

GME's Environmental Markets

Market Instruments for Environmental Protection

EMISSIONS TRADING MARKET
ENERGY EFFICIENCY CERTIFICATES MARKET
GREEN CERTIFICATES MARKET





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September 2005

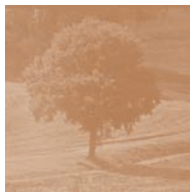
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Introduction

GME (Gestore del Mercato Elettrico S.p.A.) is directly involved in the promotion of sustainable development by organising and managing markets that support environmental policies, the so-called “environmental markets”. Indeed, in addition to managing the power exchange, GME organises and manages venues for the trading of Green Certificates (issued to electricity producers and certifying that the underlying electricity has been generated by renewable-energy power plants) and of Energy Efficiency Certificates (the so-called “White Certificates, certifying the reduction of consumption achieved through energy savings and energy efficiency enhancements). **GME will also organise and manage the Emissions Trading Market, the first Italian platform for the trading of greenhouse gas emission rights, which will contribute to the development of the European market of emission allowances, as provided by Directive 2003/87/EC with a view to meeting the Kyoto Protocol emission reduction targets.**



GME (Gestore del Mercato Elettrico S.p.A.)

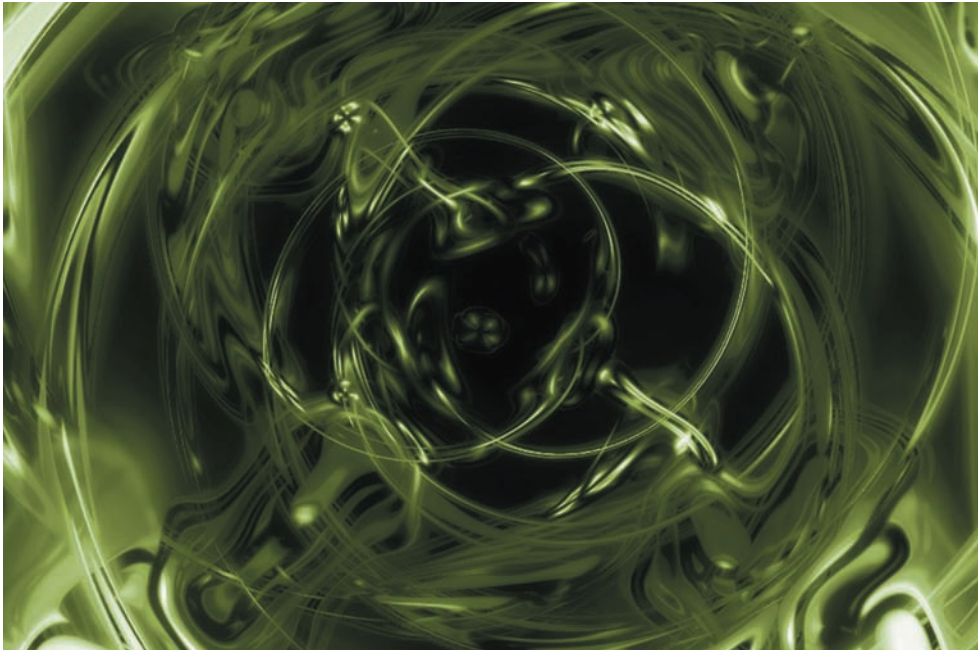
GME (Gestore del Mercato Elettrico S.p.A) was established in compliance with art. 5 of the electricity liberalisation decree (Legislative Decree 79/99). GME organises and manages the electricity market (commonly referred to as the "Italian Power Exchange" or IPEX) under criteria of impartiality, transparency, objectivity and competitiveness between producers. The electricity market enables producers, consumers and wholesalers to trade electricity. In practice, the power exchange is an electronic marketplace where demand and supply meet under market mechanisms. The power exchange is not only an electronic market, but also an actual physical market, where schedules of electricity injections (generation) into and withdrawals (load) from the power grid are defined.

The power exchange represents a fundamental instrument for creating a competitive electricity market in Italy and it was designed with the purpose of favouring the formation of efficient clearing prices.

