legislative Decree No 152 of 11 May 1999 - Article 27, Integrated management strategies for animal manure (energy production from manure).

- **Legislative Decree No 163 of 12.04.2006**,
  Public Contracts Code relating to works, services and supplies, implementing Directives 2004/17/EC and 2004/18/EC.

- **Ministerial Decree of 07.02.2007**,
  Format and means for presenting the application for integrated environmental authorisation.

- **Legislative Decree No 20 of 08.02.2007,**
  Implementation of Directive 2004/08/EC on the promotion of cogeneration based on a useful heat demand in the internal energy market.

- **Ministerial Decree of 19.02.2007,**
  Criteria and means for incentivising the production of electricity through photovoltaic conversion of solar energy, implementing Article 7 of Legislative Decree No 387 of 29 December 2003.

- **Law No 125 of 03.08.2007**,
  Conversion into law, with amendments, of Decree-Law No 73 of 18 June 2007, defining urgent measures for implementing Community provisions on liberalisation of energy markets.

- **Ministerial Decree of 22.11.2007,**
  Conditions for access to loans from the rotating fund to support research firms and investments.

- **Ministerial Decree of 21.12.2007**,
  Revision and update of the Ministerial Decrees of 20 July 2004, relating to increasing the energy end-use efficiency, energy saving and the development of renewable sources.

- **Law No 244 of 24.12.2007**,
  Provisions for forming the annual and multiannual State budget (2008 Finance Act).

- **Legislative Decree No 4 of 16.01.2008,**
  Additional corrective and supplementary provisions for Legislative Decree No 152 of 03.04.2006, defining rules relating to the environment.

- **Legislative Decree No 115 of 30.05.2008,**
  Implementation of Directive 2006/32/EC on energy end-use efficiency and energy services and repealing Directive 93/76/EEC.

- **Ministerial Decree of 18.12.2008,**
  Incentivisation of electricity production from renewable sources.

- **Law No 2 of 28.01.2009,**
  Conversion into law, with amendments, of Decree-Law No 185 of 29 November 2008, defining urgent measures to support families, work, employment and companies and to restructure the national strategic framework in response to the financial crisis.

- **Ministerial Decree of 02.03.2009,**
  Provisions relating to incentivisation of electricity production through photovoltaic conversion of solar energy.

- **Ministerial Decree of 19.03.2009,**
  Approval of the three-year plan for research relating to the national electricity system 2009-2011, and related annual operational plan for 2009.

- **Presidential Decree No 59 of 02.04.2009,**
  Regulation to implement Legislative Decree No 192/2005, relating to the implementation of Directive 2002/91/EC on the energy performance of buildings.

- **Law No 99 of 23.07.2009,**
  Provisions for the development and internationalisation of firms, and in relation to energy.

- **Ministerial Decree of 31.07.2009,**
  Criteria and means for providing end customers with information on the composition of the energy mix used to produce the electricity supplied.

- **Law No 102 of 23.07.2009,**
  Conversion into law, with amendments, of Decree-Law No 78 of 1 July 2009, defining anti-crisis measures, and extension of the timeframes and Italian participation in international actions.

- **Ministerial Decree of 31.07.2009,**
  Criteria and means for providing end customers with information on the composition of the energy mix used to produce the electricity supplied.

- **Ministerial Decree No 128 of 05.08.2009,**
  Tax benefits for bioethanol of agricultural origin.

- **Ministerial Decree of 16.11.2009,**
  Incentivisation of electricity produced by plants fed by solid biomass which are subject to partial refurbishment.

- **Ministerial Decree of 02.12.2009,**
  Mechanism for the foreseen resolution of CIP 6/92 agreements [interministerial pricing committee].

- **Law No 191 of 23.12.2009,**
  2010 Finance Act.

- **Decree-Law No 194 of 30.12.2009,**
  Extension of the planned deadlines for legislative provisions – the so-called "thousand extensions".

- **Legislative Decree No 22 of 11.02.2010,**
  Reorganisation of legislation relating to search for and mining of geothermal resources, under Article 27(28) of Law No 99 of 23 July 2009.

- **Ministerial Decree of 25.01.2010,**
  Amendment to the minimum quota of biofuels and other renewable fuels to be made available for consumption.

- **Ministerial Decree of 26.01.2010,**
  Update of the Decree of 11 March 2008 relating to energy retrofits of buildings.

- **Law No 25 of 26.02.2010,**
  Conversion into law, with amendments, of Decree-Law No 194 of 30 December 2009, defining extensions of the planned deadlines for legislative provisions.

- **Ministerial Decree of 02.03.2010,**
  Implementation of law No 296 of 27 December 2006, on the traceability of biomass for electricity production.

- **Law No 41 of 22.03.2010,**
  Conversion into law, with amendments, of Decree-Law No 3 of 25 January 2010, defining urgent measures to guarantee the security of the electricity supply to the large Italian islands.

- **Ministerial Decree of 26.03.2010,**
  "Incentives" Decree-Law (40/2010) – Goods eligible for the contribution and means of providing it.

- **Legislative Decree of No 56 of 29.03.2010,**
  End use of energy and energy services – Amendments to Legislative Decree No 115/2008.

- **Legislative Decree No 48 of 29.03.2010,**
  Implementation of Directive 2008/118/EC – Arrangements to excise duty.

- **Ministerial Decree of 12.05.2010,**
  Extension to individual agro-energy firms of the option to agree framework contracts.

- **Law No 73 of 22.05.2010,**
  Conversion into law of Decree-Law 40/2010 defining incentives to support action to improve energy efficiency, eco-compatibility objectives and workplace.

- **Law No 96 of 04.05.2010,**
  Provisions to fulfil the obligations arising from Italy's membership of the European Communities – Community Law 2009.

- **Decree-Law No 105 of 08.07.2010,**
  Urgent measures relating to energy.

REGIONAL LEGISLATION

ABRUZZO

- **Regional Law No 72 of 12.08.1998,**
  Organisation of administrative duties at local level.

- **Regional Law No 5 of 28.03.2006,**
  Adaptation of Regional Law No 2 of 13 February 2003, as amended by Regional Law No 49 of 15 December 2004: Provisions relating to landscape and environmental assets.

- **Regional Law No 27 of 09.08.2006,**
  Environmental provision, transposition of Article 12 of Legislative Decree No 387/2003.

- **Regional Council Decree No 47/7 of 24.10.2006,**
  Three-year regional plan for environmental protection and rehabilitation, 2006-2008.

- **Regional Executive Decision No 351 of 12.04.2007,**
  Legislative Decree No 387/2003 relating to "Implementation of Directive 2001/77/EC relating to the promotion of electricity produced from renewable energy sources in the internal electricity market".

- **Regional Executive Decision No 752 of 30.07.2007,**
  Regional Executive Decision No 351 of 12.04.2007: Legislative Decree No 387/2003 relating to "Implementation of Directive 2001/77/EC relating to the promotion of electricity produced from renewable energy sources in the intemal electricity market"- amendment and additions.

- **Regional Executive Decision No 754 of 30.07.2007,**
  Guidelines for the construction and assessment on wind farms in Abruzzo, under Article 12(10) of Legislative Decree No 387/2003, which also provide instructions for the environmental impact assessment for these installations.

- **Decree by the President of the Regional Executive No 3/Reg of 13.08.2007,**
  Rules for procedures for issuing permits to divert the public water system, reuse waste water and search for groundwater.

- **Regional Law No 45 of 19.12.2007,**
  Rules for integrated waste management.

- **Regional Executive Decision No 209 of 17.03.2008,**
  Regional Executive Decision No 119/2002 as amended: "Criteria and guidelines for environmental procedures". Further amendments as a result of the entry into force of Legislative Decree No 4 of 16 January 2008.

- **Regional Executive Decision No 221 of 21.03.2008,**
  Adoption of the Regional Energy Plan.

- **Regional Executive Decision No 529 of 16.06.2008,**
  Abruzzo ERDF Regional Operational Plan 2007-2013 – Approval of the managing authority's procedure manual.

- **Regional Executive Decision No 688 of 24.07.2008,**
  Legislative Decree No 152/2006 as amended. - Regional Law No 45 of 19 December 2007.

Programme agreement for optimising agricultural waste management, entitled "Clean Farm". Approval.

- **Regional Executive Decision No 759 of 12.08.2008,**
  Regulation (EC) No 320/2006. National programme for restructuring the beet and sugar sector. Approval of the regional action plan.
  - Chapter 1.2, The agro-energy supply chain
  - Chapter 4, Consistency, complementarity and demarcation with operations under Law No 81/2006.

- **Regional Executive Decision No 760 of 12.08.2008,**
  Regional Executive Decision No 351 of 12 April 2007: Legislative Decree 387/2003 relating to: "Implementation of Directive 2001/77/EC relating to the promotion of electricity produced from renewable energy sources in the internal electricity market" as amended – Completion.

BASILICATA

- **Regional Law No 47 of 14.12.1998,**
  Framework for the environmental impact assessment and rules for environment protection.

- **Regional Law No 7 of 08.03.1999,**
  Transfer of duties and administrative tasks to local and functional autonomous bodies, implementing Legislative Decree No 112/1998.
  - Title 2, Chapter 5, Energy, Article 23 "Duties to be fulfilled by the region";
  - ibid, Article 24 "Duties to be fulfilled by the provinces";
  - ibid, Article 25 "Duties to be fulfilled by the municipalities";

- **Regional Law No 23 of 11.08.1999,**
  Land protection, management and use.

- **Regional Law No 19 of 17.04.2001,**
  Introduction and rules for the analysis of the impact of regulation and technical analysis of legislation.

- **Regional Executive Decision No 2628 of 30.12.2003,**
  Regulation of the procedures for issuing permits to divert and draw from the Basilicata public water system.

- **Regional Executive Decision No 2920 of 13.12.2004,**
  Guidance document for the correct insertion of wind farms into regional territory – Amendments to Regional Executive Decision No 1138 of 24 June 2002.

- **Regional Law No 13 of 31.07.2006,**
  Establishment of the Lucana energy company.

- **Regional Law No 9 of 26.04.2007,**
  Provisions relating to energy.

- **Regional Law No 28 of 28.12.2007,**
  Provisions for forming the annual and multiannual budget for Basilicata – Finance Act 2008.
  - Article 10, Improving the energy performance of buildings.
  - Article 11, Building volumes to encourage energy saving and the use of renewable sources.

- **Regional Law No 31 of 24.12.2008,**

Provisions for forming the annual and multiannual budget for Basilicata – Finance Act 2009.

CALABRIA

- **Regional Law No 17 of 24.11.2000,**
  Rules on granting permits for electrical power lines and electricity plants with a voltage no greater then 150,000 volts. Delegation to provincial administrative bodies.

- **Regional Law No 19 of 16.04.2002,**
  Rules for land protection, management and use – Calabria planning law.

- **Regional Law No 34 of 12.08.2002,**
  Reorganisation of regional and local administrative duties.
  - Title 2, Economic development and productive activity, Chapter 5 – Energy research, production, transport and distribution
  - Articles 37, 38 Duties of the region, Duties of the province.

- **Regional Executive Decision No 460 of 30.06.2003,**
  Measure 1.11 – Clean energy and energy networks – Action 1.11a – Energy production from renewable sources and energy saving – Approval: "Sun in one hundred schools" incentive programme and related call for bids (expiry 2006).

- **Regional Executive Decision No 564 of 04.08.2003,**
  Legislative Decree No 112 of 31 March 1998, Article 31, Presidential Decree of 12 April 1996 as amended – Approval of procedures and guidelines for the installation of wind farms in Calabria.

- **Regional Executive Decision No 832 of 15.11.2004,**
  Acceptance by the Presidency of the Regional Executive – Department for strategic targets for the energy sector – of the responsibility for the procedure for issuing authorisation for the construction and operation of electricity production plants using renewable sources, implementing Legislative Decree No 387 of 29 December 2003.

- **Regional Executive Decision No 5 of 11.01.2005,**
  Approval of the guidelines in accordance with Article 17(5) of Regional Law No 19/2002.

- **Regional Council Decree No 315 of 14.02.2005,**
  Regional Energy and Environment Plan.

- **Regional Executive Decision No 248 of 08.03.2005,**
  Measure 1.11 – Clean energy and energy networks – Action 1.11a – Energy production from renewable sources and energy saving – Approval: "Planning guidelines for rationalising energy use and efficiency within hospitals and healthcare facilities run by the Calabria region", part of the "PERSEO" programme, and the related call for bids.

- **Regional Executive Decision No 250 of 08.03.2005,**
  Calabria Regional Operational Plan 2000-2006. Measure 1.11 – Clean energy and energy networks – Action 1.11a – Energy production from renewable sources and energy saving. "Implementation framework under Article 31c of Regional Law No 7/2001".

- **Regional Executive Decision No 55 of 30.01.2006,**
  Wind power in Calabria: guidelines for the insertion of wind farms into regional territory.

- **Regional Council Decree No 106 of 10.11.2006,**
  Regional Law No 19 of 16 April 2002, Article 17(5) – Guidelines for regional planning.
  - Chapter 5, Municipal planning, Article 5.1: The municipal planning system.

- **Regional Executive Decision No 272 of 05.04.2008,**
  Calabria ERDF Regional Operational Plan 2007-2013. Approval of the communication plan.
  - Article 2. Background analysis.

- **Regional Executive Decision No 534 of 04.08.2008,**
  Approval of the Strategic Objectives Plan (POS) 2008-2010. Article 19 of Regional Law No 1/2006.

- **Regulation No 3 of 04.08.2008,**
  Regional regulation of the environmental impact assessment and strategic environmental assessment procedures and procedures for issuing the integrated environmental authorisations.

- **Regional Law No 42 of 29.12.2008,**
  Measures relating to electricity from renewable energy sources.

- **Regional Executive Decision No 152 of 31.03.2009,**
  Approval of guidelines for organising and running the integrated management of municipal waste.

- **Regional Executive Decision No 564 of 24.08.2009,**
  Joint Regional Programme 2007-2013. Approval of the Calabria Regional Implementation Programme (PAR) co-funded by the Underused Areas Fund (FAS) 2007-2013 – Amendments and additions to Regional Executive Decision No 157 of 31 March 2009.

- **Regional Executive Decision No 396 of 30.06.2009,**
  Approval of criteria and guidelines for the integrated management of municipal waste under Article 13(1)b of the regional waste plan.

CAMPANIA

- **Regional Executive Decision No 6120 of 15.11.2001,**
  Ministerial Decree of 16 March 2001, Environment: "Photovoltaic Roofs" – Regional Sub-programme – Identification and definition of resources. Approval and issue of call for bids.

- **Regional Executive Decision No 6148 of 15.11.2001,**
  Legislative Decree No 112 of 31 March 1998, Article 31, Presidential Decree of 12 April 1996 as amended – Approval of procedures and guidelines for the installation of wind farms in Campania.

- **Regional Executive Decision No 4818 of 25.10.2002,**
  Approval of guidelines for regional policy and sustainable development in the energy sector – Formulating the agreement in accordance with Article 1(2) of Law No 55 of 9 April 2002.

- **Regional Law No 12 of 25.07.2002,**
  Rules for limiting the light pollution and energy consumption of public and private external lighting to protect the environment, protect the activity of professional and non-professional astronomers and allow the proper appreciation of historical centres.

- **Regional Executive Decision No 3533 of 05.12.2003,**
  Guidelines for regional policy and sustainable development in the energy sector.

- **Regional Executive Decision No 3838 of 23.12.2003,**
  Programme to promote energy saving, aimed at school pupils in the region.

- **Regional Law No 16 of 22.12.2004,**
  Rules on land management.

- **Regional Executive Decision No 109 of 02.02.2005,**
  Regional Energy and Environment Plan (PEAR).

