1.THE INTERNATIONAL AND ITALIAN CONTEXT

Economic and energy framework in 2005

The international oil market in 2005 and prospects for 2006

According to World Bank estimates, global economic activity grew by 4.4 percent in 2005, slowing somewhat with respect to the significant 5 percent growth rate the previous year. Against this backdrop, the prices of raw materials denominated in dollars rose sharply; contributing heavily to the total rise of 31 percent were energy commodities, which showed price growth of 43 percent. Net of fuels, commodity prices were up 6 percent for the year.

On the international oil markets, growing demand for crude oil and derivatives—against a still structurally rigid supply—kept prices at historical highs and rendered them more volatile. The average price of oil imports from OECD countries in 2005 was $55/barrel, more than 50 percent higher than in 2004. Oil prices continued to rise in the first few months of 2006, reaching the all-time highs of the early 1980s, which in today's dollars would amount to some $76/barrel.

In 2005 the prices of oil products in the European markets generally moved in parallel with dated Brent, the price benchmark for Europe and Africa. The price of low sulphur fuel oil (LSFO) rose by a remarkable 50 percent in dollar terms, compared with 42 percent for Brent. LSFO prices were affected by both contingent and structural factors. The former include the effects of hurricanes in the Gulf of Mexico region, where enormous damage was caused to the already poor refining capacity. The blow to capacity led to a shortage of finished products, whose prices therefore went up. The trend was magnified by the simultaneous rise in gas prices (the hurricanes also caused serious damage to gas infrastructures), which led electricity producers to burn fuel oil instead of gas at their power plants. The spread between the price of oil products and the price of crude oil thus widened

considerably in September, then narrowed again in subsequent months thanks in part to the recovery of refining capacity by the United States. In a medium-term perspective, it should be stressed that the price ratio between fuel oil and crude oil, which historically fluctuates around 0.7, had been falling substantially since the spring of 2004 as demand shifted to lighter products with a lower sulphur content, and only came back toward the long-range average at the end of summer 2005 (Fig. 1.2).

Toward the end of 2005, after some major hikes in July and August, spot prices for crude oil came down due to pressure from fundamentals and to temperatures above the seasonal average in October and November, especially in Europe and North America, which helped limit the demand for home-heating products. In early 2006, geopolitical concerns triggered by the Iranian nuclear standoff and by repeated interruptions in Nigerian production as a result of sabotaged pipelines in the Niger Delta pushed oil prices back up, towards the highs reached late the previous August.

On the procurement side, signs of expanding production capacity by OPEC countries—which should rise from a current 32.6 mb/d to 33.5 mb/d by the end of 2006—foretell a relaxing of tensions in the medium-term future (Fig. 1.3).

However, the global demand for oil products is still high, especially in the Asian markets, and recent projections by the International Energy Agency (IEA) indicate an estimated growth rate of 1.5 percent (or 1.3 mb/d) in 2006 with respect to 2005. On the whole, then, the worldwide demand for oil should settle in 2006 at around 85 mb/d.

Although the fundamentals of the oil market paint a more favourable picture for 2006 than they did for 2005, the prices of energy futures suggest that the numbers will stay very high in coming years. Specifically, the strong responsiveness of long-term crude prices to the trend in the corresponding spot prices over the past two years is an indirect indicator of how difficult the market is finding it to reach shared expectations about a new equilibrium for oil prices.

In the short-term, most analysts predict that oil prices are going to stay high, and emphasize the supply-side risks caused by the geopolitical tensions in many OPEC countries and the lack of a production recovery in non-OPEC states.

For the medium term, concerns are focused on the investment strategies of oil companies, which many accuse of not reacting fast enough to the past three years' high prices and of paying fat dividends to shareholders while buying back their own stock to defend themselves against hostile takeovers. A two-year study by Lehman Brothers and Citigroup of 316 oil companies showed that in 2005, upstream investments grew by a nominal 20 percent year on year, and could rise by around 14-15 percent in 2006. While positive, these growth rates are not nearly enough to have a significant effect on prices in the oil markets. In real terms, this spending will have less of an impact than in the past, because the new reservoirs are smaller on average than those already in production and because it will cost more to run them due to the lack of qualified personnel and machinery for extraction, the legacy of the oil countershock of the late 1980s and early '90s.

A partial explanation for the conduct of oil companies, who are of course among the first to benefit from high prices, is the new wave of nationalizations in the main producer countries. This has accentuated the distortion caused by the unbalanced direct relationship between oil companies and Sovereign states. In particular, the limited access allowed by producer countries to lower-cost extraction areas drives oil companies to less politically risky zones, while curtailing their economic commitment for fear that in the long term, such investments may be wasted as a result of low-cost production by Producer states.

To eliminate all reasonable justification for the oil companies to underinvest, Consumer states—first and foremost the European Union—could take on the risk themselves by signing long-term contracts for new production in politically stable zones. Although it takes an average of five years to progress from initial exploration to full-scale production, new investments like this could give an important signal to the market, which would have an immediate good influence on prices.

Another way to limit price growth for the short term would be to intervene on the demand side. If major consumer countries (once again with the European Union taking the lead) were to make a mutual commitment to correlating their demand with oil prices, then those prices would surely react. This is because a modest change in demand would heavily influence unused production capacity, which in recent years has caused price tensions.

Other economic policy initiatives are possible, although they might have less of an impact. For example, the April 2006 report by the International Monetary Fund encourages the adoption of measures to harmonize the ways in which the end use of oil products is taxed. In the United States, where one fourth of the world's oil consumption takes place, gasoline taxes are still relatively low, and in many developing countries—especially those that are also oil producers—there are various forms of direct or indirect subsidies for the consumption of gasoline, gasoil and kerosene. Conversely, in many European countries these taxes are very high in an attempt to limit consumption and reduce the environmental impact.

The international natural gas market

The demand for natural gas in OECD countries rose by an estimated 0.7 percent in 2005 compared with 2004. That figure conceals diverse trends in the main geographical regions: while in Europe the increase should be greater than 3 percent, in North America there was a decline of around 1.3 percent. Globally, according to some preliminary estimates, the demand for gas was up 2.1 percent. Non-OECD countries (Fig. 1.5) account for half of total consumption.

On the procurement side, net imports in Europe have grown at twice the pace of demand over the past decade; thus, the net foreign balance rose from 33 percent of consumption in 1996 to 42 percent in 2005. In OECD countries, the same indicator grew from 17 percent in 1996 to 23 percent this past year. According to a survey carried out in 2005 by the EU Competition Directorate-General, wholesale natural gas prices in long-term procurement contracts for Europe are still largely indexed to oil prices (crude oil and derivatives), although the connection is partly attenuated by ceilings on the prices of these commodities. This means that the prices paid by buyers do not reflect, more than marginally, the changes in supply and demand conditions in the gas markets. Magnifying the situation is the use of moving averages for fuel prices when indexing the price of gas, which over time can dilute the response to price signals. The gas prices formed on the European Exchanges in Belgium, the United Kingdom and the Netherlands (respectively the Zeebrugge, NBP and Bunde TTF) are instead characterized by greater volatility and by the seasonal trend in demand. However, on the basis of the sample used in the European survey mentioned above, only about 10 percent of the long-term procurement contracts held in Europe in 2004 were indexed to these prices.

In 2005, the price of natural gas in dollars at the European border increased by an average of 49 percent compared with the previous year; in European hubs the average growth rate was 56 percent. In the winter of 2005-2006 (November through February), the average price on the European Exchanges was nearly double the previous winter's, reflecting procurement problems in the face of unusually cold temperatures across the continent. Speculative hikes emphasized price growth in the forward markets, which was then transferred to the spot markets. This occurred most notably in the UK at the start of the winter season.

Excluding seasonal peaks, we are still unlikely to see a short-term drop in wholesale natural gas prices, due to the structure of procurement contracts that index gas prices to the price of oil products. For the medium term, however, better supply-side competition (which could also derive from the development of gas liquefaction and subsequent regassification technology) would make it possible to meet rising demand, especially in the thermoelectric sector. Gas prices would therefore head down, even if crude oil went up, since the global availability of these sources is greater.

The international coal market

On the basis of IEA international statistics, in 2004 coal was still the second leading energy source worldwide (following oil), with a demand of about 2,800 million tons of oil equivalent (toe). Geographically, non-OECD countries account for some 60 percent of global consumption, led by China, the world's largest coal consumer.

Worldwide consumption of steam coal, used mainly for electricity generation, grew 9.3 percent in 2004 with respect to 2003. In OECD countries the increase was a modest 2 percent, while a growth rate of 13.7 percent was reported for countries outside the OECD. Coal is still the most-used fossil fuel for the production of electricity worldwide, with a share of 40 percent; next come natural gas (19 percent), and oil products at less than 7 percent.

In the second half of 2005, coal prices started to fall from the record highs they had reached late the previous year, due to soaring demand and to a lack of ships that led to a significant hike in freight charges.

In early 2006, however, prices in the international markets started to head upwards again for three reasons: a shortage of the finest coals, unusually cold temperatures in some of the outlet markets, and an across-the-board rise in the price of oil products and natural gas that caused some thermoelectric producers to burn coal instead of gas. Indeed, despite how expensive it has become over the last three years, coal is still the cheapest input for electricity generation and costs about half what natural gas does for the same amount of electricity produced.

Energy demand and supply in Italy in 2005

In comparison with previous years, the growth in energy needs in this country slowed down in 2005. Consumption of primary and final energy increased by 1 percent and 1.5 percent, respectively, against corresponding growth rates in 2004 of 2.1 percent and 1.8 percent. In contrast to this relative stability, the figures for 2005 show significant changes in the structure of final consumption by sector and source, and especially in the breakdown of procurement, availability for domestic consumption and energy conversion (Table 1.1).

Procurement

While the procurement of coal and renewable energy resources decreased from 2004 to 2005, by 2.8 percent and 8.2 percent respectively, there was a marked increase in the procurement of natural gas and electricity. Oil procurement was basically stable, although exports of derivative products rose by a substantial 14.5 percent. Conversely, the increase in natural gas procurement (+5.6%) essentially concerned the domestic market. The decline in the procurement of renewable energy resources is attributable wholly to hydroelectric power, since the other sources (biomass, waste, wind and solar energy) rose by around 5 percent. There was also significant growth in net electricity imports, despite a 40 percent rise in exports, due to favourable prices on the foreign Exchanges in late 2005.

Conversion

As in prior years, the main driver of change in the structure of consumption by primary sources was the development of the electricity sector. In thermoelectric generation, oil consumption declined by 2.5 mtoe, while the consumption of natural gas increased (+3.32 mtoe). However, natural gas availability was affected by a further plunge in domestic production (–0.8 mtoe) and by the physical limitations of import and storage facilities, including the time needed to bring Libyan imports up to full capacity (not expected until late 2006). Meanwhile, gas had to make up for the reduced contribution of hydro (--1.3 mtoe) and coal (–0.4 mtoe), the latter due essentially to the temporary closure of Edipower S.p.A.'s North Brindisi coal storage by the local courts in connection with environmental complaints. Despite the considerable rise in electricity imports (0.8 mtoe), which resumed the levels seen in 2003 and earlier years, the limitations on natural gas procurement wound up bolstering oil production.

End uses

The decline in the conversion of coal and other solid fossil fuels into electricity was offset by a marked increase in industrial end consumption (+4%), driven by the wide price spread in comparison with competing sources. The 3 percent rise in natural gas consumption is the sum of a 1.3 percent decrease in the industrial sector and growth of 6.4 percent in the non-industrial sector. The consumption of oil products decreased (or was basically unchanged) in all sectors except non-industrial and non-energy. The drop of 0.3 percent in the transportation sector, in the wake of soaring fuel prices, is unprecedented in recent times. Nearly all of the rise in electricity consumption (1.1 percent) is attributable to the non-industrial sector (+2.3 percent). On the whole, the increase in end consumption was concentrated in the non-industrial sector (4.6 percent) and with reference to non-energy uses (4.5 percent), while consumption in the other sectors decreased or was basically unchanged.

Economic and energy growth

The energy/GDP ratio has changed little in recent years, for both primary and final energy, and the same ratio for electricity in 2005 continued to grow, in line with the historical trend (Fig. 1.9).
An analysis of energy elasticity to GDP (Fig. 1.10) highlights the trend in energy demand, even under conditions of poor growth or lack of economic development. After fluctuating around an average of 0.75 for a decade, the long-term elasticity of primary and final energy began to grow again after 2002 and even topped 1 in 2004. Likewise, in recent years electricity elasticity has resumed its upward trend, exceeding 1.7 in 2005. Although the reasons for this consist partly of rising energy demand (especially in the non-industrial sector) which is only partly linked to economic growth, one must also consider the economic stagnation of the last few years which has failed to encourage upgrades to more efficient systems. Another major factor that has limited the reduction over time in the intensity and elasticity

of primary energy with respect to GDP is the fact that electricity consumption has grown from 15 percent to 18 percent of total end consumption over the past decade, and is still rising at an appreciable pace.

Security of procurement

In June 2005, the European Commission published an initial evaluation of the results achieved in the four years since publication of its *Green Paper: Towards a European strategy for the security of energy supply*[1]. The report stressed that back in the year 2000, the *Green Paper* listed various crucial problems affecting energy sustainability for the European Union: the constant rise in energy needs against declining domestic production of fossil fuels; growing dependency on unstable parts of the globe for hydrocarbon imports; and bottlenecks in cross-border transport infrastructures[2].

In the four years that followed, the situation, if anything, grew worse. The attacks of 11 September 2001 and the war in Iraq have transformed the geopolitical framework. Crude oil prices were pushed up by the sharp increase in the oil requirement (especially in China, India and other developing countries), in conjunction with procurement shortages. The precarious balance between supply and demand made oil prices quite sensitive to relatively local events, and put a spotlight on the problem of global competition for hydrocarbons. Moreover, both Europe and the United States suffered sweeping interruptions in electricity procurement. After the European Commission report was published, problems also emerged with regard to gas supplies from Russia, which aggravated concerns about the EU's energy future.

Security of procurement is a subject addressed again in the new *Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy*[3] , in a broader context aimed at promoting competition in the domestic market and environmental compatibility. In this paper, the European Commission takes a multi-pronged approach to the issue, calling for a reduction in energy needs through energy efficiency measures; the development of local energy and renewable resources; research and technological innovation in the energy sector diversification of fossil fuel imports; the creation of a framework to stimulate investment in energy procurement and procurement infrastructures; means of ensuring that individual member states' energy decisions are consistent with the general good and with the common interest of a secure energy procurement for the European Union as a whole; solidarity among member states for the effective handling of crises; and a united external policy aimed at constructive dialogue with energy producer and transit countries. In particular, the European Commission emphasizes the need to face challenges with an energy policy that speaks with a single voice (with due respect for the self-determination of member states), rather than working from a multitude of national policies that often conflict with one another. Conducive to this approach are the European Union's considerable negotiating electricity worldwide as a consumer of energy, and its front-line role in managing demand, promoting new and renewable forms of energy, and developing low-emission technologies. The need for a united energy policy was also stressed at the recent Council session of March 2006, at which the energy ministers urged greater coherence and coordination among Member states in terms of both energy and foreign policy in pursuit of a secure supply.

The importance for the European Union of a joint approach is highlighted in Table 1.2, which shows the degree of exposure of the main countries and regions of expanded Europe to procurement problems with electricity and gas. This indicator reflects the main factors affecting the security of natural gas and electricity procurement: dependence on natural gas imports; dependence on imported fossil fuels for electricity generation; the incidence of electricity imports; and level of diversification of the regions from which electricity and fossil fuels are imported. The value ranges from 0 to 1, with zero representing complete self-sufficiency and one representing total dependency on a single supplier country.

As the figures show, in 2004 exposure was quite high for natural gas, with the exception of producer countries, and low almost everywhere for electricity. With respect to most of the individual countries, the degree of exposure falls considerably for the various groupings of the European Union and for Europe as a whole, but this greater security is fictitious without the storage and inter-country transport infrastructures, which are necessary to ensure an adequate diversification of procurement and to deal with emergency conditions.

Reducing the risk of interruptions has a high infrastructure cost, and each country deals with this complex matter according to its procurement of primary sources. Some

countries, especially producers, can exploit their gas reservoirs quite flexibly and have no need for storage capacity. In others, notably the major importers, the pattern of domestic production and imports makes it difficult to modulate the procurement to energy requirements, so it is crucial to have an appropriate amount of seasonal storage. For others still, the problem of modulation is basically non-existent because demand is concentrated in sectors with little dependence on weather conditions, and annual fluctuation is limited or negligible with respect to the procurement in transit from major producer states.

Italy's exposure, as shown in Table 1.2, is relatively low for natural gas because of its still significant domestic production and well diversified procurement. Conversely, its exposure for electricity is fairly high, as it is dependent on fossil fuels and imports a large share of its electricity. Italy has already suffered from excessive exposure to import limitations stemming from events in other countries that are therefore beyond its control. During a heat wave and drought in June 2003, rolling electricity cuts were caused in part by reduced imports from France but also by the greater opportunity for sales on the European Exchanges.

Of more recent memory are the cutbacks in natural gas imports, due to a severe cold spell that limited production capacity while increasing withdrawals by Russia, Ukraine and other former Soviet states. Figure 1.11 shows the high correlation between the average temperature in these countries and the procurement of gas to Italy from January to March 2006, and the growing sensitivity of procurement reductions to temperature drops throughout that period, most likely due to the depletion of those countries' reserves[4]. Indeed, an average temperature below –20°C caused procurement to fall by approximately 7 percent in January but by more than 15 percent in February, while in early March a temperature of –7°C was enough to cause a 12 percent drop. This trend was not caused by the cold weather in the former USSR, where temperatures were basically in line with the historical average, but by the balance of gas supply and demand (Table 1.3). The increase in gas exports from Russia over the past decade (from just over 100 billion m3 in the early 1990s to 160 billion in 2004) was eased by the steep decline in domestic consumption by the countries of the former USSR, from a high of 702 billion m3 in 1991 to a low of 547 billion in 1997. With the subsequent upswing in domestic demand by these countries (consumption in 2004 reached 622 billion m3) and the arduous return to production levels close to those of the early 1990s (800 billion m3), export capacity has begun to display serious limitations and will soon be saturated without major investment in the upstream industry and in transport networks. Under these conditions, a cold spell was enough to knock out a considerable share of gas procurement.

[1] COM(2000) 769 of 29 November 2000.

[2] *Report on the Green Paper on Energy - Four years of European Initiatives.*

[3] COM(2006) 105 of 8 March 2006.

[4] In 2004, the former USSR had total working gas capacity of around 120 billion m^3 , compared with 70 billion for Western Europe. However, the maximum sendout was slightly more than half: 770 versus 1,450 million m^3/day.

Electricity and gas prices in the European Union

Eurostat statistics enable comparison of the prices Italians pay for electricity and gas—depending on type of consumer, annual consumption, installed electricity and load factor—with those paid in other countries of the European Union. Italian prices are considered in relation to the European weighted average, calculated as a function of national volume-wise consumption in the year 2000 (separately for residential and industrial users). This allows for a fairer comparison of prices, since consumption varies considerably from one European country to another. Prices are expressed in eurocents per kWh for electricity, and in eurocents per cubic meter for gas, by converting local-currency prices into euros at the fixed exchange rate or at the current exchange rate in the case of countries not participating in European monetary union.

Note that, according to the Eurostat definition, the price net of taxes has been stripped not only of bona fide taxes such as excise duties or VAT, but also of any other duty or charge to the consumer that is not included in the industrial price (an "ecotax" is a good example). In Italy's case this means that Eurostat, when reporting electricity prices, considers general system costs (components A and UC) to be fiscal components of the gross price and excludes them from the net figure. In addition, Eurostat prices do not include the initial hook-up charge.

The gradual demand-side opening of the electricity and gas markets and the structural changes in procurement have led tariffs, once set by monopoly rule, to evolve toward more complex pricing systems. Today's Eurostat statistics reflect this complexity to a very limited degree. Indeed, most of the prices it reports are regulated or reference prices (maximum or recommended tariffs), and in rare cases only does it report the prices freely negotiated between the parties. Although prices should reflect the most representative market rates for a given procurement of electricity or natural gas, often they are simply the prices charged by the former monopoly holder, which tend to lose significance as the incumbent loses shares of the market.

To improve the quality of its data, in 2002 Eurostat set up a task force that proposed an alternative price tracking method. Tested in various European countries, this method requires the tracking of average prices for various consumption categories, instead of actual prices for specific amounts consumed (standard consumers); in addition, national prices are determined by weighting data over the 12 months of the year. On the whole, the aim is to provide a more accurate view of the end prices paid by consumers who buy electricity on the free market. Experimentation with the new method has been substantially successful, demonstrating the value of tracking prices by consumption band (for both residential and non-residential customers), which provide adequate coverage of the electricity and natural gas markets. The next step planned by the task force is to have the European Parliament and Council adopt a regulation ensuring price transparency for residential and non-residential users in the two markets by the end of 2007.

Electricity prices

Figure 1.12 shows average European electricity prices from January 1997 through July 2005 for certain categories of consumption: residential users, small industrial/commercial users, and midsize industrial users.

Until January 2000, average European electricity prices moved downward for all three categories. After a settling phase, the prices paid by industrial consumers started to rise again, picking up considerable speed since July 2004. The same upward sweep occurred in the same period in the residential sector, where until that month prices had changed little since January 2000, while for small

industrial/commercial users the trend took off a year earlier starting in July 2003.
The graph shows a peak in January 2003, reflecting the growth spurt in Scandinavian prices due to a procurement shortage on the Nord Pool power exchange between late 2002 and the first quarter of 2003.

Prices for residential users

Eurostat figures for residential users (Table 1.4) refer to four annual consumption brackets: 600 kWh, 1,200 kWh, 3,500 kWh and 7,500 kWh.
Prices for July 2005 confirm the Italian anomaly caused by a progressive tariff structure (magnified by the tax system, which does not strike the lowest levels of consumption) by which the unit price of electricity rises with an increase in annual consumption, at least up to a certain level of consumption. Italians who consume less power—up to 600 and 1,200 kWh per year—are charged much lower prices (both gross and net of taxes) than in the rest of Europe; for consumption up to 600 kWh, Italians pay less than half the European average.
Those who consume more suffer the opposite: Italian prices are well above the European average, namely 42-44 percent higher in the 3,500 kWh and 7,500 kWh brackets, both gross and net of taxes.
As for net prices, with respect to July 2004 the distance from the European weighted average grew significantly for consumption in the 3,500 kWh and 7,500 kWh brackets. Indeed, Europe-wide, these prices rose by 3.8 to 4 percent, while in Italy the growth rate was about three points higher. Italian prices in the lower consumption brackets also grew more than the average; with European prices up 6.5 percent for those consuming up to 600 kWh and 5.5 percent for those in the 1,200 kWh category, the corresponding Italian prices (net of taxes) increased by 8.4 to 8.6 percent. The analysis is somewhat different if we consider gross prices: for the two higher categories of consumption prices grew slightly more than the European average, and for consumers using up to 600 kWh and 1,200 kWh they rose at less than the average pace.
In Europe, the most significant price hikes took place in Ireland and Norway, although the increase for the latter in local currency was less than that reported in Table 1.5, since the Norwegian crown gained 6.6 percent against the euro during the period in question. In Ireland, prices have been climbing fast since 2002, as fuel prices have risen and the country has had to invest heavily in transport networks to deal with its long-time lack of infrastructure and a substantial upturn in demand. Only in Sweden and, to a lesser degree, Finland and Austria did prices fall significantly over the 12 months since July 2004. Prices in Belgium dropped appreciably only for the highest two brackets.

Prices for industrial users

Prices for industrial users (i.e. all users other than residential—in industry, services and agriculture) are compared on the basis of seven consumption brackets, from 50 MWh to 70 GWh per year (Table 1.6).
For Italian businesses, prices, both gross and net of taxes, are consistently above the European average; the differences are smaller for lower consumption brackets and larger for major consumers. In percentage terms, the gap is widest for the three intermediate brackets (2, 10 and 24 GWh per year).
In the year-on-year trend, however, Italian prices, net and gross of taxes, grew more slowly than the European average, for industrial users at both ends of the scale. Net of taxes, the greatest gaps occurred for the consumption brackets 0.16 GWh, 2 GWh and 50 GWh, where price growth in Italy was 3 to 4 percentage points less than the average for Europe.
Gross of taxes, too, the price differential between Europe and Italy narrowed, quite significantly for users consuming up to 2 GWh and more than 50 GWh per year.
Looking at the individual European countries, the first trend of note is a steep rise in UK prices, topping 25 percent for the 50 MWh bracket and for all classes higher than 24 GWh. There may be several reasons for this: tensions caused by high fuel prices, particularly natural gas prices in the domestic market; a deterioration in the natural gas procurement system due to market distortions in continental Europe; a more rapid "pass-through" effect than elsewhere of the impact of emissions quota trading in the liberalized British market. For that matter, UK price growth is even more significant if measured in the national currency, due to the pound's depreciation against the euro (-1.3%).
Growth was also significant in Spain and Ireland, averaging 20 percent and 15 percent, respectively. Finland is the only country where prices dropped not only for residential users but for industrial users as well.

Gas prices

Figure 1.13 shows the nine-year trend in average European gas prices for three categories of consumption: residential users, small industrial/commercial users, and midsize industrial users.

For the period 1997-1999, average European gas prices went down for all three classes considered. Starting in January 2000, as the price of oil soared, gas prices—especially those paid by midsize industrial consumers—shot up by as much as 60 percent over the course of a year and a half. The reversal of trend in 2001-2002 brought gas prices back down to more modest levels, although in July 2004 they were still about 20 percent higher for all three categories than they were in January 1997. The following year, prices soared again, most notably for the two categories of industrial users. As at July 2005 all three reference prices reached an all-time high, with the upper industrial bracket paying 60 percent more than at the start of the period.

Residential users

The latest price figures for small residential users in Italy date to July 2004, due to the difficulties the Ministry of Productive Activities encountered in collecting basic data from gas suppliers once the demand-side opening of the market was complete. As of 1 July 2004, prices for households where gas is used mainly for cooking were among the lowest in Europe, both gross and net of taxes.

Households that also use natural gas for heating (and that are therefore in a higher bracket) see some of the highest rates gross of taxes, preceded only by Sweden and Denmark, with a differential of more than 50 percent on the average European price.

Europe-wide, from July 2004 to July 2005 prices, gross and net of taxes, grew by around 10 percent for all consumption brackets. Influencing that trend were steep price growth in the Netherlands, justified in part by the close correlation between domestic gas prices and the price of oil, and the hikes recorded in Ireland, Belgium and the United Kingdom. As mentioned above, UK price growth would be even more significant if measured in the national currency, due to the pound's depreciation against the euro.

Industrial users

For residential users, the latest price figures for Italy date to July 2003, again because the Ministry of Productive Activities has been unable to send the basic data to Eurostat. At the time, for residential users consuming the least, Italian prices were among the highest in Europe: about 13 to 17 percent more than the European average, gross of taxes, and 20 to 25 percent more on a net-of-taxes basis. Unlike for residential rates, gas prices for industrial users differed less from the European average once they fell into the higher consumption brackets. For businesses consuming approximately 11 million cubic meters per year, the price gross of taxes was 5 percent higher than the weighted average value, while for those with an annual consumption of around one million cubic meters the gap was actually negative.

At European level, prices rose substantially over the past year for every consumption category, with growth exceeding 30 percent for those in the 11 million m3 bracket.

Contributing heavily to that trend was the boom in UK prices, which rose by 37.6 to 50.8 percent net of taxes and by 36.5 to 47.6 percent gross.

Other major countries that saw gas prices surge were Sweden, France and Germany. Note that while net Swedish and British prices had also gone up sharply from July 2003 to July 2004, those in France and Germany, which are weighted at just under half the European total, moved downward for the year. As a result of these trends, the European average went up, as was stated before, at rates rising from one bracket to the next.

The average European tax charge for residential gas consumers is also rising, from around 12 percent for the lowest consumption brackets to around 21 percent for those consuming approximately 3,300 m3 per year. The accuracy of these numbers is affected by the lack of data from Italy, which in 2004 had a higher tax charge than the European average for all residential consumption brackets. Therefore, in analysing the tax charge trend from July 2004 to July 2005, Italy should also be excluded from the set of countries used to determine the 2004 average; on that basis, the tax charge was essentially stable in percentage terms for all classes of consumption.

For industrial consumers, taxes range from 21 to 23 percent depending on the consumption bracket. They have fallen by

1 to 2 percentage points for all brackets, with the partial exception of 11 million m3 per year, which enjoyed a tax charge reduction of nearly 4 points.

European emissions trading system

Europe's emissions trading system, the market tool instituted to control CO_2 emissions in accordance with Directive 2003/87/EC, has been up and running since 1 January 2005. The aim of this system is to create a European market for greenhouse gas emissions that can put a price on CO_2 emissions and encourage businesses to reduce them to the lowest possible cost.

Emissions trading is one of the measures taken to satisfy the commitments of the Kyoto Protocol. It will be implemented in two phases (2005-2007 and 2008-2012) during the second of which the emissions cuts called for by the Protocol are meant to be reached. The participating sectors account for roughly 45 percent of CO_2 emissions in the EU and include electricity generation, refineries, ferrous metals processing, glass, ceramics, cement, and paper-mills.

By early 2006, the national allocation plans have been defined by the Member states and approved by the European Commission. The plans set the emissions quotas that are assigned free of charge to each plant affected by the Directive. The process was completed late due to the European Commission's request for modifications and additions, mostly with a view to reducing the number of quotas assigned by the allocation plans initially presented by certain Member states.

During the course of 2005, the price of emissions certificates in the European market was influenced by the uncertain prospects for approval of the revised allocation plans, emissions performance in the affected industries, and quota estimates for Clean Development Mechanism (CDM) projects. CDM projects are designed to reduce emissions in developing countries which are not subject to any emissions limits in Kyoto Protocol Annex B. Once the projects are approved and completed, certificates are issued that are valid for meeting Kyoto reduction targets. Along with Joint Implementation (JI) projects (carried out in countries with transitional economies included in Annex B), which will only be recognized as from the second period, CDM projects are one of the flexible mechanisms that can be used in the European emissions trading circuit on the basis of Directive 2004/101/EC.

Another factor with a major influence on the emissions trading market was the rise in the price of fuels used for electricity generation, which is closely related to the cost of reducing CO_2 emissions, at least in a medium-term perspective. The result was an initial flare-up in prices on the main emissions trading markets, topping €30 per ton of CO_2, and a subsequent crash to below €15 per ton of CO_2 when plants involved in the system in 2005 announced their first emissions data.

Indeed, preliminary data released by the European Commission on 16 May 2006 show a Europe-wide excess of quotas amounting to some 44 million tons of CO_2, concentrated mainly in Germany and France, although data are still unavailable for Cyprus, Luxembourg, Malta and Poland. It should be noted, in any case, that the assignment of quotas is for the three-year period 2005-2007, so it is over that horizon that the assignment process, trading, and price trends should be assessed.

Emissions data for 2005 will still be useful for defining allocation plans for the second period (2008-2012), which are due before the Commission by 30 June 2006.

TABLE 1.1

The Italian energy industry in figures, 2005

Mtoe

	SOLIDS	GAS	OIL	RENEWABLES	ELECTRICITY	TOTAL
Production	0,50	9,88	6,09	13,25	0,00	29,71
Imports	16,56	60,60	107,94	0,74	11,06	196,90
Exports	0,22	0,33	28,65	0,00	0,24	29,45
Change in reserves	–0,03	–0,93	–0,63	0,00	0,00	–1,59
Availability for domestic consumption	16,86	71,09	86,00	13,98	10,81	198,75
Consumption and leakage in the energy sector	–0,51	–0,82	–6,18	–0,07	–44,94	–52,52
Conversion into electricity	–11,73	–27,12	–9,39	–11,57	59,81	0,00
Total end uses	4,62	43,16	70,43	2,34	25,68	146,23
- industry	4,48	16,90	7,60	0,32	11,84	41,14
- trasportation	0,00	0,38	42,83	0,27	0,84	44,31
- civil use	0,01	24,79	6,87	1,57	12,55	45,79
- agricolture	0,00	0,14	2,59	0,18	0,45	3,36
- chemical synthesis	0,14	0,95	7,09	0,00	0,00	8,18
- bunkering	0,00	0,00	3,45	0,00	0,00	3,45

Source: Ministry of Productive Activities.

TABLE 1.2

Exposure to risk of interruption in the procurement of natural gas and electricity

2004

NATURAL GAS		ELECTRICITY		ELECTRICITY AND NATURAL GAS	
Latvia	1,00	Cyprus	0,54	Latvia	0,61
Finland	1,00	Malta	0,54	Finland	0,55
FYROM	1,00	Italy	0,44	Turkey	0,55
Lithuania	1,00	Turkey	0,37	Greece	0,53
Bosnia-Herzegovina	1,00	Belgium	0,33	Portugal	0,52
Estonia	1,00	Portugal	0,32	FYROM	0,51
Sweden	0,93	Luxembourg	0,27	Lithuania	0,50
Bulgaria	0,91	Spain	0,24	Bosnia-Herzegovina	0,50
Slovakia	0,86	Greece	0,23	Estonia	0,50
Serbia-Montenegro	0,86	Latvia	0,22	Bulgaria	0,50
Greece	0,83	Croatia	0,19	Luxembourg	0,49
Ireland	0,80	Netherlands	0,14	Slovakia	0,48
Czech Republic	0,76	United Kingdom	0,14	Sweden	0,47
Portugal	0,73	Finland	0,10	Belgium	0,45
Turkey	0,73	Austria	0,10	Ireland	0,45
Luxembourg	0,71	Ireland	0,10	Italy	0,43
Slovenia	0,68	Slovakia	0,09	Serbia-Montenegro	0,43
Hungary	0,66	Bulgaria	0,09	Czech Republic	0,38
Austria	0,62	Germany	0,08	Austria	0,36
Switzerland	0,59	France	0,06	Hungary	0,36
Belgium	0,58	Hungary	0,05	Slovenia	0,34
France	0,50	Romania	0,03	Spain	0,34
Poland	0,47	Albania	0,03	Switzerland	0,30
Germany	0,46	FYROM	0,02	France	0,28
Spain	0,43	Poland	0,01	Germany	0,27
Italy	0,42	Sweden	0,01	Cyprus	0,27
Croatia	0,34	Serbia-Montenegro	0,01	Malta	0,27
Romania	0,27	Lithuania	0,01	Croatia	0,26
United Kingdom	0,02	Bosnia-Herzegovina	0,01	Poland	0,24
Cyprus	0,00	Norway	0,01	Romania	0,15
Malta	0,00	Estonia	0,00	United Kingdom	0,08
Netherlands	0,00	Slovenia	0,00	Netherlands	0,07
Albania	0,00	Czech Republic	0,00	Albania	0,01
Norway	0,00	Switzerland	0,00	Norway	0,00
Denmark	0,00	Denmark	0,00	Denmark	0,00
Total Europe	0,19	Total Europe	0,10	Total Europe	0,14
EU 15	0,16	EU 15	0,13	EU 15	0,14
EU 25	0,18	EU 25	0,10	EU 25	0,14
EU 10	0,67	EU 10	0,00	EU 10	0,34

Source: AEEG calculations on IEA data.

TABLE 1.3

Natural gas balance in ex-USSR

G(m3)

YEAR	CONSUMPTION	PRODUCTION	EXPORTS
1990	699	802	103
1991	702	797	96
1992	662	768	106
1993	642	749	107
1994	598	708	110
1995	577	696	119
1996	584	705	121
1997	547	661	114
1998	558	680	121
1999	565	692	127
2000	582	711	129
2001	583	714	131
2002	596	730	134
2003	606	762	156
2004	622	782	160

Source: AEEG calculations on IEA data. For the sake of continuity in historical series, the IEA includes the Baltic states as part of the former USSR.

TABLE 1.4

Electricity prices per type of consumption: residential users

Prices in eurocents/kWh at current exchange rates as of 1 July 2005

ANNUAL CONSUMPTION	600 kWh		1.200 kWh		3.500 kWh		7.500 kWh	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	19,4	14,0	16,6	11,8	13,9	9,5	13,1	8,8
Belgium	21,2	16,7	18,1	14,1	14,3	11,0	13,7	10,5
Denmark	34,1	18,4	27,5	13,1	23,2	9,6	21,9	8,6
Finland	19,3	15,0	13,6	10,4	10,4	7,8	8,7	6,4
France(A)	16,7	12,8	14,8	11,1	11,9	9,1	11,6	8,8
Germany	27,8	21,9	22,5	17,4	18,0	13,5	16,7	12,4
Greece	8,7	8,0	8,1	7,5	6,9	6,4	7,9	7,2
Ireland	32,3	24,5	23,1	18,3	14,4	12,0	12,9	11,0
Italy(B)	10,0	8,2	10,3	8,6	20,1	15,1	19,0	14,1
Luxembourg	27,9	25,3	20,6	18,4	15,0	13,1	13,6	11,8
Norway	54,9	42,6	31,6	24,0	16,3	11,8	12,1	8,4
Netherlands	22,9	21,5	20,9	15,2	19,6	11,1	19,3	9,9
Portugal	14,3	13,5	16,2	15,4	13,8	13,1	12,3	11,7
United Kingdom	13,3	12,7	12,0	11,5	9,3	8,8	9,3	8,9
Spain	14,0	11,5	14,0	11,5	11,0	9,0	10,1	8,3
Sweden	28,8	20,5	19,5	13,0	13,3	8,1	12,3	7,3
European weighted average (C)	**20,9**	**16,7**	**17,0**	**13,3**	**14,1**	**10,6**	**13,2**	**9,9**
Italy: differential(D)	*–52,4%*	*–50,7%*	*–39,3%*	*–35,6%*	*42,5%*	*42,0%*	*43,7%*	*42,9%*

A) Average price in various sample locations.
B) General system costs (tariff components A and UC) included in price gross of taxes.
C) Average weighted to reflect national domestic consumption volumes in 2000.
D) Percent difference from European weighted average.