The operation of the power exchange generates a number of advantages:

1. it improves the price-setting mechanism, reflecting the conditions of supply and demand;
2. it fosters competition between market participants and favours the coverage of demand at the most advantageous prices available in the market;
3. it operates transparently, making volumes and prices constantly visible to all market participants;
4. it provides more flexibility, allowing electricity operators to make additional purchases in order to cover variations in their electricity requirements;
5. it contributes to the coverage of supply deficits, giving accurate and timely price signals both to producers (to make their generating capacity available) and to consumers (promoting the efficient use of electricity);
6. it favours market stabilisation, incentivising the construction of new power plants and new power lines and the entry of newcomers into the market;

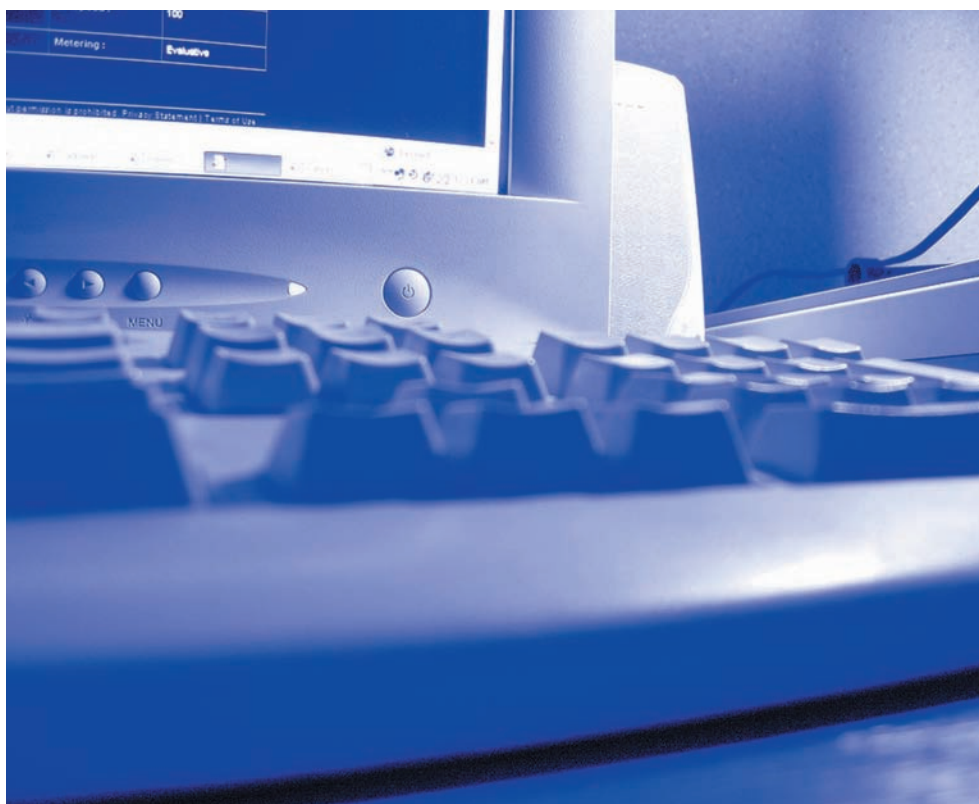
7. it separates electricity generation from electricity sales, two competitive activities in the electricity business;
8. it simplifies companies' commercial procedures and provides more security of payment of the sold electricity through the guarantee systems offered by the market.



The power exchange was operationalised on 31 March 2004. Until 31 December 2004, only electricity producers were admitted to the trading, whereas demand was expressed by GRTN (Gestore della Rete di Trasmissione Nazionale). The date of 1 January 2005 marked the start of full demand-side participation in the power exchange. From that date, all interested operators may procure their electricity directly in the power exchange.

The power exchange is a non-mandatory market. Electricity may be bought and sold off the power exchange (bilateral contracts or OTC trading). However, from the start, the power exchange has recorded very significant results, ranking first among European voluntary exchanges in terms of liquidity. Liquidity, which is defined by the ratio of the volume of electricity traded on the exchange to the volume of electricity traded in the entire national system, has been equal to about 65%, a definitely high value for a voluntary exchange.