- **Regional Executive Decision No 168 of 15.02.2005,**
  Campania Regional Operational Plan 2000-2006 – Measure 1.12 Actions (a) and (c): Assistance for micro, small and medium enterprises in the production of electricity from renewable sources and energy saving measures. Approval of the regional framework.

- **Regional Executive Decision No 283 of 04.03.2006,**
  Approval of procedures for operations encouraging the use of renewable energy sources and for energy saving in agriculture.

- **Executive Decree No 238 of 16.06.2006,**
  Regional Operational Plan 2000-2006. Measure 1.12 Actions (a) and (c): Incentivisation of energy saving, production of energy from renewable sources and distributed cogeneration. Single-sector operations and operations within integrated projects. Issue of call for bids.

- **Regional Executive Decision No 1955 of 30.11.2006,**
  Legislative Decree 387/2003 – Article 12(3): Guidelines for carrying out the single procedure for the installation of electricity production plants using renewable sources. Approval.

- **Regional Law No 4 of 28.03.2007,**
  Rules for the management, conversion and reuse of waste and the remediation of contaminated land.

- **Regional Law No 1 of 30.01.2008,**
  Provisions for forming the annual and multiannual budget for Campania – Finance Act 2008 – Article 20, Action to support qualified forms of energy.

- **Regional Executive Decision No 326 of 06.03.2009,**
  Campania Regional Operational Plan ERDF 2007-2013. Approval of the funding application procedure for the large projects foreseen by the Campania ERDF Regional Operational Plan 2007-2013 and procedure for identifying new large projects.

- **Regional Executive Decision No 500 of 20.03.2009,**
  Legislative Decree No 387/2003 – Article 12(3) – Regional Law No 1/2008: New guidelines for carrying out the procedure for issuing the single authorisation for the construction and operation of electricity production plants using renewable sources. Amendments and additions to Regional Executive Decision No 1955/2006.

EMILIA ROMAGNA

- **Regional Law No 10 of 22.02.1993,**
  Rules for works relating to electricity lines and power plants up to 150 kV. Delegation of administrative duties.

- **Regional Law No 3 of 21.04.1999,**
  Reform of the regional and local system.
  - Title 5, Chapter 11, Energy.

- **Regional Executive Decision No 918 of 08.06.1999,**
  Regional action plan to acquire and initial collection of projects relating to rational energy use, energy saving, use of renewable sources and limitation of greenhouse gas

emissions.

- **Regional Executive Decision No 960 of 16.06.1999,**
  Approval of Directive for authorising emissions into the atmosphere, implementing Regional Law No 3/1999 "Reform of the regional and local system".

- **Regional Law No 9 of 18.05.1999,**
  Rules for the environmental impact assessment procedure.

- **Regional Law No 35 of 16.11.2000,**
  Amendments to Regional Law No 9 of 18 May 1999 on "Rules for the environmental impact assessment procedure".

- **Regulation No 41 of 20.11.2001,**
  Regulation governing the public water permit procedure.

- **Regional Council Decree No 315 of 14.02.2005,**
  Regional Energy Plan.

- **Regional Law No 31 of 25.11.2002,**
  General framework for building (also valid for RES plants).

- **Regional Executive Decision No 2825 of 30.12.2003,**
  Regional programme for the construction of photovoltaic systems. Approval of the call for contribution applications (expiry 30.04.2004).

- **Regional Law No 26 of 23.12.2004,**
  Framework for regional energy planning and other provisions relating to energy.

- **Regional Law No 6 of 17.02.2005,**
  Framework for establishing and managing the regional system of protected natural areas and sites in the Natura 2000 network.

- **Regional Executive Decision No 686 of 14.05.2007,**
  Regional health service planning and funding guidelines for 2007
  - Article 6 "Energy saving and environmentally-friendly policies; tariff policies and energy sources".

- **Regional Executive Decision No 1709 of 12 November 2007,**
  Regional Law No 43/1997 as amended by Regional Law No 17/2006. New implementation criteria for adapting to Community guidance on State aid 2007-2013 and adoption of the region programme.
  - Article 4 "Regional contributions to interest payments on medium/longterm loans granted to associated enterprises".

- **Regional Executive Decision No 141 of 14.11.2007,**
  Approval of the Regional Energy Plan.

- **Regional Executive Decision No 167 of 11.02.2008,**
  Regulation (EC) No 1698/2005 and decision 4161- Regional strategic plan 2007-2013. Approval of the operational programme. Axis 1 covering operational programmes relating to measures 111, 112, 114, 121 and 123, as well as the approval of the public notice of measure 123
  - Annex 4, Measure 121 "Modernisation of farms".

- **Regional Executive Decision No 156 of 04.03.2008,**
  Approval of the guidance and coordination document on requirements for energy

performance and procedures for energy certification of buildings (energy efficient and eco-compatible development in buildings)
- Article. 1 "Aims and scope of action"
- Article 7 "Accredited certification bodies"
- Article 10 "Support measures and incentivisation".

- **Regional Executive Decision No 580 of 21.04.2008,**
  Regulation (EC) No 320/2006. National programme for restructuring the beet and sugar sector. Approval of the regional action plan.
  - Article 2 "Targets and means of action" (investment in and support for bioenergy).

- **Decision No 2845 of 17.03.2008,**
  Approval of the draft farm development plan and further technical provisions for the implementation of the operational programmes of Measures 112 and 121 in accordance with Regional Executive Decision No 167/2008
  - Article 2 "Market and commercial strategy" (loans to farms for the renewable energy use).

- **Regional Executive Decision No 421 of 31.03.2008,**
  Amendment and additions to the implementation criteria for the adaptation to the operational programme of Measure 121 of Regional Law No 43/1997, as amended by Regional Law No 17/2006.
  - Article 4.1.1 "Regional contributions to interest payments on medium/long-term loans granted to associated enterprises".

- **Regional Executive Decision No 1255 of 28.07.2008,**
  Aspects of environmental legislation relating to biogas plants using small-scale or micro cogeneration: initial guidance for local bodies in order to harmonise procedures.

- **Decree by the President of the Regional Executive No 210 of 01.10.2008,**
  Approval of the programme agreement on air quality for the three-year period 2006-2009 – 2008-2009 update, between Emilia-Romagna, the provinces, principal municipalities of areas and municipalities with more than 50,000 inhabitants, dated 12 September 2008.
  - Article 2.4a, Energy.

- **Regional Executive Decision No 1580 of 06.10.2008,**
  Guidelines for regional action on sustainable transport.
  - 1. Strategic points and innovative criteria.

- **Regional Executive Decision No 1793 of 03.11.2008,**
  Directives relating to diversions of the public water network for hydroelectric use.

- **Regional Executive Decision No 204 of 03.12.2008,**
  Emilia-Romagna environmental action plan for a sustainable future, 2008-2010. (Regional Executive Proposal No 1328 of 28 July 2008).

- **Regional Executive Decision No 417 of 30.03.2009,**
  Regional Energy Plan: Approval of means and criteria for making contributions to local bodies for the creation of energy certification programmes, implementing Measures 1.1, 1.2, 1.3, 2.1 and 2.2 of the three-year action plan.

- **Regional Executive Decision No 1124 of 27.07.2009,**
  Active employment policies to get through the crisis, safeguarding productive and professional capacities, employment, competitiveness and social security, implementing the agreement between the government, regions and autonomous provinces dated 12 February 2009 and the pact made between Emilia-Romagna and the social parties on 8 May 2009 – Approval of an action plan and initial implementation measures.

FRIULI VENEZIA GIULIA

- **Regional Law No 43 of 07.09.1990,**
  Organisation of the environmental impact assessment in Friuli Venezia Giulia.

- **Regional Law No 13 of 02.04.1991,**
  Amendments and additions to the Regional Laws No 43 of 7 September 1990, relating to the environmental impact assessment, No 30 of 7 September 1987, relating to waste disposal, and No 35 of 18 August 1986, relating to mining activity.

- **Regional Law No 30 of 19.11.2002,**
  Provisions relating to energy.

- **Regional Law No 23 of 18.08.2005,**
  Provisions relating to sustainable building.
  - Art. 2, Definition of ecological, bio/eco-compatible, ethical, bioecological and natural building projects.
  - Article 6, Regional protocol for green building.

- **Regional Law No 24 of 27.11.2006,**
  Transfer of duties and administrative tasks to local bodies in matters relating to agriculture, forests, the environment, energy, spatial and town planning, transport infrastructure, local public transport, culture and sport.

- **Decree by the President of the Region No 0137/Pres. of 21.05.2007,**
  Regional Law No 30/2002, Article 6, Approval of the Regional Energy Plan (PER).

- **Decree by the President of the Region No 0155/Pres. of. 28.05.2007,**
  Regulation defining amendments and additions to Decree by the President of the Region No 0345/Pres. of 7 November 2006, relating to: "Regulation on incentives granted by chambers of commerce, industry, craft and agriculture to industrial, craft, commercial, tourist and service enterprises, for initiatives aimed at limiting the energy consumption of production processed and using renewable energy sources". Approval.

- **Regional Law No 15 of 18.06.2007,**
  Urgent measures for limiting the light pollution and saving energy in external lighting and protecting the environment and the work of astronomic observatories.

- **Regional Executive Decision No 1021 of 04.05.2007,**
  Regional Energy Plan.

- **Decree by the President of the Region No 056/Pres. of 12.02.2008,**
  Regulation implementing "Measure 311 – Diversification of non-agricultural activity / Action 3 – Alternative-source energy systems" of the Friuli-Venezia Giulia Rural Development Plan 2007-2013.

- **Regional Law No 16 of 05.12.2008,**
  Urgent rules relating to the environment, land, building, town planning, hunting, reconstruction, earthquake adaptations, transport, maritime property and tourism.
  - Chapter 3 – Rules for building and town planning.

- **Decree by the President of the Region No 0274/Pres. of 01.10.2009,**
  Regulation defining environmental and energy quality certification procedures for the environmental and energy sustainability of buildings, in accordance with Article 6a of Regional Law No 23 of 18 August 2005, "Provisions relating to sustainable building".

LAZIO

- **Regional Law No 16 of 19.02.1985,**
  Rules for establishing and managing the regional energy programme.

- **Regional Law No 42 of 10.05.1990,**
  Rules relating to electricity lines and power plants up to 150 kV.

- **Regional Law No 29 of 06.10.1997,**
  Rules relating to regional protected natural areas.
  - Article 32, Incentivisation.

- **Regional Law No 14 of 06.09.1999,**
  Organisation of duties at regional and local level for administrative decentralisation.

- **Regional Council Decree No 45 of 14.02.2001,**
  Approval of the Regional Energy Plan.

- **Regional Law No 30 of 03.09.2002,**
  Order of regional bodies acting in relation for public residential buildings.
  - Article 3, Activity of businesses.

- **Regional Council Decree No 143 of 31.07.2003,**
  Regional Law No 1 of 5 January 2001, Article 7. Integrated programme of actions to develop the Lazio coast.
  - Point 1, Content of the action
  - Point 2, Technical description of the action
  - Point 4, Results of the action.

- **Regional Executive Decision No 604 of 04.07.2003,**
  Adoption of assessment criteria for regional representatives participating the application process for the construction of thermoelectric power stations, presented under Law No 55/2002.

- **Regional Executive Decision No 686 of 20.10.2006,**
  Implementation programme for action relating to energy from renewable sources, energy efficiency and the use of hydrogen, under Article 36 of Regional Law No 4 of 28.04.2006.

- **Regional Executive Decision No 780 of 31.10.2006,**
  Legislative Decree No 173 of 30 April 1998, Article 1(3, 4); Ministerial Decree No 401 of 11 September 1999. Approval of the Regional Operational Plan and public notice relating to assistance for the production and use of renewable energy sources in the agricultural sector.

- **Regional Law No 18 of 28.11.2006,**
  Delegation to the provinces of administrative duties and tasks relating to energy.

- **Regional Executive Decision No 883 of 09.11.2007,**
  Taking into account the first revision of the Technical Report, containing the results of the preliminary study for the Lazio Regional Energy Plan, prepared by the National Agency for New Technologies, Energy and the Environment (ENEA). Provisions for organising the "Regional Energy Conference". Approval of the Regional Council's balance sheet for the 2004 financial year".
  - Chapter 5 Actions to be implemented in the medium term for the use of renewable energy sources.

- **Regional Law No 26 of 28.12.2007,** Regional Finance Act for the 2008 financial year

- Chapter 3 Article 19 "Initiatives to implement the Kyoto protocol. Amendment to Regional Law No 15 of 08.11.2004 defining measures to encourage the use of solar and thermal energy and the reduce the amount of water wasted in offices";
- Chapter 3 Article 22 "Amendments to Regional Law No 24 of 06.07.1998, defining measures for countryside planning and protection of assets and areas subject to landscape protection" as amended.

- **Regional Law No 6 of 27.05.2008,**
  Regional provisions relating to sustainable architecture and green building.
  - Article 2, Sustainable building, sustainable architecture and green building projects.
  - Article 5, Renewable energy sources.
  - Article 7, Regional protocol on green building.

- **Regional Executive Decision No 611 of 05.08.2008,**
  Joint regional development policy 2007-2013 - Approval of guidelines for identifying strategic sectors in which to begin selecting projects, the implementation methods for Axis 1 Research, innovation and strengthening the production base, and activity under Axis 2 Environment and risk prevention of the Lazio ERDF Regional Operational Plan 2007-2013 and the procedures for accessing benefits.

- **Regional Executive Decision No 425 of 06.06.2008,**
  Regional Law No 4 of 21 January 1984. Directives and priority objectives for drawing up proposals for the preparation of the regional plan to carry public land reclamation projects.
  - Article 3.6. Reclamation district 6

- **Regional Executive Decision No 517 of 18.07.2008,**
  Approval of "Guidelines for carrying out the single procedure relating to the installation of renewable electricity production plants", in accordance with Legislative Decree No 387 of 29 December 2003, and Regional Law No 18 of 23 November.

- **Regional Executive Decision No 755 of 24.10.2008,**
  Approval of the technical document "General criteria for providing the financial guarantees for the issue of authorisations to run waste disposal and recovery operations under Article 208 of Legislative Decree No 152/2006, Article 14 of Legislative Decree No 36/2003 and Legislative Decree No 59/2005". Repeal of Regional Executive Decision No 4100/1999.

- **Regional Law No 31 of 24.12.2008,**
  Regional Finance Act for the 2009 financial year (Article 11 of Regional Law No 25 of 20 November 2001) – Article 31, Incentivisation of renewable energy sources. Results of the participation process.

- **Regional Executive Decision No 340 of 08.05.2008,**
  Relating to the Approval of Guidelines - delegation to the provinces, Law No 10/1991, Articles 8, 10 and 13

- **Regional Executive Decision No 239 of 17.04.2009,**
  Amendments and additions to Regional Executive Decision No 755/2008, relating to the Approval of general criteria for providing the financial guarantees for the issue of authorisations to run waste disposal and recovery operations under Legislative Decree No 152/2006 (Article 208), Legislative Decree No 36/2003 (Article 14) and Legislative Decree No 59/2005

- **Regional Executive Decision No 388 of 22.05.2009,**
  Regional Executive Decision No 686/2006. Implementation programme for action relating to energy from renewable sources, energy efficiency and the use of hydrogen.

- **Regional Executive Decision No 644 of 07.08.2009,**

Lazio ERDF Regional Operational Plan 2007-2013. Amendment and additions to Regional Executive Decision No 611 of 5 August 2008, full re-approval of annexes 3), 6) e 8) in the amended version.

- **Decision No 3928 of 11.09.2009,**
  Lazio ERDF Regional Operational Plan 2007-2013, Regional competitiveness and employment target. Implementation of Action 2.1 "Promotion of energy efficiency and renewable energy production". Approval of additions and amendments to the "Public notice of support for the construction of solar power systems within building structures and components". (This public notice was approved by Decision No 1627 of 23 April 2009).