Source: AEEG calculations on Eurostat data.

TABLE 1.5

Change in electricity prices per type of consumption: residential users

Percent change, July 2005 – July 2004(A)

ANNUAL CONSUMPTION	600 kWh		1.200 kWh		3.500 kWh		7.500 kWh	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	–1,1%	–1,3%	–0,1%	–0,3%	–2,6%	–3,3%	–1,7%	–2,1%
Belgium(B)	10,3%	7,0%	2,5%	0,1%	–0,7%	–3,8%	–1,9%	–5,1%
Denmark	3,9%	6,1%	3,4%	6,1%	2,9%	6,1%	2,8%	6,0%
Finland	–1,1%	–1,2%	–1,8%	–2,0%	–2,1%	–2,3%	–2,4%	–2,4%
France (B)	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Germany	7,1%	7,8%	6,8%	7,7%	4,7%	5,5%	6,2%	7,3%
Greece	3,5%	2,4%	3,4%	2,5%	3,4%	2,6%	3,6%	2,6%
Ireland	21,5%	20,0%	17,9%	16,6%	14,3%	13,5%	12,3%	11,9%
Italy **(C)**	**4,6%**	**8,6%**	**4,6%**	**8,4%**	**4,3%**	**7,1%**	**3,7%**	**6,6%**
Luxembourg	15,1%	14,1%	12,5%	11,1%	9,9%	7,7%	8,9%	6,4%
Norway	22,1%	21,6%	20,2%	19,8%	16,0%	15,7%	13,1%	12,6%
Netherlands	8,5%	8,0%	8,2%	8,2%	6,7%	6,5%	6,9%	6,9%
Portugal	2,5%	2,7%	2,1%	2,5%	2,2%	2,1%	2,6%	2,5%
United Kingdom	7,7%	7,7%	7,3%	7,5%	4,9%	4,8%	6,0%	6,2%
Spain	1,7%	1,8%	1,7%	1,8%	1,7%	1,7%	1,7%	1,7%
Sweden	–3,3%	–4,0%	–2,9%	–4,1%	–2,3%	–3,9%	–3,4%	–5,5%
European weighted average (D)	**6,3%**	**6,5%**	**5,1%**	**5,5%**	**3,5%**	**3,8%**	**3,5%**	**4,0%**

A) The adjustments made to the 2004 figures of certain countries in the Eurostat database have been taken into account.

B) Average price in various sample locations.

C) General system costs (tariff components A and UC) included in price gross of taxes.

D) Average weighted to reflect national domestic consumption volumes in 2000. The growth rates for each consumption bracket were calculated by including in the European average only those countries for which data were available at both July 2004 and July 2005.

Source: AEEG calculations on Eurostat data.

TABLE 1.6

Electricity prices per type of consumption: industrial users

Prices in eurocents/kWh at current exchange rates as of 1 July 2005

ANNUAL CONSUMPTION	50,000 kWh (50 kW, 1,000 h)		160,000 kWh (100 kW, 1,600 h)		2 GWh (500 kW, 4,000 h)		10 GWh (2,500 kW, 4,000 h)	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	13,8	9,4	12,6	8,4	9,6	6,0	8,3	4,8
Belgium	15,2	11,5	14,0	10,7	10,1	7,5	9,6	7,0
Denmark	12,0	7,3	11,4	6,9	11,0	6,5	–	–
Finland	8,4	6,4	8,1	6,2	6,7	5,0	6,8	5,1
France (A)	10,9	8,4	10,0	7,7	6,9	5,3	6,9	5,3
Germany	19,4	15,5	15,4	12,1	10,8	8,1	10,7	8,0
Greece	10,3	9,5	9,5	8,8	7,0	6,5	7,0	6,5
Ireland	17,9	14,3	15,0	12,4	10,6	9,0	10,2	8,7
Italy **(B)**	**15,9**	**12,0**	**13,8**	**10,3**	**12,4**	**9,1**	**11,4**	**8,9**
Luxembourg	–	–	–	–	9,0	7,5	–	–
Norway	9,5	6,4	9,0	6,0	8,5	5,5	7,3	4,6
Netherlands	17,0	10,9	14,4	10,5	10,7	8,1	8,9	6,6
Portugal	11,4	10,9	9,6	9,1	7,7	7,4	7,7	7,3
United Kingdom	12,0	9,6	10,4	8,5	7,8	6,4	6,8	5,6
Spain	12,7	10,4	9,9	8,1	8,4	6,9	7,8	6,4
Sweden	7,1	7,1	6,5	6,4	5,4	5,4	5,0	5,0
European weighted average (C)	**13,9**	**10,8**	**11,8**	**9,2**	**9,1**	**7,0**	**8,5**	**6,6**
Italy: differential (D)	*14,7%*	*11,3%*	*16,7%*	*11,9%*	*35,7%*	*30,0%*	*33,1%*	*34,4%*

ANNUAL CONSUMPTION	24 GWh (4,000 kW, 6,000 h)		50 GWh (10,000 kW, 5,000 h)		70 GWh (10,000 kW, 7,000 h)	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	8,1	4,7	8,2	4,8	7,7	4,4
Belgium	8,6	6,2	7,8	6,0	7,2	5,6
Denmark	–	–	–	–	–	–
Finland	6,3	4,7	5,5	4,0	5,4	3,9
France (A)	6,0	4,6	–	–	–	–
Germany	9,7	7,1	10,2	7,5	9,5	7,0
Greece	5,9	5,4	5,5	5,1	4,9	4,5
Ireland	9,1	7,7	8,6	7,3	8,1	6,9
Italy **(B)**	**10,1**	**8,2**	**9,6**	**7,8**	**9,1**	**7,4**
Luxembourg	–	–	–	–	–	–
Norway	6,3	3,8	6,1	3,6	6,0	3,5
Netherlands	7,1	5,6	6,8	5,5	6,5	5,3
Portugal	6,9	6,6	6,0	5,7	5,6	5,3
United Kingdom	6,3	5,2	6,6	5,5	5,7	4,8
Spain	7,1	5,8	7,1	5,8	6,5	5,3
Sweden	4,7	4,7	4,8	4,7	4,6	4,5
European weighted average (C)	**7,6**	**5,9**	**7,9**	**6,2**	**7,4**	**5,8**
Italy: differential (D)	*32,0%*	*37,7%*	*20,7%*	*25,6%*	*22,7%*	*28,0%*

A) Average price in various sample locations.
B) General system costs (tariff components A and UC) included in price gross of taxes.
C) Average weighted to reflect national domestic consumption volumes in 2000.
D) Percent difference from European weighted average.

Source: AEEG calculations on Eurostat data.

TABLE 1.7

Change in electricity prices per type of consumption: industrial users

Percent change, July 2004 – July 2005(A)

ANNUAL CONSUMPTION	50,000 kWh (50 kW, 1,000 h)		160,000 kWh (100 kW, 1,600 h)		2 GWh (500 kW, 4,000 h)		10 GWh (2,500 kW, 4,000 h)	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	–1,5%	–2,0%	0,7%	1,0%	7,6%	10,7%	5,2%	7,6%
Belgium(B)	–3,9%	–7,1%	1,7%	–1,7%	8,2%	3,0%	9,8%	4,0%
Denmark	2,0%	2,0%	2,0%	2,1%	2,0%	2,0%	–	–
Finland	–2,7%	–3,0%	–1,6%	–1,9%	–2,6%	–2,9%	–2,2%	–2,3%
France (B)	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Germany	3,8%	4,0%	7,9%	8,9%	9,3%	11,0%	9,9%	11,7%
Greece	3,4%	2,5%	3,5%	2,5%	3,4%	2,4%	3,4%	2,4%
Ireland	11,2%	9,3%	10,6%	9,3%	14,5%	13,9%	15,5%	14,9%
Italy **(C)**	**–1,4%**	**3,5%**	**0,8%**	**4,2%**	**2,5%**	**5,6%**	**6,1%**	**9,8%**
Luxembourg	–	–	–	–	11,9%	8,2%	–	–
Norway	12,8%	12,6%	13,3%	12,7%	13,7%	13,8%	9,2%	8,3%
Netherlands	–	–	–	–	–	–	–	–
Portugal	6,2%	6,2%	6,9%	6,9%	8,1%	8,1%	8,0%	8,1%
United Kingdom	25,4%	27,8%	18,8%	19,8%	21,3%	22,3%	18,0%	19,1%
Spain	7,3%	7,3%	20,1%	20,1%	27,4%	27,5%	26,9%	27,1%
Sweden	–1,5%	–2,4%	0,2%	–0,6%	–0,2%	–1,1%	–1,6%	–2,5%
European weighted average (D)	**4,5%**	**5,4%**	**6,7%**	**7,5%**	**8,5%**	**9,6%**	**8,8%**	**9,8%**

ANNUAL CONSUMPTION	24 GWh (4,000 kW, 6,000 h)		50 GWh (10,000 kW, 5,000 h)		70 GWh (10,000 kW, 7,000 h)	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	8,2%	12,5%	8,1%	12,0%	8,9%	13,7%
Belgium (B)	22,9%	12,1%	18,3%	14,3%	18,9%	16,3%
Denmark	–	–	–	–	–	–
Finland	–2,3%	–2,7%	–2,8%	–3,1%	–2,9%	–3,2%
France (B)	0,0%	0,0%	–	–	–	–
Germany	11,1%	13,4%	10,5%	12,5%	11,6%	13,9%
Greece	3,5%	2,5%	3,4%	2,4%	3,4%	2,5%
Ireland	16,6%	16,0%	19,5%	19,0%	20,3%	20,0%
Italy **(C)**	**7,9%**	**11,8%**	**5,6%**	**8,9%**	**8,2%**	**12,2%**
Luxembourg	–	–	–	–	–	–
Norway	10,1%	9,2%	10,4%	9,7%	10,4%	9,3%
Netherlands	–	–	–	–	–	–
Portugal	8,5%	8,6%	9,4%	9,3%	10,1%	10,1%
United Kingdom	32,5%	34,0%	24,6%	25,5%	41,4%	43,4%
Spain	19,3%	19,4%	21,2%	21,1%	15,4%	14,3%
Sweden	0,0%	–1,1%	–0,2%	–1,3%	0,0%	–1,1%
European weighted average (D)	**10,9%**	**12,1%**	**11,5%**	**12,8%**	**13,3%**	**15,0%**

A) The adjustments made to the 2004 figures of certain countries in the Eurostat database have been taken into account.
B) Average price in various sample locations.
C) General system costs (tariff components A and UC) included in price gross of taxes.
D) Average weighted to reflect national domestic consumption volumes in 2000. The growth rates for each consumption bracket were calculated by including in the European average only those countries for which data were available at both July 2004 and July 2005.

Source: AEEG calculations on Eurostat data.

TABLE 1.8

Gas prices per type of consumption: residential users

Prices in eurocents/kWh at current exchange rates as of 1 July 2005; 1 GJ = 26.268 m3

ANNUAL CONSUMPTION	8.37 GJ (219.86 m3)(A)		16.74 GJ (439.73 m3)(A)		83.7 GJ (2,198.63 m3)(B)		125.6 GJ (3,299.26 m3) (B)	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	82,3	58,6	66,6	46,3	51,6	34,5	50,1	33,3
Belgium	76,9	62,0	68,8	55,3	48,1	38,2	45,5	36,1
Denmark	152,2	84,6	103,7	45,8	103,7	45,8	103,7	45,8
France	70,2	60,5	62,1	52,8	41,7	35,5	40,1	34,1
Germany	91,0	72,6	74,8	58,7	52,6	39,6	50,3	37,5
Ireland	90,6	79,8	75,2	66,3	38,0	33,5	34,9	30,8
Italy	–	–	–	–	–	–	–	–
Luxembourg	60,2	56,8	53,3	50,3	33,4	31,6	33,0	31,1
Netherlands(C)	76,2	91,0	66,3	61,1	58,4	37,2	57,7	35,2
Portugal	77,6	73,9	71,3	67,8	50,7	48,3	49,3	47,0
United Kingdom	35,7	34,0	31,7	30,2	28,4	27,1	28,1	26,8
Spain	65,6	56,5	58,3	50,3	46,0	39,7	44,9	38,7
Sweden	88,4	49,1	81,7	43,7	79,1	41,2	78,6	40,8
European weighted average (D)	**65,5**	**57,8**	**55,8**	**47,0**	**42,9**	**34,1**	**41,6**	**32,8**
Italy: differential (E)	–	–	–	–	–	–	–	–

A) For cooking and hot water.
B) For cooking, hot water and heating.
C) Since 1 January 2001 all natural gas consumers have received a fixed refund. The price net of taxes may therefore be higher than the gross price.
D) Average weighted to reflect national domestic consumption volumes in 2000.
E) Percent difference from weighted average.

Source: AEEG calculations on Eurostat data.

TABLE 1.9

Change in gas prices per type of consumption: residential users

Percent change, July 2004 – July 2005 (A)

ANNUAL CONSUMPTION	8.37 GJ (219.86 m3)(B)		16.74 GJ (439.73 m3)(B)		83.7 GJ (2,198.63 m3)(C)		125.6 GJ (3,299.26 m3) (C)	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	2,1%	2,3%	2,1%	2,4%	1,5%	1,8%	1,4%	1,6%
Belgium	4,9%	4,4%	1,6%	1,0%	18,0%	17,6%	16,6%	16,3%
Denmark	9,9%	9,8%	9,8%	9,9%	9,8%	9,9%	9,8%	9,9%
France(D)	–1,8%	–1,9%	1,9%	1,9%	8,0%	7,9%	9,1%	9,1%
Germany(D)	5,7%	6,2%	7,2%	8,0%	7,8%	9,0%	8,2%	9,6%
Ireland	10,9%	10,9%	10,9%	10,9%	10,9%	11,0%	10,9%	10,8%
Italy	–	–	–	–	–	–	–	–
Luxembourg	11,1%	11,1%	12,7%	12,7%	21,8%	21,9%	22,3%	22,3%
Netherlands	70,1%	38,2%	38,4%	31,1%	15,9%	19,1%	14,2%	17,6%
Portugal	7,3%	7,3%	7,2%	7,1%	8,3%	8,4%	9,0%	9,1%
United Kingdom	10,5%	10,6%	10,1%	10,0%	9,4%	9,4%	9,3%	9,3%
Spain	4,6%	4,5%	5,1%	5,1%	6,5%	6,7%	6,7%	6,7%
Sweden	–3,5%	–4,6%	0,5%	1,2%	6,9%	11,1%	6,8%	10,9%
European weighted average(E)	**10,5%**	**10,0%**	**9,7%**	**9,6%**	**9,6%**	**10,3%**	**9,6%**	**10,3%**

A) The adjustments made to the 2004 figures of certain countries in the Eurostat database have been taken into account.

B) For cooking and hot water.

C) For cooking, hot water and heating.

D) Average price in various sample locations.

E) Average weighted to reflect national domestic consumption volumes in 2000. The growth rates for each consumption bracket were calculated by including in the European average only those countries for which data were available at both July 2004 and July 2005.

Source: AEEG calculations on Eurostat data.

TABLE 1.10

Gas prices per type of consumption: industrial users

Prices in eurocents/kWh at current exchange rates as of 1 July 2005; 1 GJ = 26.268 m3

ANNUAL CONSUMPTION	418.6 GJ (10,995.8 m3)(A)		4,186 GJ (109,958 m3)(B)		41,860 GJ (1,099,578 m3)(C)		125.6 GJ (10,995,785 m3)(D)	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	44,6	29,0	40,5	25,8	39,1	24,7	–	–
Belgium	–	–	–	–	26,5	21,7	–	–
Denmark	61,3	45,9	54,6	40,3	31,1	22,0	26,5	18,4
Finland	–	–	41,6	32,3	33,7	25,8	25,4	19,0
France	36,3	30,6	31,0	26,0	31,1	25,5	27,3	21,7
Germany	47,5	36,7	44,7	34,3	42,4	32,4	35,8	26,6
Ireland	38,8	34,2	31,0	27,3	–	–	–	–
Italy	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Luxembourg	32,7	30,9	30,9	29,1	30,5	28,8	19,1	18,0
Netherlands	49,8	29,5	43,1	25,0	25,8	17,5	19,9	15,3
Portugal	41,1	39,1	36,2	34,5	27,2	25,9	18,8	17,9
United Kingdom	37,3	30,5	34,2	28,0	30,1	24,5	21,2	17,7
Spain	36,4	31,4	22,5	19,4	21,4	18,5	20,1	17,4
Sweden	46,4	42,1	–	–	40,6	36,4	–	–
European weighted average(E)	**41,7**	**32,4**	**36,6**	**28,2**	**32,2**	**25,3**	**26,5**	**20,9**
Italy: scostamento(F)	–	–	–	–	–	–	–	–

A) No load factor.
B) With load factor of 200 days.
C) With load factor of 200 days, or 1,600 hours.
D) With load factor of 250 days, or 4,000 hours.
E) Average weighted to reflect national domestic consumption volumes in 2000.
F) Percent difference from weighted average.

Source: AEEG calculations on Eurostat data.

TABLE 1.11

Change in gas prices per type of consumption: industrial users

Percent change,
July 2005 – July 2004 (A)

ANNUAL CONSUMPTION	418.6 GJ (10,995.8 m3)(B)		4,186 GJ (109,958 m3)(C)		41,860 GJ (1,099,578 m3)(D)		125.6 GJ (10,995,785 m3)(E)	
COUNTRY	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES	GROSS OF TAXES	NET OF TAXES
Austria	1,7%	2,1%	12,8%	16,3%	13,5%	17,2%	–	–
Belgium	–	–	–	–	11,0%	9,6%	–	–
Denmark	9,5%	10,1%	9,0%	8,3%	7,2%	7,1%	6,4%	5,9%
Finland	–	–	4,5%	4,8%	5,6%	6,1%	7,4%	8,2%
France(F)	11,0%	11,1%	13,3%	13,3%	21,6%	17,7%	39,0%	42,3%
Germany(F)	9,4%	16,1%	18,3%	28,2%	21,0%	32,4%	19,9%	33,7%
Ireland	15,9%	16,0%	16,0%	16,0%	–	–	–	–
Italy	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Luxembourg	22,5%	22,5%	24,2%	24,2%	24,6%	24,5%	19,2%	19,4%
Netherlands	9,3%	5,0%	1,8%	–8,9%	13,2%	9,0%	10,1%	9,9%
Portugal	1,3%	2,0%	16,8%	18,0%	17,2%	19,9%	17,9%	26,3%
United Kingdom	41,5%	44,1%	47,6%	50,8%	39,8%	42,6%	36,5%	37,6%
Spain	8,9%	8,8%	14,5%	14,6%	15,4%	15,7%	16,8%	16,9%
Sweden	22,8%	25,4%	–	–	30,0%	34,5%	–	–
European weighted average(G)	**14,5%**	**16,9%**	**18,6%**	**21,4%**	**22,0%**	**25,0%**	**25,1%**	**31,4%**

A) The adjustments made to the 2004 figures of certain countries in the Eurostat database have been taken into account.
B) No load factor.
C) With load factor of 200 days.
D) With load factor of 200 days, or 1,600 hours.
E) With load factor of 250 days, or 4,000 hours.
F) Average price in various sample locations.
G) Average weighted to reflect national domestic consumption volumes in 2000. The growth rates for each consumption bracket were calculated by including in the European average only those countries for which data were available at both July 2004 and July 2005.

Source: AEEG calculations on Eurostat data.

TABLE 1.12

Tax charge as a percentage of gas prices per type of consumption

1 July 2005

ANNUAL CONSUMPTION	8,37 GJ 219,86 m3	16,74 GJ 439,73 m3	83,70 GJ 2.198,63 m3	125,6 GJ 3.299,26 m3	419 GJ 10.996 m3	4.186 GJ 109.958 m3	41.860 GJ 1.099.578m3	418.600 GJ 10.995.785 m3
COUNTRY	RESIDENTIAL USERS				INDUSTRIAL USERS			
Austria	28,9%	30,6%	33,1%	33,5%	34,9%	36,3%	36,9%	–
Belgium	19,4%	19,6%	20,6%	20,7%	–	–	18,4%	–
Denmark	44,4%	55,8%	55,8%	55,8%	25,0%	26,2%	29,5%	30,7%
Finlandia	–	–	–	–	–	22,3%	23,4%	25,2%
France	13,8%	14,9%	14,9%	14,8%	15,8%	16,1%	17,9%	20,3%
Germany	20,2%	21,6%	24,8%	25,4%	22,7%	23,3%	23,8%	25,5%
Ireland	11,9%	11,9%	11,8%	11,9%	11,9%	11,9%	–	–
Italy	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Luxembourg	5,7%	5,6%	5,6%	5,7%	5,7%	5,7%	5,6%	5,6%
Netherlands(A)	–19,4%	7,8%	36,3%	39,1%	40,7%	41,9%	32,0%	23,5%
Portugal	4,8%	4,8%	4,7%	4,7%	4,7%	4,7%	4,8%	4,8%
United Kingdom	4,7%	4,7%	4,7%	4,7%	18,2%	18,1%	18,6%	16,5%
Spain	13,8%	13,8%	13,7%	13,8%	13,8%	13,7%	13,7%	13,8%
Sweden	44,4%	46,5%	47,9%	48,1%	9,1%	–	10,3%	–
European average	**11,9%**	**15,8%**	**20,5%**	**21,1%**	**22,3%**	**23,0%**	**21,6%**	**21,4%**

(A) Since 1 January 2001 all domestic natural gas consumers have received a fixed refund. The price net of taxes may therefore be higher than the gross price.

Source: AEEG calculations on Eurostat data.

TABLE 1.13

National allocation plans and emissions in 2005

Tons

MEMBER STATE	CO_2 EMISSIONS FOR 2005	AVERAGE ANNUAL ALLOCATION, 2005-2007(A)	AVERAGE ANNUAL ALLOCATION NOT ASSIGNED UPON SYSTEM IMPLEMENTATION(B)
Austria	33.372.841	32.674.905	330.050
Belgium	55.354.096	59.853.575	2.545.876
Denmark	26.090.910	31.039.618	348.020
Estonia	12.621.824	18.763.471	2.460.382
Finland	33.072.638	44.587.032	189.529
France	131.147.905	150.500.685	862.952
Germany	473.715.872	495.073.574	4.871.317
Greece	71.033.294	71.135.034	3.926.426
Ireland	22.397.678	19.238.190	3.286.839
Italy	215.415.641	207.518.860	1.424.738
Latvia	2.854.424	4.054.431	3.081.180
Lithuania	6.603.869	11.468.181	15.551.575
Netherlands	80.351.292	86.439.031	505.760
Portugal	36.413.004	36.898.516	797.213
United Kingdom	242.396.039	209.387.854	2.503.305
Czech Republic	82.453.727	96.907.832	1.262.898
Slovakia	25.237.739	30.364.848	7.180
Slovenia	8.720.550	8.691.990	66.667
Spain	181.063.141	162.111.391	13.162.130
Sweden	19.306.761	22.530.831	678.149
Hungary	25.714.574	30.236.166	15.527.484
TOTAL	**1.785.337.819**	**1.829.476.015**	**73.389.670**

A) Allocations to plants already existing when the system was implemented.

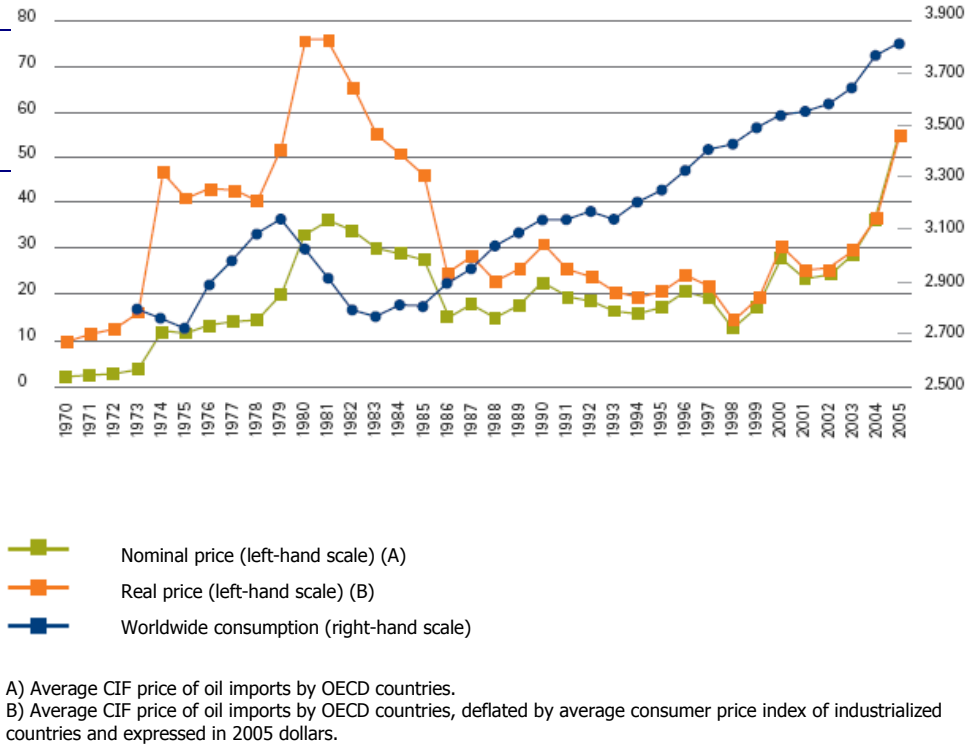
B) The figures in this column indicate the quotas not allocated to plants already existing when the system was implemented, but set aside mainly for new entrants or for auctions (in the case of Denmark, Ireland, Lithuania and Hungary).

Source: AEEG calculations on Eurostat data.

FIG. 1.1

Trend in oil price and worldwide consumption

Price in $/barrel and consumption in millions of tons



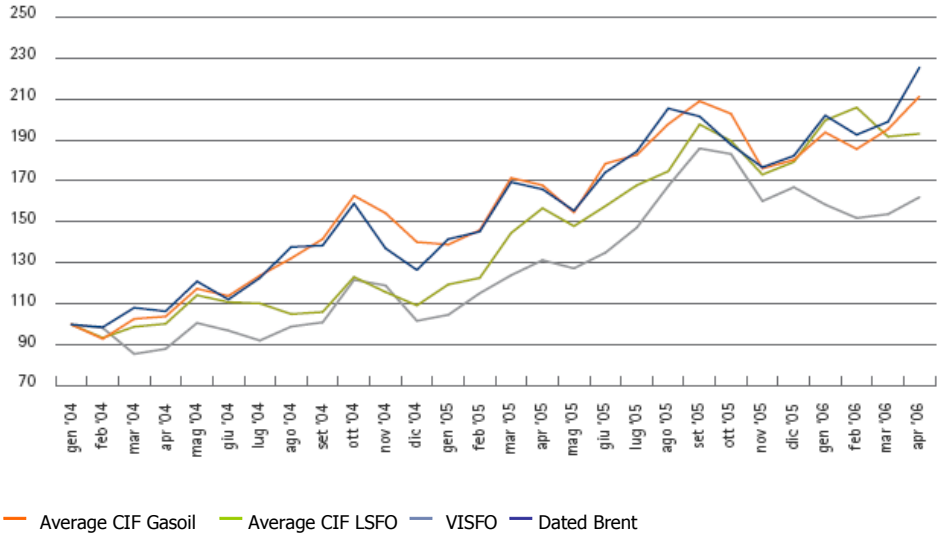
A) Average CIF price of oil imports by OECD countries.
B) Average CIF price of oil imports by OECD countries, deflated by average consumer price index of industrialized countries and expressed in 2005 dollars.

Source: AEEG calculations on Unione Petrolifera data.

FIG. 1.2

Trend in prices of crude oil and principal oil products for thermoelectric generation

Index numbers
January 2004 = 100

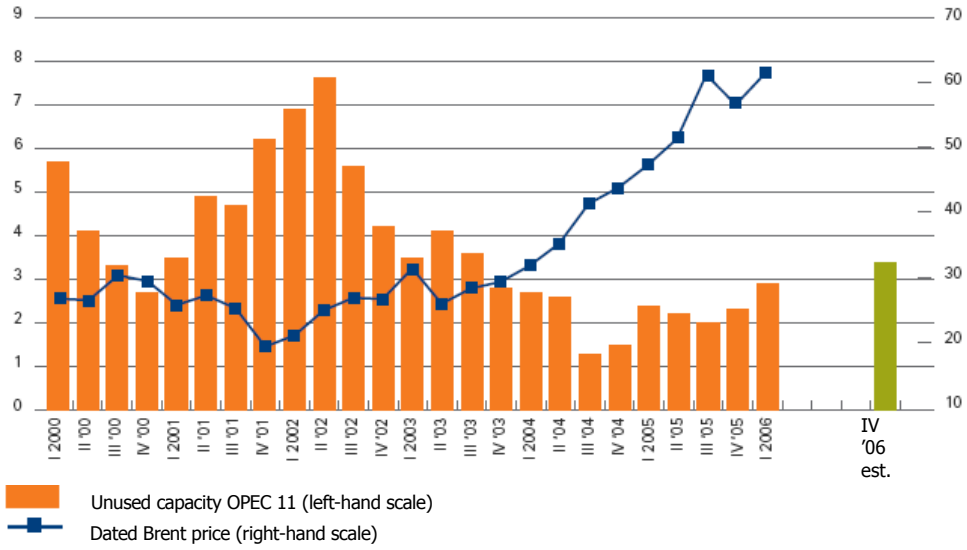


Source: AEEG calculations on Platts data

FIG. 1.3

Oil prices and unused capacity in OPEC countries

Price in $/barrel and capacity in Mb/d
IV '06 est.

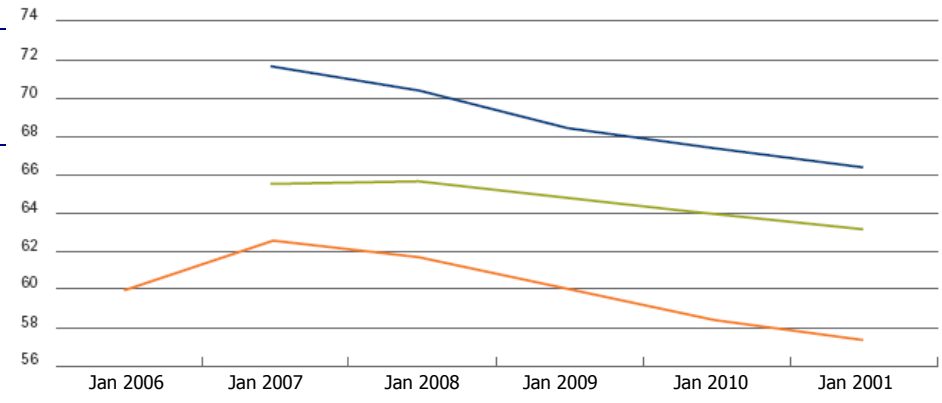


Source: AEEG calculations on IEA data.

FIG. 1.4

Price curves for Brent futures (IPE/ICE)

$/barrel

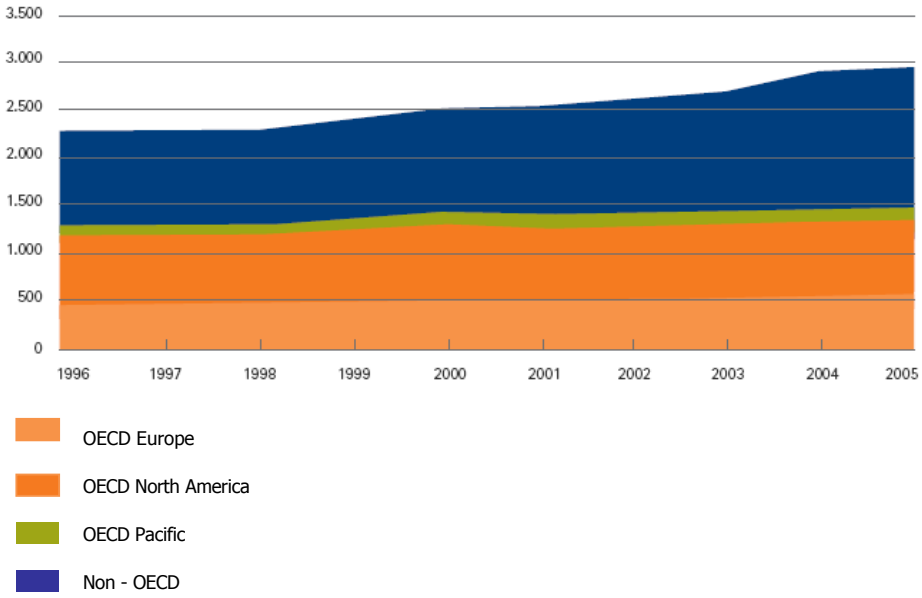


Source: AEEG calculations on IPE/ICE data

FIG. 1.5

Trend in natural gas consumption

G(m3)

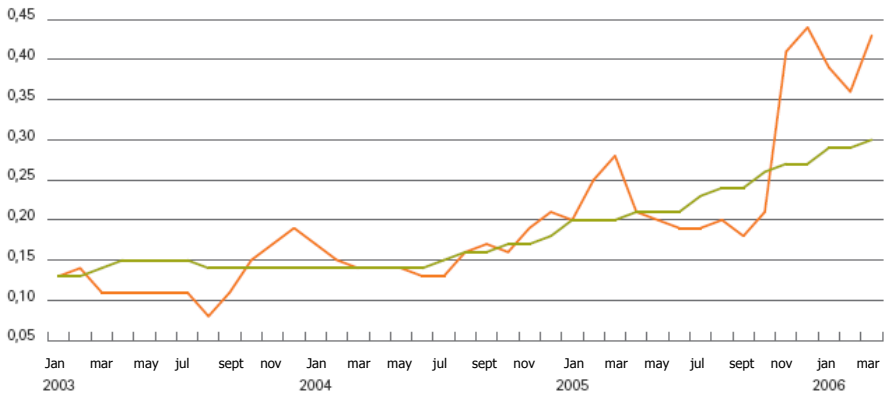


Source: AEEG calculations on IEA, Enerdata and Cedigaz data.

FIG. 1.6

Average wholesale price of natural gas in Europe

$/m3

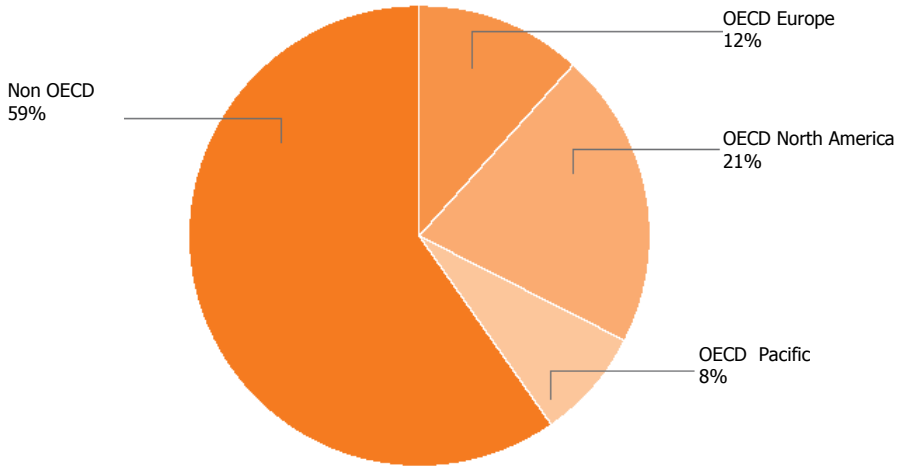


Source: AEEG calculations on World Gas Intelligence and Argus Gas Connections data.

FIG. 1.7

Worldwide consumption of coal by region

2004

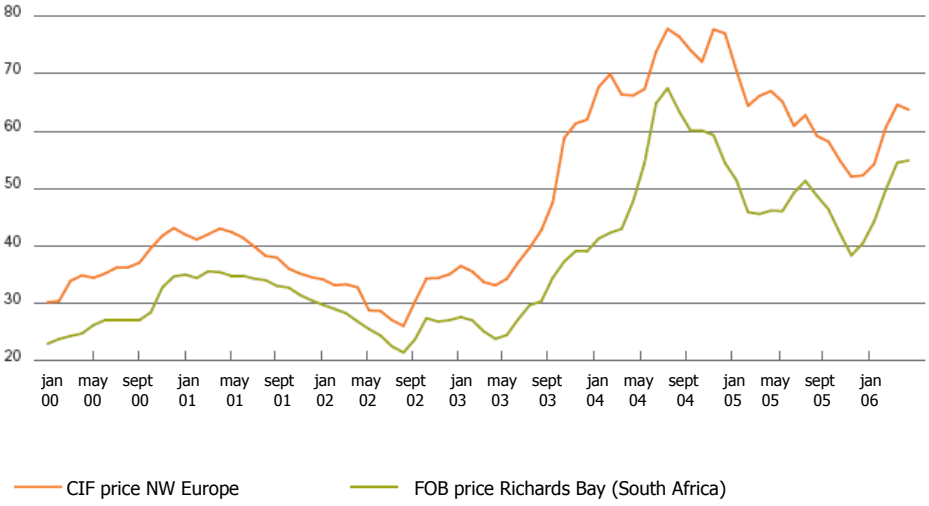


Source: AEEG calculations on IEA data.