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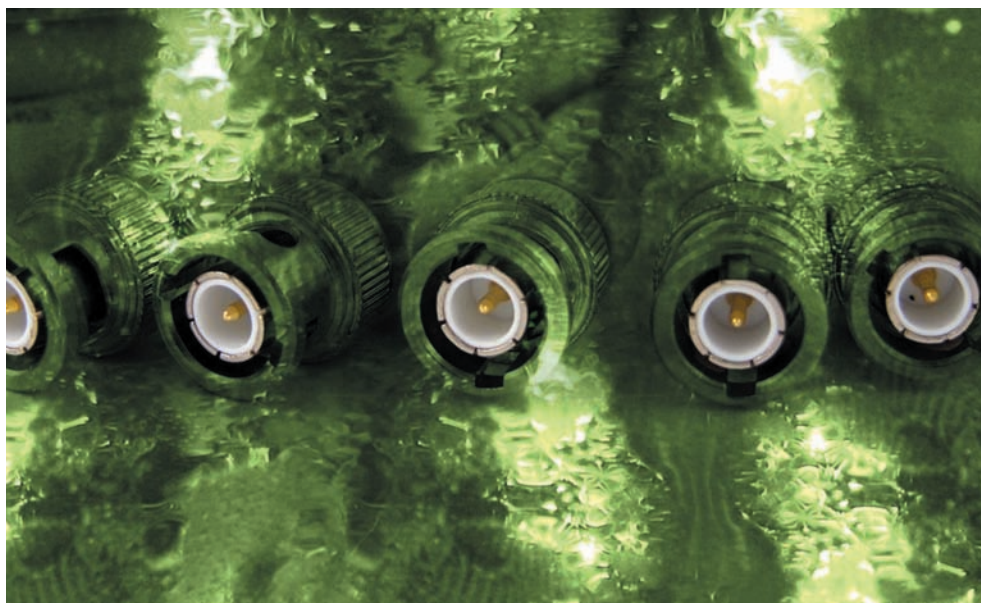
The power exchange consists of three separate markets, which take place sequentially during the day: the Day-Ahead Market (Italian Acronym MGP), hosting the majority of electricity trades and where participants define their selling and purchasing schedules for the next day; the Adjustment Market (Italian Acronym MA), allowing producers to revise the schedules that they have defined in the MGP; and the Ancillary Services Market (Italian Acronym MSD), enabling GRTN to procure the resources that it needs for managing, operating and controlling the power system.

Transactions are made on an electronic platform, to which participants connect through the Internet (with secure access procedures based on digital certificates) and enter into on-line electricity purchase and sale contracts.

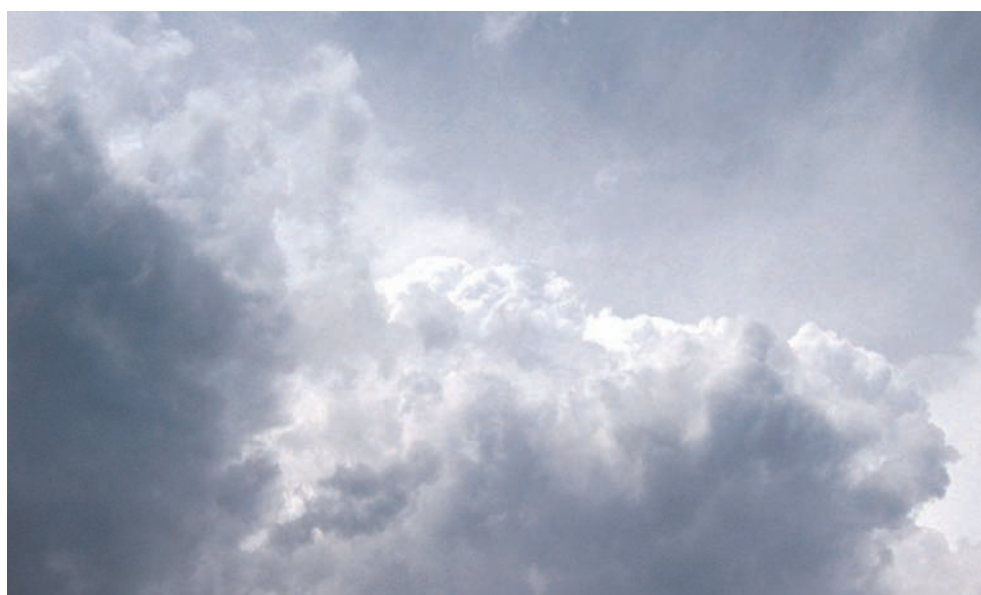
GME also developed an electricity market simulation/familiarisation environment, called Electric Trade Simulator (ETS). ETS is available to all those wishing to perform demo market sessions. Users connect to ETS through the Internet, via basic authentication procedures, i.e. User Id and Password assigned by GME.