LIGURIA

- **Regional Law No 36 of 04.09.1997,**
  Regional planning law.

- **Regional Law No 38 of 30.12.1998,**
  Rules for the environmental impact assessment.

- **Regional Law No 18 of 21.06.1999,**
  Adaptation of the rules and transfer of duties to local bodies in matters relating to the environment, land protection and energy.

- **Regional Executive Decision No 873 of 02.08.2002,**
  Approval of documents relating to "Energy efficiency guidelines for the Liguria hospital system and accompanying report".
  - Point 2, Reference framework.

- **Regional Executive Decision No 966 of 05.09.2002,**
  Criteria for preparing the verification/screening report in accordance with Article 10 of Regional Law No 38/1998 for wind power systems.

- **Regional Council Decree No 43 of 02.12.2003,**
  Liguria Regional Energy and Environment Plan.

- **Regional Executive Decision No 279 of 16.03.2007,**
  Actions for energy saving and use of renewable sources in accordance with Regional Executive Decision No 1566/2006. Approval of implementation measures for the public call for bids.

- **Regional Executive Decision No 1586 of 15.12.2004,**
  Guidelines for the procedures for using the public water network and definition of fees for the permit to divert the public water network.

- **Regional Law No 22 of 29.05.2007,**
  Rules relating to energy.

- **Regional Executive Decision No 183 of 26.02.2008,**
  Guidance and criteria for the mobilisation of energy from biomass, Technical standards for the EIA in accordance with Regional Law No 38/1998.

- **Regional Executive Decision No 551 of 23.05.2008,**
  Technical standards in accordance with Article 16 of Regional Law No 38/1998. Guidance on the mobilisation of renewable energy.

- **Regional Law No 16 of 06.06.2008,**

Framework for building activity.
- Article 29, Linear energy infrastructure relating to gas and oil pipelines and energy production plants fed by renewable sources
- Article 39, Reduction of and exemption from construction tax.

- **Regulation No 1 of 22.01.2009,**
  Regulation implementing Article 29 of Regional Law No 22 of 29 May 2007, defining: Rules for energy certification of buildings. Replacement of Regulation No 6 of 8 November 2007.

- **Environment and Land Department Circular No 1 of 06.03.2009,**
  Operational instructions for the procedures for construction renewable energy production plants.

LOMBARDY

- **Regional Law No 20 of 03.09.1999,**
  Rules relating to environmental impact.

- **Regional Law No 26 of 12.12.2003,**
  Framework for local services of general economic interests. Rules on management of waste, energy and use of soil and water resources.

- **Regional Law No 12 of 11.03.2005,**
  Law on land management.

- **Regional Law No 24 of 11.12.2006,**
  Rules for prevention and reduction of emissions into the atmosphere in order to protect health and the environment.

- **Regional Executive Decision No 8/4916 of 15.06.2007,**
  Energy Action Plan.

- **Regional Executive Decision No 8/5018 of 26.6.2007,**
  Decisions relating to the energy certification of buildings, implementing Legislative Decree No 192/2005 and Articles 9 and 25 of Regional Law No 24/2006.

- **Executive Decree No 8921 of 02.08.2007,**
  Approval of the call for bids for funding for 2007: "Establishing the land management plans and planning instruments" under Regional Law No 12 of 11 March 2005.

- **Regional Executive Decision No 8/5773 of 31.10.2007,**
  Energy certification of buildings – Amendments and additions to Regional Executive Decision No 8/5018 of 2007.

- **Regional Executive Decision No 8/5779 of 31.10.2007,**
  Taking into account the announcement by President Formigoni in agreement with Vice President Beccalossi and Councillors Colozzi, Corsaro, Prosperini and Rossoni relating to: "Community planning 2007-2013".

- **Executive Decree No 15833 of 13.12.2007,**
  Update to the calculation procedure for preparing energy certificates for buildings, provided for by Regional Executive Decision No 8/5018/2007 as amended.

- **Executive Decree No 16188 of 20.12.2007,**
  Approval of the document "Guidelines for incentives for the reuse of damaged urban areas

by promoting sustainable building"
- Article 2 Promotion of environmental sustainability of homes
- Article 3 Lines of action for the promotion of sustainable building in the rehabilitation of damaged areas.

- **Regional Executive Decision No 8/7025 of 09.04.2008,**
  Methods for submitting innovative projects in the energy/environment, agro-foodstuffs, health and advanced manufacturing sectors
  - Article 3, Energy and environment.

- **Regional Executive Decision No 8/7050 of 09.04.2008,**
  Decisions relating to contributions to municipalities for establishing land management plans (Regional Law No 12/2005).

- **Executive Decree No 5288 of 22.05.2008,**
  Approval of the call for bids for capital grants for carrying out environmental protection and rehabilitation operations in regional parks and nature reserves and on natural monuments under Regional Law No 86/1983.
  - Article 3, Eligible projects.

- **Regional Executive Decision No 8/7347 of 28.05.2008,**
  Agreement protocol with Piedmont for the establishment of a Strategic Agreement on Hydrogen: approval of the strategic document and replacement of an element of the steering committee.
  - Point 5, Short-term operational proposals for consolidating leadership in Europe.

- **Executive Decree No 9142 of 14.08.2008,**
  Regional Executive Decision No 8/7950 of 6 August 2008, - Approval of Implementation measures and opening the deadlines for submitting applications to join the regional action plan for investment in agro-energy production and for limiting nitrogen content in accordance with Regional Executive Decision No 8/5868 of 21 November 2007.

- **Regional Executive Decision No 8/8046 of 19.09.2008,**
  Decisions relating to actions to support agriculture in mountain areas following the European Commission opinion under Article 87 and 88 of the EU Treaty– Amendments and additions to Regional Executive Decision No 8/7953/2008.
  - Article 6.3.1) Type 2.1.1: Construction and adaptation of rural buildings.

- **Executive Decree No 11577 of 20.10.2008,**
  Programme agreement for economic development and competitiveness in Lombardy - Approval of the call for bids for "Innovative projects and operations relating to workplace safety, energy and the environment"
  - 3. Description of measures.

- **Regional Executive Decision No 8/8298 of 29.10.2008,**
  ERDF Regional Competitiveness and Employment Operational Plan 2007-2013 - Implementation guidelines - First step.

- **Regional Executive Decision No 8/8355 of 05.11.2008,**
  Measures for the operation, control, maintenance and inspecting power plants in regional territory.

- **Regional Executive Decision No 8/8515 of 26.11.2008,**
  Means of implementing the Regional Ecological Network in line with local bodies' spatial planning.

- **Regional Executive Decision No 8/8745 of 22.12.2008,**

Decisions relating to measures for energy efficiency in buildings and for the energy certification of buildings.

- **Regional Executive Decision No 8/8829 of 30.12.2008,**
  Temporary environmental measures relating to existing energy production plants in regional territory with a capacity greater than 300 MWt.

- **Regional Executive Decision No 8/8927 of 11.02.2009,**
  Decisions relating to the methods for submitting innovative projects in the agro-foodstuffs, energy/environment, health and advanced manufacturing sectors - Addition to Regional Executive Decision No 8/7025/2008.

- **Executive Decree No 5796 of 11.06.2009,**
  Update to the calculation procedure for the energy certification of buildings.

- **Executive Decree No 7152 of 13.07.2009,**
  Call for bids for industrial experimental research and development projects in the energy efficiency sector (ERDF Regional Operational Plan 2007-2013 – Axis 1 – Line of operation 1.1.1.1. – Action B).

- **Regional Executive Decision No 8/9955 of 29.07.2009,**
  Incentivisation for energy production plants using solar power for heating uses - Construction of systems to service publicly-owned buildings.

- **Regional Executive Decision No 8/10124 of 07.08.2009,**
  Decisions relating to means and tariffs for issuing the integrated environmental authorisations (Article 9(4) of the Ministerial Decree of 24 April 2008).

- **Regional Law No 5 of 02.02.2010,**
  New provisions relating to the EIA, excluding EIAs for certain types of system.

MARCHE

- **Directive No 2 of 09.11.1982,**
  Directives relating to public works under Article 59 of the Statute and Article 22 of Regional Law No 17 of 18 April 1979.
  - Article 5(5) “Electricity plants and authorisations”.

- **Regional Law No 19 of 06.06.1988,**
  Rules on works relating to electricity lines and plants up to 150,000 Volts.
  - Article 3 “Authorisation application”

- **Regional Law No 15 of 28.04.1994,**
  Rules for establishing and managing protected natural areas.
  - Article 9, Incentive measures.

- **Regional Law No 10 of 17.05.1999,**
  Reorganisation of the region and local bodies’ administrative duties in the economic development and productive activity, land, environment, infrastructures and services for individuals and the community, and administrative arrangements and organisation.

- **Regional Executive Decision No 587 of 20.03.2000 - ME/AMB,**
  Transposition of provisions relating to the environmental impact assessment.

- **Regional Executive Decision No 324 of 16.07.2002 - OT/AMB,**
  Decree by the President of the Region of 12 April 1996 - Prime Ministerial Decree of 3

September 1999. Environmental impact assessment (EIA) procedures "Industrial plants for energy production from wind power". Criteria and guidance for assessment.

- **Regional Law No 10 of 24.07.2002,**
  Urgent measures relating to energy saving and limiting light pollution.
  - Article 8 "Regional contributions".

- **Regional Law No 20 of 28.10.2003,**
  Consolidated rules on industry, craft and services for manufacturing.
  - Article12 "Actions for energy saving and the use of renewable sources".

- **Regional Law No 7 of 14.04.2004,**
  Rules on the environmental impact assessment procedure

- **Regional Council Decree No 175 of 16.02.2005,**
  Regional Energy and Environment Plan
  - Chapter 4 "Energy supply management".

- **Regional Law No 7 of 09.06.2006,**
  Rules on diverting the public water system and occupying maritime property.

- **Regional Executive Decision No 894 of 31.07.2006,**
  Programme guidance relating to contributions for actions relating to biomass energy, cogeneration and photovoltaic systems and for transferring contributions to municipalities for writing municipal energy and environment plans.

- **Regional Council Decree No 33 of 14.11.2006,**
  Regional strategic document - 2007-2013 European funds and regional development policies.

- **Regional Council Decree No 44 of 30.01.2007,**
  Approval of the regional environmental action for sustainability strategy (STRAS) 2006-2010
  - Part 4, Use and sustainable management of natural resources and waste, Chapter 8, activities and production and consumption cycles.

- **Regional Law No 6 of 12.06.2007,**
  Amendments and additions to Regional Law of 14.04.2004 and previous measures relating to the environment and Natura 2000 network - Article 16 "Amendment to Regional Law No 10/1999" and introduction of Article 23a relating to the provinces' duties.

- **Regional Executive Decision No 775 of 16.07.2007,**
  Annual measures for implementing Regional Law No 20/2003 (Consolidated rules on industry, craft and services for manufacturing)
  - Article 12(2)c, "Operations for solar thermal energy use"

- **Regional Executive Decision No 829 of 23.07.2007,**
  Implementation of the Energy and Environment Plan (PEAR): environmental guidance and technical criteria for the insertion of wind farms into Marche regional territory.

- **Regional Executive Decision No 830 of 23.07.2007,**
  Implementation of the Energy and Environment Plan (PEAR): environmental guidance and technical criteria for the application of solar thermal and photovoltaic technology and for the development of bio-energy supply chains in Marche.

- **Regional Executive Decision No 865 of 01.08.2007,**
  Regional Council Decree No 44/2007 - Implementing the regional environmental action for sustainability strategy - Approval of the draft regional climate plan
  - Point 3, Regional actions to fight against climate change.

- **Regional Executive Decision No 863 of 06.02.2008,**
  Recommendations for the municipal energy and environment plans.

- **Regional Executive Decision No 586 of 30.04.2008,**
  Approval of the draft agreement for the promotion and spread of renewable energy and the energy efficiency of public buildings, linked to renewable sources, energy saving and environmental sustainability.

- **Regional Law No 14 of 17.06.2008,**
  Rules relating to sustainable building.

- **Regional Executive Decision No 1792 of 09.12.2008,**
  Regional Law No 7/2004 "Framework for the environmental impact procedure", Article 21(6): amendment to the annexes implementing national legislation and subsequent adaptation of Regional Executive Decision No 829/2007

- **Regional Executive Decision No 1400 of 20.10.2008,**
  Regional Law No 6/2007 "Measures relating to the environment and Natura 2000 network" Article 20 - Approval of "Regional guidelines for the strategic environmental assessment".

- **Regional Executive Decision No 760 of 11.05.2009,**
  Regional Law No 14/2008 "Rules for sustainable building" - Article 14(2)a: "Guidelines for environmental/energy assessments of residential buildings"; Article 14(2)b: "Criteria for defining incentives"; Article 14(2)c: "Professional training programme".

- **Executive Decree No 54 of 01.07.2009,**
  Regional Law No 14/2008, Regional Executive Decision No 760/2009. Approval of the technical implementation documentation for assessing and certifying the sustainability of buildings.

MOLISE

- **Regional Law No 34 of 29.09.1999,**
  Rules on sharing administrative duties and tasks between the region and local bodies, implementing Article 3 of Law No 142 of 8 June 1990, Law No 59 of 15 March 1997, and Legislative Decree No 112 of 31 March 1998
  - Article 42, Provinces' duties.

- **Regional Law No 21 of 24.03.2000,**
  Framework for the environmental impact procedure.

- **Regional Law No 28 of 27.09.2006,**
  Rules on works relating to electricity lines and plants up to 150,000 Volts.

- **Regional Law No 46 of 30.11.2000,**
  Correction to Annex "A" of Regional Law No 21 of 24 March 2000, defining the "Framework for the environmental impact procedure".

- **Regional Executive Decision No 908 of 26.06.2006,**
  Regional Law No 3 of 12 April 2006, Article 13 - Verifying the coherence of applications to construct wind farms - decisions.

- **Regional Executive Decision No 452 of 07.05.2007,**
  Regional Council Decree No 117 of 10 July 2006: Regional Energy and Environment Plan - Guidelines for carrying out the single procedure in accordance with Article 12(3) of Legislative

Decree No 387/2003, relating to the installation of renewable electricity production plants in Molise and for the correct insertion of wind farms into the landscape - Approval.

- **Regional Council Decree No 167 of 10.06.2008,**
  Guidelines for carrying out the single procedure in accordance with Article 12(3) of Legislative Decree No 387/2003, relating to the installation of renewable electricity production plants in Molise and for the correct insertion of wind farms into the landscape - Implementation of Regional Council Decree No 117 of 10 July 2006, defining: "Regional Energy and Environment Plan".

- **Regional Executive Decision No 401 of 15.04.2009,**
  Construction of micro and small-scale cogeneration renewable electricity production plants - Decisions.

- **Regional Executive Decision No 759 of 13.07.2009,**
  Molise ERDF Regional Operational Plan 2007/2013 - Notice for the submission of applications for concessions for investment in energy saving measures within firms.

- **Regional Law No 22 of 07.08.2009,**
  New rules for installation of renewable electricity production plants in Molise.

PIEDMONT

- **Regional Law No 40 of 14.12.1998,**
  Provisions relating to environmental compatibility and the assessment procedures.

- **Regional Law No 44 of 26.04.2000,**
  Legislative provisions for implementing Legislative Decree No 112 of 31 March 1998, "Transfer of duties and administrative tasks from the State to the regions and local bodies, implementing Chapter 1 of Law No 59 of 15 March 1997"
  - Title 3, Chapter 8, Energy.

- **Regional Law No 54 of 10.11.2000,**
  Amendment to Article 23 of Regional Law No 40 of 14 December 1998, "Provisions relating to environmental compatibility and the assessment procedures".