FIG. 1.8

Price of coal in the international markets

$/t

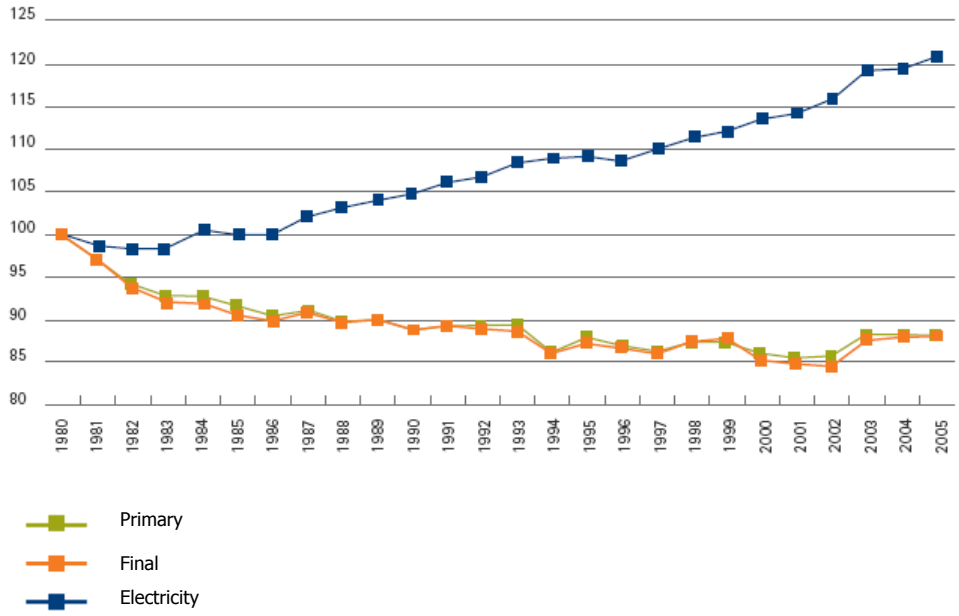


Source: AEEG calculations on Platts data.

FIG. 1.9

Energy intensity of GDP

Index numbers; 1980 = 100

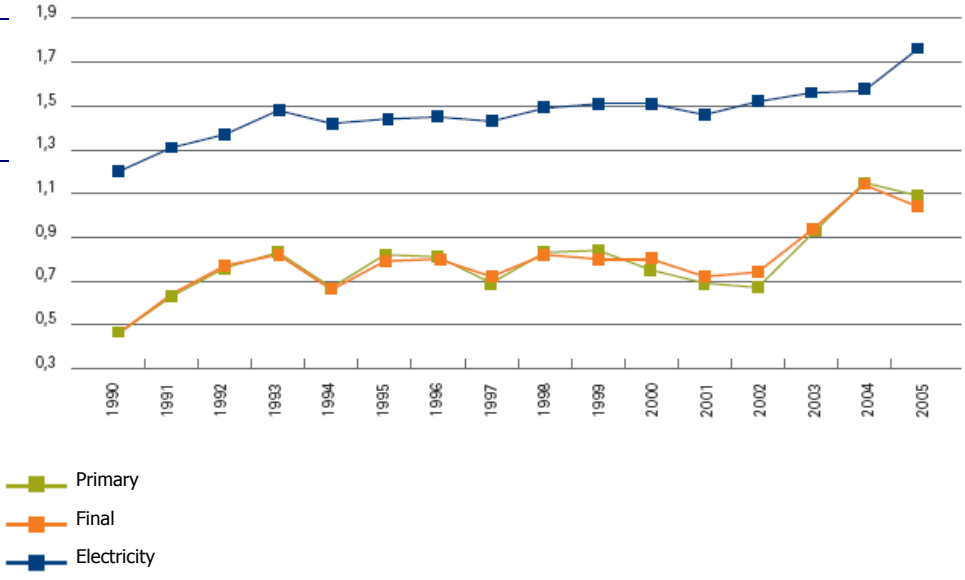


Source: AEEG calculations on data from the Ministry of Productive Activities and ISTAT.

FIG. 1.10

Energy elasticity to GDP

10-year moving average of the ratio of energy consumption growth to GDP growth

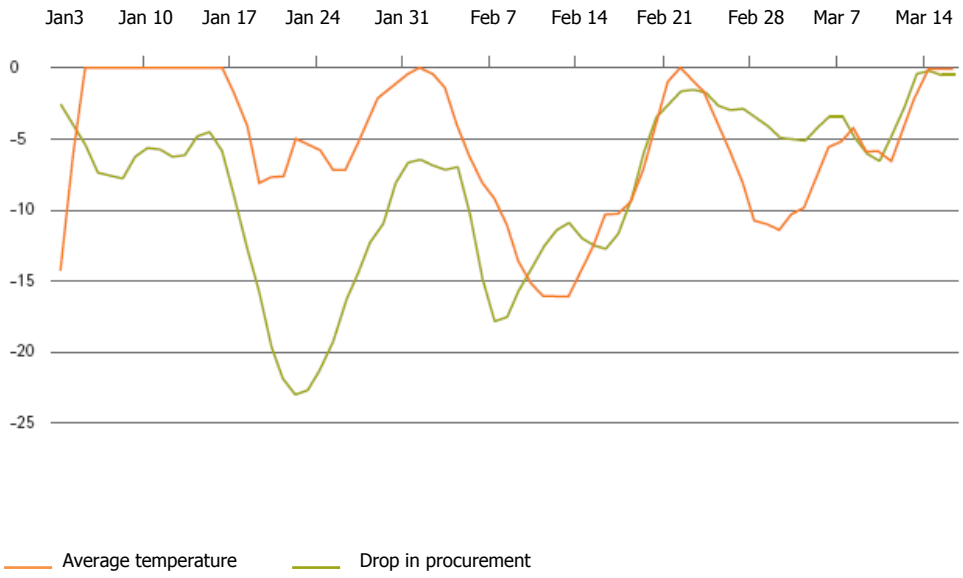


Source: AEEG calculations on data from the Ministry of Productive Activities and ISTAT.

FIG. 1.11

Average temperatures and drop in gas procurement from Russia: January to March 2006

Temperature in °C(A) and procurement decrease in %



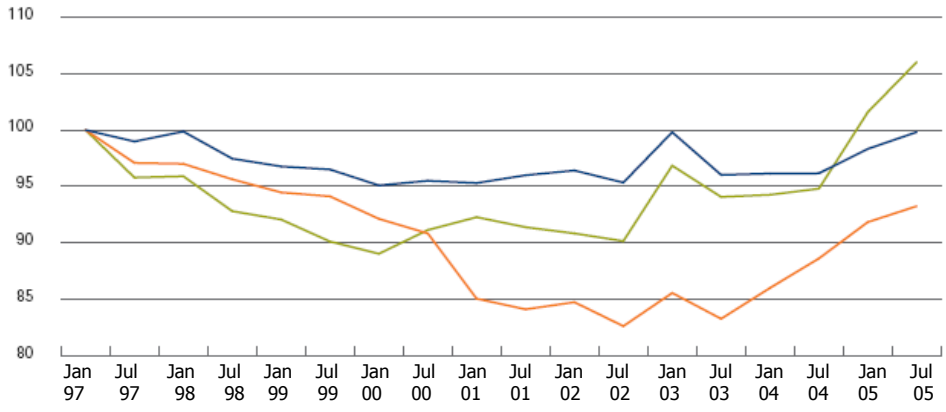
(A) Temperatures in cities of the Russian Federation, Ukraine and Belarus with pop. above 500,000, weighted by population. Temperatures refer to the 3-day moving average.

Source: AEEG calculations on Eni data for daily import figures and on Wunderground data for temperatures.

FIG. 1.12

Electricity prices in Europe

Indexes of weighted average European prices for three classes of consumption (January 1997 = 100)



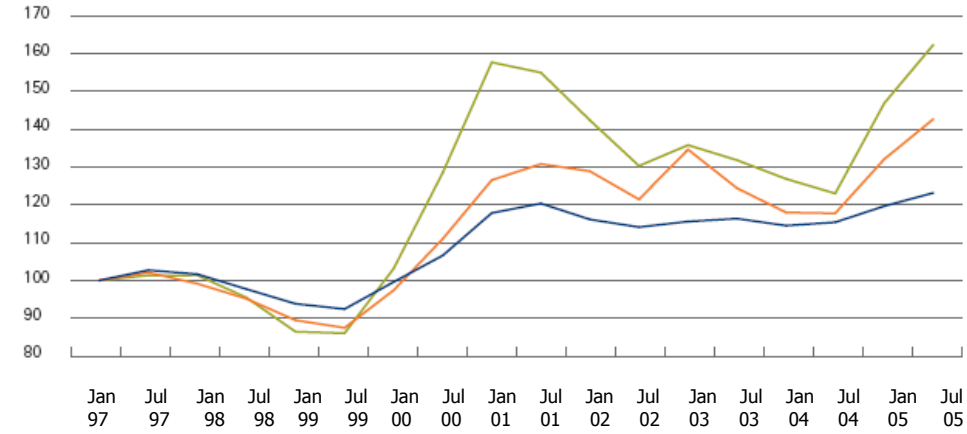
Average prices net of taxes, weighted for national residential/industrial consumption in the year 2000.

Source: AEEG calculations on Eurostat data.

FIG. 1.13

Natural gas prices in Europe

Indexes of European weighted average prices for three classes of consumption (January 1997 = 100)



Residential users ((2,200 m3))

Industrial users (110,000 m3)

Industrial users (11,000,000 m3)

Average prices net of taxes, weighted for national residential/industrial consumption in the year 2000.

Source: AEEG calculations on Eurostat data.

2. STRUCTURE, PRICES AND QUALITY IN THE ELECTRICITY SECTOR

Electricity supply and demand in 2005

Development of the sector

The gas crisis which marked the winter of 2005-2006 highlighted the structural changes which have concerned generation plants in Italy in the last few years. In particular, approximately 5,000 MW of new capacity was installed in 2005, which mainly consisted of gas combined cycles. While on the one hand this evolution resulted in an overall increase in electricity generation that was accompanied by a decrease in the level of concentration of supply, which however continues to remain high, on the other it emphasized specialization in the Italian fleet of baseload plants while concurrently bringing the problem of safety in the supply of natural gas to the forefront.

The development of fuel prices on international markets as only partly reflected in the performance of wholesale prices of electricity and with delays due to the structures of the contracts for the purchase of raw materials. On the average for the period from April to December 2005, the day-ahead market price (MGP) on the Power Exchange rose by 13 percent compared to the same period in 2004, against an increase in the Euro price of oil which exceeded 40 percent. However, in the first quarter of 2006 the national single price (PUN) grew by 31 percent with respect to the same period in 2005 while, during the same months, oil prices increased by 42 percent. It must however be recalled that the wholesale price of electricity is influenced by various factors other than the performance of fuel prices, such as the prices of green certificates and CO2 emission rights, changes in requirements, the availability of thermoelectric groups, the ability to produce hydroelectricity, grid congestion and the offer strategies of the operators. The new element which surfaced during 2005 consists of the sharp increase in electricity exports which continued into the first quarter of 2006 and was accompanied by a considerable reduction in imports. The causes of this phenomenon, which decreased in part starting from April 2006, can be found both in the trend towards increasing prices of electricity abroad which, mainly during low-load hours, were in line with domestic prices and in the new combined cycle plants which during the night resulted in the availability of productive overcapacity that was enough to shut out imports.

Moving from the generation and the wholesale market segment to the retail segment we note that the final prices net of taxes paid by non-eligible consumers increased by an annual average of 6 percent during 2005 compared to 2004. This increase underlies the steep rise of the procurement cost of electricity (10.5 percent) and a drop in the components that are related to transmission, distribution and measurement costs (-3 percent). The complete opening of the market to non-domestic customers starting from July 1, 2004, was reflected in a modest increase in the number of eligible consumers that at the end of 2005 were supplied from the free market (200,000 more than the year before); the increase was even more contained insofar as withdrawals (7 percent). The free market was therefore measured as 61 percent of the potential market, if the final withdrawal is taken into account, with an increase that is less than 1 percent compared with 2004. A survey of Italian companies conducted during 2005 showed that they are critical of the current state of the energy market's liberalization. In particular, the companies that were interviewed identified a series of problems that could obstruct the execution of a contract with a new supplier or the renegotiation of the contract with their current supplier. Among the critical points were: the lack of information (or advertising), the difficulty of operating in a market that is still perceived as monopolistic, the lack of clarity and transparency of the offers, the perception that changing a supplier will not result in an economic benefit.

During the course of 2005, a further improvement in the continuity of the service on the electricity distribution grids was recorded: indeed, both the number and the duration of unanticipated outages decreased significantly. In particular, the latter decreased from 91 minutes per year per customer in 2004 to 80 minutes per year per customer in 2005, with all outages taken into account. As far as commercial quality is concerned, the data provided by retailers shows that in 2005 the number of cases of non-compliance with specific quality standards that were subject to reimbursements as well as indemnities paid to customers increased slightly.

Electricity supply and demand in 2005

The overall characteristics of the development of the demand and supply of electricity were described in Chapter 1, with reference to the national energy balance. In this section, we will focus on the activities of operators, so as to summarize the course of energy through the electricity supply chain, from the phases involving generation and cross-border trade through the commercial flows in the wholesale market up to sale to consumers.

The balance of the operators in the electricity sector for 2005, which is shown in table 2.1, reflects the structure of 2004 to a good extent5. However, the changes in the regulations, structure and operation of the electricity sector which took place in 2005 required significant review of the structure by rows and columns when compared to 2004.

The columns show the size of the operators, distinguished as producers or wholesalers, in terms of electricity produced and supplied. As in the 2004 report, the size of producers refers to groups and not to the single companies belonging to the group. However, in contrast to the prior year's report, these groups do not include any wholesalers that are owned by producers. A further difference with the 2004 report involves the category consisting of wholesalers with intermediary and final sales that are less than 1 TWh, which was subdivided into two sub-categories to analyze the activity of operators with transactions below 0.1 TWh in detail.

The composition of the various categories of producers is basically unchanged with respect to 2004. The category with a net production in excess of 10 TWh includes the companies belonging to the Edison group and the Eni group, Endesa Italia, Edipower and Tirreno Power; these groups produced an average of 24 TWh of energy during 2005.The next category, with an average net production between 1 and 10 TWh , is composed of 13 groups, of which the main players are Erg, AceaElectrabel, Saras, Aem Milano, Aem Torino and Asm Brescia; these groups generated a little over 3 TWh of energy on the average. Finally, the last category relating to producers includes almost 400 operators which have an average production of only 38 GWh.

The composition of the wholesaler category has changed considerably, due to the structural changes referred to previously. The first category includes the trading and final sale companies that are associated with the major producers, to which the companies Aem Trading, Atel Energia and EGL Italia have been added; overall, this includes 8 companies with average sales on the intermediate and final market exceeding 16 TWh. The second category consists of 40 companies, the main ones being Enel Energia, AceaElectrabel Trading, Siet, Energia, EdF Energia Italia and Endesa Europa Power&Fuel, all with sales in excess of 6TWh, The last two categories contain almost 90 companies, of which two thirds have sales that are lower than 100 GWh; on the average, these companies sold approximately 35 GWh of energy in 2005. As far as electricity generation is concerned, while Enel Produzione posted a significant reduction in its market share, the electricity produced by the groups with production exceeding 10TWH has increased significantly.

The strong growth of imports which marked 2005 took place following the increased flows towards the Single Buyer in the amount of 10 TWh of energy, with respect to the previous year. By contrast, the imports of the other operators decreased by more than 6 TWh during 2005. Over the total imported energy, only a relatively contained amount corresponding to a little over 7 TWh was purchased on the Exchange. The imports which took place on the basis of bilateral contracts (approximately 43 TWh) are almost equally divided between the Single Buyer and the wholesalers. As far as exports are concerned, the steep increase in energy moved during the final months of 2005 can be attributed largely to wholesale companies belonging to the main producers. Overall the electricity purchased from domestic operators represented almost 170 percent of electricity generation, net of auxiliary services and energy for pumping. Producers also resorted to purchases for a significant amount of their disposable energy, with overall procurement reaching approximately 21 percent of their generated output.

Purchases from the Power Exchange more than tripled with respect to 2004, so much that they covered almost 50 percent of overall purchases, thus becoming the principal form of transaction. Purchases from the Exchange by the Single Buyer reached a little over 60 percent of total energy, while purchases by wholesalers and producers represented 22 and 17 percent, respectively. Enel Produzione was the major buyer among producers, as it purchased over 30 TWh of energy in this way.

A large portion of the purchases from wholesalers based on bilateral contracts, which represented approximately 23

percent of total purchases, was made by other wholesalers, in particular those with sales between 1 and 10 TWh.

Purchases from producers (directly, via mandate and through tolling agreements) were approximately 24 percent of purchases. Purchases via mandate and tolling agreements, in particular, saw their percentage of total purchases from producers grow to 16 and 25 percent. Overall, purchases from producers constitute the main method of procurement for wholesalers with sales exceeding 10 TWh (62 percent of purchases), who in turn purchase energy from other wholesalers (19 percent) and the Power Exchange (18 percent). Intermediate and minor wholesalers on the other hand prefer bilateral contracts with other wholesalers, covering from 55 percent to 68 percent of their total purchases in this way.

Conveyances of energy to other operators through the Exchange constituted more than 50 percent of total transactions and were largely carried out by producers (87 percent of the offers); approximately half of the energy conveyed was offered by Enel Produzione alone. Conveyances through the Exchange, in a percentage of approximately 84 percent in the case of Enel Produzione, decrease to 51 percent for the major producers' category, while sales to wholesalers gain significance (24 percent) as do tolling agreements (21 percent), reaching 66 percent for producers generating between 1 and 10 TWh.

69 percent of sales to wholesalers, which constituted approximately 35 percent of total conveyances, were carried out by other wholesalers; on the average, the sales to other wholesalers represented approximately 75 percent of total conveyances of wholesalers.

As far as final consumption and sales are concerned, we note that the entire capacity of Enel Produzione was sold on the final market through Enel Trade and Enel Energia. The sales and self-consumption of other producers as compared to their generation, increase as their productive dimensions decrease, from 8 percent for the major producers to 36 percent of producers who generate less than 1 TWh; we do point out however that 89 percent of the final consumption and sales of the latter concerned self-consumption for industrial processes.

The supplies of the Single Buyer on the captive market exceeded 167 TWh before leakages. Sales on the free market increased considerably with respect to 2004, due to an increase in the three lower consumption segments (up to 5,000 MWh/year). The two main consumption segments posted a decrease in sales by contrast, which was in part due to the negative performance of industrial production by companies belonging to this category.

Supplies to the free market were covered mainly by wholesalers with sales between 1 and 10 TWh that represented approximately 52 percent of the market, while the major wholesalers represented approximately 36 percent. Producers as a whole contributed to supplies on the free market only by approximately 3 percent.

[5] To read the accounts correctly, please bear in mind that the breakdown of operators into categories involves the inclusion of transactions between operators that are grouped within the same category and details for the latter are not always available. Consequently, the column items do not always reflect the normal balance sheet rules, except for the column labelled "Total" which reproduces the column relating to electricity of the national energy balance, though using a different structure. Balance sheet rules apply to the rows.

Market and competition

Structure of the electricity offer

Domestic production

In 2005, the demand for electricity, which amounted to 329.4 TWh, increased by 1.3 percent compared to the previous year. Despite this increase, gross domestic electricity generation decreased by 0.3 percent, due to a significant increase in the foreign balance. On the supply side, the year was also characterized by the increased contribution of thermoelectric power to the overall gross generation of power as compared to 2004.

Table 2.2 shows that during 2005, gross production of thermoelectric power grew by 2.4 percent, to reach approximately 246.3 TWh. Natural gas production increased by almost 15 percent, concurrently with a contraction in the production of oil products (- 24.1 percent) and solid fuels (- 3.6 percent). The increase in the consumption of natural gas for electricity production in 2005 is due to the reduced consumption of interconnection capacity from abroad, in conjunction with the commissioning of new gas plants, compared to the previous year. These circumstances, together with the emergence of criticalities in the supplying of natural gas imported from abroad, created a crisis situation insofar as the procurement of the necessary reserves at the beginning of 2006.

With regard to renewable energy resources, there was a significant decrease of 16 percent in the production of hydroelectricity from natural sources, which was to a great degree connected to the lack of precipitation in Northern Italy during the winter of 2005, while the production of wind power increased (+15.6 percent) as did the production of power from biomass and waste (+8.4 percent). Overall, power generation from renewable energy resources as a percentage of gross production decreased by two percentage points, dropping from 18.4 percent in 2004 to 16.4 percent in 2005.

Finally, production from pumping dropped by 8.5 percent in 2005, to approximately 6.6 TWh.

Figure 2.1 shows the amounts generated in 2005 as compared to the previous year. In line with the trend of the last few years, there was a further contraction in the market share of the Enel Group of approximately 4.5 percentage points, in favour of some of the other major producers, such as Eni, Endesa Italia, Tirreno Power and AEM Torino.

Eni, in particular, increased its market share to approximately 9 percent. The increase in the market share of Tirreno Power by 1.6 percentage points was also significant, as was that of Endesa Italia, whose share exceeded 8 percent of gross production.

Overall, the Herfindahl-Hirschman Index (HHI) shows a decrease in market concentration, as far as gross generation is concerned; the value in the 2005 index is 1,900, while for 2004 it was 2,220.

These results are due to a production mix in 2005 that differed from the one in 2004 as well as to the addition of new plants that took place during the year. As far as the gross installed capacity is concerned, the growth in 2005 exceeded 5,000 MW, which is a 6.4 percent increase compared to the previous year. The new capacity is mainly composed of thermoelectric plants, with the addition of approximately 4,400 MW. Figure 2.2, which presents the gross available capacity of the major operators, shows how the increases mainly affected the thermoelectric capacity of the Edison group and the Eni group, each of which declares approximately 1,000 MW more than in 2004.

Figure 2.3 shows the percentages of energy aimed at consumption for major domestic operators. The calculation of the percentages does not include the energy provided by the Transmission System Operator (GRTN) to the market following compulsory withdrawals or the energy for pumping. The figure does however show the percentages of electricity provided to the market through bilateral contracts or participation in the Power Exchange.

We note that in this case as well there is a marked decrease in the market share held by the Enel group in comparison to 2004, which exceeds 5 percentage points, mainly in favour of Eni, Endesa Italia and Tirreno Power. There is furthermore a substantial reduction in the market share of Edipower, which did not contribute more than 10 percent to power generation for consumption in 2005.

Overall, the market concentration of the power generation for consumption appears to have contracted with respect to 2004; in 2004, the HHI index was in fact at 2,846, while in 2005 it was 2,419.

Table 2.3 shows the domestic percentage contribution by the major groups to thermoelectric production with reference to each fuel used. The first six groups that are significant domestically cover approximately 82 percent of thermoelectric power production, while the first eighteen cover approximately 94.5 percent.

In particular, almost all power generation from coal and an amount exceeding 65-70 percent of the generation of power from all other thermoelectric sources is attributable to the first six domestic groups. There is a drop in Enel's share as far as power generation from oil products is concerned and, to a more limited extent, power generation from natural gas. There was a drop in the market shares of all the major operators as far as the generation of power from oil products are concerned, while the reduction of Enel's share of power generation from natural gas mainly favoured Eni, whose share rose by more than 5 percentage points and Tirreno Power, following the commissioning of the new gas production capacity available during 2005.

As for other sources, Edison and Eni are by far the major operators, mainly due to their roles in the generation of power from derived gases.

In the renewable energy sector, the market share of the first six domestic groups, equal to a little over 64 percent, is far lower than their share in the thermoelectric sector. As far as the production of hydroelectric power is concerned, the market share of the major operators remained basically unchanged with respect to 2004. The Enel group continues to hold a production share that exceeds 51 percent; the remaining part is attributable to some of the major competitors, Edison, Endesa and Edipower. The CVA group is distinguished among the other operators, as its market share exceeded 7 percent of hydroelectric power produced.

Geo-thermoelectric production is attributable to Enel almost in its entirety, while the IVPC group was the major domestic producer of wind power, with a market share exceeding 50 percent.

As far as other types of production are concerned, where the largest sixteen operators cover a market share which exceeds 85 percent, the generation of power from biomass, biogas and waste is characterized by a more marked presence of smaller companies; the market share of the largest six national groups is in fact less than 3 percent, while the share of the largest sixteen operators is slightly higher than 30 percent

Subsidized production

In 2005, the total production withdrawn by GRTN according to article 3 of Legislative Decree no. 79 dated March 16, 1999, amounted to 51,262 GWh, or 17.7 percent of domestic production.

Compulsory withdrawals which mainly involve the energy produced by CIP6 plants, dropped by 9.5 percent with respect to the previous year with a contribution to domestic power generation which was less than 2 percent.

The reductions in all the items relating to withdrawals by GRTN are due to various reasons. First of all the data relating to the Mini-hydro is reduced to zero on the basis of the provisions of article 13 of Legislative Decree no. 387 dated December 29, 2003, which gave rise to resolution no. 34 of February 23, 2005 (see Non-tariff Regulation in Chapter 2 of the second volume), which rescinded the previous resolution no. 62 dated April 18, 2002. On the other hand, the most marked decrease in CIP6 energy was in "assimilated generation" and in particular in the so-called new plants, i.e. those for which the specific subsidization period is still in effect.

By contrast, the decreases in the renewable CIP6 are attributable to a steep drop in the production relating to hydro-electric plants, which was due to the low level of natural sources available to the plants during the year to which must be added a significant reduction in the production from geothermal and wind plants.

Total CIP6 costs are estimated at 3,108 million Euro which is the difference between the withdrawal costs and the revenues from the sale of energy both on the free market and to Acquirente Unico Spa (see also the paragraph on the sale of CIP6 energy on the market) as well as the revenue deriving from the sale of green certificates to entitled subjects. The decrease in CIP6 subsidization costs due to the sale of green certificates registered to the GRTN must however be evaluated in consideration of the fact that producers and importers of thermoelectric energy will incorporate the acquisition costs of these certificates into the price of electricity. The costs of surpluses must also be added to compulsory withdrawals.

The steep increases in the costs of the CIP6 program in 2005 when compared to the previous year are due to the decrease in the average price of the sale of energy to the market against a significant increase in the cost of withdrawal that was mainly due to an increase in the avoided fuel cost.

The energy "assimilated" in CIP6 was 16.8 percent of the domestic production of thermoelectricity in 2005. Of 40,463 GWh of withdrawals from "assimilated" sources, 25,097 GWh involve "new" plants that receive an average withdrawal tariff of 107.66€/MWh; the remaining amount, which belongs to "existing" plants, and which does not include the subsidization component was evaluated at an average tariff of 83.73€/MWh. These withdrawal costs must be compared (Table 2.9) to the average selling price of CIP6 energy from GRTN to the Single Buyer and the free market of 50.00 €/MWh.

As far as the renewable sources are concerned, the CIP6 agreements cover 19.7 percent of renewable energy generation. The increase of the subsidization costs is mainly determined by the annual adjustment of the tariffs and the distribution by source which, due to the lack of hydraulicity in 2005, favoured biomass, waste and biogas plants which receive the highest subsidy.

Imports

The foreign balance for 2005 amounted to 49,155 GWh which was the difference between the imports of 50,264 GWh and the exports of 1,109 GWh. Compared to 2004, the foreign balance increased by 7.7 percent, though it remained at lower levels than those registered in 2003 of approximately 1,800 GWh. This increase reverses the trend of the last two years, during which a reduction in imports was recorded following several years of continuous growth.

The foreign balance covered 14.9 percent of domestic electricity requirements in 2005, as compared to 14.0 percent the previous year.

Two contrasting factors impacted the balance between imports and exports. The first was the significant increase in imports during 2005, which grew by 8.3 percent, also due to the commissioning of the new 380 kV San Fiorano-Robbia and Gorlago-Robbia interconnection lines with Switzerland, which resulted in an increase in maximum transmission capacity.

In particular, the maximum transmission capacity, for the winter period varied on a daily basis from 7,450 MW to 6,300 MW; during the summer period (May to September 2005, not including August) these amounts were 6,350 MW and 5,800 MW. Imports from Switzerland increased by approximately 27 percent compared to the previous year, while imports from France dropped by 15 percent. We also note the significant increase in imports from Slovenia, which rose by approximately 1,800 GWh and, correspondingly, the sharp decrease in imports from Greece, which were substantially halved during the year.

The second factor which affected the balance involves the rise of 40.2 percent in exports, which reached a grater value than the pervious year for each month of the year except July and August and with a more accentuated tendency to grow in the month of December when it reached 200 GWh. We note how imports only began to diminish in percentage terms in the month of November in response to the increasing tendency for exports. This tendency continued to increase in the first months of 2006, during which there was a reduction in imports to the order of 48 percent together with a sharp decrease in the foreign balance, which was more than halved with respect to the same months of the previous year.

The decree issued by the Ministry of Productive Activities on December 13, 2005 established the terms and conditions for the regulation of electricity imports in 2006. In fact, pursuant to law no. 239 of August 23, 2004 which concerned the reorganization of the energy sector, decisions relating to the import and export of electricity are part of the State functions.

The decree confirms the separate attribution of 50 percent each by foreign operators and TERNA Spa of the available capacity net of multi-year contracts, in the name of Enel, amounting to 2,000 MW, earmarked for the Single Buyer for the procurement of the captive market.

As in 2004, the differing methods for handling congestions on the interconnection with Italy that were adopted by the bordering countries did not make adoption of joint allocation procedures possible. Of the amount due to TERNA, the decree determines:

- the availability for the Single Buyer of import rights on the transmission capacity not to exceed 26 percent of capacity at the northern electricity borders and at the southern border;
- regarding the electricity border with Switzerland only, a share of 150 MW which remains constant during the entire year and, for a period of six years starting from 2005, reserved for Raetia Energie;
- regarding the electricity border with Switzerland only, up to a maximum of 32MW for Edison to guarantee the re-entry into Italian territory of electricity produced in 2006 at the Innerferrera hydroelectric reservoir, with the possibility of a gradual re-entry of energy which was not moved in the previous years up to another 15 MW;

- the attribution of transmission capacity shares for the supplying to the Republic of San Marino and the Vatican City State, in compliance with international agreements, to the extent that is absolutely necessary to satisfy the consumption in each State.

As already pointed out, the decree provided for the maintenance of transmission capacity reserves for the execution of these multi-year contracts for 2006 as well.

A judgement of the European Court of Justice in June 2005 established the non-admissibility of a priority assignment of cross-border capacity to multi-year contracts executed by the incumbent in the Dutch market during the period preceding the Community Directive. Indeed, according to the Court a Country cannot attribute priority capacity to a company, unless this has been authorized with a notification to the European Union within the set times. The Commission de régulation de l'énergie (CRE) and the Réseau de Transport d'Electricité (RTE), respectively the regulator and the operator of the French grid, decided to interpret the judgement of the Court, which was actually related to the specific situation in the Dutch electricity market, in a general sense by establishing that they would no longer guarantee the capacity previously reserved to multi-year imports belonging to the Single Buyer beginning from 2006. According to the indications of the French grid operator, the relative capacity of 700 MW would be assigned autonomously through an explicit auction.

The Ministry of Productive Activities nonetheless decided not to take into account the unilateral decision of the French institutions to eliminate the cross-border capacity reserve in favour of multi-year contracts, considering the role of electricity imported in execution of the Italian-French multi-year contract as marginal compared to the competition structure of the relevant Italian market.

In January 2006, TERNA communicated that, based on a transit agreement executed with RTE December 30, 2005 and according to indications from the Ministry of Productive Activities, the provisional assignments of coverage certificates on the French border would be guaranteed and effective from January 1, 2006 until January 31. The assignments for the remainder of the year will be guaranteed on a monthly basis, on the basis of temporary agreements between TERNA and RTE, while waiting for the competent authorities to reach a final agreement for the assignment of capacity.

Table 2.10 shows a breakdown of the interconnection capacity by individual border as regards peak times during daylight for the winter period, 2006.

Beginning from 2005, the energy transit rights on the interconnection lines must be assigned on the basis of a competition criterion, in compliance with EC regulation 1228/2003 dated June 26, 2003. Prior to this, the interconnection capacity was assigned on a pro rata basis to operators with specific withdrawal features.

The decree issued by the Ministry of Productive Activities on December 13, 2005, which confirmed what had been forecasted the previous year, established that for 2006, usage of transmission capacity on the interconnection network would be determined on the basis of offers for the sale and purchase of electricity relating to the execution of cross-border exchanges by domestic or foreign operators, which are placed on the electricity market according to the provisions of the Authority for Electricity and Gas (see the paragraph on Non-tariff Regulation in Chapter 2 of the second volume).

Electricity facilities

Transmission

Legislative Decree no. 79/99 implementing Directive 96/92/EC based on the Independent System Operator (ISO) model, provided for the separation of ownership between the national transmission system management, which is entrusted to a public entity that is controlled by the Ministry of Finance, and the activities involving the ownership of the grid facilities, which continue to be owned by operators. The model adopted in Italy proved however to incorporate inefficiencies and difficulties of coordination between the grid operator and the owners of the grid; this led the Government to propose that ownership and management be merged once again and this became operational with the creation of TERNA - Rete elettrica nazionale Spa in November 2005.

Please see the second volume of this Annual Report which relates to the activities that took place, for details regarding the reunification of ownership and management of the transmission system.

TERNA currently owns over 90 percent of the domestic transmission system, while the remaining facilities belong to certain municipalized companies and several producers of electricity, for a total of 13 companies.
Among the remaining companies, those which hold a lager portion of the grid facilities are Edison Rete Spa, which owns almost 3,000 kilometres of high voltage lines, Aem Trasmissione Spa, which owns a little over 1,000 kilometres of lines, and Rete Ferroviaria Italiana Spa. Currently, TERNA owns approximately 35,000 kilometres of lines and 302 transformation and switching stations and 3 remote stations. In September 2005, the company acquired Acea Trasmissione Spa, which owns approximately 700 kilometres of high voltage lines, or approximately 2 percent of the domestic grid. This acquisition launched the domestic grid unification process as provided by law no. 290 of October 27, 2003, on the restructuring of the electricity sector and the subsequent decree issued by the President of the Council of Ministers on May 11, 2004.
During 2005, in view of the unification process of the transmission grid under a single independent entity, Enel reduced its investment in TERNA; currently 29.99 percent of the company's shares belong to Cassa Depositi e Prestiti Spa, while Enel owns 5.12 percent of the company's shares.
In January 2006, TERNA distributed the Development plan for the domestic transmission electricity grid, subject to the approval of the Ministry of Productive Activities, which contained an analysis of the current and future critical points regarding the grid and the identification of the main interventions regarding development. These interventions have been classified on the basis of the main benefits they provide: adequacy of the system as far as coverage of requirements is concerned, the operational safety of the grid, the reduction of congestion and limited poles of production in the market, improvement of quality and continuity of service and supplying. The interventions were further differentiated into short to medium term actions, usually referring to the next five-year period and long-term actions to take place over the next decade.

Distribution

Decree no. 79/99, which provided for the granting of only one distribution concession per commune and the attribution to investee companies of local bodies of the right to request the conveyance of branches that carry out distribution activities in the territory of the municipality, implemented the gradual rationalization process of the activity, which is expected to continue in coming years.

During the period from 2000 to 2002, the reorganization process of the distribution activity was particularly intense, with the transfer from Enel to the investee companies of local bodies of over one and a half million consumers, in 27 municipalities including Rome, Milan, Turin, Verona and Parma. In the following two year period between 2003-2004, further transactions were concluded which involved the conveyance of Enel grids in approximately 61 municipalities, including Brescia, for a total of approximately 140,000 users. Furthermore, during the period from 2000 to 2004, the distribution activity for 13 municipalities was conveyed to Enel Distribuzione Spa in its entirety, with the transfer of approximately 14,000 customers and the activity in 46 municipalities was conveyed in part, with the transfer of about 2,000 customers.
During 2005, Enel Distribuzione conveyed the first branch which handled the entire province of Trento to SET Distribuzione Spa; the conveyance affected more than 231,000 customers.
On March 13, 2006, Enel Distribuzione executed a preliminary contract with Hera Spa for the conveyance of the grids of 18 municipalities, for a total of 80,000 customers. The effective date set for this contract is July 1, 2006. On March 29, Enel Distribuzione executed a preliminary contract with SECAB Alto But Soc. Coop. arl. for the conveyance of approximately 900 customers in the municipality of Sutrio: the effective date for this contract has not been set as yet.
The complete conveyances of the Enel distribution activity took place in 2005 as well, by the companies AEC Comunale, AEC Cefalù and Azienda Baldovin Carulli (conveyance of supplying agreements), for a total of approximately 7,000 customers.

The wholesale market

The Power Exchange: demand

The principal innovation in the operation of the wholesale market during 2005 has to do with the active participation of demand in the offer system. When the Power Exchange was opened in April 2004, provisional regulations were adopted which limited access to the Power Exchange to suppliers, so as to make the transition to the new negotiation mechanism gradual. Following the provisions of the ministerial directive of December 24, 2004, these provisional regulations were changed for 2005 to allow the gradual participation of the demand side in the offer system.