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GME's Demand-Side Bilateral Adjustment Platform (PAB) went into operation on 31 December 2004. On this electronic platform, participants that manage withdrawal points within the same geographical zone may register their hourly balanced trading proposals. Therefore, all consumers (whether they qualify as electricity market participants or not) may trade electricity on PAB and "adjust" their commitments arising from bilateral contracts or from purchases in the electricity market. GME has the task of monitoring compliance with the PAB Rules and Technical Rules, thus ensuring the proper functioning of PAB under criteria of impartiality, transparency, objectivity and competitiveness between participants.



Emissions Trading Market



Regulatory Framework

At its third plenary session of 11 November 1997, the Conference of the Parties (CoP 3) to the United Nations Framework Convention on Climate Change (UNFCCC) adopted the Kyoto Protocol (Decision 1/CP.3). Under the Protocol, industrial countries and countries with economies in transition (listed in Annex I of the Convention) are bound to globally reduce greenhouse gas emissions by 5% compared to 1990 levels in the period 2008 to 2012. The Protocol was approved on behalf of the European Community by Decision 2002/358/EC of 25 April 2002. With this Decision, the European Community expressed its willingness to meet - jointly with its Member States - the international commitment of reducing greenhouse gas emissions that it had undertaken by signing and ratifying the Kyoto Protocol. The entry into force of the Protocol required ratification by at least 55 Parties to the Convention whose emissions accounted for at least 55% of the total. Italy ratified the Protocol in June 2002 (with Law no. 120) and the Protocol came into force on 16 February 2005 after ratification by Russia in October 2004.

The Kyoto Protocol sets different reduction targets for each of the Parties to the Convention. For the European Union, the emission reduction target is 8% (Annex B of the Protocol). In accordance with Art. 4 of the Protocol, this collective target was shared among Member States under a burden sharing agreement. In its Decision of 17 June 1998 (Burden Sharing Agreement), the EU Council of Environment Ministers established specific targets for each Member State, requiring Italy to reduce greenhouse gas emissions by 6.5% from 1990 levels. Decision 2002/358/EC defined the 2008-2012 timescale as the period for fulfilling the commitment.

In this context, the European Parliament and Council approved Directive 2003/87/EC (hereinafter referred to as the "ETS Directive"), which set up a Community scheme for greenhouse gas emission allowance trading (Emissions Trading Scheme - ETS) with a view to curbing CO₂ emissions "in a cost-effective and economically efficient manner" (Art. 1). Under the scheme, emission reduction obligations may be fulfilled by purchasing emission rights. Law Decree no. 273 of 12 November 2004 (urgent provisions for implementing European Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, converted into Law 316/04) made it possible to enforce the ETS Directive in Italy from January 2005. On 13 April 2005, Community Law 2004 (Law Decree 2742-B) transposed the ETS Directive into the Italian legislation, enabling the Government to adopt - within 18 months from the enforcement of the law - a legislative decree with provisions implementing the Directive (Art. 14).

The Emissions Trading Scheme introduced by the Directive is a cap-&-trade system, which sets a maximum limit (cap) to emissions from greenhouse gas-producing industrial installations. This limit is set through the allocation of a given number of emission allowances to each installation.

Each allowance (European Unit Allowance - EUA) gives the right to emit one ton of carbon dioxide equivalent into the atmosphere, during the reference year of the same allowance. The allowances are allocated to installations covered by the ETS Directive through National Allocation Plans (NAPs). The plans are subject to the approval of the European Commission. The Italian NAP (allocating the 2005-2007 allowances) was submitted on 21 July 2004 and approved by the European Commission on 25 May 2005 with recommended modifications.

Every year, operators of installations covered by the ETS Directive are held to surrender a number of allowances corresponding to their actual emissions. Any surplus of allowances (positive difference between allowances allocated at the start of the year and actual emissions into the atmosphere) may be set aside or sold in the market, whereas any deficit may be covered through the purchase of allowances. Member States will thus be called to ensure the free movement of emission allowances within the European Community, so as to allow the effective development of a European market of emission rights.