- **Regional Law No 23 of 07.10.2002,**
  Measures in the energy field. Procedures for establishing a regional energy and environmental plan. Repeal of Regional Law No 19 of 23 March 1984, Regional Law No 31 of 17 July 1984, and Regional Law No 79 of 28 December 1989.

- **Regulation No 10/R of 02.07.2003,**
  Regulation defining "Rules for procedures for issuing permits to divert the public water system".

- **Regional Council Decree No 351/3642 of 03.02.2004,**
  Regional Energy and Environment Plan.

- **Regional Law No 13 of 28.05.2007,**
  Measures relating to the energy performance of buildings.

- **Decision No 232 of 22.04.2008,**
  ERDF Regional Operational Plan 2007-2013 - "Regional competitiveness and employment target" - Axis 2 "Incentives for rational energy use and the use of renewable energy sources in manufacturing installations" and the related forms (and related call for bids).

- **Regional Executive Decision No 22/8733 of 05.05.2008,**

Criteria for assessing the eligibility for funding of projects to divert the public water system for hydroelectric purposes and projects involving the use of biomass as fuel.

- **Decision No 257 of 09.05.2008,**
  Regional Law No 23 of 7 October 2002, Articles 2(2)f and 8(3) - Approval of the call for bids for obtaining soft loans through the rotating fund for incentivisation of small-scale photovoltaic systems connected to the electricity distribution network under the Ministerial Decree of 19 February 2007.

- **Decision No 230 of 17.09.2008,**
  Regional operational plan 2007-2013 funded by the ERDF, under the "Competitiveness and employment" target: Axis 1 - Activity 1.1.2: "Innovation hubs": approval of the call for bids.

- **Regional Executive Decision No 35/9702 of 30.10.2008,**
  Implementation measures relating to power plants under Article 21(1) letters h), i), j), k), l), m) and o), of Regional Law No 13/2007.

- **Regional Executive Decision No 47/9714 of 30.09.2008,**
  Regional Law No 17 of 25 June 2008, Article 1. Incentive programme for the construction of systems aimed at environmental improvement and energy saving in agricultural production activity and at the production and use of renewable energy. Implementation measures.

- **Decision No 545 of 06.10.2008,**
  ERDF Regional Operational Plan 2007-2013 - "Regional competitiveness and employment" target - Axis 2 "Sustainability and energy efficiency". Approval of the call for bids "Incentivisation of electricity production from solar power on worked out dump sites and those at the post-operational management stage".

- **Regional Executive Decision No 57/9882 of 20.10.2008,**
  Agreement protocol between Piedmont and Apulia for energy production from renewable sources.

- **Regional Executive Decision No 43/11965 of 04.08.2009,**
  Regional Law No 13 of 28 May 2007, "Measures relating to the energy performance of buildings". Implementation measures relating to the energy certification of buildings under Article 21(1) d), e) and f).

- **Regional Executive Decision No 45/11967 of 04.08.2009,**
  Regional Law No 13 of 28 May 2007, "Measures relating to the energy performance of buildings". Implementation measures relating to solar thermal systems, renewable source systems and solar greenhouses under Article 21(1) g) and p).

- **Regional Executive Decision No 46/11968 of 04.08.2009,**
  Update to the regional plan the improving and protecting air quality, extract of the plan for green heating and air conditions and implementation measures relating to the energy performance of buildings.

- **Regional Executive Decision No 63/10873 of 23.02.2009,**
  Regional Executive Decision No 22/8733 of 5 May 2008. Integration of criteria relating to cogeneration plants fed by biogas from anaerobic digestion of animal manure and waste from agriculture and the agri-foodstuffs sector for the production of electricity and heat.

APULIA

- **Regional Law No 17 of 30.11.2000,**
  Transfer of duties and administrative tasks relating to environmental protection – Extract.

- **Regional Law No 19 of 30.11.2000,**
  Transfer of duties and administrative tasks relating to energy and energy saving, mines and geothermal resources.

- **Regional Law No 11 of 12.04.2001,**
  Rules for the environmental impact assessment.

- **Regional Executive Decision No 131 of 02.03.2004,**
  Article 7, Regional Law No 11/2001 – Directives regarding the guidelines for the environmental assessment of the construction of wind farms in Apulia.

- **Regional Executive Decision No 716 of 31.05.2005,**
  Legislative Decree No 387 of 29 December 2003. Procedure for issuing authorisation for the construction and operation of electricity production plants using renewable sources.

- **Regulation No 13 of 22.08.2006,**
  Urgent measures for limiting light pollution and saving energy.

- **Regulation No 16 of 04.10.2006,**
  Regulation for the construction of wind farms in Apulia.

- **Regional Executive Decision No 1550 of 13.10.2006,**
  Administrative duties assigned to local bodies and delegated under Regional Law No 19/2000. Implementation of Directive 2001/77/EC relating to the promotion of electricity produced from renewable energy sources in the internal electricity market, under Legislative Decree No 387 of 29 December 2003. Amendments and additions to the procedure for issuing the single authorisation.

- **Decision by the Industry Executive No 429 of 07.05.2007,**
  Priority criteria for assessing single authorisation applications under Regional Executive Decision No 35 of 6 February 2007.

- **Regional Executive Decision No 827 of 08.06.2007,**
  Regional Energy and Environment Plan.

- **Regional Law No 17 of 14.06.2007,**
  Environmental measures, including in relation to the decentralisation of administrative duties relating to the environment.

- **Regional Executive Decision No 35 of 23.01.2007,**
  Procedure for issuing the single authorisation under Legislative Decree No 387 of 29 December 2003, and for adopting the final authorisation measure relating to plants fed by renewable sources and the connected works, as well as the essential infrastructure for their construction and operation.

- **Regional Executive Decision No 1842 of 13.11.2007,**
  Apulia Landscape Plan (PPTR) – Approval of the "Programme Document".

- **Regional Law No 13 of 10.06.2008,**
  Rules for sustainable housing.

- **Regulation No 12 of 14.07.2008,**
  Regulation for the construction of energy production plants fed by biomass.

- **Circular No 38/8763 of 01.08.2008,**
  RE: Article 27 of Regional Law No 1 of 19 February 2008 "Commencement notice rules for renewable electricity production plants with a nominal electrical capacity of up to 1 MW to be constructed in Apulia".

- **Regional Law No 31 of 21.10.2008,**
  Rules relating to energy production from renewable sources, reduction of polluting emissions and the environment.

- **Regulation no 26 of 21.11.2008,**
  Regulation for aid schemes for SME investment in energy saving, high performance cogeneration and the use of renewable energy as an exemption under Regulation (EC) No 800/2008.

- **Regional Executive Decision No 810 of 13.05.2009,**
  "Renewable Energy and Energy Saving" Interregional Operational Plan - ERDF 2007-2013.

SARDINIA

- **Decree by the President of the Regional Executive No 153 of 31.10.1986,**
  Regional measures for implementing Law No 308 of 29.05.1982, defining "Rules for limiting electricity consumption, developing renewable sources and operating electricity plants fed by fuels other than hydrocarbons".

- **Regional Executive Decision No 22/32 of 21.07.2003,**
  Guidelines and coordination for construction industrial energy plants using wind power.

- **Regional Executive Decision No 31/7 of 27.07.2004,**
  Repeal of the call for bids for the preliminary comparative assessment of proposals to construct wind farms to produce electricity and suspension of the examination of applications not defined on the date of entry into force of Legislative Decree No 387/2003.

- **Regional Executive Decision No 34/13 of 02.08.2006,**
  Regional Energy and Environment Plan.

- **Regional Executive Decision No 36/7 of 05.09.2006,**
  Regional Law No 8 of 25 November 2004, Article 1(1). Approval of the Landscape Plan – Initial uniform scope - Article 104, Infrastructure system. Guidelines.

- **Decree by the President of the Region No 82 of 07.09.2006,**
  Approval of the Regional Landscape Plan - Initial uniform scope - Regional Executive Decision No 36/7 of 5 September 2006.

- **Regional Law No 9 of 12.06.2006,**
  Transfer of duties and tasks to local bodies.
  - Article 20, Energy. Duties of the region.
  - Article 21, Energy. Transfer of tasks to local bodies.

- **Regional Executive Decision No 28/56 of 26.07.2007,**
  Study to identify areas in which to locate wind farms.

- **Regional Law No 3 of 05.03.2008,**
  Provisions for forming the annual and multiannual regional budget (2008 Finance Act)
  - Article 7, Measures in favour of the island's manufacturing system (paragraph 32)
  - Article 9, Measures relating to public works and transport (paragraph 6).

- **Regional Executive Decision No 30/2 of 23.05.2008,**
  Guidelines for identifying the potential impact of photovoltaic plants and for their correct insertion into the landscape.

- **Regional Executive Decision No 51/25 of 24.09.2008,**
  Guidance for implementing the incentive programme for the benefit of companies. Guidance for implementing the funding of networks serving companies in industrial districts and in the context of local manufacturing systems. Final approval.

- **Regional Executive Decision No 59/12 of 29.10.2008,**
  Amendment and update to the guidelines for identifying the potential impact of photovoltaic plants and for their correct insertion into the landscape.

- **Regional Executive Decision No 3/17 of 16.01.2009,**
  Amendments to the "Study to identify areas in which to locate wind farms" (Regional Executive Decision No 28/56 of 26 July 2007).

SICILY

- **Regional Law No 71 of 03.10.1995,**
  Urgent measures relating to land and environment. Title 2.

- **Regional Law No 6 of 03.05.2001,**
  Planning and financial provisions for 2001. Financial legislation also involves amending several environmental / town planning rules to protect land etc. (Establishment of the Regional Environmental Protection Agency; Rules for the environmental impact assessment; Integrated environmental authorisation).

- **Regional Law No 4 of 16.04.2003,**
  Planning and financial provisions for 2003.
  - Article 10. Costs of obtaining evidence for the environmental impact assessment procedures.

- **Councillor's Circular of 11.04.2005,**
  Initiatives aimed at energy saving (update of the previous regulations on this matter).

- **Councillor's Decree of 28.04.2005,**
  Criteria relating to projects to construct industrial plants for energy production using wind power.

- **Councillor's Decree of 14.11.2005,**
  Criteria relating to projects to construct industrial plants for energy production using solar power.

- **Councillor's Decree of 17.05.2006,**
  Criteria relating to projects to construct plants for energy production using solar power.

- **Councillor's Circular No 14 of 26.05.2006,**
  Wind energy production plants in Sicily, relating to legislation to protect landscape assets.

- **Councillor's Circular No 17 of 14.12.2006,**
  Wind energy production plants in Sicily, relating to legislation to protect landscape assets.

- **Decree by the President of the Regional Executive of 31.10.2007,**
  ERDF Regional Operational Plan 2007-2013 – point 3.1, General strategic coherence framework.

- **Circular of 15.04.2008,**
  Urgent measures relating to projects to construct energy production plants fed by renewable sources.

- **Circular No 7 of 23.07.2008,**
  Procedures for establishing and managing landscape protection measures. Repeal of the

Councillor's Circular No 3 of 16 February 2006.

- **Circular of 15.04.2008,**
  Urgent measures relating to projects to construct energy production plants fed by renewable sources.

- **Regional Executive Decision No 1 of 03.02.2009,**
  Regional Energy and Environment Plan.

- **Regional Law No 6 of 23.03.2010,**
  Rules for the regional "Housing Plan".

- **Regional Law No 11 of 12.05.2010,**
  Planning and corrective provisions for 2010 – Extract – Guarantee fund for the installation of photovoltaic systems.

TUSCANY

- **Regional Law No 79 of 03.11.1998,**
  Rules for applying the environmental impact assessment.

- **Regional Council Decision No 1 of 18.01.2000,**
  Regional Law No 45/1997. Regional Energy Plan.

- **Regional Law No 79 of 20.12.2000,**
  Regional Law No 79 of 3 November 1998 (Rules for applying the environmental impact assessment) – Repeal of Article 27(1).

- **Regional Executive Decision No 356 of 02.04.2001,**
  Regional EIA procedure in accordance with Articles 14 onwards of Regional Law No 79/1998. Assignment of authority to the Regional Executive.

- **Regional Law No 39 of 24.02.2005,**
  Energy-related measures.

- **Decree by the President of the Regional Executive No 4/R of 09.02.2007,**
  Regulation implementing Article 11(5) of Regional Law No 1 of 3 January 2005 (Rules for land management) relating to the integrated assessment.

- **Regional Executive Decision No 208 of 26.03.2007,**
  Financial incentive programme relating to energy production from renewable sources and eco-efficiency in the energy field.

- **Regional Executive Decision No 227 of 02.04.2007,**
  Guidance and criteria for the creation of Low-Energy Housing Districts.

- **Regional Executive Decision No 898 of 03.12.2007,**
  Regional Law No 39/2005 – Guidance for implementing a research project relating to the energy certification of buildings.

- **Regional Executive Decision No 147 of 03.03.2008,**
  Refinancing of the financial incentive programme relating to energy production from renewable sources and eco-efficiency in the energy field as per Regional Executive Decision No 208/2007.

- **Regional Executive Decision No 235 of 31.03.2008,**
  Circular for the initial application, at regional level, of Law No 244 of 24 December 2007 " Provisions for forming the annual and multiannual State budget. 2008 Finance Act" relating to the installation of electricity production plants fed by renewable sources.

- **Regional Executive Decision No 257 of 31.03.2008,**
  Financial incentive programme relating to the production and use of energy from renewable sources and energy eco-efficiency, aimed at municipalities.

- **Regional Executive Decision No 848 of 27.10.2008,**
  Approval of the regional implementation document for the Regional Operational Plan "Regional Competitiveness and Employment" ERDF 2007-2013. Version 5.
  - Article 3.1 Support for the construction of energy production plants fed by renewable sources. Public and private entities.
  - Article 3.2 Action to promote and support the creation, reduction in energy consumption and energy efficiency of manufacturing systems. Public and private entities.
  - Article 3.3 Accompanying action (awareness raising, technical support) for entities working to promote and improve operations for energy production from renewable sources and energy saving measures.

- **Regional Executive Decision No 925 of 10.11.2008,**
  Regional Executive Decision No 257/2008 "Financial incentive programme relating to the production and use of energy from renewable sources and energy eco-efficiency, aimed at municipalities". Additions.

- **Regional Executive Decision No 933 of 17.11.2008,**
  Division of geothermal funds under Article 7 of Regional Law No 45/1997 "Rules relating to energy resources" and subsequent amendments and additions.

- **Regional Executive Decision No 372 of 11.05.2009,**
  Article 22 of Regional Law No 39/2005 – Adoption of methodology for determining contributions to investments in renewable energy sources, district heating and cogeneration – Repeal of Regional Executive Decision No 206/2007.

TRENTINO ALTO ADIGE

Autonomous Province of Bolzano

- **Provincial Law No 4 of 19.02.1993,**
  New rules relating to rational energy use, energy saving and the development of renewable energy sources.

- **Decision of the Provincial Executive No 5259 of 30.08.1993,**
  Provincial Law No 4 of 19 February 1993 - Articles 3, 4, 5, 6 and 7 "New rules relating to rational energy use, energy saving and the development of renewable energy sources".

- **Provincial Law No 4 of 13.02.1997,**
  Action by the Autonomous Province of Bolzano-Alto Adige to support the economy.

- **Provincial Law No 13 of 11.08.1997,**
  Provincial Planning Law.

- **Decision of the Provincial Executive No 7080 of 22.12.1997,**
  Approval of the Provincial Energy Plan as the sector plan of the Provincial Spatial Development and Coordination Plan.

- **Decision of the President of the Provincial Executive No 5 of 23.02.1998,**
  Regulation for implementing the Provincial Planning Law.

- **Provincial Law No 13 of 29.08.2000,**
  Financial provisions connected to the restructuring of the Province of Bolzano's budget forecast for the 2000 financial year and the three-year period 2000-2002 and connected legislation.