The regulated market managed by the Electricity Market Operator (GME) is further divided into two sub-markets: the Day-Ahead Market (MGP) and the Adjustment Market (MA). The Dispatching Market (MSD) follows these two markets; through it, TERNA (and before the GRTN) procures the resources which are necessary to their transmission and dispatching activities and to guarantee the security of the electricity system. The regulations governing dispatching provide for the active participation of demand in all these markets over time, but the provisional regulations for 2005 provide for the participation of MGP only. The effect of active participation of the demand on this market is evident in figure 2.6, which shows the number of subjects operating on the demand and supply sides. Participation of only MGP on the demand side has made necessary the implementation of provisional mechanisms to compensate for the reduced negotiation flexibility that it would have encountered due to the inability to participate to the MA and MSD. These mechanisms are represented by:

- the scheduled unbalancing, which allows holders of contracts entered into outside the offer system to present Injection and Withdrawal Schedules that are not balanced on the MGP. In this case, injections must be higher than withdrawals and the difference is considered as a sale on the MGP on the part of the buyer to GRTN/TERNA at a price equal to the national single price (PUN);
- the bilateral adjustment platform (PAB) for demand, which allows balanced hourly exchanges of electricity between operators that manage the withdrawal offer points which belong to the same geographic area on an hourly basis. The exchanges communicated to the GME through this platform, which carries out a function similar to that of the MA, together with the commitments deriving from bilateral contracts or purchases on the MGP, determine the constraints of each withdrawal offer point.

In addition to the aforementioned interventions, a simplified system for the improvement of unbalances that would reduce the costs for withdrawing operators compared to what has been provided for the mechanism which they can participate in on the MSD, was scheduled for 2005. For this same reason and to give purchasing entities the time necessary to learn to efficiently manage their negotiations on the MGP, the electricity market regulations also provide for the GRTN/TERNA to present additional offers on the MGP in order that the level of demand on the MGP does not deviate from the forecasts made by the latter by more than 5 percent in absolute values. The new mechanisms introduced with the active participation of demand have involved significant volumes which are illustrated in figures 2.7, 2.8 and 2.9 which, compared to the overall volumes exchanged on the Wholesale Italian Market (exchanges on the MGP and bilateral contracts) in 2005, amounted to 2.7 percent on the average for supplementary offers by GRTN/TERNA, 2.9 percent for PAB and 4 percent for scheduled unbalancing.

Regarding the monthly development of the various mechanisms we note that the volume of supplementary offers made on the MGP by GRTN/TERNA stabilized progressively and decreased over the months, indicating a gradual comprehension of the entities operating on the demand side of the required organizational and anticipatory skills. Exchanges on the PAB, on the other hand, showed a more regular development with volumes that are comparable to those exchanged between the entities operating on the supply side of the MA. The scheduled unbalancing performed irregularly, with a reduction in volumes initially, followed by a considerable increase in the last three months of 2005, which continued into the first months of 2006 as well.

The Power Exchange: results on the Day-Ahead Market

Over and above the innovations that were introduced with the inclusion of the demand side, the overall performance of the MGP during 2005 confirms what was pointed out in last year's Annual Report regarding the structural critical

areas that pertain to the state of the electricity market's liberalization. These areas, which mainly involve the supply side, translate into high prices on average, which appear to be increasing progressively (without taking seasonality into account), due to the constant tensions on the markets pertaining to the oil and fuel used in electricity generation.
This resulted in an average increase of PUN by 13.2 percent during the period from April to December 2005 compared to the same months in 2004, and subsequently to an average increase by 31.3 percent from January to March 2006 compared to the same period in 2005.
The progressive increase in the average PUN also contributed to the increased value of the transactions carried out on the MGP as shown in figure 2.11.
The main cause of the sharp increase from December 2004 to January 2005 is however due to the significant volumes of the contracts for differences (CFDs) executed by the operators for 2005. These are hedges of the MGP price and are substitutes for the hedges which were previously obtained through physical bilateral contracts. In particular, we note the hedges purchased by the Single Buyer for the supplying of the captive market, which are described in great detail in the paragraph titled Procurement of the Single Buyer and the differing nature of the CIP6 contracts allocated in 2005, which are illustrated in the paragraph titled *Sale of CIP6* energy to the market.
This phenomenon is clearly illustrated in figure 2.12 as well, which shows the development of the MGP's monthly liquidity, together with the underlying quantities exchanged on this market as well as bilaterally.
A further examination of the price levels on the MGP shows that during 2005 there was a substantial decrease in the sales price differential in the various zones the electricity market is divided into. This phenomenon is based on the decrease of the national congestion rent that favoured GRTN/TERNA as shown in figure 2.13. In the period from April to December 2005, compared to the same months in 2004, this rent was in fact reduced by approximately 82 million Euro, as it dropped from about 113 million Euro in 2004 to approximately 31 million Euro in 2005.
The new element in 2005 is the foreign congestion rent, which derives from the new cross-border resolution mechanism that was adopted as a consequence of EC regulation no. 1228/2003, which is described in the paragraph titled *Non-tariff Regulation* in Chapter 2 of the second volume. This rent amounted to approximately 50 million Euro during 2005.

The Power Exchange: Results on the Adjustment Market (MA)

As far as the MA during 2005 is concerned, there was a much higher correlation of prices with the MGP when compared to 2004. The average price for 2005 was equal to approximately 57 €/MWh, which is lower by 2 percent than the average PUN on the MGP. There is however a progressive gap between the average prices in the two markets starting from November 2005, which continues into the initial months of 2006. The market volumes of the quantities exchanged on the Wholesale Italian Market (MGP plus bilateral contracts) ranged between a maximum of 4.4 percent in the month of February 2005 and a minimum of 2.3 percent in the month of February 2006.

The Power Exchange: a market for the dispatching service

The results of the MSD for 2005 show the different nature of this market compared to the energy markets (MGP and MA). The average prices of the step-up and step-down bids in fact have a very low correlation to the prices recorded on the MGP. The average sales prices of the operators are substantially higher with regard to the evaluation of energy on the MGP, while the purchase prices are lower, as reflected by the different structure of this market and the distinct nature of the resources that are traded therein. These factors make the MSD particularly sensitive to the structural problems that have already been pointed for the MGP.
Figure 2.15, which shows the monthly development of prices for the period from January 2005 to March 2006, we can note that the average ex ante prices for step-up bids were subject to great tensions beginning from the second half of 2005, similarly to what was recorded on other markets with the continuous increase in fuel prices. Otherwise, the average prices of the step-down bids appear to be far more stable, with an ever increasing differential leading to progressive increases in the dispatch costs for the electricity system.
The development of volumes was irregular but stable overall with a volume of step-up bids accepted ex ante on the MSD during 2005 which involved 3.6 percent of the energy compared to the volumes exchanged on the Wholesale Italian Market. The quantities relating to the step-down bids accepted ex ante on the MSD during 2005 involved 4 percent of the energy compared to the volumes exchanged on the Wholesale Italian Market.

Sale of CIP6 energy to the market

Up to 2004 the availability of electricity withdrawn by GRTN from CIP6 plants represented, for eligible consumers, a procurement source which allowed differentiation of the electricity offer while waiting for the opening of the exchange and a more competitive market on the supply side.

Starting from 2005, though maintaining continuity elements with the 2004 regulation, the allocations of CIP6 energy and risk hedges relating to the regulation of imports, aim to introduce mechanisms that are able to reduce risks deriving from the volatility of procurement prices that is created in the exchange, more than diversify the offer. In the case of CIP6 energy, the financial instruments used to this end are the contracts for differences introduced in the sale of CIP6 energy and executed between the awarding market players and the GRTN. The decree issued by the Ministry of Productive Activities on December 5, 2005, which confirmed the mechanism which had been outlined the previous year, established a fixed price that is valid for all of 2006 that the awarding market players of the bands must pay to the GRTN. The price which is 55.5 €/MWh and constant throughout all the hours of the year, is higher than the price set for 2005, which was 50 €/MWh. We note that in 2004 the allocation price had been defined as the sum between a fixed component established at 25 €/MWh and a variable component equal to a percentage of the Ct value up to July 1, 2004, and indexed both to the Ct parameter and the average price on the exchange for the rest of the year.

Therefore, in 2006 the eligible consumers holding CIP6 bands are supplied directly from the electricity market for the volumes granted following the allocation, but the economic transactions are settled on the basis of the contracts for differences executed with the GRTN. For the hours during which the Exchange price exceeds 55.5 €/MWh, the GRTN pays the difference between this price and the hourly price on the electricity market; conversely, in the case of Exchange prices that are lower than 55.5 €/MWh, the awarding market players pay the GRTN the difference between the Exchange price and the price they have committed to pay.

For 2006, the GRTN followed the provisions of the decree issued b the Ministry of Productive Activities and determined that the total volumes of electricity to purchase would need to be equal to 40 TWh, identifying for the free market 3.360 MW of CIP6 power annually and allocating to the Single Buyer, and therefore to the captive market, 2.240 MW of power on an annual basis, or 40 percent of overall capacity.

Table 2.13 shows the total CIP6 allocations divided between the eligible and captive markets. The power available in 2006, which equals 5.600 MW, is 200 MW lower than that available the previous year; as in 2005, no quarterly allocations of capacity have been planned.

The allocations which all users of the dispatching withdrawals were able to participate in were carried out, as in 2005, on a pro rata basis; requesting eligible consumers were allocated fixed bands of 1 MW on a constant annual basis. The decree dated December 5, 2005 established that in case of requests exceeding the availability of CIP6 energy, a proportional reduction applicable to all applicants would be provided. It should be noted that, contrary to what had been provided in 2005, the decree did not exclude subjects which benefit from instant or notified interruptibility from the allocation.

The free market

Development of the free market

With article 21, paragraph 1, letter b) of the European Directive dated June 26, 2003 (2003/54/EC) coming into force, beginning from July 1, 2004 all domestic customers are to be considered eligible and therefore free to choose the counterparty they will contract with as well as to stipulate the conditions of the supply, except for regulated profiles.

The option of maintaining one's position on the captive market is however correlated to the acknowledgment of this right, unless the option to terminate is exercised according to the terms set by resolution no. 158 of October 20, 1999 as amended. If such an option is not exercised, the distributors/suppliers will continue to be obliged to guarantee the supply according to the terms of art. 4 of Legislative Decree 79/99. As shown in table 2.15, the eligible customers (who are therefore potentially free) on December 31, 2005 numbered approximately 7.7 million and they withdrew 223.2 TWh of energy during the year (net of the amounts consumed by Rete Ferroviaria Italiana); compared to the previous year, the volume of

energy withdrawn by these customers increased by approximately 5.6 TWh. The average withdrawal per customer is essentially unchanged compared to 2004 at 28,814 kWh and continues to fluctuate to a significant degree on the regional level. In particular the average withdrawal drops from about 48,000 kWh in Lombardy to only 12,141 kWh in Calabria. Lombardy is also the region with the highest quantity of electricity withdrawn from the grid in absolute terms, representing alone a little less than 24 percent of demand, followed by the Veneto region (10.8 percent) and Emilia Romagna (8.9 percent).

By contrast, there were 330,000 customers who on December 31, 2005 were supplied through the free market, with an overall withdrawal of 136.6 TWh1, which corresponds to 61.2 percent of the potential market (Table 2.16).

Eligible consumers therefore increased by more than 200,000 in 2005, while the energy withdrawn increased by about 9 TWh. As a result, the per capita withdrawals decreased by approximately 1 GWh in 2004 to 0.41 GWh in 2005. The per capita withdrawals of eligible consumers fluctuate even more markedly when measured against the potential market: from 1.15 GWh in Basilicata to 0.12 GWh in Liguria. The per capita withdrawals are well below average in Sicily (0.22 GWh), Calabria (0.23 GWh) and Lazio (0.26 GWh).

The regions in which a larger number of potentially eligible consumers chose the free market are Friuli Venezia Giulia, Sardinia and Umbria (over 70 percent) while the amounts for other southern regions are much lower, in particular for Calabria (31.3 percent), Sicily (41.2 percent) and Campania (42.7 percent). In comparison to last year, the regions with the greatest increase in eligible consumers during 2005, both in numerical terms and energy withdrawn, were Lombardy (+ 3 TWh), Emilia Romagna, the Veneto and Lazio, each registering increases of 0.9 TWh. A comparison between the two tables shows how approximately 86.6 TWh of energy supplied to eligible consumers on the captive market refers to withdrawals made by very small users with average withdrawals of approximately 11,700 kWh, which preferred to continue purchasing electricity from their local distributor, at least until the end of 2005.

The liberalization of the electricity sector according to the "Energy 2005" survey

During 2005, the Authority participated in "Energy 2005", a multiple customer survey, conducted by GfK-EURISKO, of the demand for energy and gas by Italian companies. The survey was conducted on a representative sample of the entire national non-domestic customer base (2,700 local units of Italian companies on a national level), breakdown by geographic area, product segment and operator category. The purpose of the survey was to provide an overview of the awareness of liberalization of the energy market and to examine the behaviour of customers towards it.

67 percent of non-domestic customers of the electricity sector interviewed are aware of the liberalization of the market (Table 2.17). Of all customers, those with the greatest consumption were those that were more informed about the liberalization of the sector through communication activities and proposals to enter into new contracts, deriving both from the existing supplier as well as a new supplier; the smaller entities which consume less energy and which use energy mainly for production purposes were the least informed, particularly in the South.

In Italy, information on liberalization was mainly assigned to the media (press and advertisement) (Table 2.18), while in 9 percent of the cases, providers other than the customers' one provided information on the liberalization of the market, by approaching the potential customers with proposals for a new contract. The overall communication activity carried out by the customers' suppliers was rather contained (4 percent) as was the communication by trade associations (4 percent). As far as awareness and the sources of information are concerned, medium to large companies and those with higher electricity consumption appeared to have a greater awareness of the state of liberalization.

Insofar as attitude towards liberalization (Table. 2.19), subscribers of new contracts were 6 percent of non-domestic customers interviewed (predominantly those with increased consumption levels); of these, approximately 2 percent changed contracts while maintaining their current supplier. The about 95,000 companies with consumption exceeding 100,000 kWh per year, were more aware of the opening of the market: indeed, the introduction of suppliers other than the incumbent was more prevalent within this group.

However, almost all non-domestic customers (88 percent) stated that they would contemplate changing their supplier if they received a more advantageous offer and, in particular, if they received a consistent discount (the average discount expected is 22 percent); customers with higher consumption levels had more modest expectations (a discount of 15 percent), though they still remained unrealistic. More generally, the expectations of non-domestic electricity customers

from new contracts and/or suppliers are essentially linked to factors such as greater convenience and personalization or flexibility.

The main obstacle to changing a contract or supplier appears to be the lack of information and clarity; among the reasons set forth is the perception that there is no actual advantage (19 percent, mainly by small companies of the advanced tertiary sector and the real estate and financial sectors) and that change is not actually possible in their own areas (the general belief in 17 percent of the cases is that only one supplier services the area). 12 percent have little reason to change as consumption is modest and 10 percent are satisfied with their own supplier.

In the last year, only 12 percent were approached by a supplier that differs from the current one; this contact was mainly directed towards units with high consumption levels and, in fact, approximately one and a half years after the execution of a new contract, 63 percent of those that entered into such a contract saw a reduction in energy costs of 8 percent on the average. The possibility of having one electricity and gas supplier played an important role in the decision to enter into a new contract.

Among the elements that could constitute determining factors for change are: the quality of service guarantee; the support from and quality of the personnel; personalized contracts; less bureaucracy; monitoring of consumption; extensions of payment.

More generally, companies exhibit a tendency to be critical of the current state of the liberalization of the energy market and identify problems on several fronts. The main problems involve: the lack of information (or advertising), the difficulty of operating in a market that is still perceived as monopolistic, the lack of clarity and transparency of the offers, the perception that changing a supplier will not result in an economic benefit. This becomes even more significant in view of the fact that the criticism expressed by the market segment with consumption exceeding 100,000 kWh annually is of the same type and level.

Companies expect that liberalization of the market will result in actual benefits, such as lower prices, personalized services and flexibility insofar as consumption, in addition to greater attention paid to customer needs and the quality of the services offered. These expectations were common to all the local units interviewed, independently of their sector, size or energy consumption level.

The Captive market

During 2005, the consumption of the captive market, based on the preliminary data provided by distributors, dropped by over 2 percent compared to the previous year.
The drop is entirely attributable to the consumption of non-domestic captive customers. The consumption of the latter category, which is mainly composed of small companies, craftsmen, freelance professionals, etc. that became eligible consumers, has decreased by approximately 4 percent, while domestic consumption has remained substantially unchanged since 2004.
In the last five years, the weight of the captive market, in terms of volume, on the total market (not including self-consumption) has dropped from 82 percent to 53 percent (Fig. 2.18).

Tariffs for use of the facilities

According to the provisions of the Service quality code, the Authority must adjust transmission and distribution tariff parameters annually; by contrast, the corresponding parameters of the metering service are not subject to annual automatic updating mechanisms.
The annual adjustment of the transmission and distribution tariffs for 2006, which were implemented with resolution 202 of September 28, 2005, provided for:

- application of the price cap mechanism to the part of the transmission and distribution tariffs involving coverage of operating costs and amortization;
- a review of the value of the capital invested that is recognized for tariff purposes at the national level, in order to take account of net investments finalized during 2004.

The annual adjustment did not result in substantial variations in the components covering transmission costs or those covering distribution; certain fractional increments, with respect to the objectives of the tariff adjustment mechanism, were determined by the cumulative effect of the rounding of the fees in previous adjustments. As part of the annual transmission and distribution annual tariff adjustment, the Authority also reviewed the tariff components covering the recognized costs of recovery of service quality and the costs deriving from achievement of the objectives set forth by the decree dated April 24, 2001, that is following the adoption of interventions aimed at controlling and managing demand through the efficient use of resources In particular, the costs for recovery of service quality (UC6 component) were increased by approximately 80 percent, from 50 million Euro in 2005 to approximately 90 million Euro in 2006. On the other hand, for costs deriving from the adoption of interventions aimed at controlling and managing demand through the efficient use of resources (which are components of the distribution tariff), the forecast is for the amount to remain unchanged with respect to 2005 at 50 million Euro.

Captive market tariffs

Procurement of the Single Buyer

The beginning of the operation of the financial offers and merit order dispatching system, on April 1, 2004, made a marked change in the way electricity is supplied. Within this context, by decree issued by the Ministry of Productive Activities on December 19, 2003, the Single Buyer was appointed to guarantee the procurement of the customers of the captive market, in lieu of Enel, which had carried

out this function previously. The Single Buyer is therefore in charge of procuring electricity for the captive market, while minimizing the costs and risks of this activity by using various methods for procurement.

Table 2.21 shows the volumes procured by the Single Buyer for the period from January to December 2005. This data shows that the Single Buyer entered into contracts outside the offer system for approximately 16 percent of its needs, while the remaining portion was covered by contracts for differences and the electricity associated with the productive capacity as per CIP resolution no. 6 dated April 29, 1992. Starting from January 1, 2005, with the addition of the demand side to the Power Exchange, the unbalancing of the consumption units belonging to the captive market were quantified and measured in accordance with resolution no. 168 issued on December 30, 2003, as amended. The quantities of unbalancing electricity allocated to the Single Buyer in its capacity as a user of the dispatching service for the aforementioned consumption units amounted to approximately 1 percent of needs. Table 2.22 shows the Single Buyer's portfolio amounts which are not subject to the price risk connected with the volatility of the exchange prices.

For 2006, the incidence anticipated for each source of procurement with respect to the total needs of the Single Buyer is similar to 2005 insofar as CIP6 energy and annual imports, but changes significantly for multi-year import contracts.

With respect 2005, following the pronouncement of the European Court of Justice on June 7, 2005 on Case C-17/03, concerning priority access to electricity transmission capacity on the interconnection network for an operator that had entered into long-term contracts prior to the liberalization of the electricity market, the French authorities decided not to recognize the priority rights of holders of multi-year contracts on the overall import capacity required for the execution of these contracts. The multi-year contracts regarding the French border will therefore be executed for an amount equal to 50 percent, reducing the needs covered by the Single Buyer through such contracts to 7 percent.

The energy procured during 2006 through contracts for differences that were entered into to hedge the risk of volatility in the price of electricity purchased in the MGP will be connected to:

- the power allocated in the tenders called for by the Single Buyer for 2005 for which the option of extending the contract for 2006 was granted (contracts for differences 2005);
- the power allocated in the tenders called for by the Single Buyer for 2006 (contracts for differences 2006).

The contracts for differences for 2005 in particular, are "one way" contracts and provide for a strike price and an amount for the coverage of fluctuations in the market price of electricity, differentiated for each product (coal, oil, gas 1 and gas 2). As mentioned previously, these contracts entered into by the Single Buyer in 2005, contained an option for extension in 2006. Such option implies, for each product, a 5 percent reduction of the premium and a reduction of 28 percent in the quantity awarded.

The portion of the portfolio which is covered by contracts for differences for the year 2005, that is the quantity for which the contract for differences is executed, depends on the applicable exchange prices, which are currently available only for the first quarter of 2006. For the months of January, February and March this portion is a little higher than 27 percent of total needs.

With regard to contracts for differences for the year 2006, the Single Buyer called for four different tenders for the conclusion of "two way" contracts for differences. 2,500 MW were awarded for the first auction, which are constant throughout all hours of the year. The power allocated following the second and third auctions relates to peak hours[6] and is divided as shown in table 2.23 for each quarter. Finally, the power allocated in the fourth auction, as shown in table 2.24, varies on a monthly basis and refers to peak and non-peak hours as in the previous auctions. The portion of the portfolio which is covered by contracts for differences for the year 2006 is expected to be approximately 20 percent of needs.

Table 2.25 shows an estimate of the volumes to be procured and the relevant measurement procedures for 2006.

We also note that the Single Buyer has entered into "two way" contracts for differences for the year 2006 to hedge against the volatility:

- of the gas 1 and gas 2 strike prices in contracts for differences for the year 2005 which are indexed to the natural gas index , as defined in resolution no. 70 issued on June 26, 1997;
- of the oil strike prices in contracts for differences for the year 2005 which are indexed to the fuel oil index , as defined in resolution no. 70/97;
- of the strike prices in contracts for differences for the year 2006 which are indexed to the IPE Brent future contract.

Table 2.26 shows the amounts of the aforementioned hedges for each product.

Electricity and inflation

Despite the substantial and continuous increase in the prices of oil products internationally since the spring of 2003, the dynamics of electricity tariffs were very limited, at least until the first quarter of 2005.

Until the first half of 2004 the price index of electricity, as provided by the national institute of statistics as part of the national basket of consumer prices (NIC)[7] was on the decrease. In the second part of 2004 and more so in 2005, the increases gradually became more consistent.

More specifically, table 2.27 shows that during the first half of 2004 the index registered two significant reductions; however, in the last two quarters of the year the further strengthening of tensions on international fuel markets gave rise to two increases in the index (0.9 percent in July and 1 percent in October), which were nevertheless not able to reverse the trend. 2004 therefore closed with an inflation rate for electricity which decreased by 3.2 percent over the year, while during the same period the general price level increased by 2.1 percent. The price of electricity thus decreased by over five percentage points in real terms. In 2005, not including the third quarter, energy recorded consistent increases, with the highest one occurring in October with an increase of 3.9 percent compared to the previous month. In December the relative inflation rate reached 7.1 percent.

Over the year, the price of electricity for Italian families increased by 3.9 percent, while the general rate of inflation was 1.8 percent: thus, in real terms the price of electricity for families increased by 2 percent.

It is however interesting to observe, for the same period, the performance of the price of Italian electricity compared with the main European countries, using the harmonized consumer price indices collected by Eurostat (Fig. 2.19).

Compared with a change in the price of Brent oil in excess of 40 percent in 2005 (which is reproduced below) we note how the performance of the Italian price is in line with the average European price (3.7 percent) and is actually better when compared to Germany (4.3 percent) and the United Kingdom (10.6 percent), that is the two countries in which the portion of by thermoelectric production is high, as it is in Italy.

The increases were considerably more contained only in France and Spain (in France, in particular, there was no change at all): performance was better where a higher portion of electricity was produced from sources that are not connected to oil (nuclear sources in the case of France and hydroelectricity in the case of Spain).

Average national electricity tariff

The performance of the Istat index for consumer prices for electricity is confirmed by the changes in the average national tariff net of taxes, as calculated by the Authority. Beginning from the third quarter of 2004, the average national tariff followed an increasing trend which pushed the national trend rate from zero in the last quarter of 2004 to 15.6 percent in the second quarter of 2006. In April the tariff was 12.33 c€/kWh, net of taxes.

The chart in figure 2.21 shows how the new tariff adjustment mechanism effective as of the launching of the Power Exchange and the procurement procedures followed by the Single Buyer allowed the impact of the tensions which characterized the international fuel markets from the second quarter of 2004 to be contained and mitigated, reducing the potential negative effects on the weaker portion of the customers that was created from the transition from an administered wholesale market to a market driven by competition.

The component covering the fixed costs involving transmission, distribution and measurement (including for the marketing of the sales service and the UC3 and UC6 tariff components, as they are connected to the equalization of the transmission and distribution costs and the recoveries of continuity in the service) was 24 percent of the total tariff net of taxes in the first quarter of 2004. In the second quarter of 2006, the corresponding total was 2.36 c€/kWh, which is 19.1 percent of the net tariff (17 percent of the tariff including taxes). The component for the coverage of marketing and sales costs, which can be seen separately from April 2004, was 0.03 c€/kWh. Overall, the production costs were 66.3 percent of the net tariff in the first quarter of 2004, while in April 2006, this increased by four percentage points (70.4 percent net of taxes and 63.4 percent including taxes). Production costs, which correspond to 8.68 c€/kWh include the following cost items, in addition to the fixed and variable costs of generation:

- remuneration of productive capacity of 0.04 c€/kWh (CD component); this is an incentive, connected to the performance of prices on the exchange, which is provided to producers in order for them to make the plants available when electricity is required most;
- remuneration of interruptible contracts (INT component) of 0.12 c€/kWh.

These two cost items were introduced in the second quarter of 2004 concurrently with the opening of the Power Exchange, while in July 2005 the cost component involving green certificates (VE component) was

eliminated; this had been introduced in the first semester of 2003 to allow producers conveying energy to the captive market to cover the cost of acquiring green certificates; thanks to the Power Exchange, producers can now recover these costs by changing the prices they offer accordingly, thus the value of this component was decreased in time until its complete deletion once the cost incurred have been recovered.

The general system charges (including certain UC tariff components) and their incidence on the average tariff, following a period of relative stability in 2004, increased at the beginning of 2005 after the evaluation of the component for the equalization of the procurement costs (UC1), the introduction of the new MCT component for territorial compensation favouring plants with nuclear power plants and nuclear fuel cycle plants and the increase of the component covering stranded cost (A6) tariff component. In the second half of 2005, this aggregate decreased on account of the curtailment of the incentive component for new renewable and "assimilated" energy resources plants (A3); this component was then increased at the beginning of 2006 on the basis of the new estimate of the amount required to cover the charges relating to the account in question for the current year. The UC1 component (covering the unbalances of the equalization system for the procurement of electricity for customers of the captive market) was increased in the first quarter of 2006 to take account of the remaining variations between the ex ante and ex post evaluation of the acquisition and dispatch costs incurred by the Single Buyer in 2005, which can only be quantified when the quarterly adjustments for 2006 take place. These variations are not recovered through correction of the PC and OD tariff components covering generation costs, but are applied towards the adjustment of the equalization component.

These costs amounted to 1.29 c€/kWh on the average in the second quarter of 2006 and amount to 10.5 percent of the overall tariff, net of taxes (9.4 percent of the gross tariff).

Production costs include the cost of fuel, the fixed generation costs, the dispatching cost and the remuneration of productive capacity and the interruptiblity service. System charges include all the A components, the UC1, UC4, UC5 components and the MCT component.

Taxes are calculated pro forma at 10 percent of the average national tariff.

[6] Peak hours are the hours between 8:00 and 21:00 from Monday to Friday, not including the weekday holidays of January 6, April 17, May 1, June 2, November 1, December 8, December 25, December 26 and the days from August14 to 20.

[7] More precisely, ISTAT shows the price of electricity within the "home expenses" category in the context of the consumer price index. The weight of electricity in the basic index not including tobacco is 1.1 percent.

The quality of the service

Quality and continuity of the electricity distribution service

During the course of 2005, a further improvement in the continuity of the service on the electric energy distribution grids was recorded. Both the number and the duration of unanticipated outages decreased significantly starting from 2000, due to the regulation of the continuity of the service introduced by the Authority.

In particular, the overall duration of outages dropped from 91 minutes per year per customer in 2004 to 80 minutes per year per customer in 2005 (taking all outages into account); there is an improvement of 58 percent when compared to 1999. The number of long outages (more than three minutes) dropped from 2.5 outages per customer in 2004 to 2.3 outages per customer in 2005 (taking into account all outages in this case as well); the overall improvement compared to 1999 is 39 percent (Fig. 2.23, 2.24 and 2.25).

The positive results achieved in the Northern regions contributed significantly to the overall improvement at the national level in 2005; by contrast, there has been an increase in the duration of outages in the Southern regions compared to 2004, which is to a great extent due to the long and extended outages in the Abruzzo and Basilicata regions following repeated bad weather conditions. In the Southern regions, the number of outages per customer also increased slightly, while in the Central regions it remained unchanged and decreased in the North. An analysis of the improvement which does not include contributions due to non-recurring events, shows that the durations of the outages per customer in the Southern-Central regions is progressively approaching the durations recorded in the North (table 2.28).

As a result of the introduction in 2005 of a new mechanism regulating outages due to external causes (as described in the par. "Regulation of the quality of electricity services" of the second volume, Chapter 2), which had previously been excluded from regulation, the duration of outages owing to the distribution companies has increased considerably compared to 2004. Indeed, the review of the regulation mechanism resulted in the undertaking of more responsibility by the distribution companies (in particular, Enel Distribuzione, Aim Vicenza Spa and SET Distribuzione) compared to the previous system, when the outages that were attributable to external causes were not considered to be the responsibility of distribution companies. This increased responsibility rather than a deterioration of the services provided, is the reason for the increase in the "outages attributable to the distributor" indicator.

As far as short outages (duration of less than 3 minutes but more than one second) are concerned, there is substantial stability in terms of the results obtained: in 2005, as in 2004, 5.8 short outages were recorded per customer (Table 2.28). Taking account of the overall number of long and short outages per Low Voltage customer, 2005 witnessed a further reduction in the number of short outages of 8.1 per year per customer, with an improvement of approximately 13 percent in the last three years. All the information relating to the continuity of the electricity service can be viewed on the Authority's internet site.

Commercial quality of the electricity distribution, measurement and sales services

The regulation of commercial quality, which has been effective since July 1, 2000, provided for the introduction of national quality standards regarding the maximum time allowed for carrying out the services required by customers (hook-ups, activations, estimates, technical checks, responses to complaints, etc.) which constitute the minimum that each company is required to provide to its customers. The regulation of commercial quality was updated during the 2004-2007 regulation period in service quality code, to take into account the development of the level of liberalization in the sector and the legislative modifications that took place, putting into place the necessary separations between the services relating to the activities for distribution, measurement and sales in the perspective of the liberalization of the market for all consumers that will take place on July 1, 2007.

The regulation of commercial quality will benefit all customers, whether they belong to the captive market or the free market and provides for intervention insofar as guarantees and promotion of the service quality in order that the liberalization does not result in a weakening of the safeguards for consumers, particularly those which have less bargaining power, safeguarding the right of choice of the interested parties in the competing activities.

All customers requesting services subject to a specific standard are informed by the company about the maximum time and the automatic compensation provided in the event of non-compliance with the standard. At least once a year all customers must receive from the company information on the guaranteed quality standards and the results actually achieved during the year. As part of its own survey on the quality of services, the Authority publishes information on the average real time required for carrying out the services, as declared by the companies and the relative control parameters for the standards (percentage of cases not complying with the standard, due to reasons that fall under the responsibility of the company itself, force majeure or the responsibility of third parties).

The introduction of automatic compensation provided to the customers in the event of failure to comply with specific quality standards at the fault of the providing companies that are not due to force majeure or the responsibility of third parties or the customer himself, has resulted in an increase in the compensation paid to customers compared to the service card system that was in force prior to the current regulation (Table 2.29). The amount of the compensation, which is defined by the Authority, is higher for customers that incur higher energy and grid costs. Clients receive automatic compensation by deducting the amount debited from the next following invoice and in any case within 90 calendar days from the expiration of the deadline for the execution of the service requested by the customer. If the retailer is unable to meet this deadline a compensation must be made to the customer of an amount that is two or five times higher, depending on the delay in payment.

The data provided by retailers shows that in 2005 the number of cases of non-compliance with specific quality standards that were subject to reimbursements as well as compensation paid to customers increased slightly (Table 2.29). In particular, there was an increase in the number of cases involving non-compliance due to delayed payments for the services which are subject to a specific standard, while for all other services (estimates for the execution of work on the LV grid, execution of simple work, connections of supplying, disconnections of supplying and punctuality as far as appointments are concerned) there was a decrease in the cases of non-compliance (Fig. 2.26).

The cases of non-compliance with guaranteed quality standards are generally lower than 4.5 percent and, for several types of services (connections and disconnections, punctuality as far as personalized appointments are concerned), it is lower than 1 percent. We note that the standard relating to invoicing was introduced during 2004 as a guaranteed standard which is subject to compensation, to remedy the critical points stemming from the use of the previous guaranteed standard on deadlines; the move from an overall to a guaranteed standard seems to have produced positive effects, given that as early as 2005 there was a significant reduction in the percentages

of non-compliance with the standard, while further improvements are expected in the coming years.
with automatic compensation. Overall quality standards have been set for these services, which allow monitoring of commercial quality. For all services which are subject to an overall standard, the Authority verifies the average time required for completion, as it does for services that are as responses to complaints and written requests for information on distribution and voltage checking.
Table 2.30 presents, for the years 2004 and 2005, the principal data regarding the services that are subject to automatic compensation (annual number of requests, The Authority believes, that for some services, it is not necessary to set guaranteed standards that are associated subject to a guaranteed standard. For many services, the average time is approximately 2/3 of the maximum time defined by the Authority (Fig. 2.27). The objectives set by the overall quality standards are achieved in most cases; in 2005 the standards were not reached only insofar actual average time and number of automatic compensations made to customers), with reference to LV domestic and non-domestic consumers, which constitute the largest group of users.

Domestic customer satisfaction survey

The Authority periodically conducts surveys on the satisfaction of families regarding the domestic use of electricity and gas and the efficiency of the services. Since 1998, Istat has conducted, on behalf of the Authority, surveys aimed at gauging the satisfaction of domestic customers and the efficiency of services in the electricity and gas sectors, as part of its multi-purpose survey on families titled "Aspects of daily life". The collaboration with ISTAT will continue until 2009, in order to continue to gauge the satisfaction of domestic customers and ensure continuity to this track record.
The Istat survey involves and average of 22,000 families and 60,000 individuals, The family sample guarantees representation of results on a regional level, so as to efficiently monitor the effects of regulation of quality, one of the objects of which is the reduction of regional differences in the service levels. Up to 2003, the survey took place during the month of November; since 2004, it has been conducted during the month of February. For this reason, on the publication date, the results of the survey for 2004 are not available. Over time, the survey has covered a growing number of aspects, such as the attitude of users when reading bills, awareness of the Authority's role and the degree of liberalization of the gas market.
For the entire period from 1998 to 2005, the general level of satisfaction of users has been good overall, though there are differences based on geographical profiles. We note that the satisfaction of the customers of the electricity sector is strongly linked to the continuity of the service (no interruptions of the supplying of electricity to users). Overall satisfaction is however currently affected by negative views on aspects that are strictly connected to commercial aspects of the service (frequency of readings, easy-to-read bills, information on the service).
The Authority wishes to ensure that liberalization favours the development of competition among the operators, including the quality of the commercial services provided to customers. To facilitate the achievement of this objective, the Authority has made proposals aimed at increasing the transparency of electricity bills, to improve the informative function of the bill and guarantee that it is clearly understandable.