Furthermore, the "Linking" Directive (Directive 2004/101/EC) recognised the

Kyoto Protocol flexible mechanisms - Joint Implementation (JI) and Clean Development Mechanism (CDM) - within the ETS, establishing the validity of emission credits (generated through the implementation of such projects) for complying with emission reduction obligations.

Functioning of the ETS

With effect from 1 January 2005, all installations carrying out any of the activities covered by the ETS Directive (activities in the energy sector, iron and steel production and processing, the mineral industry and the wood pulp, paper and card industry) must be in possession of an appropriate permit issued by the competent authorities (in Italy, such permits are issued by joint decrees of the Ministry of the Environment and Land Protection and of the Ministry of Productive Activities).

Every year, emission allowances will be allocated to operators of such installations. Operators will have to surrender (within 30 April of the following year) a number of emission allowances equal to the yearly actual emissions released by the same installations. Such allowances will be subsequently cancelled.

Penalties

Operators not surrendering sufficient allowances to cover their emissions during the year are held liable for the payment of a penalty of € 40 per ton of carbon dioxide equivalent in the three-year period 2005 to 2007 and of € 100 in subsequent periods. Payment of the penalty does not relieve the operator of the obligation to surrender an amount of allowances equal to its excess emissions.

Registry

Member States are required to provide for the establishment and maintenance of a registry in order to ensure the accounting of the issue, holding, transfer and cancellation of allowances.

Art. 2 of Legislative Decree 273/04 stipulated that operators of installations covered by the ETS Directive should, within 30 December 2004, submit to the Ministry of the Environment and Land Protection all the data required for the allotment of emission allowances for the period 2005 to 2007. The format, details and procedures for the provision of such data were set out in appropriate Decrees issued by the Ministry of the Environment and Land Protection and the Ministry of Productive Activities (Dec/RAS/1715/2004 of 29 Nov. 2004 and Dec/RAS/1877/2004 of 29 Nov. 2004). For each operator, a holding account will be opened in the registry of APAT (Agency for Environmental Protection and Technical Services). The emission allowances allocated by the NAP to the individual operators will be recorded in such accounts. Conversely, under art. 19, para. 3, of the ETS Directive, the European Commission will adopt a Regulation for the establishment of a system of registries (in the form of standardised electronic data-bases) to track the issue, holding, transfer and cancellation of allowances.

JI and CDM

The Joint Implementation mechanism enables industrial countries and countries with economies in transition, listed in Annex I of the UNFCCC, to jointly implement emission reduction projects. More specifically, JI allows a given Annex I country to fund a greenhouse gas emission reduction project implemented in another Annex I country, thereby obtaining "emission credits" (Emission Reduction Units - ERUs). The emission reductions (understood as avoided emissions) are certified as ERUs by the Annex I Country hosting the project and are transferred to the Annex I Country financing it; the latter Country may use them to meet its emission limit, in compliance with Annex B of the Protocol.

Clean Development Mechanism enables Annex I countries, which are required to limit greenhouse gas emissions, to implement projects targeted at certified emission reductions in developing countries that ratified the Protocol but are not listed in Annex I, so as to promote sustainable development in the latter countries. Countries implementing the projects gain emission credits (Certified Emission Reductions - CERs), which may be used to fulfil reduction obligations or sold in the European market of emissions.

Trading of Emission Allowances: OTC Trading and Regulated Markets

The emission allowances that the NAP allocates to operators of installations covered by the ETS Directive may be traded bilaterally (OTC) or on organised trading platforms (so-called "greenhouse gas exchanges").

If allowances are traded bilaterally, then the seller is required to enter its sale transaction into the registry administered by APAT. Thus, the traded emission allowances are automatically transferred from the seller's holding account to the buyer's holding account.

Organised markets, instead, facilitate the meeting of demand and supply of emission allowances and the setting of efficient prices. At European level, some trading platforms are already in place: Nord Pool has been active since February 2005 and offers trading and clearing services; EEX (European Energy Exchange) has been operational since March 2005; Powernext and EXAA (Energy Exchange Austria) have been in operation since May 2005.

GME's Emissions Trading Market: Organisation and Operation

Within the first months of 2006, the first Italian platform for trading emission allowances will be launched. The platform will be organised and managed by GME. On this platform, emission allowances will be traded on a continuous basis during different trading sessions. GME will organise an order book (one for each reference year until 2007). During the trading session, each operator will be able to enter its

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buy or sell orders into the order book, specifying the reference validity year of emission allowances, their volume and their unit price.