- **Decision of the Provincial Executive No 5292 of 29.12.2000,**
  Granting capital contributions for operations to save energy or use renewable energy sources under Provincial Law No 4 of 19 February 1993, and Article 5(1)b and 6(4) of Provincial Law No 4 of 13 February 1997 – setting the contribution percentage at 30%.

- **Provincial Law No 11 of 26.07.2002,**
  Provisions relating to taxes and provisions connected to the restructuring of the Province of Bolzano's budget forecast for the 2002 financial year and the three-year period 2002-2004.

- **Decision of the Provincial Executive No 3396 of 29.09.2003,**
  Amendment to the criteria and approval of the single text on granting capital contributions under Provincial Law No 4 of 19 February 1993, and Article 5(1)b and 6(4) of Provincial Law No 4 of 13 February 1997, for operations to save energy or use renewable energy sources.

- **Decision of the Provincial Executive No 2594 of 18.07.2005,**
  Approval of the second update to the "Waste Management Plan 2000", chapters 5, 7 and 9.

- **Decision of the Provincial Executive No 4052 of 31.10.2005,**
  Craft, industry, commerce and services, innovation and cooperative, tourism sectors: Criteria for applying Provincial Law No 4 of 13 February 1997 "Action by the Autonomous Province of Bolzano-Alto Adige to support the economy".
  - Article 24, Eligible expenditure
  - Article 26, Concessions.

- **Decision of the Provincial Executive No 286 of 30.01.2006,**
  Amendment to the criteria and approval of the single text on granting capital contributions under Article 5(1)b and 6(4) of Provincial Law No 4 of 13 February 1997, for operations to save energy or use renewable energy sources – Suspension of capital contributions for heat recovery from ventilation systems and heat recovery from refrigeration systems.

- **Decision of the President of the Province No 23 of 19.05.2006,**
  Amendment to the Regulation for implementing the Provincial Planning Law.

- **Provincial Law No 2 of 05.04.2007,**
  Environmental assessment of plans and projects.

- **Provincial Law No 3 of 02.07.2007,**
  Amendments to Provincial Law No 13 of 11 August 1997, defining the "Provincial Planning Law".

- **Decision of the Provincial Executive No 2626 of 30.07.2007,**
  Approval of the distribution plan under Articles 1b and 2 of Presidential Decree No 235 of 26 March 1977 in its current version.

- **Decision of the Provincial Executive No 3250 of 01.10.2007,**
  Craft, industry, commerce and services, innovation and cooperative, tourism sectors: Criteria for applying Provincial Law No 4 of 13 February 1997 "Action by the Autonomous Province of Bolzano-Alto Adige to support the economy".
  - Article 24, Investments and eligible expenditure
  - Article 27, Concessions

- Article 28, Increases.

- **Decision of the Provincial Executive No 759 of 10.03.2008,**
  Amendment to Decision of the Provincial Executive No 3250/2007: "Craft, industry, commerce and services, innovation and cooperative, tourism sectors: Criteria for applying Provincial Law No 4 of 13 February 1997 'Action by the Autonomous Province of Bolzano-Alto Adige to support the economy'" – Amendment to Decision of the Provincial Executive No 820 of 13 March 2006, Decision of the Provincial Executive No 11112 of 3 April 2006, Decision of the Provincial Executive No 933 of 19 March 2007: Incentivisation criteria in the tourism sector.
  - Article 24, Investments and eligible expenditure
  - Article 27, Concessions
  - Article 28, Increases.

- **Provincial Law No 4 of 10.06.2008,**
  Amendments to the Provincial Laws in various sectors and other measures
  - Chapter 3 - Energy, environment and protection of employment.

- **Decision of the Provincial Executive No 2441 of 07.07.2008,**
  Amendment to the criteria and approval of the single text on granting capital contributions under Article 1(3) of Provincial Law No 4 of 19 February 1993 for operations to save energy or use renewable energy sources.

- **Decision of the Provincial Executive No 2609 of 21.07.2008,**
  Action to promote innovation, research and development – Call for bids for innovative projects 2008 – Provincial Law No 14 of 13 December 2006, "Research and innovation".
  - Article 2, Subject of the call for bids.

- **Decision of the Provincial Executive No 3721 of 13.10.2008,**
  Amendment to the criteria and approval of the single text on granting capital contributions under Articles 4 and 7 of Provincial Law No 4 of 19 February 1993 and Article 5(1)b and 6(4) of Provincial Law No 4 of 13 February 1997, for operations to save energy or use renewable energy sources.

- **Decision of the President of the Province No 58 of 21.10.2008,**
  Amendment to the Regulation for implementing the Provincial Planning Law, Provincial Law No 13 of 11 August 1997, Article 44a paragraph 3 – Energy production plants using renewable sources.

- **Decision of the Provincial Executive No 1966 of 27.07.2009,**
  Integration of the single text on granting capital contributions for operations to save energy or use renewable energy sources, approved by Decision of the Provincial Executive No 3721 of 13 October 2008, Annex E.

TRENTINO ALTO ADIGE

Autonomous Province of Trento

- **Provincial Law No 14 of 29.05.1980,**
  Measures for energy saving and the use of alternative energy sources.

- **Provincial Law No 28 of 29.08.1988,**
  Rules for the environmental impact assessment and further rules for environmental protection.

- **Decision of the President of the Provincial Executive No 13-11/Leg of 22.11.1989,**
  Regulation for implementing Provincial Law No 28 of 29 August 1988 "Rules for the environmental impact assessment and further rules for environmental protection".

- **Decision of the Provincial Executive No 16101 of 12.11.1994,**
  Article 6 of Provincial Law No 2 of 10 January 1992 – Organisation of the Province's actions relating to emergency prevention and management
  - Article 6.7.28, Risks of incidents caused by autonomous power plants and the use of LPG in the civil sector (see target 3 in particular).

- **Decision of the Provincial Executive No 2998 of 15.03.1996,**
  Provincial Law No 14 of 29 May 1980, as amended: "Measures for energy saving and the use of alternative energy sources"; Simplification of the supporting documentation for the contribution applications.

- **Provincial Law No 10 of 07.07.1997,**
  Measures for rationalising provincial finance.
  - Article 12, Checks on power plants.
  - Article 13, Sanctions relating to power plants.

- **Provincial Law No 4 of 06.03.1998,**
  Measures for implementing Presidential Decree No 235 of 26 March 1977. Establishment of a special provincial energy authority, rules for electricity use for which the province is responsible under Article 13 of the Special Statute for Trentino-Alto Adige, criteria for drafting the distribution plan and amendments to Provincial Law No 38 of 15 December 1980, and Provincial Law No 7 of 13 July 1995.

- **Decision of the Provincial Executive No 10067 of 17.09.1998,**
  Approval of the Provincial Energy Plan and acquisition of copies of the Trentino-Alto Adige Region Official Bulletin.

- **Provincial Law No 6 of 13.12.1999,**
  Action by the Autonomous Province of Trento to support the economy and new entrepreneurship. Rules for territorial agreements to amend Provincial Law No 4 of 8 July 1996, and measures relating to business.
  - Chapter 2, Financial aid, Section 1, Measures relating to aid, Article 2, Aid beneficiaries.

- **Decision of the Provincial Executive No 2190 of 13.09.2002,**
  Provincial Law No 14 of 29 May 1980 as amended "Measures for energy saving and the use of alternative energy sources". Approval, for 2003 onwards, of criteria for the eligibility of applications and for establishing priority rankings (temporarily suspended by **Decision of the Provincial Executive No 208 of 02.02.2007,**
  Amendment to Decision of the Provincial Executive No 2190 of 13 September 2002 as amended: temporary measures relating to the management of contributions in accordance with Provincial Law No 14 of 29 May 1980, "Measures for energy saving and the use of alternative energy sources").

- **Decision of the Provincial Executive No 2438 of 03.10.2003,**
  Approval of the Provincial Energy and Environment Plan.

- **Provincial Law No 10 of 15.12.2004,**
  Measures relating to town planning, environmental protection, public water networks, transport, fire protection services, public works and hunting.
  - Chapter 4, Measures relating to energy, public water networks and hydraulic works, Article 15, Amendments to Provincial Law No 4 of 6 March 1998 (Measures for implementing Presidential Decree No 235 of 26 March 1977. Establishment of a special provincial energy authority, rules for electricity use for which the province is responsible under Article 13 of the Special Statute for Trentino-Alto Adige, criteria for drafting the distribution plan and amendments to Provincial Law No 38 of 15 December 1980, and Provincial Law No 7 of 13 July 1995).

- **Decision of the Provincial Executive No 2804 of 22.12.2005,**
  Provincial Law No 6 of 13 December 1999 ("Economy Act") – Approval of new criteria and means for applying the law.

- **Provincial Law No 20 of 29.12.2005,**
  Provisions for forming the annual budget for 2006 and multiannual budget for 2006-2008 of the Autonomous Province of Trento (Finance Act)
  - Article 29, Amendments to Provincial Law No 4 of 6 March 1998 (Measures for implementing Presidential Decree No 235 of 26 March 1977. Establishment of a special provincial energy authority, rules for electricity use for which the province is responsible under Article 13 of the Special Statute for Trentino-Alto Adige, criteria for drafting the distribution plan and amendments to Provincial Law No 38 of 15 December 1980, and Provincial Law No 7 of 13 July 1995).

- **Decision of the Provincial Executive No 106 of 27.01.2006,**
  Re-approval of the criteria and approval of the annual call for bids for contributions for the purchase of low-environmental impact vehicles and for modifications to use less polluting fuels in accordance with Article 3e of Provincial Law No 14 of 29 May 1980 as amended: "Measures for energy saving and the use of alternative energy sources".

- **Decision of the Provincial Executive No 2429 of 17.11.2006,**
  Provincial Law No 6 of 13 December 1999, Article 35 – Amendment to Decision of the Provincial Executive No 2804 of 22 December 2005, amended by Decision of the Provincial Executive No 1353 of 30 June 2006, approving new criteria and means for applying the law.

- **Decision of the President of the Province No 23-76/Leg. of 11.12.2006,**
  Regulation for the organisation and management of the Provincial Energy Authority in accordance with Article 39 of Provincial Law No 3 of 16 June 2006.

- **Provincial Law No 23 of 21.12.2007,**
  Provisions for forming the annual budget for 2008 and multiannual budget for 2008-2010 of the Autonomous Province of Trento (2008 Finance Act)
  - Article 46, Amendments to Provincial Law No 28 of 29 August 1988 (Rules for the environmental impact assessment and further rules for environmental protection).

- **Provincial Law No 1 of 04.03.2008,**
  Town planning and land management.
  - Title 4, Measures relating to sustainable building and the building log book, Chapter 1 – General measures, Article 81, Objectives.

- **Decision of the Provincial Executive No 651 of 14.03.2008,**
  Final approval of the "Autonomous Province of Trento Rural Development Plan for 2007-2013".

- **Decision of the Provincial Executive No 874 of 04.04.2008,**
  Council Regulation (EC) No 1698/2005 of 20 September 2005, on support for rural development from the European Agricultural Fund for Rural Development (EAFRD) - Autonomous Province of Trento Rural Development Plan for 2007-2013 – Approval of calls for bids, criteria, implementation means and eligibility conditions of measures: 111 - 112 - 121 - 122 - 123 -125 - 211 - 214 - 226 - 227 - 311 - 313 - 321 - 323 – Approval of the call for bids for selecting the Local Action Group and related Local Development Programme and measures for carrying out the actions foreseen by Axis 4 – Leaders:
  - Point C.2, Actions eligible for funding
  - Point C.5, Additional craft and service activities
  - Point C.7, Selection criteria
  - Point C.9, Levels of aid
  - Point 6, Business plan

- Article 8, Measures to be activated through Axis 4 – Leaders.

- **Provincial Law No 5 of 27.05.2008,**
  Approval of the new provincial town planning plan.

- **Decision of the Provincial Executive No 1800 of 11.07.2008,**
  European Regional Development Fund Operational Plan - ERDF 2007-2013 – Regional competitiveness and employment target for the Autonomous Province of Trento – Approval of the call for bids "Promotion of applied research projects relating to the Energy and Environment Technology Zone".

- **Provincial Law No 12 of 25.07.2008,**
  Initiatives to support the production and ecological use of wood biomass for energy purposes – Article 1, Objectives.

- **Decision of the President of the Province No 38-145/Leg. of 17.09.2008,**
  Provincial Law No 3 of 11 March 2005 - Regulation defining the specific requirements and procedural rules for acknowledging and monitoring agricultural producer organisations operating within the Province of Trento and not regulated by specific Community legislation.

- **Decision of the Provincial Executive No 2436 of 26.09.2008,**
  Extension of one deadline of the call for bids 1/2008 under the European Regional Development Fund Operational Plan - ERDF 2007-2013 – Regional competitiveness and employment target for the Autonomous Province of Trento relating to the "Promotion of applied research projects relating to the Energy and Environment Technology Zone".

- **Decision of the Provincial Executive No 3094 of 04.12.2008,**
  Measures adding to the criteria set by Provincial Law No 14/1980 as amended, approved by Decision of the Provincial Executive No 2744/2007, as amended by Decision of the Provincial Executive 1092/2008, for contribution applications relating to energy based on territorial agreements.

- **Decision of the Provincial Executive No 238 of 13.02.2009,**
  Approval of the electricity transfer plan in accordance with Article 13 of Presidential No 70/1972 for 2009, under Article 21 of Provincial Law No 4 of 6 March 1998 as amended.

- **Executive Decree No 7 of 29.04.2009,**
  Approval, for 2009, of the call for bids for contribution applications relating to energy in accordance with Provincial Law No 14/1980 as amended and Provincial Law No 16/2007, implementing Decision of the Provincial Executive No 690 of 3 April 2009 and Decision of the Provincial Executive No 809 of 9 April 2009.

- **Decision of the President of the Province No 11-13/Leg. of 13.07.2009,**
  Regulatory measures relating to sustainable buildings implementing Title 4 of Provincial Law No 1 of 4 March 2008 (Town planning and land management).

- **Decision of the President of the Province No 11-13/Leg. of 13.07.2009,**
  Regulatory measures relating to sustainable buildings implementing Title 4 of Provincial Law No 1 of 4 March 2008 (Town planning and land management).

- **Decision of the Provincial Executive No 1740 of 17.07.2009,**
  European Regional Development Fund Operational Plan - ERDF 2007-2013 – Regional competitiveness and employment target for the Autonomous Province of Trento. Approval of call for bids for funding No 4/2009 relating to: "Contributions to firms and public for investment in the energy efficiency and renewable energy sectors".

- **Decision of the Provincial Executive No 1885 of 30.07.2009,**

European Regional Development Fund Operational Plan - ERDF 2007-2013 - Regional competitiveness and employment target for the Autonomous Province of Trento. Approval of call for bids for funding No 6/2009 relating to: "Promotion of research projects relating to the Energy and Environment Technology Zone".

- **Decision of the Provincial Executive No 2345 of 02.10.2009,**
  European Regional Development Fund Operational Plan - ERDF 2007-2013 - Regional competitiveness and employment target for the Autonomous Province of Trento. Approval of call for bids for funding No 6/2009 relating to: "Aid for firms for the installation of photovoltaic systems to produce energy".

UMBRIA

- **Regulation No 1 of 09.01.1984,**
  Measures implementing articles 6, 8 and 12 of Law No 308 of 29.03.1982.
  - Title 1 relating to capital contributions supporting the use of renewable energy sources in buildings, Article 2 "Operations eligible for contributions and beneficiaries".

- **Regional Executive Decision No 1758 of 08.04.1998,**
  Implementing Regional Council Decision No 501 of 16.03.1998 relating to rules on environmental impact.

- **Regional Law No 11 of 09.04.1998,**
  Rules on environmental impact.