TABLE 2.1

Balance of operators in the electricity market in 2005

TWh

	PRODUCERS				Single Buyer (AU)	INDEPENDENT WHOLESALERS				
	ENEL	> 10 TWh	1 – 10 TWh	< 1 TWh		> 10 TWh	1 – 10 TWh	0.1 – 1 TWh	< 0.1 TWh	TOTAL
Net national production	**112 .1**	**117 .5**	**41 .9**	**18 .1**	**0 .0**	**0 .0**	**0 .0**	**0 .0**	**0 .0**	**289 .7**
Energy for pumping	**9 .2**	**0 .0**	**0 .1**	**0 .0**	**0 .0**	**0 .0**	**0 .0**	**0 .0**	**0 .0**	**9 .3**
Import/Export	**0 .9**	**0 .0**	**0 .0**	**0 .1**	**25 .9**	**8 .3**	**12 .5**	**1 .3**	**0 .1**	**49 .2**
Off-Exchange imports	0 .0	0 .0	0 .0	0 .1	21 .5	8 .0	12 .1	1 .2	0 .1	43 .1
Exchange Imports(A)	1 .0	0 .2	0 .0	0 .0	4 .4	0 .7	0 .8	0 .1	0 .0	7 .2
Exports	0 .1	0 .3	0 .0	0 .0	0 .0	0 .4	0 .4	0 .0	0 .0	1 .1
Purchases from domestic operators	**35 .5**	**15 .7**	**3 .9**	**4 .9**	**145 .5**	**128 .6**	**117 .2**	**15 .0**	**1 .7**	**468 .0**
Power Exchange	30 .4	7 .4	0 .3	0 .5	139 .2	22 .7	25 .8	1 .6	0 .1	228 .0
- of which imports(A)	1 .0	0 .2	0 .0	0 .0	4 .4	0 .7	0 .8	0 .1	0 .0	7 .2
Wholesalers	0 .0	2 .0	1 .8	4 .1	0 .0	24 .5	64 .6	10 .1	1 .2	108 .4
Producers	0 .0	2 .9	0 .8	0 .2	0 .0	47 .1	11 .5	1 .9	0 .3	64 .8
Tolling	0 .0	0 .0	0 .0	0 .0	0 .0	24 .3	3 .5	0 .3	0 .0	28 .1
Mandate	0 .0	0 .0	0 .9	0 .0	0 .0	8 .1	8 .2	0 .8	0 .1	18 .1
Unbalancing	5 .1	3 .4	0 .1	0 .0	1 .5	2 .0	3 .6	0 .3	0 .0	16 .0
Surpluses (resolution no. 34/05)	0 .0	0 .0	0 .0	0 .0	4 .8	0 .0	0 .0	0 .0	0 .0	4 .8
Conveyances to other operators	**136 .7**	**107 .4**	**40 .3**	**9 .4**	**0 .0**	**82 .8**	**55 .6**	**3 .5**	**0 .5**	**436 .2**
Power Exchange	115 .3	54 .7	26 .5	3 .5	0 .0	14 .5	14 .7	1 .3	0 .1	230 .5
- of which from GRTN(B)	2 .9	21 .0	24 .4	3 .0	0 .0	0 .0	0 .0	0 .0	0 .0	51 .3
Wholesalers	16 .0	26 .0	3 .2	2 .8	0 .0	65 .7	38 .1	1 .9	0 .4	154 .1
Tolling	0 .0	22 .6	4 .6	1 .1	0 .0	0 .0	0 .0	0 .0	0 .0	28 .3
Unbalancing	3 .3	3 .4	0 .1	0 .1	0 .0	2 .6	2 .8	0 .3	0 .0	12 .5
Mandate	0 .0	0 .0	5 .6	0 .4	0 .0	0 .0	0 .0	0 .0	0 .0	6 .0
Surpluses (resolution no. 34/05)	2 .1	0 .7	0 .5	1 .5	0 .0	0 .0	0 .0	0 .0	0 .0	4 .8
Net transfers(C)	**-101 .0**	**-108 .1**	**-32 .4**	**-11 .7**	**142 .0**	**41 .7**	**59 .3**	**8 .9**	**1 .2**	**-0 .1**
Grid losses(D)	**2 .8**	**0 .0**	**0 .1**	**0 .0**	**15 .3**	**1 .2**	**1 .7**	**0 .2**	**0 .0**	**21 .4**
Final sales and consumption	**0 .0**	**9 .4**	**9 .4**	**6 .6**	**152 .6**	**48 .8**	**70 .0**	**9 .9**	**1 .3**	**308 .0**
Self-consumption for end uses	**0 .0**	**8 .9**	**6 .7**	**5 .9**	**0 .0**	**0 .0**	**0 .0**	**0 .0**	**0 .0**	**21 .5**
Sales to consumers	**0 .0**	**0 .5**	**2 .7**	**0 .7**	**152 .6**	**48 .8**	**70 .0**	**9 .9**	**1 .3**	**286 .5**
Captive market	0 .0	0 .0	0 .0	0 .0	152 .6	0 .0	0 .0	0 .0	0 .0	152 .6
Free market	0 .0	0 .5	2 .7	0 .7	0 .0	48 .8	70 .0	9 .9	1 .3	133 .9
<50MWh	*0 .0*	*0 .0*	*0 .1*	*0 .4*	*0 .0*	*0 .1*	*1 .3*	*0 .5*	*0 .3*	*2 .7*
50-500MWh	*0 .0*	*0 .0*	*0 .6*	*0 .0*	*0 .0*	*1 .0*	*7 .1*	*1 .5*	*0 .3*	*10 .5*
500-5.000MWh	*0 .0*	*0 .0*	*1 .4*	*0 .0*	*0 .0*	*7 .4*	*21 .0*	*2 .9*	*0 .4*	*33 .3*
5.000-50.000MWh	*0 .0*	*0 .0*	*0 .6*	*0 .1*	*0 .0*	*13 .1*	*23 .0*	*3 .9*	*0 .3*	*40 .9*
>50.000MWh	*0 .0*	*0 .4*	*0 .0*	*0 .2*	*0 .0*	*27 .1*	*17 .5*	*1 .1*	*0 .0*	*46 .5*

A) The breakdown between operators according to Exchange purchases of imported energy has been estimated in proportion to the Exchange purchases declared by the operators, as they do not know the origin of the energy.

B) Conveyances by GRTN of CIP6 energy and surpluses according to resolution no. 108/97.

C) The net transfers as the algebraic sum of the production, the energy for pumping, import/export, leakages, sales and final consumption.

D) Losses estimated from the data relating to overall leakages provided by Terna, assuming the separation of the free and captive market in 2004 and assuming they are in proportion to the usage of the system (production and consumption) for the liberated market.

Source: Provisional data provided by AEEG based on the declarations of operators. Differences with data provided by Terna and, in particular, the non-zero value of total net transfers, are due to incomplete coverage of the operators and inaccuracies in the responses provided.

TABLE 2.2

Gross production by source 1998-2005

GWh

	1998	1999	2000	2001	2002	2003	2004	2005
Thermoelectric power	**206,741**	**207,246**	**218,549**	**216,792**	**227,646**	**238,291**	**240,488**	**246,299**
Solids	23,311	23,812	26,272	31,730	35,447	38,813	45,518	43,900
Natural gas	70,213	86,217	97,608	95,906	99,414	117,301	129,772	148,900
Oil products	105,123	91,286	85,878	75,009	76,997	65,771	47,253	35,860
Other	8,094	5,931	8,791	14,147	15,788	16,406	17,945	17,639
Production from renewable energy resources	**46,894**	**51,992**	**51,386**	**55,087**	**49,013**	**47,971**	**55,669**	**49,501**
Biomass and waste	1,229	1,822	1,906	2,587	3,423	4,493	5,637	6,113
Aeolian	232	403	563	1,179	1,404	1,458	1,847	2,135
Photovoltaic	6	6	6	5	4	5	4	5
Geothermal	4,214	4,403	4,705	4,507	4,662	5,341	5,437	5,325
Hydroelectric from natural sources	41,214	45,358	44,205	46,810	39,519	36,674	42,744	35,924
Production of hydroelectric power from pumping	6,151	6,419	6,695	7,115	7,743	7,603	7,164	6,558
Total production	**259,786**	**265,657**	**276,629**	**278,995**	**284,401**	**293,865**	**303,321**	**302,359**
For memory:								
Total production of hydroelectric power	47,365	51,777	50,900	53,925	47,262	44,277	49,908	42,482

Source: AEEG calculations on TERNA data. The data for 2005 is provisional.

TABLE 2.3

Contribution of the main domestic operators to the generation of thermoelectric energy by source

Data in percentages; 2005

	COAL	OIL PRODUCTS (A)	NATURAL GAS	OTHER SOURCES (B)
Enel Group	71.7	33.7	26.2	0.0
Edison Group	0.0	6.6	18.0	42.2
Eni Group	0.0	8.0	14.4	35.1
Endesa Italia	13.6	6.6	8.9	0.0
Edipower	2.3	14.0	9.7	0.0
Tirreno Power	10.2	0.4	4.6	0.0
TOTAL FOR THE 6 LARGEST OPERATORS	**97.7**	**69.4**	**81.8**	**77.3**
ERG group	0.0	10.9	0.0	4.1
AceaElectrabel	0.0	0.0	2.8	0.0
Saras Group	0.0	9.4	0.0	2.8
Aem Milano	0.0	0.0	1.5	0.0
Aem Torino	0.0	0.1	1.7	0.0
Asm Brescia Group	1.1	0.0	1.2	0.0
Api Group	0.0	4.5	0.0	0.0
Foster Wheeler MPE	0.0	0.0	1.5	0.0
Elettra Group	0.0	3.1	0.0	0.0
Cartiere Burgo	0.0	0.0	1.0	0.0
Agsm Verona	0.0	0.0	0.9	0.0
Esso Italiana	0.0	0.0	0.0	8.1
TOTAL FOR THE 18 LARGEST OPERATORS	**98.8**	**97.6**	**92.3**	**92.3**
Other producers	1.2	2.4	7.7	7.7
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**

A) Includes: fuel oil, orimulsion, light distillates, gasoil, oil coke, other products and other residuals from oil processing.

B) Includes derived gases, heat recoveries and expansion of compressed gas.

Source: AEEG calculations on data provided by the operators.

TABLE 2.4

Contribution of the main domestic operators to the generation of energy by renewable energy resources

Data in percentages; 2005

	HYDRO	GEOTHERMAL	AEOLIAN	BIOMASS, BIOGAS AND WASTE
Enel Group	51.4	99.6	17.2	0.5
Edison Group	8.5	0.0	19.3	0.7
Eni Group	0.0	0.0	0.0	1.6
Endesa Italia	6.5	0.0	0.0	0.0
Edipower	4.8	0.0	0.0	0.0
Tirreno Power	0.4	0.0	0.0	0.0
TOTAL FOR THE 6 LARGEST OPERATORS	**71.5**	**99.6**	**36.6**	**2.8**
AceaElectrabel	1.3	0.0	0.0	0.0
Aem Milano	3.7	0.0	0.0	0.0
Aem Torino	2.1	0.0	0.0	0.0
Asm Brescia Group	0.1	0.0	0.0	10.6
CVA Group	7.4	0.0	0.0	0.0
Api Group	0.0	0.0	0.0	7.5
Agsm Verona	0.2	0.0	0.0	0.8
IVPC	0.0	0.0	53.2	0.0
Amsa	0.0	0.0	0.0	6.0
Italiana Alimenti	0.0	0.0	0.0	4.4
TOTAL FOR THE 16 LARGEST OPERATORS	**86.2**	**99.6**	**89.8**	**32.1**
Other producers	13.8	0.4	10.2	67.9
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: AEEG calculations on data provided by the operators.

TABLE 2.5

Compulsory withdrawals by the GRTN

GWh

	2002	2003	2004	2005
CIP6	49,751	50,351	52,382	50,296
of which "assimilated"	*41,177*	*40,722*	*42,227*	*40,463*
of which renewable	*8,574*	*9,629*	*10,155*	*9,833*
Mini-hydro resolution no. 62/02	2,899	2,395	3,064	0
Surpluses resolution no. 108/97	1,450	1,136	1,218	966
Total withdrawals	**54,100**	**53,882**	**56,664**	**51,262**

Source: AEEG calculations on GRTN data.

TABLE 2.6

Energy withdrawn by "assimilated" sources during the period between 2002 and 2005

GWh

	2002	2003	2004	2005
Process fuels, residuals or energy recoveries	17,100	16,530	17,773	12,900
Fossil fuels	18,200	17,433	16,408	12,197
Total	35,300	33,963	34,181	25,097
Existing plants	5,877	6,759	8,045	15,366
TOTAL	**41,177**	**40,722**	**42,226**	**40,463**

Source: AEEG calculations on GRTN data.

TABLE 2.7

New renewable energy plants under CIP6 agreements for the period between 2002 and 2005

GWh

	2002	2003	2004	2005
Large and small reservoir hydro plants and run of river hydroelectric plants >3 MW	1,362	1,450	1,397	1,181
Run of river hydroelectric plants <3 MW	486	394	334	184
Geo-thermal and wind plants	3,111	3,847	3,415	3,040
Photovoltaic, biomass, MSW plants	2,735	3,656	4,631	5,084
Repowered hydroelectric plants	203	199	234	196
Total new plants	7,897	9,546	10,011	9,685
Existing plants	677	83	144	148
TOTAL RENEWABLE CIP6 WITHDRAWALS	**8,574**	**9,629**	**10,155**	**9,833**

Source: AEEG calculations on GRTN data.

TABLE 2.8

Total cost of compulsory withdrawals in 2005 (A)

Millions of Euro

	TOTAL REMUNERATION TO PLANTS	TOTAL REVENUES FROM SALES		TOTAL COST TO BE RECOVERED THROUGH TARIFFS
		ENERGY	GREEN CERTIFICATES	
Assimilated energy plants	3,988.6 (3,511.4)			
Renewable energy plants	1,709.5 (1,510.9)		96.8	
Total CIP6	5,698.1 (5,022.3)		96.8	
Mini-hydro	0.0 (194.7)			
Surpluses	67.6 (86.3)			
TOTAL COSTS/REVENUE	**5,765.7 (5,303.3)**	**2,560.5 (2,878.5)**	**96.8 (90.3)**	**3,108.4 (2,344.5)**

A) The data relating to 2004 which is shown in parentheses, is not directly comparable to the 2005 data as it does not include the equalization for the fuel cost component which was avoided in a total amount of 110 million Euro.

Source: AEEG calculations on GRTN data.

TABLE 2.9

CIP6 costs and quantities subsidized, by source

	QUANTITIES (GWh)	REMUNERATION OF PLANTS(€/MWh)
New "assimilated" sources	25,097	107.66
of which plants that use process fuels, residuals or energy recoveries	*12,900*	*120.58*
of which plants that use fossil fuels	*12,197*	*94.00*
Existing "assimilated" sources	15,366	83.73
New renewable sources	9,685	175.18
of which large and small reservoir hydroelectric plants and run or river hydroelectric plants >3 MW	*1,181*	*151.65*
of which run of river hydroelectric plants <3 MW	*184*	*120.65*
of which wind and geothermal plants	*3,040*	*143.78*
of which photovoltaic, biomass, MSW plants	*5,084*	*203.93*
of which repowered hydroelectric plants	*196*	*108.67*
Existing renewable sources	148	87.16
TOTAL CIP6 PLANTS	**50,296**	**113.29**

Source: AEEG calculations on GRTN data.

TABLE 2.10

Destination of import capacity 2006

MW

	FRANCE	SWITZERLAND	AUSTRIA	SLOVENIA	GREECE	TOTAL
Interconnection capacity	2,650	3,890	220	430	400	7,590
Multi-year contracts for the captive market	1,400	600				2,000
Capacity assigned by foreign operators	625	1,645	110	215	200	2,795
Capacity assigned to San Marino, the Vatican City, Edison, Raetia Energie	94	197				291
Total capacity made available to TERNA	531	1,448	110	215	200	2,504
Maximum rights availability that can be assigned to the captive market (26 percent)	138	376	29	56	52	651

Source: Decree issued by the Minister of Productive Activities on December 13, 2005 and TERNA.

TABLE 2.11

Conveyance of grid portions by Enel Distribuzione

BUYER	CITY	NO. OF MUNICIPALITIES OBJECT OF THE CONVEYANCE	NO. OF CONSUMERS	EXECUTION DATE OF THE CONTRACT	EFFECTIVE DATE OF THE CONTRACT
AC.E.GA.S. (currently Acegas – Aps)	Trieste	1	812	3/29/2000	3/31/2000
Amias (currently Amias Servizi)	Selvino (BG)	1	10	9/23/2000	12/12/2000
Amps	Parma	1	40,669	12/27/2000	1/1/2001
Amsp (currently Aeb Distribuzione)	Seregno (MI)	1	111	3/29/2001	3/31/2001
Aem Tirano	Tirano (SO)	1	20	5/24/2001	6/1/2001
Acea (currently Acea Distribuzione)	Rome	2	710,000	6/27/2001	7/1/2001
Aem Torino	Turin	1	293,000	12/21/2001	12/31/2001
Assm	Tolentino (MC)	1	25	12/21/2001	1/1/2002
Aspm di Soresina	Soresina (CR)	1	26	2/28/2002	3/1/2002
Azienda San Severino Marche	San Severino Marche (MC)	1	1,224	3/1/2002	3/1/2002
Aem Cremona	Cremona	1	2,286	3/21/2002	4/1/2002
Asm Sondrio	Sondrio	1	40	3/28/2002	4/1/2002
SEM Morbegno	Morbegno (SO)	4	6,464	4/23/2002	5/1/2002
Ami Imola (a part of Hera)	Imola (BO)	4	104	6/28/2002	7/1/2002
SIEC Chiavenna	Chiavenna (SO)	2	198	6/28/2002	7/1/2002
Aem Milano	Milan	2	387,625	10/29/2002	11/1/2002
Agsm Verona	Verona	2	91,403	11/29/2002	12/1/2002
Asp Polverigi (currently Astea)	Polverigi (AN)	1	186	12/19/2002	1/1/2003
Idroelettrica Valcanale	Tarvisio (UD)	1	754	12/19/2002	1/1/2003
A.T.EN.A.	Vercelli	1	2,137	12/20/2002	1/1/2003
Amet	Trani (BA)	1	2,182	1/31/2003	2/1/2003
Amg (currently IRIS)	Gorizia	1	1,617	2/28/2003	3/1/2003
Aim	Vicenza	1	7,929	5/30/2003	6/1/2003
A.M.E.A.	Paliano (FR)	1	244	8/29/2003	9/1/2003
Asm Terni	Terni	1	6,300	12/29/2003	12/31/2003
Asm Brescia (currently Asmea)	Brescia	46	100,205	12/30/2003	12/31/2003
Asm Voghera	Voghera (PV)	1	1,671	2/26/2004	3/1/2004
Camuna Energia	Cedegolo (BS)	2	457	4/27/2004	5/1/2004
Astea	Recanati (MC)	2	4,084	12/21/2004	12/31/2004
Odoardo Zecca	Ortona (CH)	2	9,000	12/23/2004	1/1/2005
SET Distribuzione	Rovereto (TN)	207	230,700	6/27/2005	7/1/2005
TOTAL		**295**	**1,901,484**		

Source: AEEG calculations on Enel Distribuzione data.

TABLE 2.12

Complete conveyance of the distribution activity to Enel

BUYER	CITY	NO. OF MUNICIPALITIES OBJECT OF THE CONVEYANCE	NO. OF CONSUMERS	EXECUTION DATE OF THE CONTRACT	EFFECTIVE DATE OF THE CONTRACT
AEC Montefranco	Montefranco (TR)	1	901	7/24/2000	7/25/2000
AEC Arrone	Arrone (TR)	1	1,577	4/20/2001	5/1/2001
SEM Musellarese di E. Sarra	Musellaro (PE)	3	329	6/4/2001	7/1/2001
AEC Jenne	Jenne (RM)	1	742	11/8/2001	1/1/2002
AEC Pozzomaggiore	Pozzomaggiore (SS)	1	1,880	2/28/2002	2/28/2002
AEC San Gemini	San Gemini (TR)	2	2,289	12/21/2001	3/1/2002
Aem Montecompatri	Montecompatri (RM)	1	3,500	5/2/2002	5/1/2002
Aem Vigo di Cadore	Vigo di Cadore (BL)	1	1,518	7/26/2002	8/1/2002
Ditta Compassi Gelindo(A)	Dogna (UD)	1	22	6/21/2002	10/1/2002
Comune di Castelnuovo Val di Cecina – AEC	Castelnuovo Val di Cecina (PI)	1	1,390	4/29/2003	5/1/2003
AEC Comunale	Alpette (TO)	1	737	2/28/2005	3/1/2005
AEC Cefalù	Cefalù (PA)	1	5,700	10/28/2005	11/1/2005
Azienda Baldovin Carulli(A)	Lozzo di Cadore (BL)	1	197	6/21/2005	12/31/2005
TOTAL		**16**	**20,782**		

A) Conveyance of supplying contracts – not of company branches.

Source: AEEG calculations on Enel Distribuzione data.

TABLE 2.13

Allocation of CIP6 capacity 2005-2006

MW

	2005	2006
Total available capacity	5,800	5,600
For eligible consumers	3,480	3,360
of which on an annual basis	*3,480*	*3,360*
of which on a quarterly basis	–	–
For the Single Buyer	2,320	2,240

Source: AEEG calculations on GRTN data.

TABLE 2.14

Allocation of CIP6 rights

MW

AWARDING MARKET PLAYERS	CIP6 RIGHTS 2006	CIP6 RIGHTS 2005
EniPower Trading	351	265
Edison Energia	250	352
EGL Italia	247	351
Enel Trade	221	248
Enel Energia	185	196
Energia	180	187
Asm Energy	176	153
Modula	140	152
Eneco	139	91
SIET	120	68
Alpenergie Italia	113	66
Energia e Territorio	96	101
Henergye	81	0
Energetic Source	80	75
AceaElectrabel	73	59
Green Network	59	26
Burgo Energia	58	63
Dalmine Energie	58	74
Atel Energia	52	56
Electra Italia	52	48
Dynameeting	48	32
Idroenergia	46	60
Hera Comm	45	50
Esperia	43	38
Telenergia	43	46
CVA Trading	42	13
Italgen	34	14
MPE	33	30
Multiutility	30	31
Centomilacandele	28	37
Aem Energia	27	35
E.On Italia	24	10
EDF Energia Italia	24	126
Agsm Energia	22	19
Amga Commerciale	19	20
Consorzio Romagna Energia	18	5
Azienda Energetica Trading	16	40
Radici Energie	15	19
C.U.RA.	14	8
Others	58	216
TOTAL OPERATORS	**3,360**	**3,480**

Source: AEEG calculations on GRTN data.

TABLE 2.15

Potential market on December 31, 2005

	CAPACITY USED (MW)	NUMBER OF CUSTOMERS (A)	WITHDRAWALS (TWh)
Val d'Aosta	265	27,836	0.8
Piedmont	9,237	601,540	19.2
Liguria	2,390	282,988	4.5
Lombardy	18,640	1,104,688	52.8
Trentino Alto Adige	2,644	160,206	4.4
Veneto	9,805	596,221	24.1
Friuli Venezia Giulia	2,263	155,956	7.3
Emilia Romagna	8,503	613,553	19.8
Tuscany	6,584	564,046	14.6
Lazio	7,731	711,866	14.9
Marche	2,732	221,502	5.6
Umbria	1,370	128,959	4.6
Abruzzo	1,999	174,243	5.1
Molise	435	45,957	1.2
Campania	5,791	623,399	10.9
Puglia	4,539	544,181	9.3
Basilicata	709	84,371	1.9
Calabria	2,026	257,794	3.1
Sicily	5,251	621,927	10.5
Sardinia	2,185	225,949	8.7
ITALY(B)	**95,095**	**7,747,182**	**223.2**

A) Number of withdrawal points

B) The data relating to the Rete Ferroviaria Italiana is not included

Source: AEEG calculations on distributors data.

TABLE 2.16

Free market on December 31, 2005

	CAPACITY USED (MW)	NUMBER OF CUSTOMERS	WITHDRAWALS (TWh)	PERCENT OF POTENTIAL MARKET
Val d'Aosta	68	801	0.6	69.7
Piedmont	4,006	24,642	12.6	65.5
Liguria	725	20,865	2.5	55.7
Lombardy	6,964	49,010	35.7	67.5
Trentino Alto Adige	919	6,114	2.5	57.7
Veneto	4,270	55,818	16.7	69.4
Friuli Venezia Giulia	996	13,855	5.6	76.6
Emilia Romagna	3,153	32,825	12.5	63.3
Tuscany	1,857	23,724	8.5	58.2
Lazio	1,937	27,605	7.1	47.6
Marche	811	7,691	3.2	56.5
Umbria	379	6,410	3.3	72.3
Abruzzo	583	5,601	3.2	63.5
Molise	134	1,873	0.8	67.4
Campania	898	6,859	4.7	42.7
Puglia	654	12,266	4.5	47.9
Basilicata	138	988	1.1	60.5
Calabria	195	4,297	1.0	31.3
Sicily	635	19,667	4.3	41.2
Sardinia	377	8,953	6.3	72.4
Italy	**29,700**	**329,864**	**136.6**	**61.2**

A) Number of withdrawal points.

Source: AEEG calculations on distributors data.

TABLE 2.17

Degree of awareness of liberalization

Percentage of answers to the question: "Do you know that companies have the option of freely choosing their electricity supplier?"

	LOCAL UNITS WITH ANNUAL CONSUMPTION					
	Up to 5,000 kWh	5,001 – 10,000 kWh	10,001 – 100,000 kWh	100,001 – 500,000 kWh	Over 500,000 kWh	Total
Yes, I do.	66.30	58.30	70.79	94.45	97.90	66.85
No, I do not.	33.70	41.70	29.21	5.55	2.10	33.15

Source: Multiple customer survey "Energy 2005".

TABLE 2.18

Means of awareness of liberalization

Percentage of answers to the question: "How did you become aware of the liberalization of the electricity market?"

	LOCAL UNITS WITH ANNUAL CONSUMPTION					
	Up to 5,000 kWh	5,001-10,000 kWh	10,001-100,000 kWh	100,001 - 500,000 kWh	Over 500,000 kWh	Total
Communication from the customer's energy supplier	1.99	4.03	5.01	8.18	8.33	4.48
Communication from other energy suppliers	3.85	6.20	11.69	28.03	16.34	8.58
Communication from trade associations/ industrial associations	2.52	1.56	7.81	21.54	48.28	4.02
From the internet sites of energy providers	2.08	0.55	0.73	2.97	6.18	1.38
Advertising	44.16	38.32	41.94	25.99	16.36	41.72
Articles on newspapers/magazines	48.8	42.54	44.03	26.72	22.66	43.27
Word of mouth	5.83	13.35	8.34	6.34	4.72	7.3
Through the media News/TV	4.06	4.06	7.42	3.02	0.81	4.71

Source: Multiple customer survey "Energy 2005".

TABLE 2.19

Attitude toward liberalization

Percentage of answers to the question: "How did your company react to the liberalization of the market?"

	LOCAL UNITS WITH ANNUAL CONSUMPTION					
	Up to 5,000 kWh	5,001-10,000 kWh	10,001-100,000 KWh	100,001 - 500,000 kWh	Over 500,000 kWh	Total
Entered into a new contract	1.17	0.84	7.75	36.30	66.55	4.32
Entered into a new contract with a new supplier, but then went back to the previous supplier	0	0	0.05	1.12	0.24	0.05
Entered into a new contract with the old supplier	2.21	0.57	0.9	1.25	3.30	1.46
Did nothing and maintained the old supplier	96.67	98.59	91.29	61.33	29.90	94.17

Source: Multiple customer survey "Energy 2005".

TABLE 2.20

Comparison of average tariffs for transmission and distribution services net of taxes and of A components for different types of contracts

C€/kWh

	2005	2006	
	TRANSMISSION AND DISTRIBUTION (A)	TRANSMISSION AND DISTRIBUTION (A)	DIFFERENCE 2006-2005
Average LV for domestic use	3.74	3.75	0.01
LV public lighting	1.63	1.65	0.02
LV other uses	3.10	3.15	0.05
MV public lighting	0.95	0.97	0.02
MV other uses	1.28	1.31	0.03
HV high tariff	0.41	0.41	-

A) including UC3 and UC6 components

TABLE 2.21

Volumes procured by the Single Buyer from January to December 2005

GWh

	F1	F2	F3	F4	TOTAL
Purchases of electricity outside the offer system	**1,404**	**5,618**	**3,415**	**15,868**	**26,304**
of which:					
Annual imports	200	928	583	2,347	4,057
Multi-year imports (including the energy referred to in the Authority's resolution no. 85/04)	891	3,626	2,182	10,751	17,450
Other import contracts (not connected network)	0	5	2	10	17
Electricity as per LD 387/03	313	1,059	648	2,760	4,781
Purchases of electricity on the MGP	**9,704**	**38,746**	**20,970**	**69,760**	**139,180**
of which:					
Contracts for differences	6,753	23,461	11,586	25,183	66,984
CIP6	1,035	4,241	2,538	12,509	20,323
Purchases at the PUN	1,916	11,044	6,846	32,067	51,873
Unbalancing of consumption units (A)	**121**	**405**	**A**	**1,190**	**1,517**
TOTAL	**11,229**	**44,769**	**24,185**	**86,818**	**167,001**

A) For the sake of simplicity, the conventional sign set pursuant to resolution no. 168/03 as amended was not followed.

Source: AEEG calculations on Single Buyer data 7/4/2006

TABLE 2.22

Composition of the portfolio of the Single Buyer from January to December 2005

In percentages

	INCIDENCE OF THE PROCUREMENT SOURCES WHICH ARE NOT SUBJECT TO THE PRICE RISK ON THE TOTAL NEEDS FOR 2005				
	F1	F2	F3	F4	TOTAL
CIP6	9	10	10	15	12
Imports	10	10	11	15	13
Differences	61	53	48	29	40

Source: AEEG calculations on Single Buyer data.

TABLE 2.23

"Two way" contracts for differences – second and third tenders 2006

MW allocated

	QUARTER I	QUARTER II	QUARTER III	QUARTER IV
Second auction	1,750	1,675	750	350
Third auction	650	525	375	600

Source: Single Buyer

TABLE 2.24

"Two way" contracts for differences – fourth tenders 2006

MW allocated

	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Peak hours	400	400	400	402	–	–	–	402	677
Non peak hours	700	682	471	541	642	581	675	262	195

Source: Single Buyer

TABLE 2.25

Single Buyer procurement forecasted for 2006

SOURCE	QUANTITY DESCRIPTION	ESTIMATED QUANTITY FOR 2006 (GWh)	PERCENT OF TOTAL SINGLE BUYER NEEDS	PRICE
Annual import	The Single Buyer is anticipated to have the rights of use of transmission capacity for the importation of an amount of at least 26 percent of total import capacity	3,489	2	Defined within the contract
Multi-year import	1,300 MW	10,918	7	66 €/MWh, corresponding to the maximum price envisaged by the Ministry of Productive Activities, December 13, 2005
Electricity as per LD 387/03	Energy purchased by the Single Buyer by grid operators pursuant to LD no. 387/03	7,149	4	Price defined pursuant to resolution no. 34/05
Power Exchange (MGP)	Remaining energy amount required to satisfy the demand of non-eligible consumers	140,112	87	National single price (PUN)
of which:				
CIP6 energy	The Single Buyer is anticipated to dispose of 40 percent of all allocated CIP6 bands	19,622	12	55,5 €/MWh, corresponding to the price provided by the decree issued by the Ministry of Productive Activities on December 5, 2005
Contracts for differences	This is the power allocated in the tenders called for by the Single Buyer for 2005 for which the option of extending the contract for 2006 was exercised (9,396 MW) and the power allocated in the tenders called for by the Single Buyer for 2006.	18,451(A)	45(A)	Discriminatory reverse auction with respect to the starting auction price, with fixed strike prices or prices indexed according to the contracts.
	TOTAL NEEDS	**161,668**	**100**	

A) The data refers to the months of January, February and March

Source: AEEG calculations on Single Buyer data.

TABLE 2.26

Hedges of the volatility of Single Buyer strike prices forecasted for 2006

GWh

	GAS 1	OIL	GAS 2	IPE BRENT
January	1,060	150	560	270
February	880	220	520	250
March	740	260	440	300
April	740	190	200	160

Source: AEEG calculations on Single Buyer data.

TABLE 2.27

Monthly Istat indices of electricity prices

Index numbers 1995=100; differences shown in percentages

	2004				2005			
MONTHS	NOMINAL PRICE	2004-2003 PERCENT DIFF.	REAL PRICE(A)	2004-2003 PERCENT DIFF.	NOMINAL PRICE	2005-2004 PERCENT DIFF.	REAL PRICE(A)	2005-2004 PERCENT DIFF.
January	101.2	–2.0	82.1	–4.1	101.0	–0.2	80.7	–1.8
February	101.2	–2.0	81.9	–4.3	101.0	–0.2	80.4	–1.8
March	101.2	–2.0	81.8	–4.0	101.0	–0.2	80.2	–2.0
April	98.6	–4.8	79.5	–6.8	102.6	4.1	81.2	2.2
May	97.8	–5.6	78.6	–7.6	102.6	4.9	81.0	3.1
June	97.8	–5.6	78.5	–7.7	102.6	4.9	81.0	3.2
July	98.7	–3.8	79.1	–5.9	102.6	4.0	80.7	2.0
August	98.7	–3.8	79.0	–5.9	102.8	4.2	80.8	2.3
September	98.7	–3.8	79.0	–5.7	102.8	4.2	80.8	2.3
October	99.7	–1.5	79.8	–3.4	106.8	7.1	83.8	5.0
November	99.7	–1.5	79.7	–3.2	106.8	7.1	83.7	5.0
December	99.7	–1.5	79.6	–3.2	106.8	7.1	83.6	5.0
Annual average	**99.4**	**–3.2**	**79.9**	**–5.2**	**103.3**	**3.9**	**81.5**	**2.0**

A) Relationship between the electricity price index and the general index (not including tobacco), expressed in percentages.

Source: calculations on Istat data, overall index numbers – national indices

TABLE 2.28

Outages per low voltage customer

Annual average values per region for Enel Distribuzione and local electricity companies with more than 5,000 consumers

	2004			2005		
	DURATION OF LONG OUTAGES[A]	NUMBER OF LONG OUTAGES[B]	NUMBER OF SHORT OUTAGES[C]	DURATION OF LONG OUTAGES[A]	NUMBER OF LONG OUTAGES[B]	NUMBER OF SHORT OUTAGES[C]
Piedmont	134	2.3	4.2	78	1.7	3.8
Valle d'Aosta	80	1.0	2.9	36	0.8	2.3
Liguria	51	1.7	5.0	46	1.6	5.4
Lombardy	44	1.3	2.3	57	1.2	2.2
Trentino Alto Adige	71	2.8	4.1	48	1.8	4.4
Veneto	152	2.2	3.8	55	1.5	3.6
Friuli Venezia Giulia	52	1.8	3.1	26	0.9	2.2
Emilia Romagna	96	1.8	3.3	36	1.4	3.0
Tuscany	87	2.3	4.7	70	2.0	5.1
Marche	54	1.8	3.7	63	2.0	3.7
Umbria	68	2.2	5.1	49	1.7	4.0
Lazio	97	2.8	5.9	101	3.0	7.0
Abruzzo	73	2.3	5.3	232	3.2	6.8
Molise	39	1.8	4.4	38	1.9	3.5
Campania	120	4.3	12.1	131	4.1	12.4
Puglia	80	2.4	5.5	68	2.6	5.4
Basilicata	52	2.2	6.5	193	4.2	11.0
Calabria	107	3.9	10.7	101	3.6	11.4
Sicily	98	3.6	12.1	105	3.9	10.3
Sardinia	115	3.9	9.2	120	3.8	9.6
NORTH	88	1.8	3.4	54	1.4	3.2
CENTRE	86	2.5	5.2	82	2.4	5.7
SOUTH	98	3.4	9.6	115	3.6	9.5
ITALY	**91**	**2.5**	**5.8**	**80**	**2.3**	**5.8**

A) Minutes of outage per year per customer (all causes)

B) Average number of outages lasting more than 3 minutes, per year, per customer (all causes)

C) Average number of outages lasting between 1 second and 3 minutes, per year, per customer (all causes)

TABLE 2.29

Number of reimbursements paid due to non-compliance with commercial quality standards

Enel Distribuzione and local electricity companies with more than 5,000 consumers on July 1, 2000

	SERVICE CARD			COMMERCIAL QUALITY REGULATION					
	1997	1998	1999	2000 II SEM.	2001	2002	2003	2004(A)	2005
Cases of non-compliance with standards subject to reimbursement	6,099	4,167	8,418	7,902	25,650	61,881	67,344	57,424	64,696
Actual reimbursements paid during the year	21	54	22	4,771	12,437	52,229	79,072	48,305	62,725

A) Data from February to December 2004

Source: Declarations of retailers made to the AEEG

TABLE 2.30

Services subject to automatic compensation for low voltage consumers (domestic and non-domestic)

2004 and 2005, Enel Distribuzione and local electricity companies with more than 5,000 consumers

		2004			2005		
SERVICE	STANDARD	NUMBER OF ANNUAL REQUESTS	ACTUAL AVERAGE TIME	NUMBER OF AUTOMATIC COMPENSATIONS	NUMBER OF ANNUAL REQUESTS	ACTUAL AVERAGE TIME	NUMBER OF AUTOMATIC COMPENSATIONS
Estimates regarding execution of work on the LV grid	20 working days	504,422	11,11	11,082	389,241	11,95	7,160
Execution of simple work	15 working days	437,457	8,70	11,001	438,380	8,61	8,563
Connection of supplying	5 working days	1,664,078	1,83	16,495	1,760,852	1,59	12,777
Disconnection of supplying	5 working days	767,877	2,09	4,158	835,294	1,78	2,793
Reconnection due to delayed payment	1 working day	310,540	0,72	4,692	644,240	0,84	24,427
Invoicing adjustments	90 calendar days	32,908	47,73	103	13,136	52,51	1,694
Recovery of the supplying following a break down of metering unit	3 hours 4 hours	n.a.(A)	n.a.(A)	n.a.(A)	136,770	1.73	1,592
Punctuality for personalized appointments	3 hours	69,952		602	72,358		491

A) Standard applicable from 2005

Source: Declarations of retailers to the AEEG

TABLE 2.31

Overall satisfaction with the electricity service

Percentages obtained from "very satisfied" and "quite satisfied" responses

	1998	1999	2000	2001	2002	2003	2005
North-West	94.6	94.5	94.1	94.5	94.9	93.2	90.4
North-East	93.1	94.1	92.0	94.3	92.9	91.5	88.0
Centre	89.4	91.3	89.6	91.1	90.9	89.4	87.1
South	86.4	88.1	88.7	89.2	89.5	89.9	87.8
Islands	83.7	83.9	84.5	84.5	85.6	84.2	80.4
Italy	**90.3**	**91.2**	**90.6**	**91.7**	**91.5**	**90.3**	**87.7**

Source: Multi-purpose survey by Istat for 1998-2005

TABLE 2.32

Satisfaction with the continuity of the electricity service

Percentages obtained from "very satisfied" and "quite satisfied" responses

	1998	1999	2000	2001	2002	2003	2005
North-West	95.4	95.4	95.1	94.5	95.6	94.1	93.5
North-East	94.2	94.8	93.9	95.8	95.0	93.1	93.1
Centre	89.5	90.6	89.0	91.9	91.7	89.9	89.4
South	85.9	87.5	88.3	88.5	89.2	89.6	90.0
Islands	85.0	83.1	85.8	85.9	88.4	86.4	83.5
Italy	**90.8**	**91.1**	**91.2**	**92.0**	**92.5**	**91.1**	**90.8**

Source: Multi-purpose survey by Istat for 1998-2005

TABLE 2.33

Overall satisfaction including various aspects of the electricity service

Percentages obtained from "very satisfied" and "quite satisfied" responses

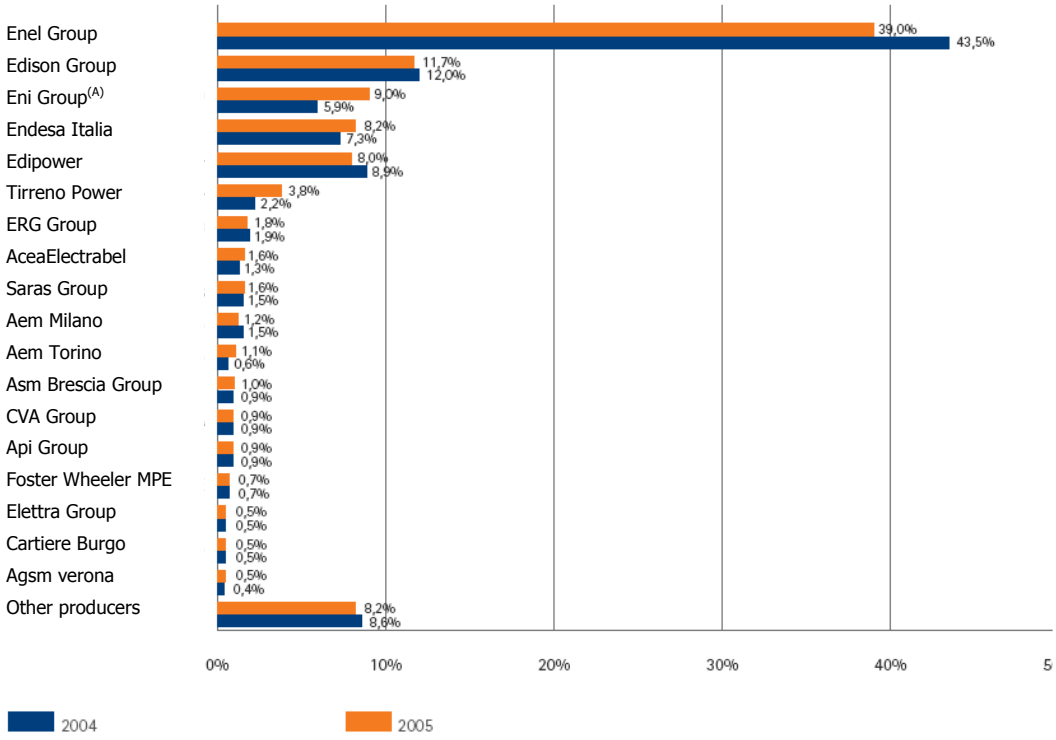
	1998	1999	2000	2001	2002	2003	2005
Continuity	90.8	91.1	91.2	92.0	92.5	91.1	90.8
Sags	86.3	87.2	87.1	87.8	86.2	86.1	85.4
Frequency of readings	72.8	74.1	73.5	72.5	72.5	70.7	71.5
Clarity of bills	75.0	76.1	74.3	76.3	72.9	72.8	70.3
Information on the service	73.2	74.1	73.4	73.5	71.6	69.5	67.4
Overall satisfaction	**90.3**	**91.2**	**90.6**	**91.7**	**91.5**	**90.3**	**87.7**

Source: Multiple purpose surveys conducted by Istat for 1998-2005

FIG. 2.1

Contribution of main operators to gross national production

Comparison of 2004-2005; data in percentages



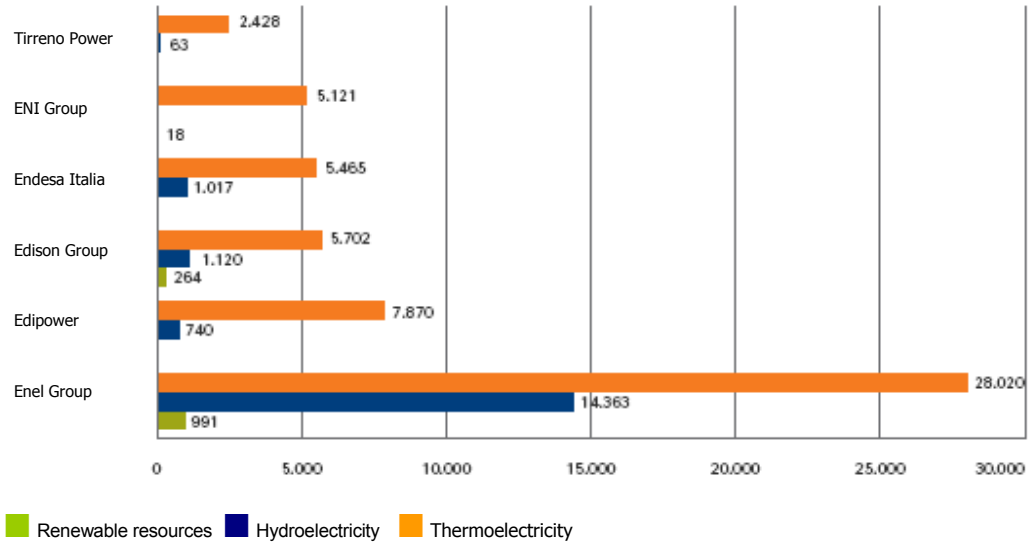
A) The data for the Eni group for 2004 does not include the Exploration & Production division.