Buy and sell orders will be ranked by price and, if their price is equal, by time of receipt of the order by GME's information system and they will be automatically matched.

GME's Emissions Trading Market will allow participants to seek their trading counterparty in the market, to trade emission permits under certain and predefined rules, guaranteeing:

- counterparty indifference;
- transparency;
- efficiency in price formation;
- security of transactions.



Chapter

3

Energy Efficiency Certificates Market

Overview

Electricity and gas market liberalisation (Legislative Decrees no. 79 of 1999 and no. 164 of 2000) marked, among others, the beginning of an energy efficiency enhancement process, which is bound to significantly change the entire system of incentivisation of rational energy use.

The Decrees issued by the Ministry of Productive Activities, in consultation with the Ministry of the Environment and Land Protection on 20 July 2004 (Ministerial Decree of 20 Jul. 2004 on electricity and Ministerial Decree of 20 Jul. 2004 on gas) specify national quantitative targets of energy efficiency improvement. Electricity distributors and natural gas distributors (with at least 100'000 final customers as of 31 December 2001) are held to meet the above targets through projects which increase energy efficiency in final energy uses. With its Decisions 103/03 and 200/04, AEEG (Authority for Electricity and Gas) issued guidelines for preparation, implementation and evaluation of the projects covered by articles 5 of the Ministerial Decrees of 20 Jul. 2004, defining criteria and procedures for the issuing of energy efficiency certificates ("white certificates", Italian acronym TEE).

For all final customers of electricity distribution services, which will have to pay a small contribution in their tariffs, the implementation of the Decrees may generate collective benefits of different nature, including:

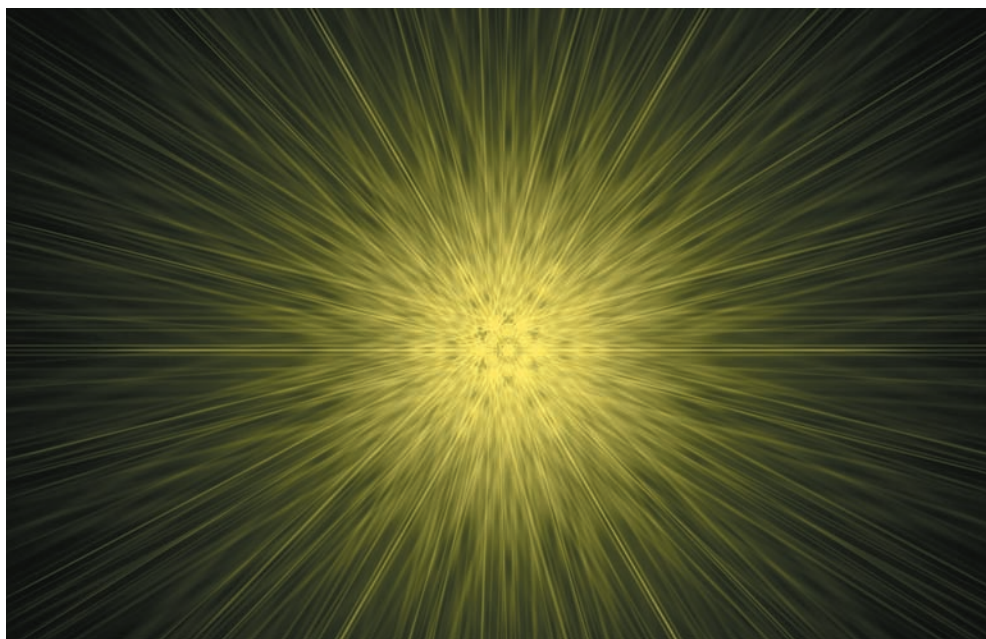
- mitigating environmental pollution thanks to primary energy savings;
- improved security of supply, as a result of a smaller growth of final energy demand;
- lower energy consumption by parties that implement energy efficiency projects and consequently obtain "lighter" energy bills.

GME's Role in Energy Savings

GME is called to organise a market for the trading of TEE and to issue the related rules of operation, in consultation with AEEG. In this market, TEE may be traded

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between parties that have to purchase them in order to fulfil their obligation (because they have not reached their energy-saving targets) and parties that wish to make a profit from the purchase of their surplus certificates (because they have exceeded their targets). GME will also administer the Register of TEE, issuing and cancelling the certificates issued to eligible parties.