- **Regional Law No 3 of 02.03.1999**
  Reorganisation of duties and administrative tasks within the regional and local system of autonomous authorities in Umbria, implementing Law No 59 of 15.03.1997, and Legislative Decree No 112 of 31.03.1998
  - Article 15, Duties relating to energy
  - Article 16, Duties and tasks reserved for the region.

- **Regional Law No 22 of 20.03.2000,**
  Adaptation to the Regional Law of 09.04.1998, Article 11 relating to rules on environmental impact.

- **Regional Executive Decision No 925 of 01.07.2003,**
  Technical / administrative procedures for issuing permits relating to water-based property and determining and collecting the related fees.

- **Regional Law No 1 of 18.2.2004,**
  Rules for building activity
  - Article 7a, Initial implementation of the Regional Energy Plan.

- **Regional Executive Decision No 402 of 21.07.2004,**
  Regional Energy Plan.

- **Decision No 359 of 28.01.2004,**
  Contributions to support renewable energy sources in residential buildings, Regional Executive Decision No 279 of 12 March 2003, Approval of the rankings for types of solar thermal system.

- **Regional Law No 21 of 03.11.2004,**
  Rules for monitoring, responsibilities, sanctions and regularisation relating to buildings.

- **Regional Law No 20 of 28.02.2005,**
  Rules relating to the prevention of light pollution and energy saving.

- **Regional Executive Decision No 729 of 11.05.2005,**
  Guidance document for the insertion into the landscape and environment of wind farms under the Regional Energy Plan, approved by the Regional Council Decision No 402/2004.

- **Decision No 3917 of 11.05.2005,**
  Single Planning Document (DOCUP) Objective 2, 2000-2006, Measure 3.1 "Support for firms in environmental protection and regeneration" – Reopening deadlines for submitting applications under Objective 2 and amendments to the call for bids approved by Decision No 3000 of 28 April 2004.
  - Article 3, Features and types of investment eligible for contributions
  - Article 5, Concessions
  - Article 6, Costs eligible for contributions
  - Article 7, Assessment criteria and priorities.

- **Regional Executive Decision No 1240 of 27.07.2005,**
  Regional Law No 23/2003. Three-year public housing plan 2004-2006. Annual Operational Programme 05. Approval of the call for bids for contributions for innovative operations and advanced solutions in green architecture and energy saving.

- **Regional Executive Decision No 1775 of 18.10.2006,**
  Conservation measures for managing the Special Protection Areas (SPAs) under Directive 79/409/EEC and Presidential Decree No 357/1997 as amended.

- **Regional Council Decision No 125 of 20.03.2007,**
  Annual Regional Planning Document 2007-2009 - Article 2.2.3, Energy.

- **Decision No 4637 of 23.05.2007,**
  Regional Operational Plan 2007-2013 Axis 3 - Actions a3-b3 - Axis I Action a4. Call for bids for support for firms in environmental protection and regeneration.
  - Article 7, Assessment criteria and priorities.

- **Regional Executive Decision No 1253 of 23.07.2007,**
  Procedure for issuing the single authorisation in accordance with Article 12 of Legislative Decree No 387/2003, relating to authorisation for the construction and operation and electricity production plants fed by renewable sources.

- **Regional Law No 5 of 26.03.2008,**
  Measures connected to budget manoeuvring for 2008 relating to income and expenditure.
  - Article 5, Amendment to Article 7a of Regional Law No 1 of 18 February 2004, - Rules for building activity (the competent body for issuing the single authorisation is the province).

- **Regional Executive Decision No 561 of 19.05.2008,**
  Criteria and means for carrying out the single procedure in accordance with Article 12(4) of Legislative Decree 387/2003, relating to authorisation for the construction and operation and electricity production plants fed by renewable sources.
  - Article 2.3. Strategic guidance for sectoral planning.

- **Decision No 4219 of 20.05.2008,**
  Approval of the public tendering procedure relating to means and criteria for granting the aid foreseen by the Umbria Rural Development Plan 2007-2013 Measures 112 – "Getting young farmers established", 121 – "Modernising Farms", and 123 – "Increasing the added value of agricultural and forestry products".
  - Article 13.7, Criteria for establishing the ranking system.

- **Regional Executive Decision No 743 of 23.06.2008,**

Regional Forestry Plan 2008-2017. Approval of the preliminary document and implementation of the strategic assessment procedure.
- Article 3, Legislative prerequisites.

- **Regional Executive Decision No 806 of 30.06.2008,**
  Technical and procedural specifications relating to the environmental impact assessment to apply Regional Law No 11 of 9 April 1998, "Rules on environmental impact" following the corrective measures introduced by Legislative Decree No 4 of 16 January 2008 to the second part of Legislative Decree No 152 of 3 April 2006.

- **Regional Executive Decision No 973 of 28.07.2008,**
  Pre-adoption, under Legislative Decree No 42 of 22 January 2004 as amended, and Legislative Decree No 152 of 3 April 2006 as amended, of the "Preliminary Regional Landscape Plan Document" and start-up of the SEA procedure.

- **Decision No 6998 of 05.08.2008,**
  Regulation (EC) No 1698/2005 – Umbria Rural Development Plan 2007-2013. Call for bids relating to means and criteria for granting the aid foreseen by Measure 311 – Action a) – Type 1 – Investments aimed at tourist accommodation and developing agri-tourism.
  - Article 8, Criteria for establishing the ranking system.

- **Decision No 7134 of 12.08.2008,**
  Amendments and additions to the public tendering procedure relating to means and criteria for granting the aid foreseen by the Umbria Rural Development Plan 2007-2013 Measures 112 – "Getting young farmers established", 121 – "Modernising Farms", and 123 – "Increasing the added value of agricultural and forestry products", approved by Decision No 4219 of 20 May 2008.
  - Articles 13-14, Rules for implementing the measure
  - Article 16, Defining specifications for the action
  - Article 17, Description of the action.

- **Regional Executive Decision No 1162 of 16.09.2008,**
  Umbria ERDF Regional Operational Plan 2007-2013 – Adoption of the Regional Implementation Tool.
  - Article 1.2 Programme Structure: strategy, objectives and levels of planning (axes, actions)
  - Article 2.3 Axis 3 – Energy efficiency and development of renewable sources
  - Article 2.4 Axis 4 – Accessibility and urban areas.

- **Regional Law No 17 of 18.11.2008,**
  Rules for the environmental sustainability of town planning and building operations.
  - Article 15, Energy saving and renewable energy use.

- **Regional Executive Decision No 1903 of 22.12.2008,**
  Approval of the Strategic Land-Use Plan for sustainable development in Umbria.

- **Decree No 3290 of 07.04.2009,**
  ERDF Regional Operational Plan 2007-2013. Axis 3. Action B3. "Support for the introduction of measures and investment aimed at energy efficiency". Approval of the call for bids for granting contributions to firms.

VALLE D'AOSTA

- **Regional Law No 304 of 05.07.1975,**
  Rules for using public water for hydroelectric purposes in Valle d'Aosta.

- **Regional Law No 19 of 04.09.2001,**
  Regional action to support tourism and commercial activities.

- **Councillor's Circular No 34 of 06.07.2001,**
  Regional Law No 11 of 6 April 1998. Town and spatial planning legislation for Valle d'Aosta.

- **Regional Law No 1 of 12.03.2002,**
  Identifying administrative duties for which the region is responsible, under Article 7(1) of Regional Law No 54 of 7 December 1998 (System of autonomous authorities in Valle d'Aosta), most recently amended by Article 15(1) of Regional Law No 15 of 16 August 2001, and measures relating to transferring administrative duties to local bodies.
  - Annex A, Administrative duties for which the region is responsible, under Article 7(1) of Regional Law No 54/1998.

- **Regional Law No 6 of 31.03.2003,**
  Regional action to develop industrial and craft enterprises.

- **Regional Executive Decision No 1518 of 22.04.2003,**
  Approval of the regional call for bids planned by the Executive Decree of 24 July 2002 from the Ministry for the Environment and Land, relating to the "Solar Thermal Programme". Spending commitment.

- **Regional Executive Decision No 2204 of 30.05.2003,**
  Approval of the regional call for bids planned by Article 2 of the Executive Decree of 24 July 2002 from the Ministry for the Environment and Land, relating to the "Photovoltaic Roofs Programme". Spending commitment.

- **Regional Law No 23 of 14.10.2005,**
  Provisions for rationalising and simplifying the authorisation procedures for constructing and operating plants fed by renewable sources for the production of energy and energy carriers.

- **Regional Law No 3 of 03.01.2006,**
  New measures relating to regional action to promote rational energy use.

- **Regional Executive Decision No 343 of 10.02.2006,**
  Approval under Article 3 of Regional Law No 23 of 14 October 2005 of the means for authorising the construction and operation of plants fed by renewable energy sources, relating to the work of the Services Conference.

- **Regional Law No 2 of 30.01.2007,**
  Measures relating to protection from air pollution and approval of the regional plan for improving and maintaining air quality for 2007-2015.
  - Article 6, Financial provisions.

- **Regional Law No 32 of 12.12.2007,**
  Provisions for forming the annual and multiannual budget for the autonomous Valle d'Aosta region (Finance Act for 2008-2010). Amendments to regional laws.
  - Article 50, Investment in farms
  - Article 51, Conservation of landscapes and traditional rural buildings.

- **Regional Law No 34 of 24.12.2007,**
  Maintenance of the regional legislative system. Amendments to regional laws and other provisions.
  - Article 29, Measures relating to plants fed by renewable sources for energy production. Amendment to Regional Law No 23 of 14 October 2005.

- **Regional Law No 21 of 18.04.2008,**
  Measures relating to the energy performance of buildings.

- Article 8, Technical report and checks
- Article 14, Plants fed by renewable energy sources.

- **Regional Law No 12 of 26.05.2009,**
  Provisions for fulfilling the Valle d'Aosta's obligations arising from Italy's membership of the European Communities. Implementation of Directives 2001/42/EC, relating to the environmental impact assessment of certain plans and programmes, and 85/337/EEC, relating to the environmental impact assessment of certain public and private projects. Measures for implementing Directive 2006/123/EC, relating to internal market services and amendments to regional laws to adapt to other Community obligations. Community Law 2009.

VENETO

- **Circular No 23 of 10.08.1990,**
  Regional Law No 28 of 23 April 1990. New rules for environmental protection. Amendments to Regional Law No 33 16 April 1985 "Rules for environmental protection". Explanatory rules.

- **Regional Law No 24 of 06.09.1991,**
  Rules for works relating to electricity lines and power plants up to 150 kV

- **Regional Executive Decision No 466 of 12.02.1997,**
  Use of the dry fraction of municipal solid waste as an alternative fuel for electricity production

- **Regional Executive Decision No 3977 of 11.11.1997,**
  Amendments to the means of operating waste disposal and recovery plants and clarification of the administrative procedures for compaction plants. Operational guidance for provinces.

- **Regional Law No 24 of 27.12.2000,**
  Amendments to Regional Law No 10 of 26 March 1999, relating to the environmental impact assessment, implementing the Prime Ministerial Decree of 3 September 1999.

- **Regional Law No 25 of 27.12.2000,**
  Rules for regional energy planning, incentives for energy saving and the development of renewable energy sources.

- **Regional Law No 11 of 13.04.2001,**
  Transfer of duties and administrative tasks to local autonomous authorities, implementing Legislative Decree No 112 of 31 March 1998.
  - Article 42, Duties of the region
  - Article 43, Duties of the municipalities
  - Article 44, Duties of the provinces.

- **Circular No 15 of 31.07.2001,**
  Directive for applying Article 89(7) of Regional Law No 11 of 13 April 2001. Delegation to the provinces of administrative duties relating to authorising the construction and operation of electric power lines with a voltage up to 150 kV.

- **Regional Executive Decision No 3295 of 30.11.2001,**
  Initiatives to encourage "pilot projects" in the renewable energy and energy saving sector aimed at reducing greenhouse gas emissions (Regional Law No 25/2000, Article 4). Approval of the ranking systems.

- **Regional Executive Decision No 3867 of 20.12.2002,**
  Initiatives to encourage "pilot projects" for 2002 in the renewable energy and energy saving sector aimed (Chapter 22106 of the 2002 provisional budget). Article 4 of Regional Law No 25/2000. Action in areas not covered by Objective 2.

- **Regional Executive Decision No 609 of 10.03.2003,**
  Single Planning Document (DOCUP) Objective 2, 2000-2006. Measure "Economic stimulation measures", second part. Approval of the call for submission of applications.

- **Regional Executive Decision No 721 of 21.03.2003,**
  Regional Law No 11 of 13 April 2001, Article 83a. Water use of hydroelectric purposes. Means and operational guidance for handling Commencement Notices.

- **Regional Law No 11 of 23.04.2004,**
  Rules for land management.

- **Regional Council Decision No 57 of 11.11.2004,**
  Regional plan for protecting and improving the atmosphere. (Proposed administrative decision No 150).

- **Regional Executive Decision No 7 of 28.01.2005,**
  Regional Energy Plan.

- **Regional Law No 7 of 25.02.2005,**
  Measures of legislative reorganisation and simplification – connected to the 2004 Finance Act relating to mines, mineral and thermal waters, employment, the handicraft industry, trade and Venetians abroad.
  - Article 15, Amendment to Regional Law No 10 of 26 March 1999, "Framework for the environmental impact assessment content and procedures" as amended.

- **Regional Executive Decision No 2114 of 02.08.2005,**
  Regional Law No 8 of 4 April 2003. Rules for manufacturing districts in Veneto and local industrial policy action. Article 10, Approval of the call for bids for contributions.

- **Regional Law No 26 of 30.06.2006,**
  Ratification of the agreement between Veneto and the Autonomous Province of Trento to fulfil administrative duties relating to permits for major diversions of water for hydroelectric purposes, of interest the relative territories.

- **Regional Law No 4 of 09.03.2007,**
  Regional initiatives and action in favour of sustainable buildings.

- **Regional Law No 5 of 09.03.2007,**
  Regional Development Plan (PRS).

- **Regional Law No 1 of 27.02.2008,**
  Regional Finance Act for the 2008 financial year
  - Article 13, Contribution to energy information kiosks created in the region.
  - Article 14, Establishment of a single regional fund to support RES production.

- **Regional Executive Decision No 2204 of 08.08.2008,**
  Initial organisation measures for the authorisation, installation and operation of electricity production plants using renewable sources.

- **Regional Executive Decision No 4070 of 30.12.2008,**
  Legislative Decree No 387/2003 – Royal Decree No 1775/1933. Energy production plants fed by renewable sources – Hydroelectric plants. Regional Executive Decision No 2204/2008 – Procedural measures.

- **Circular No 4 of 29.09.2009,**
  Regional Law No 14 of 8 July 2009 "Regional action to support the building sector and

encourage the use of sustainable building, and amendments to Regional Law No 16 of 12 July 2007, relating to architectural barriers". Explanatory notes.

- **Regional Law No 5 of 13.03.2009,**
  Amendments to Regional Law No 11 of 13 April 2001 "Transfer of duties and administrative tasks to local autonomous authorities, implementing Legislative Decree No 112 of 31 March 1998" relating to authorising gas pipelines with regional significance.

- **Regional Executive Decision No 1105 of 28.04.2009,**
  Legislative Decree No 59 of 18 February 2005 - Regional Law No 26 of 16 August 2007. Environmental authorisation for preventing and reducing pollution. Approval of guidelines for the assessment of Integrated Environmental Authorisation applications for rearing livestock and the Monitoring and Control Plan.

- **Regional Executive Decision No 1192 of 05.05.2009,**
  Update to the procedures for which the region is responsible for authorising the installation and operation of electricity production plants fed by renewable sources (Article 12, Legislative Decree No 387/2003).