Source: AEEG calculations on data provided by the operators.

FIG. 2.2

Gross capacity available from the major groups

MW; 2005

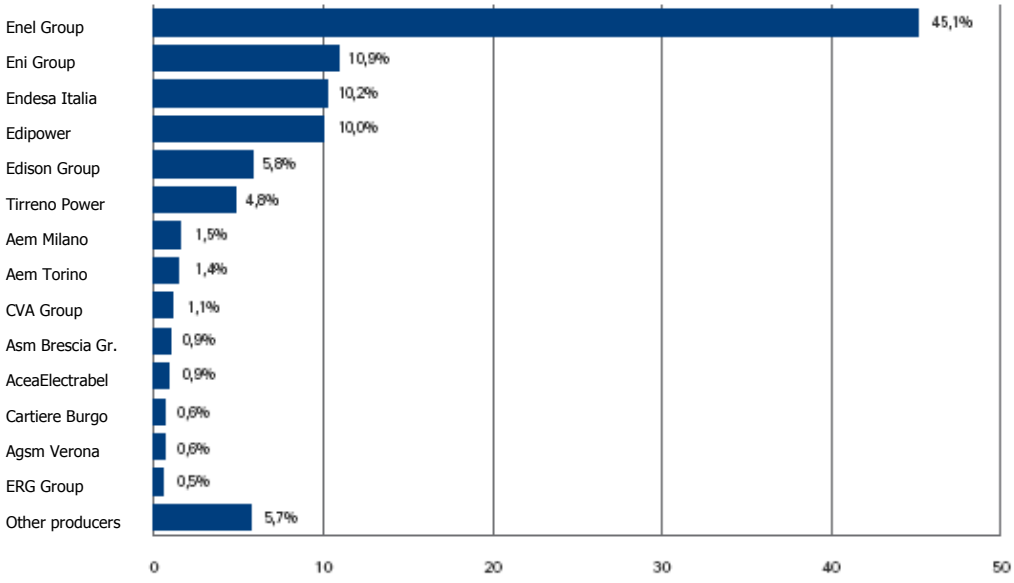


Source: AEEG calculations on data provided by the operators.

FIG. 2.3

Contribution of the main operators to the production of electricity for consumption

Data in percentages; 2005

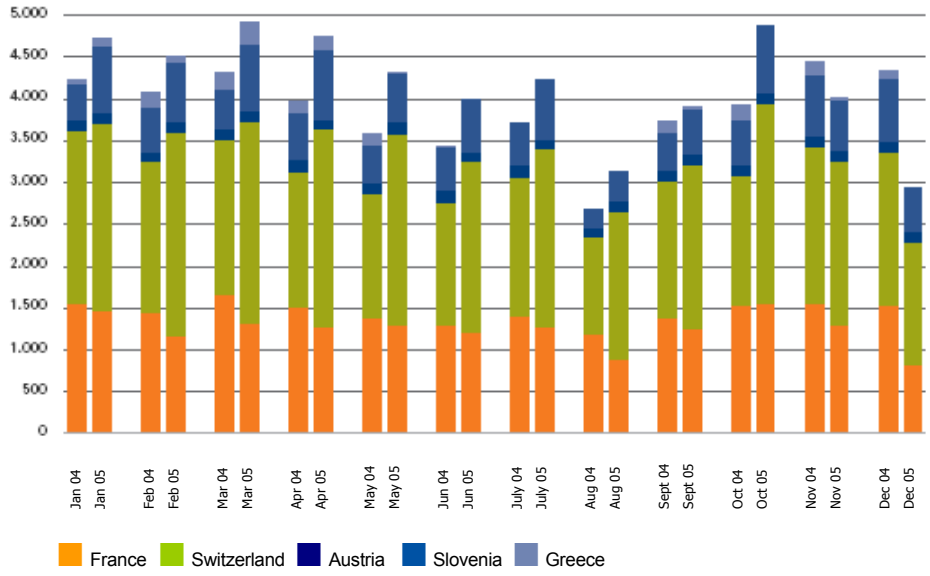


Source: AEEG calculations on data provided by the operators.

FIG. 2.4

Imports of electricity by border in 2004 and 2005

GWh

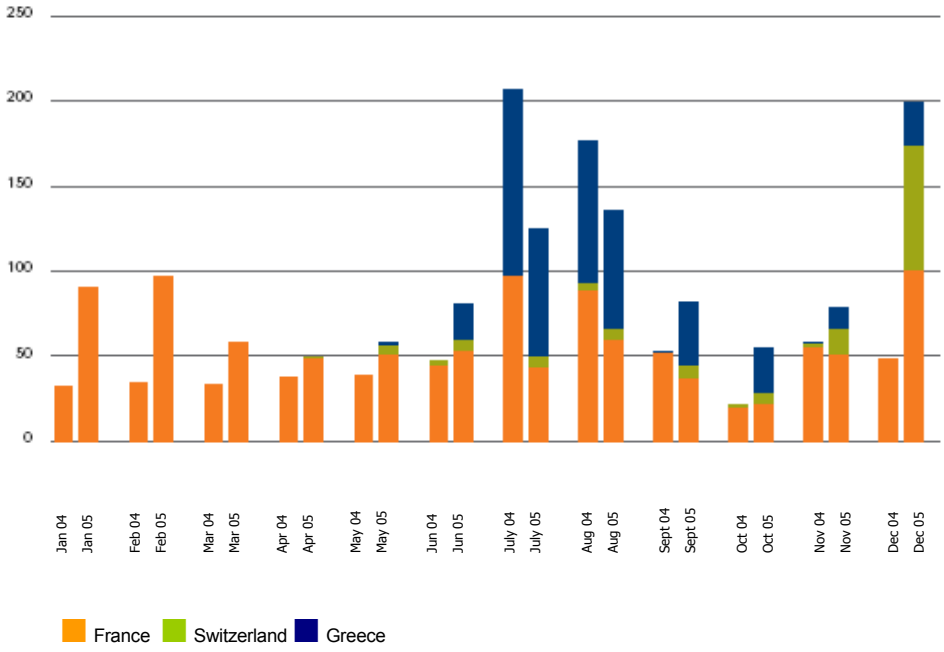


Source: AEEG calculations on TERNA data.

FIG. 2.5

Exports of electricity by border in 2004 and 2005

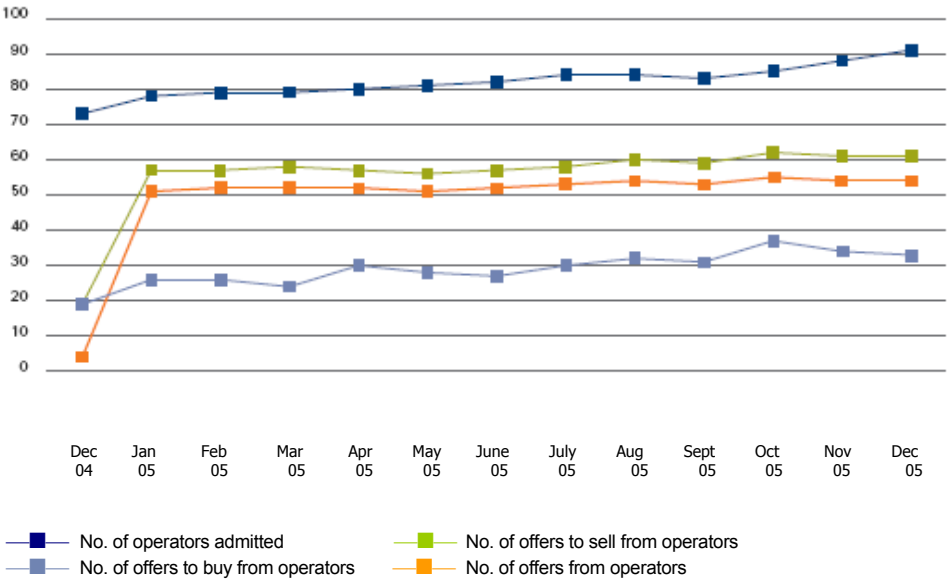
GWh



Source: AEEG calculations on TERNA data.

FIG. 2.6

Number of operators purchasing and selling on the MGP

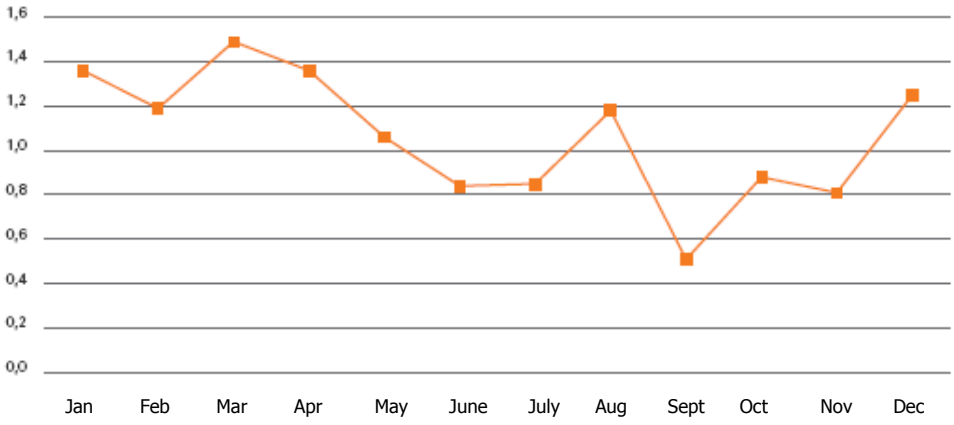


Source: AEEG calculations on GME data.

FIG. 2.7

Scheduled unbalancing

TWh; 2005

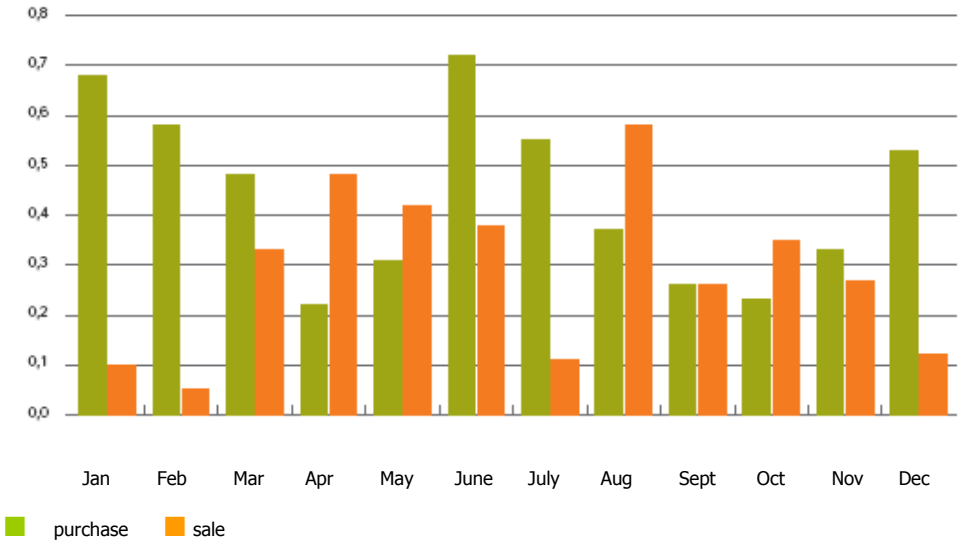


Source: AEEG calculations on GME data.

FIG. 2.8

Supplementary offers by GRTN/TERNA

TWh; 2005

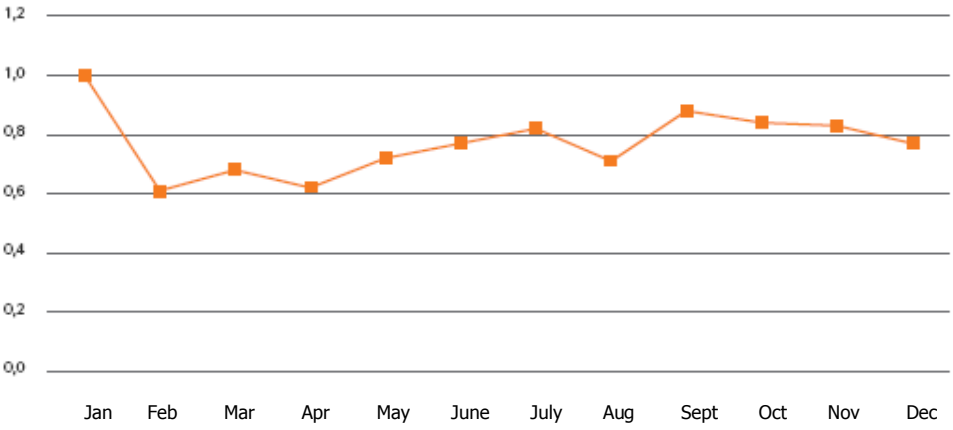


Source: AEEG calculations on GME data.

FIG. 2.9

Exchanges on the bilateral adjustment platform

TWh; 2005

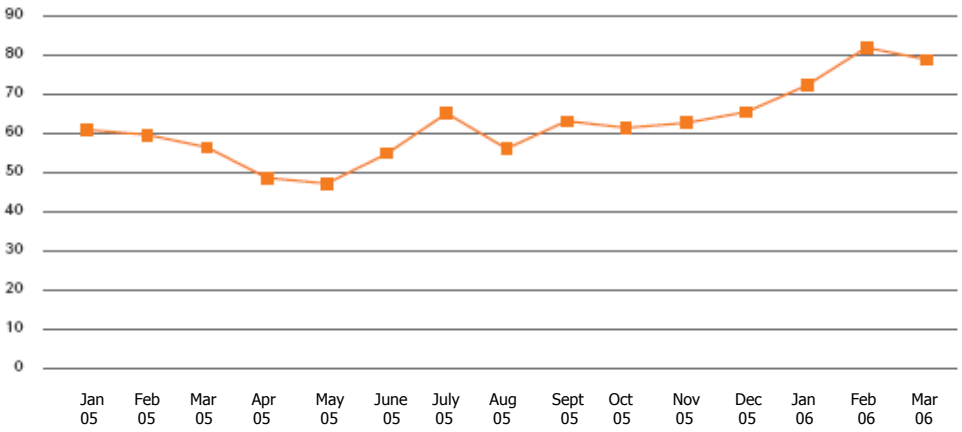


Source: AEEG calculations on GME data.

FIG. 2.10

Performance of the National Single Price (PUN)

€/MWh

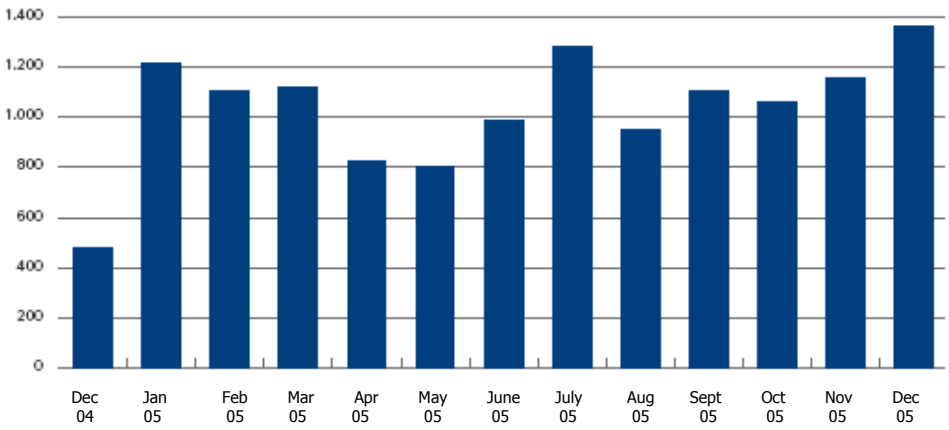


Source: AEEG calculations on GME data

FIG. 2.11

Value of transactions on the MGP

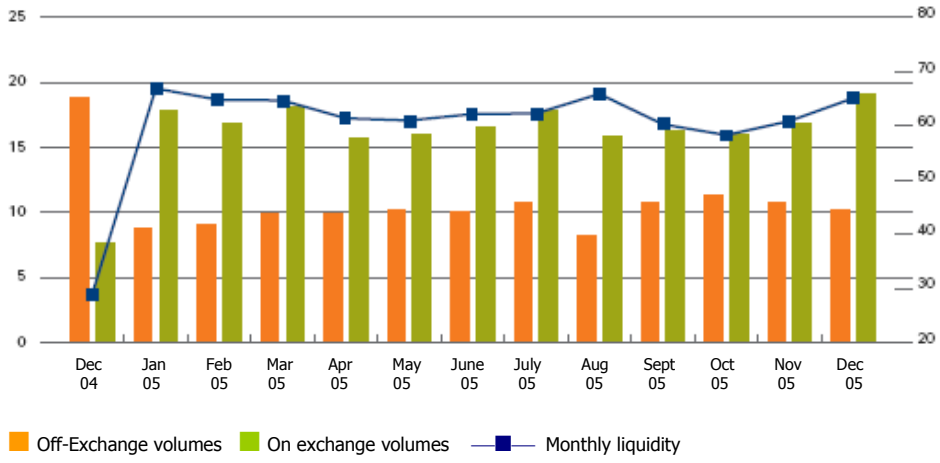
Millions of Euro



Source: AEEG calculations on GME data.

Liquidity and volumes exchanged on the MGP

TWh

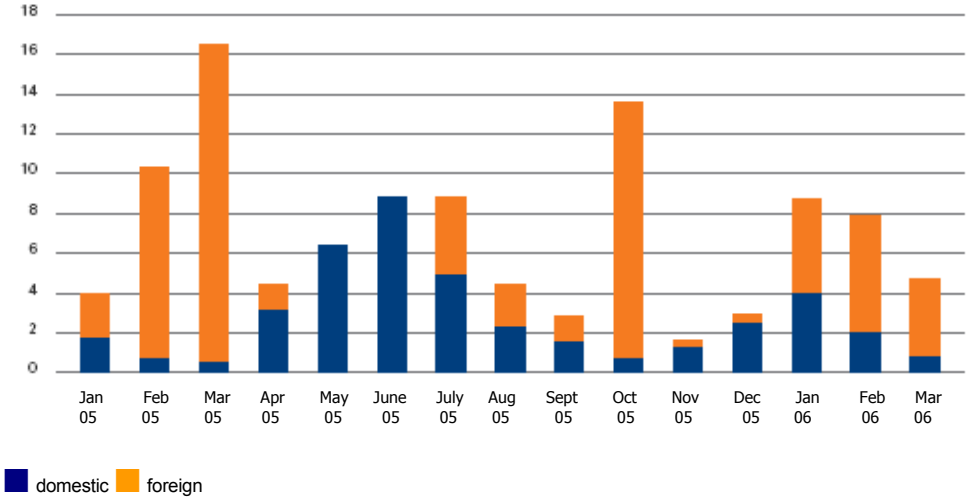


Source: AEEG calculations on GME data.

FIG. 2.13

Return from congestion

Millions of Euro

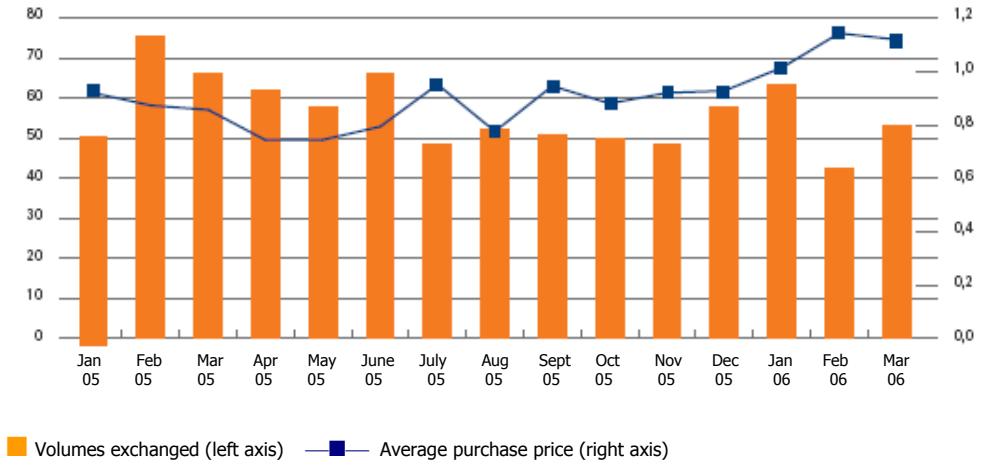


Source: AEEG calculations on GME data.

FIG 2.14

Development of prices and volumes on the MA

€/MWh; TWh

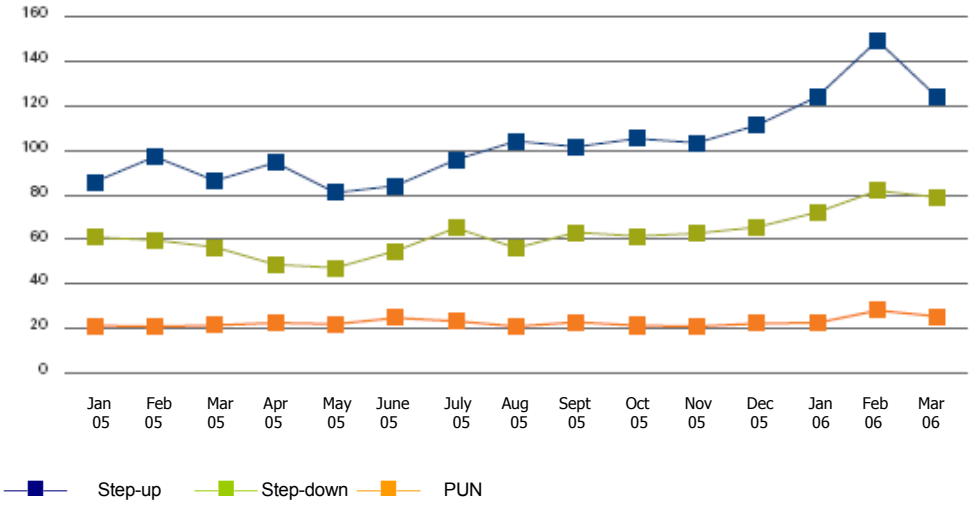


Source: AEEG calculations on GME data.

FIG. 2.15

Average price on the ex ante dispatch service market

€/MWh

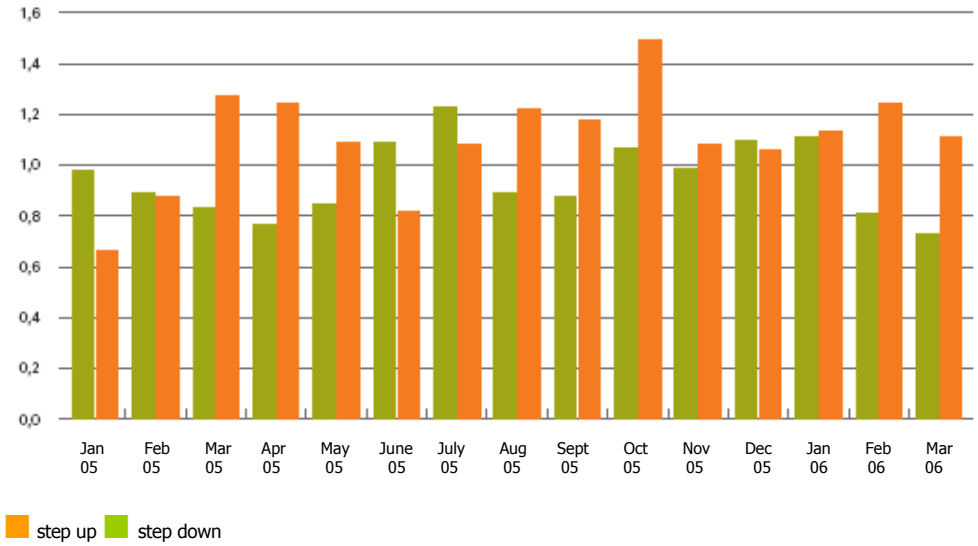


Source: AEEG calculations on GME data.

FIG. 2.16

Quantity on the ex ante dispatch service market

TWh

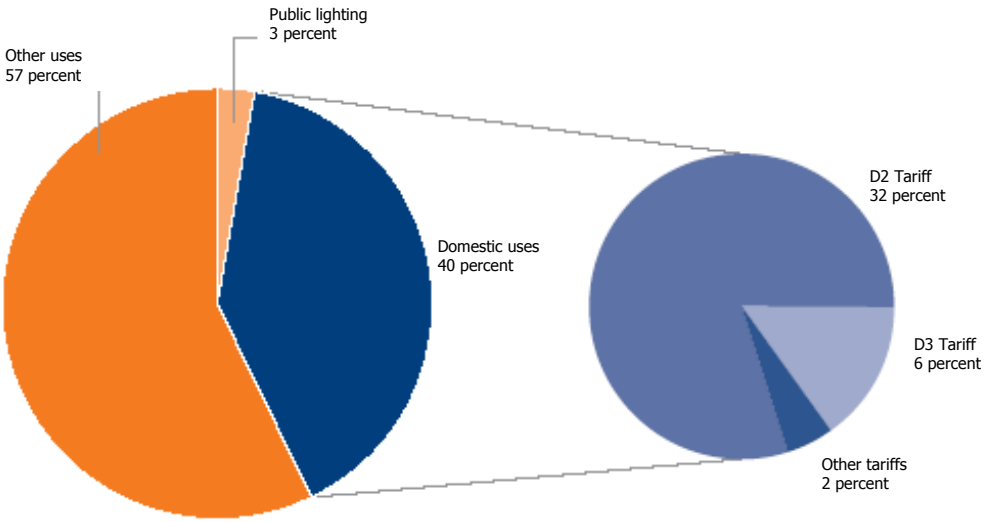


Source: AEEG calculations on GME data.

FIG. 2.17

Captive market by type of user

Data in percentages calculated on

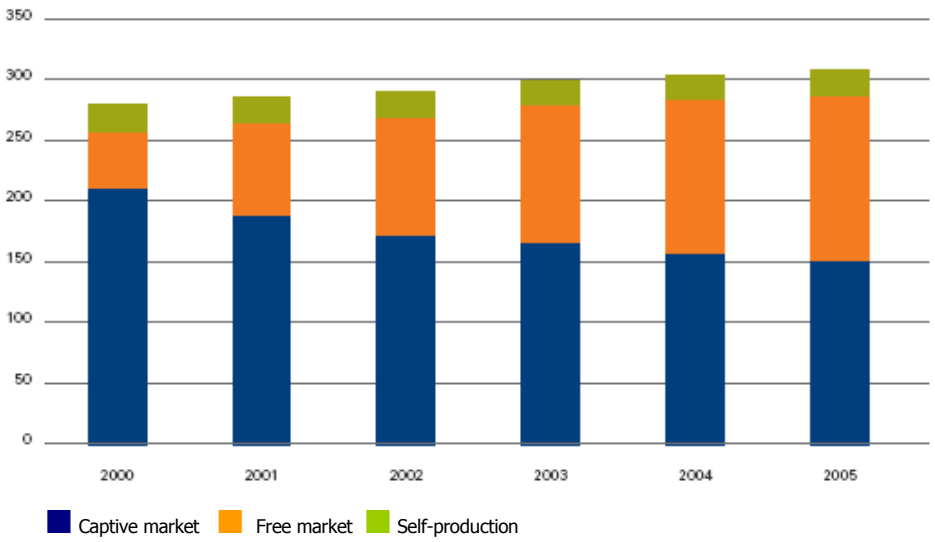


Source: AEEG calculations on distributors data.

FIG 2.18

End consumption by type of market

TWh

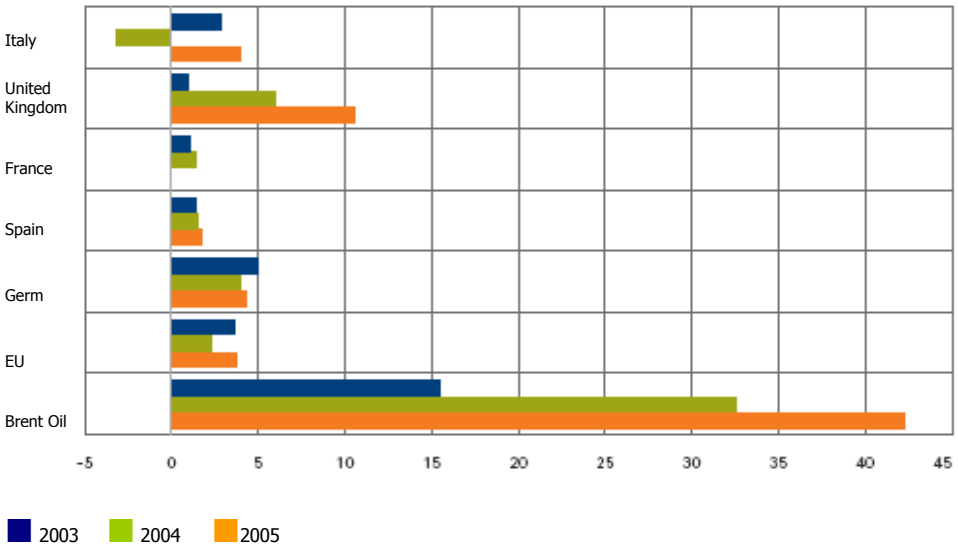


Source: AEEG calculations on TERNA and distributors data.

FIG. 2.19

Changes in the prices of electricity in the major European countries

Percentage changes over the previous year



Source: calculations on Eurostat data, harmonized consumer price index numbers.