Advantages of the Organised Market

The Energy Efficiency Certificates Market minimises the overall costs that distributors incur for achieving the quantitative targets specified in the Decrees. In this market, distributors which would incur relatively high marginal costs for energy-saving projects may instead purchase TEE from parties which have relatively lower marginal energy-saving costs and which may make a profit by selling their certificates in the market.

In GME's Energy Efficiency Certificates Market, which will be operational within the first months of 2006:

- distributors may purchase certificates, if the savings achieved through their projects lie below their yearly target and they thus have to purchase the missing certificates in the market in order to fulfil their obligation;
- distributors may sell certificates, if the savings achieved through their projects exceed their yearly target and they may thus make a profit by selling their surplus certificates in the market;
- Energy Services Companies (ESCOs) may sell the certificates that they have obtained through independent projects, as they are not required to fulfil any obligation and may thus make a profit by selling their certificates in the market.

The features of the Energy Efficiency Certificates Market will be similar to those of

the Green Certificates Market and will guarantee the advantages arising from an organised market: transparency, efficiency in price setting, security of trades.

Operation of the Energy Efficiency Certificates Market

GME will issue TEE to individual distributors (and their controlled companies) on the basis of results achieved by implementing energy efficiency enhancement projects and to companies operating in the sector of energy services (ESCOs) for the projects that they have implemented.

On a yearly basis, AEEG (Authority for Electricity and Gas) will check whether distributors have achieved their energy-saving targets on the basis of the certificates surrendered. Such notification must be given every year, within 31 May, beginning in 2006.

Through an electronic register, GME will issue TEE to parties that have obtained certification of their savings from AEEG and it will enter all transactions made in the organised market into such register. Transactions completed through bilateral contracts may be directly entered into the electronic register by their holders; however, a copy of the bilateral contract may be sent to GME for registration of the transaction.

TEE may be of different types:

- Type I, certifying the achievement of primary energy savings through projects reducing final electricity consumption;
- Type II, certifying the achievement of primary energy savings through projects reducing natural gas consumption;
- Type III, certifying the achievement of primary energy savings through projects other than those mentioned above.

As laid down in the Decrees, GME laid down the rules of operation of the market in consultation with AEEG. GME provided that the rules of the Energy Efficiency Certificates Market would be similar to those of its Green Certificates Market. Participation in the Energy Efficiency Certificates Market is open to all parties that have adequate professional qualifications and are proficient in the use of Information Technology (IT) or Information Communication Technology (ICT) systems and related security systems or that have employees or assistants meeting the above professional and proficiency requirements, provided that they have not been convicted of specific crimes referred to the Italian criminal code. For admission to the Energy Efficiency Certificates Market, applicants should submit a Market Participation Application and a Market Participation Agreement to GME. For additional information on how to register with the electronic register, the reader is referred to the Guide to Registration to TEE Register: (posted at www.mercatoelettrico.org).

Green Certificates Market

Overview

Since 2002, producers and importers of electricity from non-renewable sources have been required to inject every year into the power grid a given proportion of electricity generated by renewable-energy plants. Such proportion is equal to 2% of the electricity generated or imported in the previous year, exceeding 100 GWh. From 2004 to 2006, the minimum proportion to be injected into the power grid in the following year will be increased by 0.35% per year. This obligation may be fulfilled not only by injecting electricity from renewables into the power grid, but also by purchasing the related rights (Green Certificates, Italian acronym CV).

In accordance with article 6 of Ministerial Decree 11/11/99, GME prepared an organised venue for the trading of Green Certificates (Green Certificates Market - MCV). Thus, GME organises and manages the Green Certificates Market under criteria of impartiality, transparency, objectivity and competitiveness between participants. The rules of operation of this market are described in the Integrated Text of the Electricity Market Rules, approved by the Ministry of Productive Activities on 19 December 2003.

The availability of an organised market for trading Green Certificates - the MCV has been operational since March 2003 - guarantees transparency and security of transactions.