- **Regional Executive Decision No 1391 of 19.05.2009,**
  Legislative Decree No 387/2003, Article 12 – Regional Executive Decisions No 2204/2008 and 1192/2009. Procedural measures for issuing authorisation for the construction and operation of energy production plants fed by biomass and biogas from agriculture, forestry and livestock, within the limits set by paragraph 14a and 14e of Article 269 of Legislative Decree No 152/2006.

- **Regional Executive Decision No 1609 of 09.06.2009,**
  Legislative Decree No 387/2003 – Royal Decree 1775/1933. Energy production plants fed by renewable sources – Hydroelectric plants. Regional Executive Decision No 4070/2008, Substitute procedural measures.

- **Regional Executive Decision No 1610 of 09.06.2009,**
  Article 83a of Regional Law No 11/2001. Electricity production plants on existing diversions. Clarification and operational technical guidance.

- **Regional Executive Decision No 2373 of 04.08.2009,**
  Procedural measures for issuing authorisation to construct and operate electricity production plants, wind power and photovoltaic systems (Article 12 of Legislative Decree No 387 of 29 December 2003).

- **Regional Law No 14 of 08.07.2009,**
  Regional action to support the building sector and encourage the use of sustainable building, and amendments to Regional Law No 16 of 12 July 2007, relating to architectural barriers.

- **Regional Executive Decision No 2834 of 29.09.2009,**
  Exclusion from the EIA of plants which fall below certain size thresholds.

Annex 4.2.1.B

Article 12 of Legislative Decree No 387 of 29 December 2003

12. Harmonisation and simplification of authorisation procedures.

1. Works to create plants fed by renewable sources, as well as the works connected to, and infrastructure essential for, the construction and operation of these plants, authorised under paragraph 3, are in the public interest, necessary and urgent.

2. There is no prejudice to the Ministry of the Interior's procedures in force for activities subject to fire prevention controls.

3. The construction and operation of electricity production plants fed by renewable sources, operations to modify, expand, partially or completely restructure or reactivate these plants, as defined by the current legislation, as well as the works connected to, and infrastructure essential for, the construction and operation of these plants, are subject to a single authorisation. This authorisation is issued by the region or by the provinces to which the region has delegated this task, in respect of the current legislation on protecting the environment, landscape and historical and artistic heritage, which, where necessary, represents a variation to the town planning instrument. To this end, the Services Conference is convened by the region within thirty days of receipt of the authorisation application. The payment of the annual fee remains necessary, in accordance with Article 63(3,4) of the legislative act concerning taxes on production and consumption and related penal and administrative sanctions, referred to in Legislative Decree No 504 of 26 October 1995 as amended. The authorisation for offshore plants is issued by the Ministry for Transport, after hearing the opinions of the Ministry for Economic Development and the Ministry for the Environment, Land and Sea, through the means explained in paragraph 4 and subject to the competent maritime authority granting permission to use the maritime property concerned.

4. The authorisation cited in paragraph 3 is issued at the end of a single procedure in which all the authorities concerned participate, carried out in accordance with the principles of simplification and the means established by Law No 241/1990 as amended. The issued authorisation represents the right to construct and operate the plant in accordance with the approved plan and must include the operator's obligation to restore the site once the plant has been decommissioned or, for hydroelectric plants, the obligation to implement environmental reintegration and recovery measures. The time limit for completion of the procedure described in this paragraph cannot in any case exceed one hundred and eighty days.

4a. For the creation of plants fed by biomass and photovoltaic power, the public interest and consequent procedures for the connected works still apply, but the applicant must also prove during the procedure, and in any case before the authorisation is issued, that the land on which the plant is to be constructed is available.

5. The procedures explained in paragraphs 3 and 4 do not apply to the installation of renewable source plants under Article 2(1)b and 2(1)c, for which no authorisation is foreseen. When the generation capacity of these plants falls below the thresholds given in Table A annexed to this decree, in reference to the specific source used, the plants are subject to the commencement notice rules in accordance with Articles 22 and 23 of the Act under Presidential Decree No 380 of 6 June 2001 as amended. A decree by the Minister for Economic Development, in consultation with the Ministry for the Environment, Land and Sea and in agreement with the Unified Conference in accordance with Article 8 of Legislative Decree No 281 of 28 August 1997, could define higher generation capacity thresholds and additional installation site characteristics to which the same commencement notice requirement would apply.

6. The authorisation cannot be subject to, nor foresee, any compensation to be paid to the regions or provinces.

7. The electricity production plants under Article 2(1)b and 2(1)c may also be located in areas classified as agricultural land by the current land use plans. When choosing a location, operators must consider the measures in place to support the agricultural sector, with particular reference to highlighting the value of

local agricultural food production traditions, and protecting biodiversity, cultural heritage and the rural landscape in accordance with Articles 7 and 8 of Law No 57/2001 and Article 14 of Legislative Decree 228/2001.

9. The provisions of the previous paragraphs apply even in the absence of the division described by Article 10(1, 2), as well as the provisions of paragraph 10.

10. At the Unified Conference, following a proposal by the Ministry for Economic Development, in consultation with the Ministry for the Environment, Land and Sea and the Ministry for Cultural Heritage and Activities, the guidelines for carrying out the procedure described in paragraph 3 are approved. In particular, these guidelines are aimed at ensuring the correct insertion of plants into the landscape, with particular regard to wind farms. When implementing these guidelines, the regions may indicate areas and sites which are unsuitable for specific types of plant. The regions adapt their respective rules within ninety days of the entry into force of the guidelines. In the event of failure to adapt the rules within this deadline the national guidelines will apply.

Table A

Source	Threshold
1 Wind	60 kW
2 Solar photovoltaic	20 kW
3 Hydro	100 kW
4 Biomass	200 kW
5 Landfill gas, residual gases from purification processes and biogas	250 kW

Annex 4.2.2.A

Technical Specifications for Photovoltaic Systems

Annex 1 to the Third "*Conto Energia*" document for the Feed-In Tariff

Photovoltaic modules must be tested and verified by laboratories with UNI CEI EN ISO/IEC 17025 accreditation for using the specific tests required to verify the modules.

These laboratories must be accredited by Certification Bodies belonging to the EA (European Accreditation Agreement) or which have established mutual recognition agreements with the EA or under the ILAC scheme (International Laboratory Accreditation Cooperation).

Photovoltaic systems must be created using components which comply with the requirements given in the CEI Guide 82-25.

Photovoltaic systems and related components, of types covered by this decree, must, where relevant, meet the requirements contained in the following technical standards, including any variations, updates or extensions subsequently issued by the named standardisation bodies:

[CEI = Italian Electrotechnical Committee].

CEI 64-8: User electricity systems with a nominal voltage no higher than 1000 V for alternating current and 1500 V for direct current;

CEI 0-16: Reference technical rules for the connection of active and passive users to the HV and MV networks of electricity distributors.

CEI 11-20: Electricity production systems and continuous groups connected to category 1 and 2 networks;

CEI EN 50438 (CT 311-1): Requirements for the connection of micro-generators in parallel with public low-voltage distribution networks

CEI 82-25: Guide to the creation of photovoltaic generation systems connected to medium and low voltage electricity networks.

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

UNI 8477: Solar energy – Calculation of energy gains for building applications – Evaluation of radiant received energy;

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 devices;

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

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

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

CEI EN 62108 (82-30): Concentrator photovoltaic (CPV) modules and assemblies. Design qualification and type approval;

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

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

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

CEI EN 61000-3-2 (CEI 110-31): Electromagnetic compatibility (EMC). Part 3: Limits. Section 2: Limits for harmonic current emissions (equipment input current • 16 A per phase);

CEI EN 60555-1 (CEI 77-2): Disturbances in supply systems caused by household appliances and similar electrical equipment. Part 1: Glossary of terms;

CEI EN 60439 (CEI 17-13): Low-voltage switchgear and controlgear assemblies, series made up of:

CEI EN 60439-1 (CEI 17-13/1): Type-tested and partially type-tested assemblies;

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

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 to 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 arrestors for AC systems;
CEI 20-19: Rubber-insulated cables with nominal voltage no higher than 450/750 V;
CEI 20-20: PVC-insulated cables with nominal voltage no higher than 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: Mean values of number of lighting strikes per year and per square kilometre;
CEI 0-2: Guide to defining the planning documentation for electrical systems;
CEI 0-3: Guide to completing the declaration of conformity and related annexed for Law No 46/1990;
CEI 13-4: Electrical energy measuring systems – Composition, accuracy and verification;
CEI EN 62053-21 (CEI 13-43): Electricity metering equipment (AC). Particular requirements. Part 21: Static meters for active energy (classes 1 and 2);
CEI EN 50470-1 (CEI 13-52): Electricity metering equipment (AC). Part 1: General requirements, tests and test conditions. Metering equipment (class indexes A, B and C);
CEI EN 50470-3 (CEI 13-54): Electricity metering equipment (AC). Particular requirements. Part 3: Static meters for active energy (class indexes A, B and C);
CEI EN 62053-23 (CEI 13-45): Electricity metering equipment (AC). Particular requirements. Part 23: Static meters for reactive energy (classes 2 and 3);

By way of derogation from the certifications required above, for photovoltaic systems under Article 2(1)f, the use of photovoltaic modules not certified in accordance with standards CEI EN 61215 (for crystalline silicon modules) or CEI EN 61646 (for thin film modules) are permitted, but only in the event that certified products allowing the type of integration designed for the specific plant are not commercially available. In such cases the constructor must provide a declaration that the product is designed and manufactured in such a way as to pass the tests required by standard CEI EN 61215 or CEI EN 61646. The declaration must be supported by certificates issued by an accredited laboratory for similar modules. This laboratory must be accredited under the EA or must have established mutual recognition agreements with the EA or under the ILAC scheme.

By way of derogation from the certifications required above, until 31 December 2011, for photovoltaic systems under Article 2(1)r, concentrated photovoltaic modules and assemblies of modules not certified under standard CEI EN 62108 are permitted, but only if the certification process has started and the modules/assemblies have passed the basic tests contained in CEI Guide 82-25 in order to ensure compliance with the guide's minimum technical requirements for safety and product quality. In such cases, the constructor must provide a declaration that the product is in the process of being certified under CEI EN 62108. The declaration must be supported by certificates issued by an accredited laboratory proving that the CEI Guide 82-25 minimum technical requirements for safety and product quality have been met. This laboratory must be accredited under the EA or must have established mutual recognition agreements with the EA or under the ILAC scheme.

The provisions of AEEG Decision 99/08 (Integrated Text on Active Connections), as amended, apply to the connection of photovoltaic systems to the electricity network. The technical documentation issued by network operators also applies, insofar as it is compatible with the above-mentioned standards.

Annex 4.2.2.B

Technical Specifications for the Energy Efficiency Credits

Ministerial Decree of 20 July 2004.

Article 6 “Promotion of products, equipment and system components as part of the initiatives”.

1. The products, equipment and system components used for the initiatives covered by this decree, or whose use will in any case be promoted due to their capacity to fulfil one or more significant energy use functions, must have the characteristics listed below, certified according to the means specified for each particular case:
a) heat generators under Presidential Decree No 660 of 15 November 1996 must have a 4-star energy efficiency rating and be certified in accordance with the provisions of the same decree;
b) heat generators fed by plant biomass with a nominal power of less then 300 kW must fall within efficiency class 3 under standard EN 303-5; heat generators fed by plant biomass with a nominal power of more than 300 kW must have a efficiency of at least 82%; heat generators fed by plant biomass must have emission levels compliant with the limits set by Annex 3 of the Prime Ministerial Decree of 8 March 2002 as amended; the biomass types which can be used are those permitted by Annex 3 of the same Prime Ministerial Decree of 8 March 2002 as amended;
c) domestic appliances under Presidential Decree No 107 of 9 March 1998 and subsequent application decrees must be labelled as Class A and certified in accordance with the provisions of the same decrees;
d) all products, equipment or system components which fall with the scope of the Ministry for Industry and Trade of 2 April 1998 defining “Means of certifying the characteristics and energy performance of buildings and building systems”, to which the above points do not apply, must be certified in accordance with this decree;
e) the characteristics and energy performance of all other products, equipment or system components, to which the above points do not apply, must be certified by a product certification body accredited in one of the European Union Member States, or identified through testing at a university laboratory listed on the laboratory register cited by Article 4 of Law No 46 of 17 February 1982, applying one of the following procedures foreseen by legislation (listed in order of priority):
1) obligatory technical rules which must be observed in a European Union Member State;
2) European technical standards approved by European standardisation bodies, CEN, CENELEC and ETSI;
3) national technical standards published by standardisation bodies of the European Union Member States listed in the Annex to Council Directive 83/189/EC of 28 March 1983 as amended;
4) technical rules applied by law in countries outside the European Union;
5) technical standards published by international standardisation bodies or standardisation bodies of countries outside the European Union.

Annex 4.2.2.C

Technical Specifications for Heat Pumps

Annex 1 to the Ministerial Decree of 19 February 2007, amended by the Ministerial Decree of 26 October 2007 and coordinated with the Ministerial Decree of 7 April 2008 and with the Ministerial Decree of 6 August 2009, implementing the 2008 Finance Act.

HEAT PUMP PERFORMANCES

1. Minimum coefficient of performance (COP) values for electric heat pumps

Type of heat pump External/internal environment	***External environment (°C)***	***Internal environment (°C)***	***COP***	***COP***
			2008-2009	***2010***
air-air	*Dry bulb input: 7* *Wet bulb input: 6*	*Dry bulb input: 20* *Wet bulb input: 15*	*3.8*	*3.9*
air-water, thermal potential useful for heating • 35 kW	*Dry bulb input: 7* *Wet bulb input: 6*	*Input temperature: 30* *Output temperature: 35*	*3.9*	*4.1*
air-water, thermal potential useful for heating > 35 kW	*Dry bulb input: 7* *Wet bulb input: 6*	*Input temperature: 30* *Output temperature: 35*	*3.7*	*3.8*
brine-air	*Input temperature: 0*	*Dry bulb input: 20* *Wet bulb input: 15*	*4.0*	*4.3*
brine- water	*Input temperature: 0*	*Input temperature: 30* *Output temperature: 35*	*4.0*	*4.3*
water-air	*Input temperature: 15* *Output temperature: 12*	*Dry bulb input: 20* *Wet bulb input: 15*	*4.3*	*4.7*
water-water	*Input temperature: 10*	*Input temperature: 30* *Output temperature: 35*	*4.4*	*5.1*

Performance must be measured in accordance with standard UNI EN 14511:2004. The heat pump must be working at full load, under the conditions indicated in the table above, when the tests are carried out.

2. Minimum energy efficiency rating (EER) values for electric heat pumps

Type of heat pump External/internal environment	***External environment (°C)***	***Internal environment (°C)***	***EER***	***EER***
			2008-2009	***2010***
air-air	*Dry bulb input: 35* *Wet bulb input: 24*	*Dry bulb input: 27* *Wet bulb input: 19*	*3.3*	*3.4*
air-water, thermal potential useful for heating • 35 kW	*Dry bulb input: 35* *Wet bulb input: 24*	*Input temperature: 23* *Output temperature: 18*	*3.4*	*3.8*
air-water, thermal potential useful for heating > 35 kW	*Dry bulb input: 35* *Wet bulb input: 24*	*Input temperature: 23* *Output temperature: 18*	*3.1*	*3.2*
brine-air	*Input temperature: 30* *Output temperature: 35*	*Dry bulb input: 27* *Wet bulb input: 19*	*4.2*	*4.4*
brine-water	*Input temperature: 30* *Output temperature: 35*	*Input temperature: 23* *Output temperature: 18*	*4.2*	*4.4*
water-air	*Input temperature: 30* *Output temperature: 35*	*Dry bulb input: 27* *Wet bulb input: 19*	*4.2*	*4.4*
water-water	*Input temperature: 30* *Output temperature: 35*	*Input temperature: 23* *Output temperature: 18*	*4.6*	*5.1*

Performance must be measured in accordance with standard UNI EN 14511:2004. The heat pump must be working at full load, under the conditions indicated in the table above, when the tests are carried out.