FIG. 2.20

Average national tariff net of taxes: performance over the last two years

c€/kWh

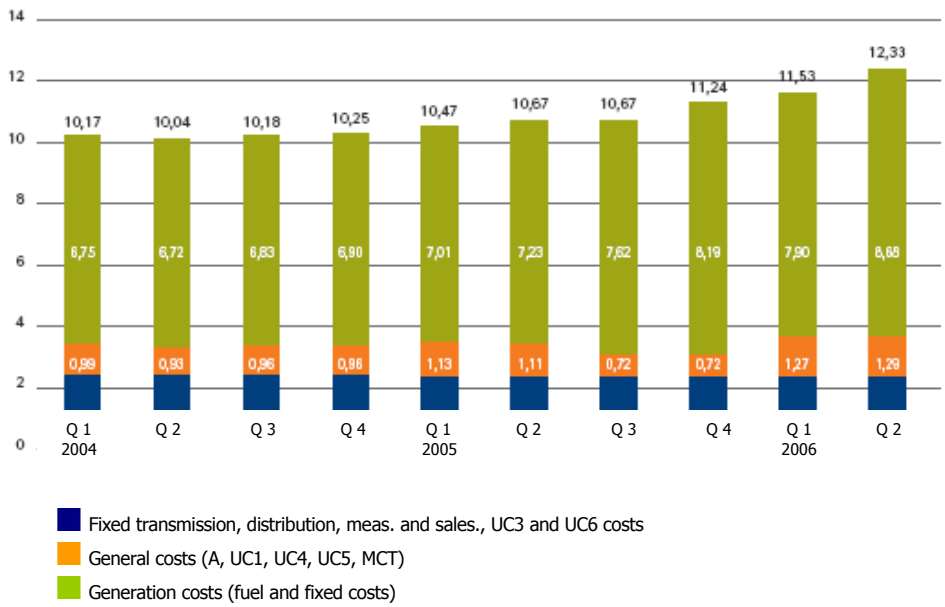
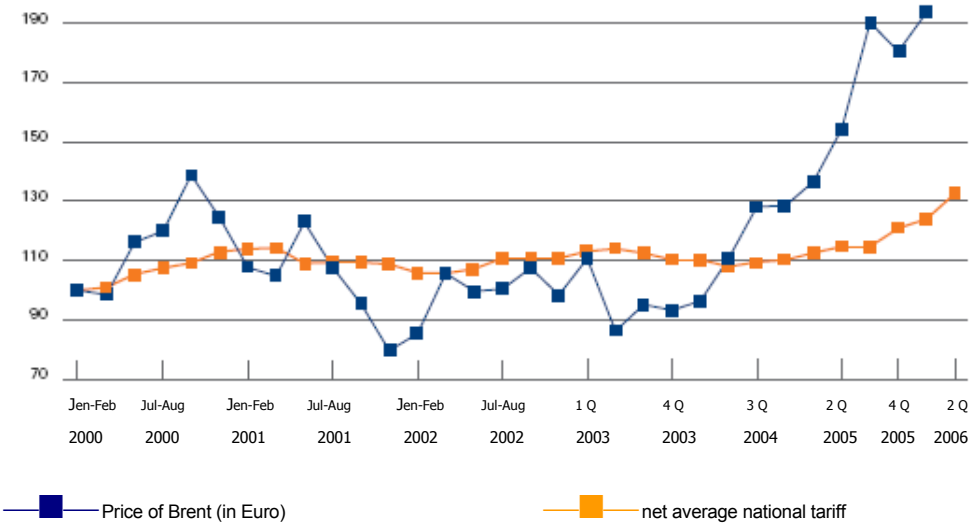


FIG. 2.21

Performance of the average national tariff and of oil prices (Brent dated)

Index numbers, first 2 months 2000=100

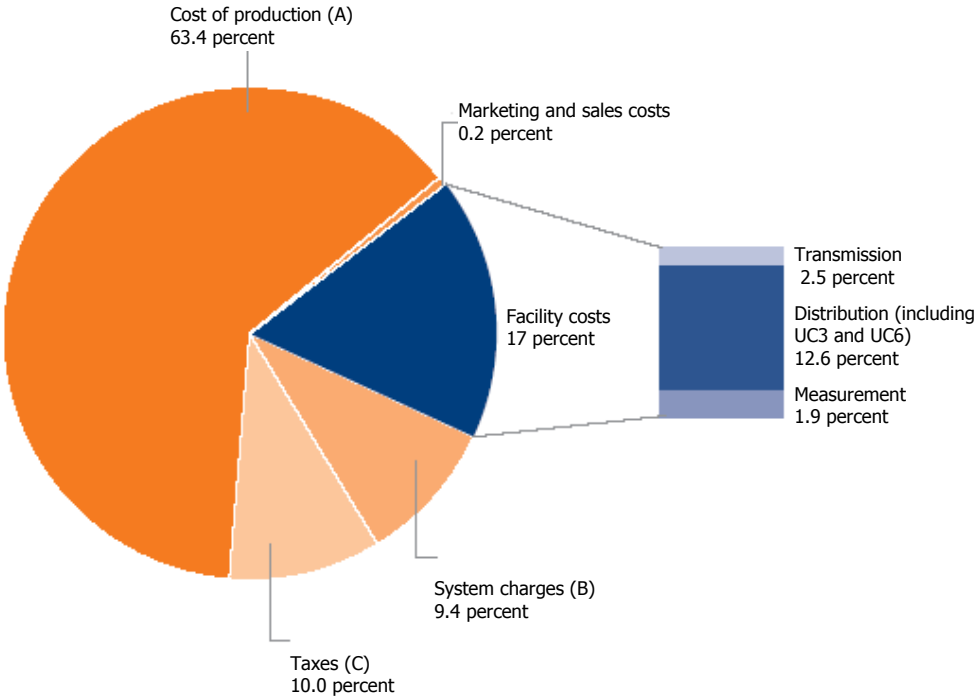


Source: AEEG calculations on internal and Platts data

FIG

Average national tariff including taxes:

Percentages as of April 1 2006



A) The costs of production include the cost of fuel, the fixed generation costs, the dispatching cost and the remuneration of productive capacity and the interruptiblity service.

B) The system charges include all the A components, the UC1, UC4, UC5 components and the MCT component.

C) Taxes are calculated pro forma at 10 percent of the average national tariff.

FIG. 2.23

Duration of outages for low voltage customers

Minutes lost per customer, annual average values, Enel Distribuzione and local electricity companies with more than 5,000 consumers

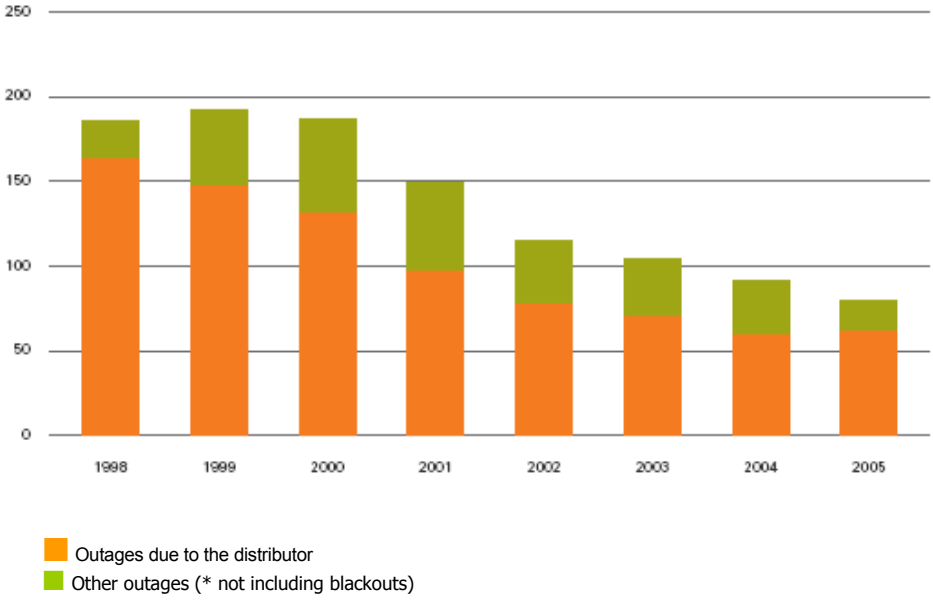


FIG. 2.24

Number of long and short outages for low voltage customers

Annual average values, Enel Distribuzione and local electricity companies with more than 5,000 consumers

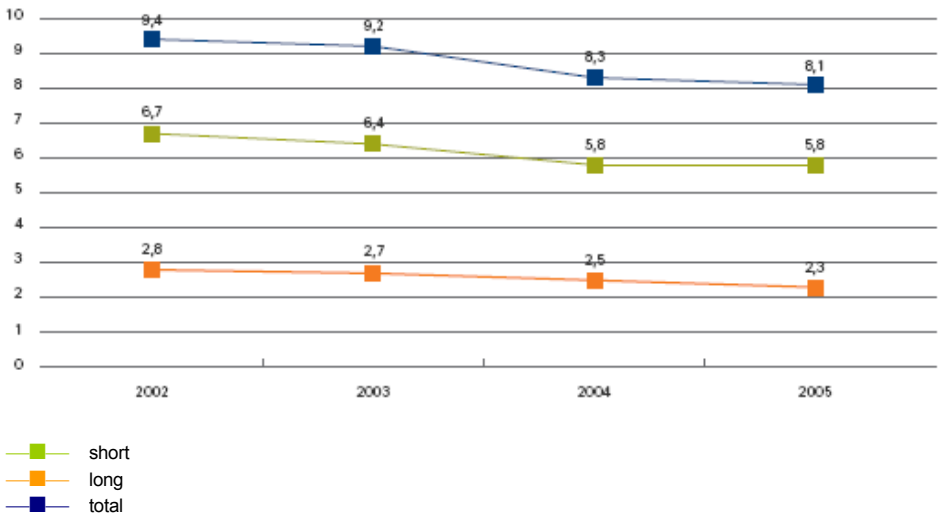
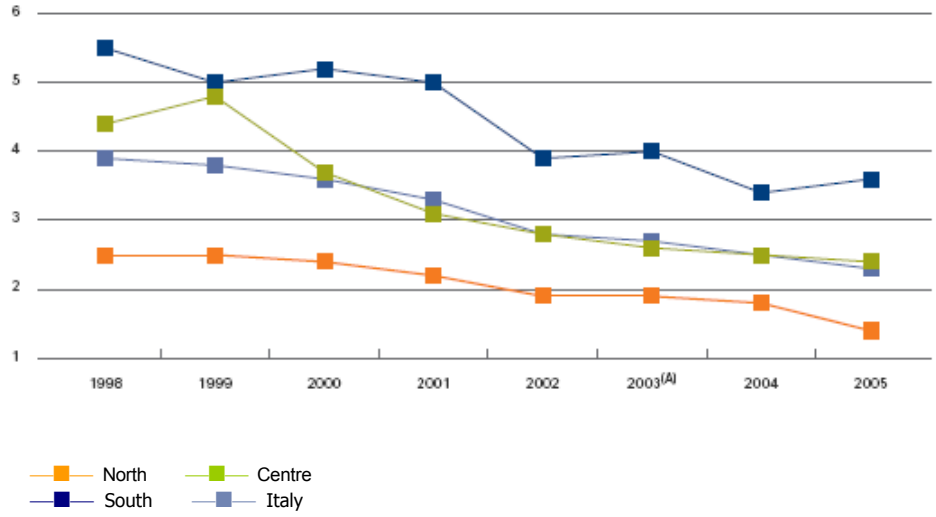


FIG. 2.25

Number of unanticipated outages for low voltage customers

Annual average values, Enel Distribuzione and local electricity companies with more than 5,000 consumers

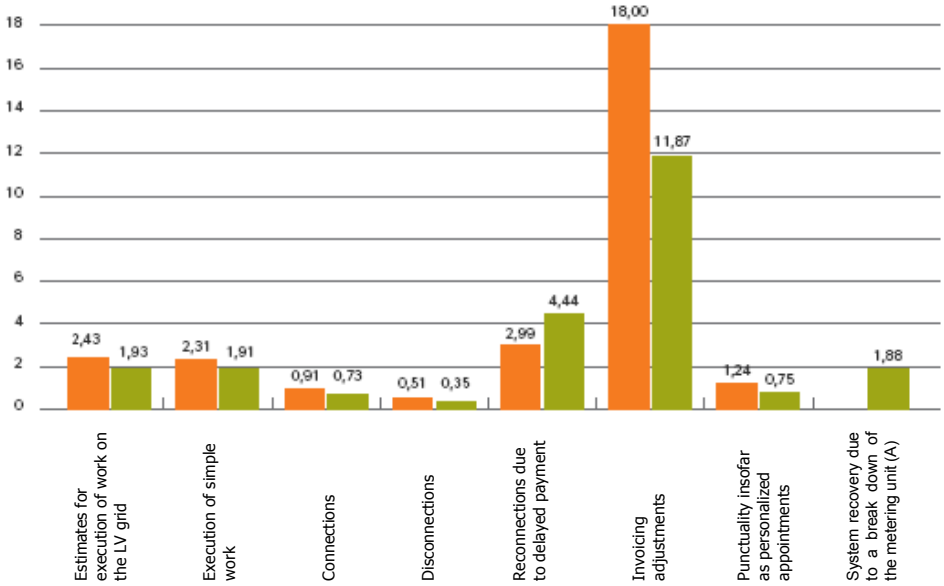


A) Not including scheduled outages and blackouts

FIG. 2.26

Percentage of non-compliance with guaranteed quality standards for low voltage users

2004 and 2005; Enel Distribuzione and local electricity companies with more than 5,000 consumers



percent non compliance compared to 2004 percent non compliance compared to 2005

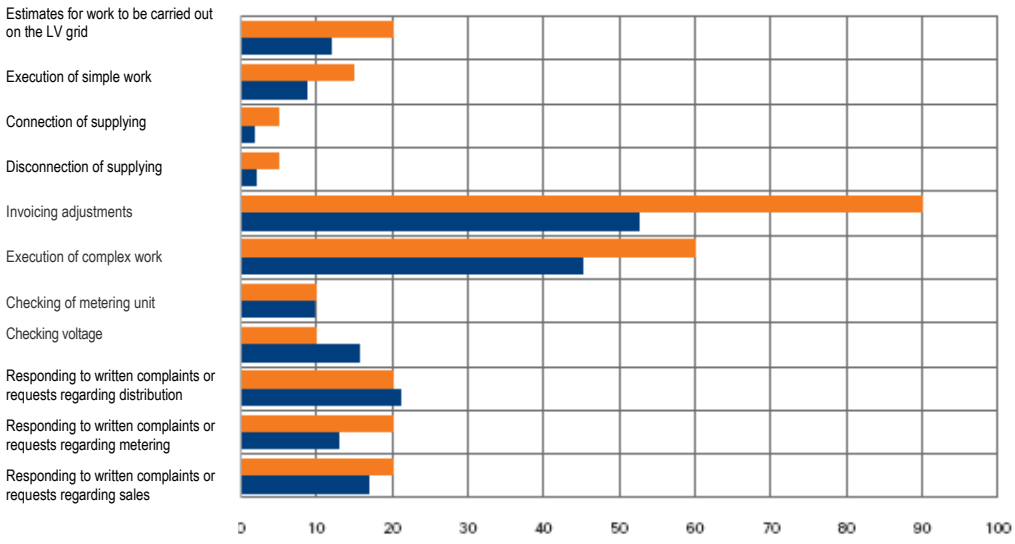
A) Standard applicable as of 2005:

Source: Declarations of retailers to the AEEG

FIG. 2.27

Comparison of standard average actual time and standard defined by the authority for commercial quality services for low voltage consumers

2005, working days, calendar days for invoice adjustments, Enel Distribuzione and local electricity companies with more than 5,000 consumers



Maximum time (standard for LV customers)

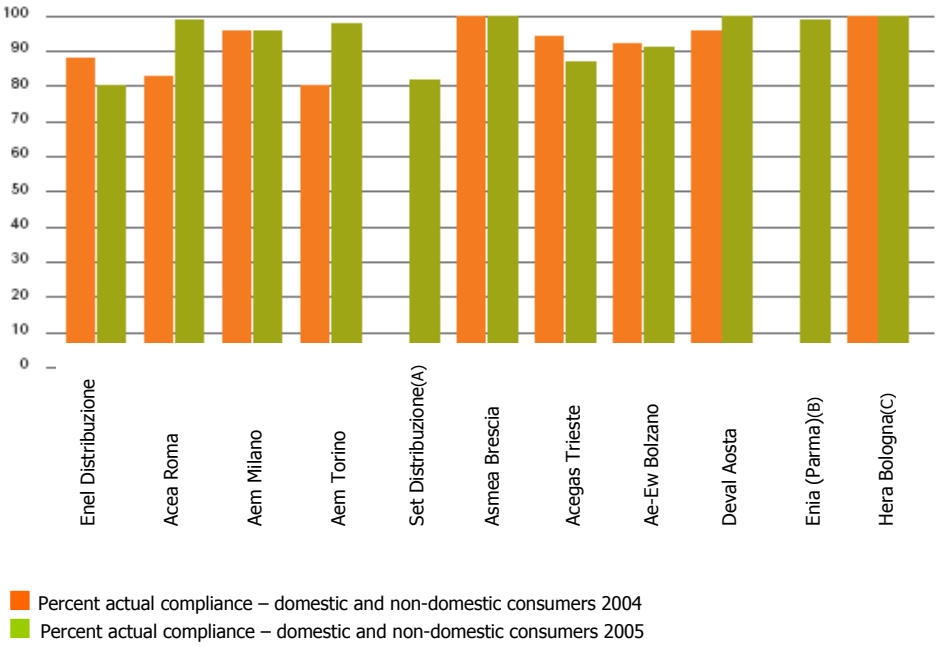
Actual average maximum time 2005 (LV customers)

Source: Declarations of retailers to the AEEG

Fig. 2.28

Actual compliance with response times to complaints made by low voltage consumers (domestic and non-domestic)

2004 and 2005, Enel Distribuzione and local electricity companies with more than 100,000 consumers



A) 2004 data not comparable.

B) In 2004 Enìa Parma did not declare any complaints relating to distribution.

C) The 2004 data refers to Hera Bologna and Meta Modena.

Source: Declarations of retailers to the AEEG

3. STRUCTURE, PRICES AND QUALITY IN THE GAS SECTOR

Natural gas supply and demand in 2005

The evolution of natural gas supply and demand in 2005, described in Chapter 1, highlighted the main characteristics of the development of this energy source in the more general context of the energy development of the country, using the national electricity balance. This Chapter, dedicated specifically to natural gas, provides more details about this sector through the balance of operators, illustrated in table 3.1, which was built starting from the data provided by the operators themselves as part of the annual survey that the Authority for Electricity and Gas performs on the regulated markets; for this reason, the total figures (indicated in the last column of table 3.1) differ from those, albeit temporary, published by the Ministry of Productive Activities and used in Chapter 1. The differences are partially due to the incomplete coverage, in the survey carried out by the Authority, of the entire market, and partially to the different reading methods used in the two datasets.

Like in previous years, its structure is designed to highlight the key characteristics of the activities of the different categories of operators in the main sections of the supply chain: from supplying to internal transfers, to sales on the end market [8]. The operator categories have been broken down by the primary type of activity (wholesaler or supplier [9]) and by size. Unlike in past years, the category of wholesalers with intermediate and end sales of less than 1 G(m3) has been subdivided further into two categories in order to better emphasize the type of activity of the smaller wholesalers, those with transactions of less than 100,000 M(m3). Moreover, a separate line has been dedicated to transactions completed at the Virtual Trading Point (VTP), which consolidated their presence on the gas market, cross-border purchases and gas release.

The operator breakdown by category has changed greatly with respect to the previous year. In particular, Edison Spa moved into the second category of wholesalers, with intermediate and end sales of over 10 G(m3), together with Enel Trade. The third class, with total sales of between 1 and 10 G(m3) grew by three new operators (Gaz de France, Gas Natural Vendita Italia Spa and Dalmine Energie Spa), which were previously in the lower class.

Overall, the level of concentration in the wholesale market has, however, decreased (as will be seen later on in this Chapter), thanks to the sharp increase in the total number of wholesalers with very low average sales. The most important change amongst suppliers regards the merger of Italgas Più Spa into Eni Spa – Gas & Power Division, substituted by E.On Vendita Srl as a new member of the class with sales of over 1 G(m3).

The contraction in domestic production was a lot less dramatic for Eni than for the other operators (5 percent versus 25 percent), reconfirming the growing flexibility that Eni enjoys with respect to the caps set by Legislative Decree no. 164 dated May 23, 2000. The fact that the caps are less severe probably also explains the rise in the net imports of Eni, of 5.6 G(m3), compared to the other operators posting virtually no change. It should, however, be pointed out that almost 2 G(m3) were then conveyed as gas release. The new procurements from Libya, up by 3.3 G(m3) with respect to 2004, helped increase the gas availability of Edison and of Energia Spa, easing the pressure on the cross-border sales of Eni, which overall were down by 0.8 G(m3) with respect to 2004. Libyan imports also strengthened the gas availability of Gaz de France dramatically. On the other hand, imports by suppliers, which in 2004 amounted to roughly 1 G(m3), reached zero, due mainly to the shift of Gaz de France from supplier to wholesaler.

No operator exported gas except for Eni, which re-exported gas on the Algerian contract with Slovenia, and for Estgas Spa, which sold minimal amounts across the Slovenian border. Eni stepped up sales in Europe considerably, also by using gas that it can't sell in Italy, based on the Antitrust Authority caps. Moreover, Edison and Enel Trade engage in trading activities in other European countries, but this is not taken into account in the annual survey of the Authority, which only focuses on activities performed domestically. In contrast, the activity of foreign traders in Italy seems intense.

Withdrawals from stocks were considerably higher than average in 2005, primarily due to the early cold of the 2005-2006 winter season. However, the sharp reduction in gas in storage at December 31, 2005 with respect to December 31, 2004, of around 1 G(m3), against a basically flat comparison the year before, also reflects the use of gas for electricity generation aimed for exports on the European markets in the last two months of the year. All but one wholesaler categories reduced their stocks with respect to the beginning of the year. However, in comparison to gas availability, the reduction was by far the largest for Eni (1.7 percent of total availability against the 0.2 percent for wholesalers other than Eni). Suppliers, on the other hand, neither injected into nor withdrew from stocks.

The most obvious variations in the structure of purchases from domestic operators between 2004 and 2005 were due to the merger of Italgas Più into Eni and to the reclassification of Edison. There was also a marked rise in purchases from "Other operators", which climbed from 11.3 to 18.4 G(m3), which is explained by the resales of gas purchased from these operators at the VTP, at the border and in gas release.

As is known, gas transfers amongst operators include resales. In this regard, it is interesting to calculate a "total resale rate", defined as the ratio between the distributable gas of the operator (produced, imported, withdrawn from stocks and purchased from other operators), and the gas sold on the end market, which reflects the number of times that the gas is placed with intermediaries before being sold on the end market. While for suppliers this value has to be close to 1, the rather high value that the ratio approaches for wholesalers in inverse relation to their size is, instead, significant. In fact, the overall resale rate is 1.6 for Eni; 1.8 for wholesale with sales of over 10 G(m3); 2.6 for wholesalers with sales between 1 and 10 G(m3); 4.3 for wholesalers with sales of between 0.1 and 1 G(m3); 6.9 for wholesalers with sales lower than 0.1 G(m3).

Transfers net of resales are basically in line with those of the year before, taking into account the absorption of Italgas Più and the shift of Edison into the higher class. Net transfers are negative for the first three classes of wholesalers supplying both suppliers and smaller wholesalers. The consumption and losses of the various operator classes are estimated based on the actual transfer of gas on the domestic grids. By deducting net transfers, consumption and losses from total procurement (production, net imports and stock withdrawals), we obtain end sales.

According to the preliminary figures of the Ministry of Productive Activities, in 2005 the demand for gas grew by 7.4 percent with respect to the year before, going from 79.3 to 85.2 G(m3). The extent of this increase enabled the sales of Eni to increase further, without reaching the supply caps. Available figures do not show substantial variations in the distribution of sales between the free market and the protected market, with respect to the situation in 2004: overall, the free market represents approximately 70 percent of end sales and self-consumption. In the class of sales between 5,000 and 200,000 m3, the weighting of the free market rose from 12.5 percent to 18.3 percent. On the other hand, the weighting of the class with consumption of over 200,000 m3 remained basically stable at 99 percent, while the class with consumption of less than 5,000 m3 posted a decrease (from 3.2 percent to 2.2 percent), a decrease which, however, falls within a measurement error. Finally, in 2005 there was still a net prevalence of wholesalers as suppliers for the free market: 86.4 percent of the gas sold on said market is indeed provided by wholesalers, while that of suppliers is only 13.6 percent. In contrast, the protected market is served 67 percent by suppliers and only 33 percent by wholesalers. The percentage of the suppliers decreased this year consequent to the merger of Italgas Più into Eni.

[8] For a correct reading of the balance by rows and columns, the same considerations made for the electricity sector apply. The "total" column gives more structural details about the natural gas column in the national electricity balance. In contrast, the columns of the various operator categories do not follow the regular reporting rules, given that the aggregation on several operators results in resales being included in transactions amongst the operators.

[9] Operators who make more than 95 percent of their sales and/or self-consumption on the end market are conventionally classified as suppliers. The other operators are classified as wholesalers.

Market and competition

Structure of the gas offer

Domestic production

Domestic production continued on the downward trend that characterized the last few years. As forecast by the Ministry of Productive Activities (please see the previous Annual Reports), in 2005 production stood at 11,977 G(m3), down by another 7.6 percentage points with respect to 2004, and accounting for just under 14 percent of total consumption, compared to 16 percent the year before.

Figure 3.1 shows the historic curve of domestic production and forecast production until 2010. Based on the temporary results of the annual survey of the electricity and gas sectors carried out by the Authority, the natural gas production segment in Italy is dominated by Eni, holding a majority share of domestic production, which is by far greater than those of competitors (84.1 percent). In this phase of the supply chain, in 2005 only three other companies, Edison, Shell Italia E&P Spa and Gas Plus Italiana Spa, reached a share that was close to or above 2 percent (Table 3.2).

Imports

The dependency of Italy on imports increases considerably from year to year. In 2005, approximately 8.2 percent more gas was imported than in 2004, which overall was just over 85 percent of consumption (Fig. 3.2).

The main sources of supplying via natural gas pipeline, both non-EU, are Russia and Algeria. Figure 3.3 shows the breakdown of imported gas volumes based on the country of origin. This year, the leader in imported gas volumes is Algeria, with over 37 percent of total imports, most of which via natural gas pipelines (entry point of the domestic grid: Mazara del Vallo), and to a lesser extent via tanker, regassified at the Panigaglia plant. Imports from Russia rank second (32 percent), which arrive in Italy via natural gas pipeline through the entry points of Tarvisio and Gorizia in the national grid.

Imports from Northern European countries account for close to 23.2 percent in total: most of this comes from the Netherlands (10.9 percent) and from Norway (7.8 percent), entering Italy through the Passo Gries (Swiss border) entry point of the national grid. Finally, there are the imports from Libya (point of entry: Gela in Sicily), which are still in the build-up phase, and from other countries that do not belong to the European Union (7.6 percent in total).

At the regassification terminal in Panigaglia, in the Liguria region, around 3.4 percent of import volumes were regassified and injected into the grid.

Procurement still takes place predominantly based on take-or-pay-type multi-year contracts. Calculations made based on the data provided by operators within the survey of the Authority, highlight the dependency of Italy in 2005 on gas purchase agreements having a validity period of more than 10 years, and firstly the historic contracts stipulated by Eni, in the last 10 years and in a few cases dating back to the beginning of the 1980s and to the end of the 1970s, with North Sea producers, Russia and Algeria.

Figure 3.4 shows the breakdown of active import contracts, based on the entire duration, considering the volumes under contract for 2005 (Annual Contract Quantity 2005). From this we see the importance of contracts having a validity period of over thirty years, which account for just under 50 percent of total volumes under contract, followed by contracts with a validity period of between 20 and 25 years, and between 15 and 20 years, which overall account for just over 33 percent of the total. Spot contracts, meaning those having a validity period of less than or equivalent to one year, although numerous (more than 180 contracts, including the spot LNG releases in Panigaglia), account for just below 5 percent of total volumes under contract, given that they regard small volumes of gas.

Considering the residual validity period in 2005 of these contracts (Fig. 3.5), we can see how the contract classes of over 25 years are no longer present. The class that is most represented, in terms of total volumes under

contract, is that between 10 and 15 years, which includes pipeline and via LNG.
the contracts to import from Algeria, via natural gas

2006 gas emergency: key facts

On December 19, the Gas System Emergency and Monitoring Committee (created in September 2001 with a decree of the Ministry of Productive Activities) declared a state of gas system emergency, against an anomalous withdrawal from the storages.

Besides a general lack of the facilities, with reference to imports and storage in particular, the emergency was caused by:

- the exceptionally cold weather conditions (overall the coldest winter than the average of the last twenty years) that characterized last winter, with a consequently higher demand for heating (roughly +3 billion m3 at the end of the winter);
- the simultaneous increase in demand from the thermoelectric sector (+13 percent in 2005), mainly related to the new gas power plants;
- the 190 M(m3) reduction in imports, from Russia in particular, which also had to deal with the cold wave that hit Eastern Europe and with the crisis with the Ukraine that surged at the beginning of January 2006.

Based on the emergency procedure to cope with unsatisfied natural gas demand in the event of unfavourable climatic events, updated with a Ministerial Decree dated December 12, 2005, the first phase, which involves the facility operators supervising the system, firstly by the company Snam Rete Gas Spa, the major transmission operator, which has the greatest duties of monitoring the system and coordinating with the other operators, was activated. Ten days later, phase 1 of the procedure began, which entails, in a crescendo of measures aimed to face the emergency, the obligation for operators to maximize imports and domestic production.

With the weather emergency continuing and coupled with new reductions in supplying from Russia due to the cold wave, in January the Committee planned for the next two phases of the emergency procedure to be implemented, which entail outages for customers having an interruptible supplying contract (ordered as of January 23, 2006) and shifting the industrial plants and the dual fuel thermoelectric plants (still without environmental exceptions), to fuel oil, effective January 19th.

On January 19, 2006, at an extraordinary meeting of the emergency Committee chaired by the Minister of Productive Activities additional measures were adopted (up to phase 5, the last one in the procedure) aimed to quickly reduce the daily demand for national gas in order to achieve total gas savings of approximately 1 G(m3) in two months and avoid crises from the second half of February on.

The intervention planned included:

- supply incentives in relation to additional, voluntary interruptibility in demand from the industrial sector;
- the decree of the Minister of Productive Activities with temporary provisions for internal air temperatures and maximum daily durations for the February 1 – February 28, 2006 period (estimating that one degree centigrade less in temperature in a single day on the entire national territory would provide a maximum theoretical saving of 11 M(m3) of gas per day);
- environmental exceptions to step up the use of fuel oil in thermoelectric plants until March 31, 2006;
- directives aimed at: electricity producers with the obligation to run thermoelectric plants with fuel oil; producers to increase the national production of gas over the normal operating limits; the largest storage company (Stogit Spa), for the management and use of storages after the strategic reserve has started being used, also via a temporary pressure reduction in parts of the transmission grid.

The measures adopted deferred the use of the strategic reserve until mid February 2006. The Committee also set up emergency measures to be implemented in the case of a natural gas system crisis caused by external events (interruption in supply from a foreign country, severe plant damages, exceptional cold peak in March), able to allow for a substantial reduction in a short time in possible, exceptional peaks in demand from storage, entailing: a temporary block in electricity exports with a mandatory maximization of imports, temporary exclusion from the grid of large, non-sensitive users of gas. These measures did not have to be implemented.

With the emergency having ended, on February 22, 2006 the outages for customers having an interruptible contract were suspended. One month later, on March 22, 2006, at a meeting of the Committee chaired by the Minister of Productive Activities, after the situation was evaluated, the natural gas system emergency was declared over and a procedural plan was defined for a return to normal conditions, with dual fuel thermoelectric plants resuming their normal regime (as of March 27), and the rebuilding of storages with precedence given to the strategic reserve.
Table 3.3 shows the efficiency of the measures adopted during the emergency period, as evaluated by the Committee.
The causes of the emergency can actually be found not only in the contingent causes deriving from a particularly rigid winter, but in even deeper "structural" causes, related mainly to the lack of facilities in the national territory and of imports, as pointed out by the Authority on several occasions (please see the section in the second volume of this Annual Report).

Import Permits

As set forth by Legislative Decree no. 164/00, import activity is free as regards gas produced in the European Union countries, subject to ministerial authorization as far as non-EU imports are concerned. In reference to the import authorization situation discussed exhaustively in the 2004 Annual Report, in 2005 the Ministry of Productive Activities granted a total of 27 additional permits to import from non-European countries, of which 21 are for imports for less than one year (spot), and 6 are for multi-year imports. There were 45 inter-EU import notices in 2005 [10].

Development of Import Facilities

Tables 3.4 and 3.5 show an update (at March 2006) in the gas pipeline import facilities, with respect to the picture presented last year, regarding the strengthening of existing facilities and new projects.
As far as the natural gas pipelines in the project phase are concerned:

- for the IGI project, the Italy-Greece interconnection, in November 2005 an intergovernmental agreement was stipulated providing for the realization of the offshore connection between the Italian coast in the Otranto area of Puglia and the Greek coast (Stavrolimenas), as well as of an onshore stretch that crosses Greece until interconnecting with the Turkish grid. From Turkey, the system should connect with the Caspian Sea production areas. The project was presented by Edison and by Depa (main Greek operator);
- ·a feasibility study is underway for Galsi, a natural gas pipeline to connect Algerian production with Italy, with a stretch that crosses Sardinia, for the methanization of which around 2-2.5 of the 10 G(m3) of capacity would be dedicated;
- the Interconnectirol project, presented by SEL AG Spa, obtained financing from the European Union;
- the TAP project, Trans Adriatic Pipeline, presented by EGL Italia Spa, would connect Italy to Middle Eastern production or to interconnections with other import natural gas pipelines from Russia, and at the same time, a crossing and release of a percentage of gas in Albania.

[10] It should be noted that the figures relative to import permit requests do not indicate the actual presence of operators in the gas import phase, but more simply, that the administrative formalities preliminary to importing natural gas have been completed (provisions of Legislative Decree no. 164/00).

Gas facilities

Transport

Table 3.6 shows the results of the continual transport capacity conferral at the start of the 2005-2006 thermal year. With respect to the available capacity[11] of the previous thermal year, in the 2005-2006 thermal year there were no substantial variations in available capacity, with the exception of the Gela points, which are still in the build up phase, and of Gorizia, which had a slight upward adjustment (it should be kept in mind that imports at the Gorizia point are a "virtual" transaction, resulting from lower physical export volumes).
Results relating to available capacity for the 2005-2006 thermal year show how almost all of the continual transport capacity at the entry points in the national network interconnected with abroad via natural gas

pipeline was conferred. At the start of the thermal year, 26 parties requested and gained access at these points, and the requested capacities were fully satisfied, in a few cases by assigning interruptible capacity.

The Panigaglia entry point, which has a daily available capacity of 13 M(m3)/day, is not indicated in the table. Based on the current procedures, it is assigned to the Panigaglia terminal operator, GNL Italia Spa, which injects gas into the grid for its regassification users. This is in order to allow for an efficient use of the transport capacity at the interconnection with the terminal.

Multi-year Conferrals

Table 3.7 summarizes the multi-year capacities conferred at the entry points in the national grid that are interconnected with abroad via natural gas pipeline. In compliance with Authority regulations, this year capacities for the next five years were assigned, starting from 2007-2008. The table also includes the 2006-2007 thermal year, with the multi-year capacities conferred last year. There are 27 owners of said capacity for the next two years (with the exception of a portion of capacity, just under 1 M(m3)/day, which is reserved for Snam Rete Gas at Passo Gries to carry out the transport service), 7 for the subsequent years as well, all holding multi-year import contracts.

In the meantime, Snam Rete Gas will complete the scheduled repowering in the national territory coherently with the capacity conferred.

Storage

For the 2005-2006 thermal year, the storage system[12] has a total availability for conferral in terms of space for working gas of approximately 12.9 G(m3).

The amount of that availability that will be allocated to strategic storage is roughly 5.1 G(m3), as established by the Ministry of Productive Activities based on the scheduled imports from countries not belonging to the European Union notified by users. Availability for "minerario" storage (storage available for producers in Italy) services, and for cyclical modulation is 7.8 G(m3).

Overall, the maximum gas availability stands at approximately 253 M(m3) standard, if the storages are filled to the maximum (Table 3.8).

The results of the conferral by the storage companies for the 2005-2006 thermal year are indicated in table 3.9.

The capacities made available by Stogit in 2005 were:

- close to 12.55 G(m3), equivalent to approximately 489.45 million GJ, considering a gross calorific value (GCV) of 39 MJ/m3 standard, in terms of space for working gas;
- 7.450 G(m3) (around 291 million GJ) for the modulation and "minerario" service and 0.1 G(m3) for the operative balancing of the transport network;
- 5.1 G(m3) for the strategic reserve.

Overall, in the 2005-2006 thermal year, Stogit executed 35 contracts with 44 users for "minerario" and modulation service, 13 for strategic storage and 23 for acyclic modulation service. Total volumes moved (physical movement) from the global storages of Stogit amounted to approximately 17.2 G(m3) in March 2006, of which 9 were distributed and 8.1 were injected.

The capacities in terms of working gas that Edison Stoccaggio Spa made available during the 2005-2006 thermal year amount to roughly 340 M(m3). In total, there are 8 users of the Edison storage system: 7 use the modulation service (of which 1 also uses the strategic storage service), and 1 uses the transport network balancing service.

Compared to the previous thermal year, for the 2005-2006 thermal year Edison Stoccaggio made an additional 71 M(m3) of space capacity available against the repowering of the Collalto compressor station and the treatment plants. Of this additional space, close to 18 M(m3) was made available for the conferral in July 2005. Total gas volumes moved from the hub of Edison Stoccaggio in the 2005-2006 thermal year stood at roughly 650 M(m3), of which more or less 322 were injected and 320 were distributed.

Requests for new storage concessions

Table 3.10 summarizes the requests and the current status of the concessions for new storage sites from the Ministry of Productive Activities, which regard depleted gas fields to be converted into storage and aquifers in deep lithologic units.

It should be pointed out that as far as the Alfonsine and Bordolano sites are concerned, Stogit obtained an extension from the Ministry to implement the scheduled work programs to develop the storage activity after contesting the resolutions of the Authority pertaining to the tariff framework in May 2002. The extension period includes, in addition to proceedings period, four months starting from date when the judgment becomes final. The decision of the Council of State, in favour of the Authority, was made on December 2005.

LNG terminals

Table 3.11 summarizes the status of the projects to build new terminals on the Italian coasts.
As far as the remaining projects are concerned:

- the LNG terminal projects of Enel of Taranto, Vado Ligure, and Trieste have been abandoned;
- the LNG terminal projects of LNG Terminal of Corigliano and Lamezia Terme were relocated in said company's San Ferdinando terminal project, and subsequently in the only project in Gioia Tauro.

Distribution networks

As regards the annual survey of the electricity and gas sectors carried out by the Authority, detailed information was gathered about natural gas distribution through secondary networks.
Table 3.12 illustrates the regional distribution of natural gas in Italy in 2004 and 2005. The 2004 figures are the final figures published by the Ministry of Productive Activities, while the 2005 figures derive from an initial processing of the results of the Authority's survey and therefore are temporary. The gas volumes indicated are those distributed through secondary networks for delivery to consumers of the residential and tertiary sectors, and to small, urban industries. The figures thus do not include the gas volumes used by industrial or thermoelectric customers directly connected to the transport networks, nor do they include amounts of gases other than natural gas (such as LPG, propane-air, etc.) distributed through city networks.
In 2004, a total of approximately 34.7 G(m3) of natural gas was distributed, with a marked variability throughout the country. Only four regions, Piedmont, Lombardy, Veneto and Emilia Romagna, show consumption of over 10 percent: together, these four regions absorb 65.5 percent of the total gas distributed on the secondary networks. Tuscany and Lazio also show substantial values (respectively 7.1 percent and 5.9 percent). Next there are 9 regions where consumption exceeds 1.5 percent of the total and the remaining regions with shares of less than 1 percent. The traditional geographic breakdown between the North, Central, Southern Italy and the Islands shows the absolute predominance of the North which, with a share of 72.6 percent, grossly exceeds the 18.9 percent of Central Italy and the 8.6 percent of the South and the Islands.
In 2005, the percentages were basically unchanged: 71.7 percent is gas distributed in the North, 20 percent in the Center and 8.3 in the South and to the Islands. This breakdown of consumption reflects the different diffusion of the distribution service (the degree of methanization), the climatic differences in the various areas of the country, and a different distribution of the medium-small production activities (typically those served by secondary distribution networks).