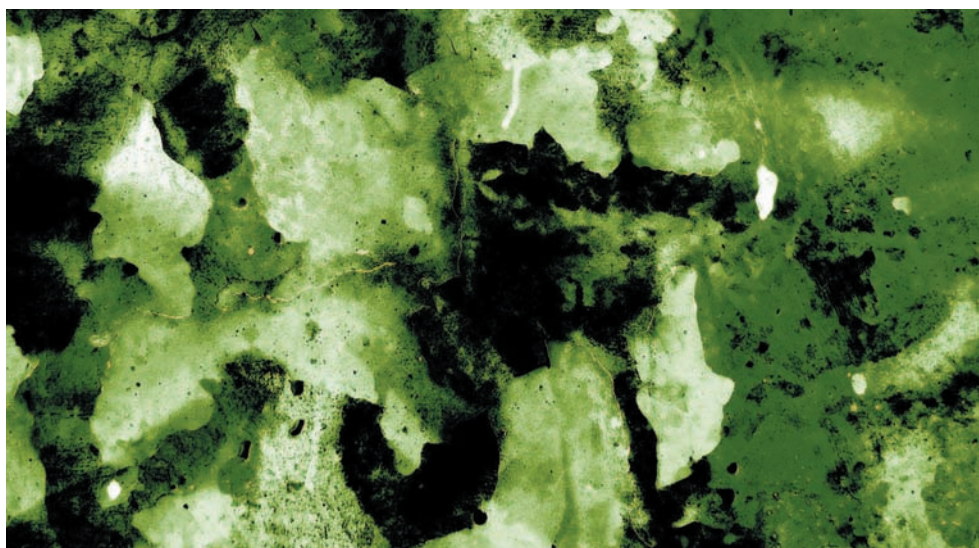
The Green Certificates Market enables participants that must fulfil their renewables obligation to purchase certificates in the market because they have not reached their targets and participants that have exceeded their targets to obtain an economic benefit by selling their excess certificates. The trading in these markets takes place under price transparency and market liquidity conditions. Transparency is guaranteed by the publication of the trend of the prices which are set in the market, whereas liquidity is guaranteed by GRTN, which is held to offer its own Green Certificates in the GME-organised market.

Operation

Green Certificates are issued by GRTN to electricity producers. They certify that the underlying electricity has been generated from renewables and may be used to fulfil the yearly obligation of generating electricity from renewables.

The sessions of this market take place at least once a week, in the period from January to March of each year, and at least once a month in the remaining period. The trading is continuous between electricity producers and importers, GRTN, wholesale customers and associations registered with the Green Certificates Market – 106 participants in total.

In 2004, the value of each Green Certificate traded in the MCV was equal to 100 MWh; Law 239/04 provided that, beginning in 2005, such value would be equal to 50 MWh.



Main features of the Green Certificates Market

- a. Participation in the Green Certificates is open to domestic and foreign producers, wholesale customers, electricity importers, consumers and users' groups, environmental associations, companies' and workers' unions;
- b. Green Certificates may be sold or purchased through bilateral contracts and/or in the trading venue organised by GME;
- c. trading in the market is on a continuous basis;
- d. trading sessions take place at least once a week, in the period from January to March, and at least once a month, in the period from April to December;

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- e. GME organises an order book for each reference year. Each order book displays the best purchase and sale orders ranked by price (if price is equal, the orders are ranked by time of receipt by GME's information system);
- f. purchase and sale orders may be limit orders (with price limit) or market orders (without price limit);
- g. the information system allows market participants to sell only the Green Certificates that are recorded in their ownership account; buying market participants are held to make a cash deposit by transferring the amount to an appropriate account of GME before the start of each session, in order to guarantee their purchases in the market;
- h. GRTN will report defaulting market participants to AEEG, which will apply appropriate penalties;
- i. Green Certificates pertaining to a given year may be used also to fulfil the obligation for the next two years.



Quantitative Data

In 2004: 24 official market sessions were organised and 20,439 certificates were traded (20,419 for 2003 and 20 for 2004).

In 2005, until 31 August, 20 market sessions were organised and 22'810 certificates were sold, of which 10 for 2003 and 22,800 for 2004.

The total value of Green Certificates traded with validity year 2003 was € 205,431,760 and the average price (average of prices weighted for volumes) of Green Certificates traded was 98.88 €/MWh.

The total value of Green Certificates traded with validity year 2004 was € 133,356,257 at a cumulated average price of 116.77 €/MWh.

As of 31 August 2005, Green Certificates Market Participants were 122.



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