3. Minimum coefficient of performance (COP) values for gas heat pumps

Type of heat pump External/internal environment	***External environment (°C)***	***Internal environment (°C)***	***COP***	***COP***
			2008-2009	***2010***
air-air	*Dry bulb input: 7 Wet bulb input: 6*	*Dry bulb input: 20*	*1.42*	*1.46*
air-water	*Dry bulb input: 7 Wet bulb input: 6*	*Input temperature: 30(*)*	*1.34*	*1.38*
brine-air	*Input temperature: 0*	*Dry bulb input: 20*	*1.55*	*1.59*
brine-water	*Input temperature: 0*	*Input temperature: 30(*)*	*1.44*	*1.47*
water-air	*Input temperature: 10*	*Dry bulb input: 20*	*1.57*	*1.60*
water-water	*Input temperature: 10*	*Input temperature: 30(*)*	*1.52*	*1.56*
(*) • t: absorption heat pumps 30-40°C – endothermic engine heat pumps 30-35°C				

Performance must be measured in accordance with standards:

EN 12309-2:2000 for gas absorption heat pumps (test values on the LHV)

EN 14511:2004 for endothermic engine heat pumps

The heat pump must be working at full load, under the conditions indicated in the table above, when the tests are carried out.

As there is no specific standard for endothermic gas heat pumps, the testing is carried out according to standard EN 14511, using an electrical energy transformation ratio of 0.4.

4. The minimum energy efficiency rating (EER) value for all types of gas heat pump is 0.6.

Annex 4.2.2.D

Technical Specifications for Biomass Heat Generators

Annex 9
to the fifth part of Legislative Decree No 152 of 3 April 2006,
as amended

Civil Heating Plants

Part 3
Emission Values

Section 2

Limit values for plants using biomass.

1. Heating plants which use biomass as listed in Annex 10 must comply with the following emission limit values, which refer to one hour of plant operation under the most difficult operating conditions, excluding start-up and any periods of suspended operation or breakdown. The reference oxygen content is equal to 11% by volume of the anhydrous gas input. The limit values refer to the dry gas output recorded under normal conditions.

Nominal heating capacity of the plant (MW)	[1] > 0.15 – < 1
total dust	100 mg/Nm^3
total organic carbon (TOC)	-
carbon monoxide (CO)	350 mg/Nm^3
nitrogen oxides (expressed as NO_2)	500 mg/Nm^3
sulphur oxides (expressed as SO_2)	200 mg/Nm_3

[1] A total dust emission value limit of 200 mg/ Nm^3 applies to plants with a nominal heating capacity equal to or above the threshold value and no higher than 0.15 MW.

Annex 4.2.4

Initiatives under the SEE campaign

Launched by the European Commission in 2005, the "Sustainable Energy Campaign" (SEE) aims to promote more intelligent energy use and production, especially at local level.

The Italian Ministry for the Environment, Land and Sea is an SEE Campaign Associate (www.campagnaSEEitalia.it) and coordinates the campaign in Italy. The campaign's objectives are:
- to establish partnerships in the following five areas: Sustainable energy communities; Market transformation; Promotion, publicity and training; Demonstration projects; Cooperation projects;
- to spread "best practice";
- to encourage decision makers (in the public and private sectors, research, politics and media) to adopt new ways of working, communicating and training.

All publicity initiatives are agreed on a case-by-case basis and implemented through cooperation between the Ministry for the Environment, Land and Sea and SEE Campaign Partners across all the partnership activities.

To date the SEE campaign includes over 130 active partnerships in Italy, and each of these foresees that the results achieved will be distributed and publicised.
Just a few of the informative initiatives set up under the SEE campaign are listed below:

- Abruzzo Region
  Project: "Energiochi" annual competition ["energy games"]
  14 November 2009: Notice of the competition, aimed at all infant, primary and secondary schools in Abruzzo.

- Piedmont Region
  Project: Energy Etats-Généraux
  Aims to get the Piedmontese community involved in strategic action and encourage all stakeholders within Piedmont to act.

- Italian Association for the Council of European Municipalities and Regions (AICCRE – Rome)
  Project: Energy from renewable sources for local communities
  This partnership was set up by the AICCRE (Italian section of the Council of European Municipalities and Regions) in cooperation with S.I.I. Consulting. The project plans to publish a series of guides to all technologies for the use of renewable sources.

- ANCI IDEALI – European Foundation of Cities
  Project: Give new energy to Italian cities and citizens
  Promotes membership of the Covenant of Mayors amongst Italian cities, to encourage local action to reduce emissions and to share information of the most successful experiments carried out in Italian and European cities.

- Perugia Energy and Environment Agency
  Project 1: "Umbria and its municipalities for efficiency and energy saving in public buildings". Information, publicity and education campaign to support renewable energy sources, energy saving and efficient energy use in the municipalities of Perugia, Terni, Foligno, Spoleto, Orvieto and Città di Castello.

  Project 2: "European Young Energy Manager Championship"
  This is a 30-month European project involving a consortium of 16 partners (educational establishments, students aged between 15 and 18, local energy agencies and others) from 9 European countries: Italy, Sweden, Greece, Portugal, Slovenia, Romania, Bulgaria, Spain and Poland. This competition will begin once the students and teachers have completed training courses run by local agency technicians.

  Project 3: "Energia (d)e i giovani" ["Energy of / and young people"]
  Scheme run in secondary schools in Perugia during the week 9-13 February on the occasion of European

Sustainable Energy Week (EUSEW 2009).

- CasaClima Agency (Bolzano) ["ClimateHouse"]
  Project: CasaClima Agency.
  The "ice cube challenge" in various Italian cities: awarding of prizes for the best "Climate Houses" in the categories of housing, work, tourism, energy plus and recovery.

- Tuscia University (Viterbo)
  Project: EUSEW 2009.
  Renewable energy and sustainable land development.

- Explora – Children's Museum (Rome)
  Project: Sustainable Energy and Explora.
  Explora's informative and educational programme on sustainable energy, with workshops and activities offered to school visits during the week and families at the weekend. The planned activities include:
  - 8 dedicated "sustainable energy days" during 2009
  - mobile exhibition on renewable energy: "Energy Island – Discover renewable energy" 20/10/2009
  - schools programme for the 2009/2010 school year with workshops on solar power, recycling, water, climate change, etc.

- Legambiente Association
  Project: EcosportelloEnergia [EnergyEcokiosk]
  From February 2007 onwards, included within the joint strategy of the European Commission and the Ministry for the Environment, Land and Sea to promote the SEE Campaign across Italy. 2009 video "Energy lives with style".

- Ecoazioni - Gubbio (Province of Perugia) ["Eco-actions"]
  Project: Renewable Energy Atlas
  November - December 2009: Presentation of the publication "Renewable Energy Atlas of Alta Umbria" produced by the Province of Perugia.

- DEEA (Diffusione EcoEnergie Ambientali) [Spread of Environmental Eco-Energy]
  Project: Implementation of renewable energy source through a new production and funding concept. March 2009 - December 2012: DEEA Campaign.

- National Town Planning Institute (INU)
  Project: "Sustainable Energy in Cities" competition (2010: third edition) aimed at promoting sustainable urban and building development.

- Art For Pro Association
  Project: EcoArt Project, a scheme to publicise and raise awareness of issues relating to the environment and energy through contemporary art and design events involving international artists, designers, curators, art critics, publishers, gallery directors, institutions and organisations, as well as firms and professionals working in the design and marketing sectors.

- Fondazione Ambiente Pulito ["Clean Environment Foundation"]
  Project: Environmental Ethics Guide 2009

- Intesa Sanpaolo Banking Group
  Project: various initiatives aimed at raising awareness of environmental and energy sustainability amongst the group's employees and firms.

- Italian Association of Energy Economists (AIEE)
  Project: various initiatives to promote and raise awareness of sustainable energy.

- Veneto Regional Environmental Prevention and Protection Agency (ARPAV)
  Project: raising awareness through the "Energy Saving in Offices" publication.

- Italian Meteorological Society
  Project: raising awareness through the "Climate and Energy: Understanding for Action" publication.

- ProMedia
  Project: Energeo Magazine, a periodical dedicated to sustainable communities, energy districts and the covenant of mayors.

- BIM Brenta [Consortium of municipalities in the Brenta river catchment basin]
  Project: "A full load of energy", aimed at increasing awareness of and interest in renewable energy and energy saving amongst the general population, associations and the 42 municipal authorities within the BIM Brenta area, and encouraging the completion of certain concrete actions.

Annex 4.3

European Community Support Schemes: Summary of the Interregional Operational Plan for Renewable Energy and Energy Saving

The Interregional Operational Plan for "*Renewable Energy and Energy Saving*" falls within the National Strategic Framework (NSF) for the Community and national cohesion policy programme cycle for the period 2007-2013.

The overall aim of the Plan is to increase the use of the natural and socio-economic potential of the Convergence region, an aim linked to the increase in renewable energy production and energy saving. The Plan's specific objectives relate to energy production from renewable sources and the promotion of energy efficiency.

Achievement indicators have been identified for each objective of the Plan, including:

Action	Indicator	2015 Target
1.1	Local biomass capacity installed	200 MW
1.3	Photovoltaic capacity installed	10 MW
1.4	High-temperature geothermal capacity installed	35 MW
1.5	RES capacity installed in the smaller islands and protected natural areas	30 MW
2.4 - 2.5	District heating network created	120 km

The Operational Plan will be funded by the European Union Structural Funds (SF) and the Italian Underused Areas Fund (FAS), and applies to the southern Italian regions (Basilicata, Molise, Abruzzo, Sardinia, and the Convergence Target Regions, i.e. Sicily, Calabria, Apulia, Campania).

The Operation Plan is structured around three priority axes:

- *Axis 1: Energy production from renewable sources*
- *Axis 2: Energy efficiency and system optimisation*
- *Axis 3: Technical assistance and supporting actions*

Each priority axis is split into several actions. The table below shows the plan's structure and examples of the types of operation, implementation methods and beneficiaries.

Axis 1: Energy production from renewable sources			
Action	Type of operation	Implementation methods	Beneficiaries
1.1 *Activation of supply chains which integrate energy objectives and objectives relating to environmental protection and land development*	**Aid schemes** and services	• Contractual procedures • Public tendering procedures	• Individual SMEs and groups of SMEs • Research bodies

1.2 *Support for entrepreneurship in research in and application of innovative technology in the renewable energy source sector*	**Aid schemes**	• Contractual procedures • Public tendering procedures	• Individual SMEs and groups of SMEs
1.3 *Support for energy production from renewable sources within schemes to improve the energy efficiency of publicly-owned buildings and energy uses and those for public use*	Public works and infrastructure	• Contractual procedures • Public tendering procedures	• Public authorities • Local health authorities
1.4 *Experimental operations using high-temperature geothermal energy*	**Aid schemes** and services	• Contractual procedures • Public tendering procedures	• Public bodies • SMEs • Large firms
1.5 *Production and distribution of small plants fed by renewable energy, and the related networks and interconnections, in protected natural areas and the smaller islands, in line with the participatory approach of the sustainable communities*	Infrastructure and services	• Contractual procedures • Public tendering procedures	• Public authorities

Axis 2: Energy efficiency and system optimisation			
Action	Type of operation	Implementation methods	Beneficiaries
2.1 *Support for entrepreneurship in energy saving and particularly relating to the creation of firms and networks*	**Aid schemes**	• Public tendering procedures	• SMEs and micro enterprises
2.2 *Improvement of the energy efficiency of publicly-owned buildings and energy uses and those for public use*	Infrastructure and services	• Contractual procedures • Public tendering procedures	• Public authorities • Government offices • Airport operators • Water resource management
2.3 *Promotion and increase of energy efficiency in protected natural areas and the smaller islands, and action to develop the local networks and sustainable communities*	Infrastructure and services	• Contractual procedures • Public tendering procedures	• Public authorities
2.4 *Expansion and adaptation of transport networks in order to increase the use of renewable sources and small and micro generation*	Infrastructure and services	• Contractual procedures • Public tendering procedures	• Public authorities • Electricity transport sector operators
2.5 *Operations on heat distribution networks, particularly those using cogeneration and for district heating and cooling*	**Aid schemes** and infrastructure	• Contractual procedures • Public tendering procedures	• Public authorities • Firms
2.6 *Promotion, awareness raising and training*	Training and services	• Public tendering procedures	• Public authorities • Firms

Axis 3: Technical assistance and supporting actions			
Action	Type of operation	Implementation methods	Beneficiaries
3.1 *Studies to assess the technically and financially viable potential which can be used for energy production from renewable sources and energy efficiency, and the related effects in terms of the environment and development*	Services	• Contractual procedures • Public tendering procedures	• Firms
3.2 *Technical assistance*	Services	• Contractual procedures • Public tendering procedures	• Public authorities • Firms
3.3 *Assessment*	Services	• Public tendering procedures	• Public authorities • Firms • Individual experts
3.4 *Communication and publicity*	Services	• Public tendering procedures	• Public authorities • Firms • Individual experts

The Plan is managed by the region of Apulia, which has also identified three intermediaries for implementing the various actions: 1. the Energy Directorate of the Ministry for Economic Development; 2. the Incentivisation Directorate of the Ministry for Economic Development; 3. the Environmental Research and Development Directorate of the Ministry for the Environment, Land and Sea.

Only actions 1.1, 1.2, 1.4, 2.1 and 2.5 (highlighted in yellow in the table above) are implemented through aid schemes, so only these measures will be taken into consideration when compiling sections 4.3, 4.4 and 4.5 of the National Renewable Energy Action Plan.

Annex 4.6

Some studies of interest on green energy

- *"Biomass Energy Report"* (2010), written by the Energy & Strategy Group of Milan Polytechnic. The report describes the economic potential of the biomass and biofuels business within Italian industry, providing data on technology, legislation, and the market and supply chain for solid biomass, biogas, MSW and biofuels.

- *"Census of the energy potential of biomass, investigation method, biomass atlas using Web-GIS"*, *"Estimated potential of biogas from waste biomass from Italy's livestock sector"* compiled by the ENEA as part of its research on the electricity system. Furthermore, the following reports by various Italian universities are works of interest cited in the study: "*Survey of energy crop productivity in Italy and market analysis"* (University of Bologna); "*Indications of the relationship between agricultural production and the associated residual biomass, analysis of the residual biomass market"* (University of Naples, Tuscia University, University of Florence, University of Perugia).

- *"ITABIA Report 2008 – Green energy objectives in Italy: key elements for the 2020 targets"*, written by the Italian Biomass Association in 2008, as instructed by the Ministry for the Environment, Land and Sea.
  This study assessed: auto-produced and auto-consumed biomass outside the commercial circuits for domestic heating; development trends in specific sectors; reconstruction of the fuel supply chain; impact analysis.

- *"The Agro-energy firm – Role and prospects for the 2 times 20 scenario for 2020"*, written as part of the International Agriculture and Foodstuffs Forum organised by the Coldiretti association. This study analysed the various agro-energy supply chains (solid biofuel, biogas, pure vegetable oil, biodiesel, bioethanol) and assessment the sustainability, possible role and potential of each.

- *"Preparatory document for drafting the National plan for agri-forestry biofuels and biomass for energy purposes"*, written in 2007 by the Biomass Research Centre (CRB) at the University of Perugia as instructed by the Ministry for Agriculture, Food and Forestry (MIPAAF).
  This study assessed: the current use of agro-forestry biomass, the current availability and potential of agri-forestry biomass, scenarios for reconverting the agricultural sector, the possibility of establishing agro-energy districts.

- *"Status and prospects for using biomass for electricity production"*, written in 2004 by CESI Ricerca.
  This study estimated the amount of biomass which could potentially be used as fuel for electricity production, either directly or through conversion into liquid fuel.