[11] It should be kept in mind that the transport capacity values are calculated based on hydraulic simulations of the transport network which take into account forecast withdrawal scenarios for the year in question. The transport capacity at each entry point is determined by considering the most severe transport scenario (the summer for the entry points in Mazara del Vallo, Tarvisio and Gorizia, the winter for the entry points in Passo Gries). In particular, Snam Rete Gas evaluated the quantitative maximums that can be injected into the network at each entry point without exceeding the minimum pressure limits at the various points of the system, and without exceeding the maximum outputs of the plants. This is in order to ensure that the transport service will be available at the requested level throughout the entire thermal year.

[12] For the storage activity, the thermal year begins in April, when the storage filling cycle begins, and ends in the following March, when storage has ended.

The wholesale market

The data on the wholesale gas market, like part of those referring to the retail market, also come from processing of the figures collected in the annual survey carried out by the Authority on the state of the electricity and gas markets the year before. In the gas sales sector, the survey covered all of the companies which in September 2005 were authorized by the Ministry of Productive Activities to sell gas to consumers, as well as to parties that only engage in trading activities and, for this reason, are not obliged to request ministerial authorization. Of the companies in question, operators that made less than 95 percent of their sales to consumers were classified as wholesalers, therefore based on the criteria adopted to build the gas sector balance illustrated at the beginning of this Chapter.

In 2005, the number of wholesalers rose to 60 units, topping the level reached in 2002 (Table 3.13). Overall, these operators sold 110.5 G(m3), of which 51.9 to other intermediaries and 58.6 to consumers (Table 3.14), realizing an average unit volume of roughly 1.8 G(m3). In 2005, figures show that there was a substantial increase in the total sales of Eni, but the increase is only apparent and due to the merger of Italgas Più into the Gas & Power Division. When comparing the total volumes sold by Eni in 2005, equivalent to 58 G(m3) to the total volumes sold by Eni and Italgas Più in 2004, equivalent to 61.1 G(m3), there is a decrease in sales of around 3 G(m3), in favour of competitors.

There are two operators in the class of wholesalers with sales of over 10 G(m3) this year, given that there is also Edison, which posted sales of 11.6 G(m3). Like last year, the largest class of operators is still medium-small wholesalers, with sales of between 0.1 and 1 G(m3). This class grew by 10 new companies in 2005, but the average unit volume remained basically unchanged at 0.3 G(m3), thanks to the 3 G(m3) increase in total volumes sold by these operators. More in general, the figures show an increase in total volumes sold for all of the classes taken into account, with the exception of the one that encompasses wholesalers with sales of between 1 and 10 G(m3), despite the fact that it has 2 more operators than it did last year. The average value of the total sales of the parties included in this class stands at 1.7 G(m3), but within the class there are very different profiles. For example, the company Plurigas Spa is included in this class, and records total sales that are double said value (Table 3.14). The average unit volume of wholesalers with sales of under 0.1 G(m3) grew five-fold with respect to 2004, despite the presence in this class of 6 operators with sales of 10 M(m3).

Table 3.14 provides a breakdown of wholesaler sales in 2005: the first 26 operators cover 97 percent of the total sales on the wholesale market. The market is very concentrated: in fact, the top four operators, Eni, Enel Trade, Edison and Plurigas alone cover 80 percent of the 110.5 G(m3) sold in total. When calculating the percentage of the first four wholesalers in sales to consumers – whose purchases amount to a total of 83.4 G(m3) – the concentration level decreases to 62 percent and Gaz de France takes the place of Plurigas in the group.

Virtual Trading Point

There were 36 users of the transport system that engaged in trades, sales and purchases of gas at the VTP in the first few months of 2006. Figures 3.8 and 3.9 show the gas transactions that took place at the entry points in the national gas system and at the VTP until March 2006, in terms of volumes and number of transactions[13].

As regards transactions at the VTP, re-deliveries of gas (in terms of volumes conveyed and the number of daily re-deliveries) by the operator of the regassification terminal of Panigaglia GNL Italia to the users of the terminal, consignments that take place at the VTP based on the current procedures (more specifically, the procedure has been in force since November 2005), are indicated distinctly with the term "VTP LNG". Although they are recorded as transactions at the VTP, they are not due to negotiations between operators on the secondary market.

A comparison between the 2003-2004 and 2004-2005 thermal years (Fig. 3.10) shows a total increase in the volumes transacted at the VTP of almost 10 percentage points.

In the first few months of the 2005-2006 thermal year, until March 2006, gas transactions at the VTP in terms of volumes accounted for just over 28 percent of the total moved (the percentage climbs to over 50 percent when considering all of the transactions at the VTP, including the consignments from the Panigaglia terminal operator). The figure also shows that the largest amount of volumes traded, historically recorded at the Passo Gries entry point, has instead been recorded at Tarvisio since the 2004-2005 thermal year. This is mainly due to the gas release transactions that take place at this entry point in the national grid with consignments from Eni to other operators, as ordered by the Antitrust Authority (AGCM).

The figures relative to the transactions at the VTP, ordered based on volume classes (Fig. 3.11), show that in 2005 most of the transactions involved gas volumes of between 50,000 and 100,000 m3 standard. The class represented by transactions of volumes of over 1 M(m3) standard is given by the volumes delivered at the VTP by GNL Italia to the users of the regassification service.

[13] In order to make the transactions recorded at the VTP comparable to those that took place at the indicated entry points, for the VTP, each month the average number of daily transactions together with the total volumes traded were considered.

Retail market

On September 8, 2005 there were 409 companies authorized by the Ministry of Productive Activities to engage in retail market sales. However, it is known that some of the companies that request ministerial authorization remain inactive. Upon closing this Annual Report, 106 suppliers on the list of those authorized by the Ministry of Productive Activities had not responded to the annual survey of the Authority for Electricity and Gas. Out of the companies that did reply to the survey, 40 stated that they were inactive in 2005. A reading of tables 3.15 and 3.16 below, which show the activities of the suppliers in detail, must thus take into account the indicated limits.

The annual gas market survey of the Authority shows a supplier situation that is decidedly less dynamic than that of wholesalers. With respect to 2005, in the class of operators with sales of over 1,000 M(m3) the number of companies was unchanged at 4, but the substitution of Italgas Più (merged into Eni) with E.On Vendita resulted in a contraction in total volumes sold of almost 4 G(m3). Consequently, the average unit sale volume decreased from 3.6 to 2.1 G(m3). On the other hand, the group of medium-large suppliers, with sales of between 100 and 1,000 M(m3), grew slightly: the number of operators rose from 37 to 40 and total sales were basically stable at 11.8 G(m3). Thus, here as well, there was a mild decrease in the average unit sale volume.

The retail segment is less concentrated than the wholesale segment: the first 26 suppliers cover 71 percent of the total sales made by these operators on the national territory, while 34 percent is covered by the first four suppliers: Enel Gas, Hera Comm Srl, E.On Vendita and Aem Acquisto e Vendita Energia Spa.

Natural gas sales to consumers in 2004

At the start of the year, the Authority published the results of a survey pertaining to the situation of the natural gas sales market in Italy. Developed in 2005, it provided a very detailed examination of the sector, based on 2004 data. The main information and conclusions are provided below.

Dynamics, location and size of authorized retail companies

The retail sector is influenced heavily by the control exercised by Eni, the largest operator in the country, over all the import facilities. Eni continues to condition the entire gas supply chain heavily, limiting, in fact, the evolution potential of the sector toward a greater degree of competition. The lack of autonomous supplying on the international gas market forces authorized retail companies to get gas from the wholesale market, which is also fuelled mainly by the amounts made available by the principal operator. On top of this, the Italian gas sector has historically been characterized by the presence of a large number of companies, basically operating on a local level, under legal monopoly conditions for the so-called "civil" supplies (domestic and small industry-trade) hooked up to the city networks. Liberalization and the introduction of third parties' right to access the girds changed the reference scenario substantially even if, due to the historic inheritance of a pulverized market and the absence of an actual competitive comparison to acquire consumers, there is still a marked territorial segmentation, especially for the civil sector.

In this context, the retail market is nonetheless showing signs of evolution, and in particular a very lively trend as can also be inferred from the retail permits (close to 400), issued on the national level by the Ministry of Productive Activities. On the one hand, we see a slow decline in the companies present on the market which did not keep their retail permits. These are mainly small companies, and mostly small Municipalities that previously managed the integrated service (distribution and sales) directly, and private operators, which sold their activities to other sector operators. In addition to this process, we also witness a combination between formerly municipal companies, of a certain size, which helped speed up the combination process that is underway. On the other hand, an analysis of the retail permits issued by the Ministry of Productive Activities highlights the entry of a lot of new companies. Of these, only a minimal portion (just under 15 percent) comes from the gas distribution sector: the largest component is indeed constituted by companies specialized in oil product sales (almost 40 percent). The arrival of electricity operators should also be pointed

out (around 15 percent), most of which are wholesalers, as well as that of a few large, foreign energy operators (20 percent) and energy service supply companies (the remaining 10 percent).
The development of the retail gas market shows great differences on the local level in relation to the number and type of companies involved in the combination processes and to the arrival of new companies. In the North of the country, new operators are entering the market, attracted by the opportunities that it has to offer, while in Central Italy a concentration process prevails. The situation is basically unchanged in the South. Overall, we can say that the retail market is going through a slow combination process, headed mainly by the larger companies. It should also be pointed out that the arrival of new operators, attributable to the possibility of enjoying attractive margins, despite the rationalization of system facility costs, turned out to be not very profitable due to the considerable difficulties that they have in being immediately operative in a sector where they cannot boast experience or consolidated procurement channels.
Another element of analysis in relation to the expansion logic of the companies active in the Italian gas market can also be deduced from a comparison of national market shares, where Eni has roughly 40 percent, followed by operators such as Enel, Edison, Hera Comm and Gaz de France, that have decidedly lower market shares (between 12 and 1.5 percent). However, there are a lot of operators that don't even reach 1 percent of the volumes sold on a national level. In terms of the location of the companies in Italy, available figures show that Eni is present in all of the regions, with its highest market share in lower Veneto (74 percent) and its lowest in Eastern Lombardy (21.2 percent). The other operators with significant national market shares (over 1.5 percent) and with activities in various regions show, on the other hand, a relevant presence in only a few areas of the country.
A breakdown of the market shares that distinguishes between consumers hooked up to the distribution or transport networks, shows that Eni, through Italgas Più, has a share of just over 22 percent of sales to consumers hooked up to the distribution networks. The remaining operators have a share of under 10 percent each. The overall concentration level of the companies is moderate, given the geographic breakdown of the country. However, the figure must be read by taking into account the condition of absolute predominance, on the local level, of many companies which, in some cases, hold market shares that approach 100 percent.
As for sales to consumers hooked up to the transport networks (mostly industrial and thermoelectric customers) we see that Eni has a 65 percent share of the national market and is present in all of the regions, while the remaining operators all have national market shares of under 5 percent, except for Enel Trade, which has 20 percent. At territorial level, there is a greater concentration than in the distribution network, with Eni present throughout the country, and a lower weighting of the other numerous companies, few of which are active on a national level.

Sales to consumers: switching rates and supplying prices.
A summary of the competitive development of the market is also expressed by the intensity with which gas consumers resort to suppliers other than the most important market operator (national or local incumbent, previously integrated with the transport or distribution networks), the so-called switching rate. The data relative to the number of consumers who have switched supplier at least once since the official starting date of the liberalization process (effective date of Legislative Decree no. 164/00 dated June 21, 2000) until June 1, 2005, were gathered by the Authority through a specific survey, described in detail later on in this Chapter. The outcome of the survey nonetheless shows that the switching rate depends on the size of consumers.
In order to understand the situation of the gas retail market, it is interesting to analyze the average procurement prices that consumers are charged, broken down by consumption class. The figures show that the variability of prices tends to decrease as the consumption class rises, thus resulting to be minimal for consumption of over 200 M(m3)/year. For low consumption (less than 500 m3/year), average prices are higher and vary greatly depending on the main suppliers taken into account.
More in general, we find that the classes subject to regulatory protection (consumption of less than 200,000 m3/year), although being basically in line with the economic conditions set by the regulator, show a price variability that is much higher than that of the subsequent classes, which are subject to the free market. This is naturally due to the differences in the grid costs, and in particular to the distribution tariff variability and to the gradual reduction in the weighting of fixed costs as volumes increase. The figures also show a more accentuated variability (with respect to the previous and following consumption classes) for the class of consumption between 200,000 e 2 M(m3)/year; the differences between the prices offered by the main operators are due not only to the variety of the withdrawal profiles of the customers

included in this class, but also to room for commercial action related to, for example, contract duration, tacit renewal, the possibility of early termination, and the possibility to renegotiate contractual conditions. There also seems to be, although to a limited extent, a certain differentiation of service by companies that propose innovative price combinations (introduction of bonuses, connection, loyalty and payment regularity awards, prepayments, dual fuel offer, etc.) and/or services offered (online branch, toll-free number for contract management as well, online consumption monitoring, energy optimization consultation, etc.) which can influence, depending on the case, the end price.
In contrast, a different situation characterizes the large consumer segments (over 2 M(m3)/year), where low price variability is associated with the higher market concentration: there are few operators, each with large market shares. This could be the result, once again, of the strategic choices made by the most important operator concentrated in this segment, in which it has market shares of almost always over 50 percent, leaving the other operators the possibility to satisfy the bulk of demand from the lower consumption classes. This strategic decision is also dependent on the Antitrust caps that set sales limits for the incumbent: forced to give up market shares, it has left a few market segments less guarded. These spaces were therefore filled by other companies that operate with a differentiated commercial logic, in terms of prices and packages offered, also exploiting the margins deriving from the transport and storage tariff reduction implemented by regulatory intervention. It therefore seems clear that, also by examining average prices, there are only variegated offers from a commercial point of view in the industrial sector: for the lower consumption categories, hooked up to the distribution network, less competitive offers prevail, which are generally in line with those set by the Authority.

Conclusions

In conclusion, the market appears to be characterized, on the one hand, by the predominance of the dominant operator in all phases of the supply chain and in particular in the procurement phase, and on the other, by a fragmented and basically local offer structure. The market structure is segmented geographically, with operators mainly oriented towards consolidating their positions on the local level and which in most cases belong to the same industrial group as the distribution network operator, making it even more difficult for new operators to enter the sector. This is all confirmed by the low switching rates of customers hooked up to those networks and by the scarcity of commercial policies reserved to that customer segment, with price conditions that are aligned with those set by the Authority. The new players concentrated their activities (with nonetheless limited gas availability) on medium-large customers, which are going through the commercial diversification process, while for the high consumption categories, the most important operator sets the market reference price, also exploiting the clear-cut advantages it enjoys in the upstream phase.

Consumer switching rates

An important indicator of the degree of market competition evolution is expressed by the intensity with which gas consumers switch to supplies other than those guaranteed by the pre-existing operator (incumbent on the national or local level, previously integrated with the transport or distribution networks). This indicator, which is already monitored systematically by the international regulators, the Anglo-American ones in particular, and by the institutions of the European Union, enables the actual possibility of the consumer to benefit from alternative offers on the market to be synthesized.
The Authority has also taken action in this direction, and opened a specific survey addressing the transport and distribution network operators, collecting data relating to the number of consumers that switched supplier, at least once, between the official starting date of the liberalization process (effective date of Legislative Decree no. 164/00 dated June 21, 2000) and June 1, 2005, as well as the relative volumes. More specifically, the survey was conducted by classifying consumers based on two precise characteristics: geographic location[14] and the annual consumption class (distinguishing between small, medium and large customers).
Table 3.17 summarizes the results of the survey. In particular, the percentages of consumers that have switched supplier (switching rates) are indicated, with reference to the active re-delivery points at June 1, 2005[15] and to the amounts of gas distributed there annually.
By examining the data collected, we can highlight a few important factors that characterize the different consumer categories. For the smaller ones (with consumption of under 5,000 m3/year), supplier switching is not very common on the national level, and only involves 0.6 percent of that category (0.8 percent in terms of gas volumes). However, it should be pointed out that, with respect to the national figure, in the Central-North regions, in addition to there being a more consistent overall

dynamic, at least in absolute terms (some 100,000 small customers have switched suppliers), there is the case of the large urban areas (Milan, Genoa and Bologna), characterized by an acquisition campaign of roughly 30,000 domestic customers (mainly referable to Enel Gas). In other areas, it is the local operators who basically contribute to the supplier switching trend, even though this, with a few exceptions, is rather modest. At the same time, it should be noted that there are areas in the country (mainly the South, but not only) where the switching rates are very low or close to zero, while in some areas the actual possibility of changing supplier is purely theoretical for customers, which stay with the traditional, local operator, which therefore remains the sole supplier[16].

For medium-large consumers (annual consumption of between 5,000 and 200,000 m3) there are slightly higher switching rates than in the previous case, although still modest: in particular, 3.6 percent of these consumers have switched suppliers. Their weighting in terms of gas volumes is equivalent to 6.3 percent of the national consumption of the category. In this context as well, and in reference to the geographic distribution of the phenomenon, most of the considerations made above in relation to small customers apply here as well, except for the inferable data for some geographic areas such as Friuli Venezia Giulia and South Piedmont-Liguria, which show values that are twice the national averages.

The figures depict a very different picture for large consumers (consumption of over 200,000 m3/year). During the June 2000 – June 2005 period, on the national level 22 percent of those consumers (almost one out of four) switched supplier. In terms of gas volumes, 53 percent of the amounts consumed annually by that category was subject to a change in supplier, with a few areas, such as South Piedmont, Liguria, Emilia and Lower Veneto in particular, that have rates decidedly above that average. Given that there are a lot of consumers directly hooked up to the transport networks (national and regional) in this category, in this case as well it is useful to distinguish the analysis between those consumers and those hooked up to the local distribution networks. Based on the data collected, we see that there are substantial differences between the two sub-categories. More in detail, 37 percent of customers hooked up to the transport networks switched suppliers (57 percent in terms of volumes), while 16 percent of those hooked up to the distribution network made the change (24 percent in terms of volumes).

Generally speaking, the conclusions made above indicate that the gas suppliers concentrated their "new" customer acquisition activity on large consumers (over 200,000 m3/year), while the trends of the other categories are much more modest. Moreover, although supplier switching is essentially linked to advantages in terms of price, in reality it is also conditioned by other factors as well.

More specifically, the extremely scarce "mobility" of small consumers (consumption of less than 5,000 m3/year), which are mainly families, is primarily attributable to the following:

- the historical tie that makes these consumers loyal to their local gas supplier;
- incomplete knowledge of the opportunities deriving from the liberalization;
- the limited economic impact of possible discounts offered given their small size, also taking into account the problems in evaluating the actual convenience of switching suppliers and the modest amounts of gas used;
- the fear that the quality of service will deteriorate with a new operator;
- the modest availability of contractual offers in alternative to that of the traditional operator, given that the new suppliers focused their offer on higher consumption level customers or gained market share by acquiring other suppliers.

There seem to be less rationale, at least from an economic standpoint, behind the low switching rates for intermediate users (between 5,000 and 200,000 m3/year), which include, in addition to domestic consumers, commercial businesses and small industrial companies as well, which are almost always hooked up to the local distribution networks. In this case, the following factors seem to be influential:

- the modest knowledge, of these consumers, of the problems related to optimization in using energy sources;
- the irrelevant impact of the discounts offered, like in the previous consumption class;
- the limited availability of commercial offers in alternative to those of the main operator;
- the greater complexity of the procedures for the supplier to access the distribution networks in comparison to the transport networks, which almost all of the customers in the category are on;
- the delicate position of the distribution companies, which must guarantee grid access to all of the suppliers under the same conditions and, at the same time, satisfy the interests of the pivot shareholder; in most cases, the latter also controls the supplier previously integrated with the same distribution company (local incumbent).

Finally, as mentioned earlier, we can see the strong activity of large consumers (over 200,000 m3/year). This result was expected, given the strong profitability appeal that these customers have over the suppliers, in light of their high unit volumes. The substantial differences in switching rates between consumers hooked up to the transport networks and those hooked up to the distribution networks let us see the influence, in this case as well, of the characteristics of the facilities and regulations that govern its use. In this sense, the greater dynamism of customers located on the transport networks can immediately be attributed to the fact that the relative supply services call for access procedures that are more direct, homogenous and proven than those needed to supply consumers located on the distribution networks. Indeed, the latter, aside from the development of the regulatory framework, are articulated and differentiated based on the single local grid operator [17].

The results of the supplier switching analysis, which covered the period starting from the beginning of the liberalization process, therefore enabled a dual picture to be outlined. On the one hand, there are customers characterized by modest consumption (mainly domestic customers), which have extremely low or almost non-existent switching rates. The figures show substantial geographic differences, and in the Central-North, there is on average a greater intensity of the traditional supplier switching process, especially in a few cities. On the other hand, for medium-large consumption, there are particularly high percentages in absolute terms and which are above average, especially in the North.

A prevalently active role of the consumers seems to be the key factor in all of these cases, with a general tendency, as far as suppliers are concerned, to focus on large customers, most of which are directly hooked up to the transport networks.

[14] Areas of exit from the national transport network, as defined by Authority resolution no. 113 dated July 14, 2004.

[15] Points where natural gas is distributed to consumers hooked up to the transport or distribution networks. The figures refer to a population of 16.7 million consumers having a total consumption of roughly 70 G(m3).

[16] A different case is represented, for example, by Sicily's Regional Law no. 2 of March 26, 2002, Disposizioni programmatiche e finanziarie per l'anno 2002 (programmatic and financial regulations for the year 2002) (art. 65), which established that different consumption thresholds than those set forth by Leg. Decree no. 164/00 be maintained, and which refer to the size of the single municipality.

[17] It should be kept in mind that there are currently more than 400 distribution companies, while there are very few transport companies.

Liberalization in the gas sector based on the "Energy 2005" survey

It is interesting to compare the data recently seen in the switching survey of the Authority to the results of the "Energy 2005" multiple customer survey, performed by GfK-EURISKO about electricity and gas demand in Italian companies, in which the Authority participated. The survey was conducted on a sample representing the entire non-domestic national clientele (2,700 local units of Italian companies on a national level), broken down by geographic area, product sector and worker class. The purpose of the survey was to provide a picture of the knowledge of the energy market liberalization and to examine the behaviour of customers when faced with it. As far as the first goal is concerned, the gas sector situation has characteristics that are similar to those of the electricity market: 63 percent is aware of the gas market development that took place, with the local units having consumption of over 10,000 m3/year having a greater knowledge. Compared to the electricity sector, the leadership of a sole supplier is more limited, especially for the units with consumption of over 100,000 m3/year.

After liberalization, 4 percent of non-domestic customers signed new contracts (the majority changing supplier), motivated by more advantageous contractual conditions and in fact, 59 percent saw a reduction in the perceived expense (13 percent on average).

For the majority of customers, however, until now nothing has changed since the liberalization. The lack of information about the suppliers present in the area, limited consumption and satisfaction with the current suppliers are amongst the main reasons why the status quo was maintained. On top of this, there is cost reduction that some feel is too limited, the lack of clarity about contractual terms, and a lack of contact with new suppliers.

In general, non-domestic customers are satisfied with their current suppliers (23 percent would keep its current supplier even despite new offers, and a similar percentage would recommend it to others), and it is clear that market growth margins exist, with real possibilities of executing new contracts with new suppliers.

The driving force behind the switch is obviously the savings, sought by 91 percent of the sample (and expected to be an average discount of 24 percent). The factors that are indicated as other potential key drivers in the choice of a new supplier are: a guarantee of the service quality (37 percent); the assistance and quality of the personnel (30 percent); contract personalization (26 percent); the convenience of having a single supplier for both electricity and gas (24 percent); bureaucratic simplification (23 percent). The gas distribution service is valued very positively for the continuity and flexibility of the supplying, and for the ability to repair possible breakdowns in a short period of time.

Prices and tariffs

Tariffs for the use of the facilities

Transport

On September 30, 2005 the first regulation period for natural gas transport tariffs ended. In March 2005, the Authority therefore started the review procedure for the calculation of transport tariffs, which ended in July and therefore, as usual, before the start of the new thermal year in order to enable users of the service to plan their investments in the best way possible. In order to calculate the new tariff levels, the Authority set new criteria and new principles, even though the tariff structure and breakdown haven't changed greatly and are still based on different fees for the commodity component and unit fees for the capacity component (for both the national and the regional grid), based on the entry points and exit points from the national grid. The main changes (the review process and the new tariff system are described in detail in Chapter 3 of the second volume of this Annual Report) regarded: valorisation of counterflow service transport costs; forecasts of an interruptible type of transport service; the definition of specific tariffs for gas transport and for the metering service; the definition of a single regional tariff on the national level.

The new tariff levels that resulted after verifying the offers of the operators are illustrated in table 3.21. At constant transported gas volumes, the transport review revision provided for a reduction in revenue of 3.9 percent in nominal terms of and of 5.9 percent in real terms, considering an inflation rate of 2 percent.

LNG

In 2005, the first regulatory period for the use of LNG terminals ended as well. In this case too, the Authority established the criteria to fix regassification tariffs in advance. To determine the tariff levels, the mechanisms already in place during the first regulatory period were basically confirmed. Moreover, given the need for new regassification capacity, additional revenues were recognized for the realization of new investments, even those already underway (the review process and the new tariff system are described in detail in Chapter 3 of the second volume of this Annual Report).

The new tariff system is based on a unit fee associated with the contractually committed regassification capacity, and on a unit fee associated with the actual mooring points of the methane tankers. In addition to these, there are two other specific fees associated with energy from regassified gas. In the case of spot regassification service, i.e. not continuative, the commitment fee is discounted by 30 percent.

At the end of September 2005, the Authority officially set the regassification service tariff levels for the 2005-2006 thermal year (Table 3.22 and Table 3.23) after rejecting the tariff proposal from GNL Italia, the only regassification operator that is currently active. On average, the approved tariffs are 21 percent lower than the previous ones. Indeed, based on the new tariffs, the average regassification cost goes from 0.8494 c€/m3 in 2004-2005 to 0.6711 c€/m3 in 2005-2006.

Storage

March 31, 2006 also marked the end of the first storage tariff regulatory period. The review process for storage tariff formulation criteria ended on March 3, 2006, when the Authority set the new tariff system for this service (the review process and the new tariff system are described in detail in Chapter 3 of the second volume of this Annual Report). A single national tariff was set (adjusted by an equalization system in order to guarantee operators a recovery of revenue deriving from geographically different costs), and an incentives program was established to promote the realization of new storage capacity, also to support a potential hub of the country for Europe. On March 16, 2006 the Authority set the single

national fees for the 2006-2007 thermal year (Table 3.24) after verifying the data, provided by the two national storage operators, Edison Stoccaggio and Stogit, needed to ascertain the business fees.

Distribution

After the legal dispute in which the companies had contested the calculation criteria used for the natural gas distribution tariffs set in September 2004, the Authority opened and closed, in 2005, a procedure to change them. The new calculation criteria to determine the investments made by distribution companies of natural gas and other types of gas have been in effect since June 2005. In the first quarter of 2006, the Authority was therefore able to examine the reformulated tariff proposals based on the new criteria, and approve or set (in the case of rejection or if no proposals were made) the distribution tariffs for the 2004-2005 thermal year.

Despite this, the approval procedures pertaining to distribution tariffs for the 2004-2005 and 2005-2006 thermal years are being affected by the administrative dispute that is still underway. While waiting for it to be resolved, the Authority ordered that the tariffs that it had set or approved be applied, subject to subsequent equalization.

Free market prices

In 2005, the average gas prices (weighted with the amounts sold), net of the taxes, charged by suppliers or the wholesalers active on the end market was 35.35 c€/m3 for protected market customers, and 22.78 c€/m3 for free market customers. This is the result of the initial calculations of the data of the 2006 Authority survey of the electricity and gas sector.

As illustrated in table 3.25, the figures confirm expectations in terms of trends and size: protected market customers pay much more than free market customers having similar consumption profiles; as the customer gets larger in terms of annual consumption volumes, the price tends to decrease, and to a greater extent in the case of free customers. Similar results were also obtained from the recent Authority survey of the retail market (see table in the paragraph on the retail market).

In the classes subject to regulatory protection, the price is basically in line with the economic conditions set by the Authority (which, in 2005, was 34.49 c€/m3 on average, net of taxes). However, smaller consumers pay an average of 37 c€/m3, against 32.12 c€/m3 of medium consumers and 29.39 c€/m3 of large consumers. The price difference between small and large consumers is therefore 7.62 c€/m3. In the free market, smaller consumers pay 8.95 c€/m3 more than larger consumers, which on average obtain gas at a price of 23 c€/m3.

A comparison with the 2004 data shows a rise in the cost of gas that varies a lot depending on the consumption category: the smaller consumers of both markets, protected and free, are the ones that were subject to smaller increases. Crude oil price rises seem to have had proportionally a stronger impact on medium-large consumers.

Reference economic conditions

The constant rise in international oil product prices triggered a new and pronounced acceleration in gas tariffs for Italian families in 2005. The dynamics of the elementary gas index, gathered on a monthly basis by ISTAT in the context of the inflation basket[18] is illustrated in Table 3.26.

In the first half of 2004, gas prices for Italian families inverted the rising trend that it had followed for the entire year before, posting several decreases. This fall was then interrupted in October 2004, after which there were repeated, consecutive increases that brought the trend rate to over 10 percent by the end of 2005.

On average, gas prices recorded a total variation of 7.6 percent in 2005. Given that in the meantime the general price level had risen by 1.8 percent, the gas dynamic logged an increase of 5.6 percent in real terms.

A comparison with the other main European countries (Fig. 3.12) shows that the sharp rise in gas prices recorded in Italy last year was not an isolated incident. Against a variation in the Brent price of 42 percent in 2005 (illustrated in the graph), we see that Italy was the country that managed to contain the gas price increase the most (7.6 percent), a level that was much lower than the average of the European countries (10.6 percent). France and Spain recorded similar variations (respectively 7.9 percent and 8.6 percent), while increases of over 10 percent were posted in Germany and the United Kingdom.

Average National Reference Gas Tariff

Trends recorded by ISTAT are basically confirmed by the average national reference tariff published by the Authority in relation to small consumers, which use less than 200,000 m3 per year (Fig. 3.13). These are the so-called economic reference conditions, as defined by resolution no. 138 of December 4, 2003, which, as of January 1, 2004 suppliers must offer by law, in addition to possible conditions of their own, to small commercial and artisan consumers and to families.

In the first nine months of 2004, the impact from the oil price hikes was mitigated by the indexing mechanism, thanks to which, the value of the raw material component (the QE component) maintained a stable or slightly declining trend. The considerable increase of this component in the last quarter of the year was partially offset on the total value of the tariff by a simultaneous reduction in the component covering distribution costs on the local and city grids (included in the fixed costs item). The measure adopted by the Authority to define formulation criteria for gas distribution tariffs for the second regulatory period (October 1, 2004 – September 30, 2008) dates back to that period. As a result of these measures, the distribution component decreased, in the average national reference tariff, from 8.04 to 7.53 c€/m3, thus lowering its weight on the final gas tariff to 13.2 percent. 2005 then started off with a new and sizeable tariff increase due to oil costs and to the increase in taxes charged on gas.

In order to mitigate the impact of oil prices on the total tariff, the Authority intervened and at the end of 2004 introduced a new indexing mechanism for the raw material component, as defined by resolution no. 248 of December 29, 2004. This had enabled the increase in the QE component to be limited to 14.63 c€/m3 in the first quarter of the year and, consequently, the increase in the total tariff as well to 59.09 c€/m3. After the Regional Administrative Court suspended resolution no. 248/04, in the second quarter of 2005 the value of the raw material component was recalculated (value retroactive to 1Q 2005) based on the old updating method (set forth by resolution no. 195 of November 29, 2002,), and thus edged up to 15.44 c€/m3. The total tariff consequently rose to 60.06 c€/m3, and remained unchanged throughout the second quarter of the year. Starting from the third quarter of 2005, the relentless climb of international oil prices caused the tariff to record repeated and sizeable increases consequent to which, it reached a level of 66.51 c€/m3 in the second quarter of 2006. It should be pointed out that these increases would have been even larger if the Authority had not applied, like it did as of 1Q 2006, the indexing mechanism for the QE component, defined by resolution no. 248/04, whose legal dispute was partially resolved as of the end of last year. As at April 1, 2006 the average national reference tariff (Fig. 3.14) was composed for around 58 percent by cost coverage components and for the remaining 42 percent by the taxes that burden the natural gas sector (excise duty, regional surcharge and VAT). The cost of raw materials accounts for more than one-third (31.5 percent) of the total tariff, selling costs for 9 percent and those for facility use and maintenance for the remaining 17 percent. In relation to facility costs, the largest component is the one needed to cover distribution; in fact, the Cd component accounts for 11.3 percent of the total tariff, while the one to cover transport costs reaches almost 5 percent and the storage component 1.4 percent.

Table 3.27 shows the excise duties and VAT rates in effect for 2006, which are unchanged with respect to 2005, set for this year in relation to the 2006 Budget Law (art. 1, paragraph 115, Law no. 266 of December 23, 2005). In the table, tariffs are still broken down according to gas usage type, given that article 2 of Decree Law no. 452 dated December 28, 2001, as amended by Law no. 16 dated February 27, 2002, extended the validity period, even if solely for tax purposes, until the organic review of the sector tax system.

[18] More specifically, within the national basket of consumer prices for the entire population, ISTAT reports gas prices (which include gas used for heating, cooking and hot water, distributed through the urban grid or with bottles) as part of the "household expenses" category. The weight of the elementary gas index in the basket net of tobacco products is 1.9 percent.

The quality of the service

Safety and continuity of the gas distribution service

In 2005, data continued to be collected about the quality of service provided to consumers in order to evaluate if and to what extent operators are implementing the provisions set forth by the gas distribution, metering and sale Service Quality Code (approved with resolution no. 168 of September 29, 2004).

More specifically, based on the data provided by the operators, and comparing it to that relative to 2004 and 2005, we can state the following:

- scheduled grid inspections covered a significantly larger percentage than the minimums established by the Authority, with a mild increase in 2005 in the percentage of the grid that was inspected in low pressure and a slight decrease in the percentage of the grid that was inspected in medium/high pressure, both coming in at around 40 percent (Fig. 3.15);
- the improvement trend was confirmed regarding the response time of emergency intervention, against a further increase in the number of calls for emergency intervention on the distribution plant (Fig. 3.16) with respect to 2004.

Table 3.29 gives a general summary of the emergency intervention services provided in 2005 in relation to the large operators.

Tables 3.30 and 3.31 give a general summary of the grid inspection and leakage detection activities carried out in 2005 relative to large distributors.

Table 3.32 provides a general summary of the cathode protection activity relating to large operators in 2005.

Commercial quality of the gas distribution service

Natural gas distribution service

The gas Service Quality Code confirmed, with a few amendments and simplifications, the standards set by the Authority and the automatic refund mechanism. Over time, the latter resulted in an increase in the number of refunds paid to customers for failure to meet the standards. In 2005, the positive growth trend recorded in 2004 was also confirmed with respect to the previous Charter of Service regime (Table 3.33). There were 1,769,382 requests for services subject to guaranteed standards, grossly outnumbering those for services subject to overall standards. The largest category regards service connection, which alone covers almost 39 percent of the total. The user category with a metering unit up to class G6 (domestic use) generated almost all of the requests for services and is therefore the one protected the most by the regulations introduced by the Authority.

A comparison between 2004 and 2005 in terms of failure to meet guaranteed quality standards (Fig. 3.17) confirms the trend inversion with respect to the years before 2004.

This trend was also seen last year due to the time needed for a few large operators to adjust their information systems. In contrast, there was a mild improvement in service connections.

For all of the services subject to guaranteed or overall standards, the Authority checked the actual average execution time based on the figures provided by the operators. The actual average times for the services subject to guaranteed standards are equal to 50 percent of

the standards set by the Authority. For estimates and the execution of works, the phenomenon is even more accentuated (Fig. 3.18).
Table 3.34 summarizes the main figures for 2004 and 2005 regarding all of the services subject to automatic refund, in reference to the most common user type, i.e. consumers supplied in low pressure with a metering unit up to class G6.

Natural gas sales service

Figure 3.19 shows the management of complaints received by suppliers having more than 100,000 consumers for the 2004-2005 period, regarding the most common user type, i.e. consumers supplied in low pressure with a metering unit up to class G6. We can see that for both years in question, all of suppliers adopted the standard set by the Authority, according to which at least 90 percent of written complaints or written requests for information be responded to within 20 working days.

Gas quality and safety after the re-delivery points

Gas installations safety inspections

The summary of the fact-finding investigation regarding the implementation of resolution no. 40 of March 18, 2000, approved and published with resolution no. 42 of February 27, 2006, shows that implementation of the regulations set by the Authority produced substantial results. Even though almost all of the distributors fully implemented resolution no. 40/04 for the activation of new gas installations only as of July 1, 2005, more than 77,000 new gas installations were inspected with a positive outcome, against just over 7,000 with a negative outcome. Therefore, for a large number of installations, this resulted in the completeness and compliance of the relative documentation provided for by current safety regulations being checked (Tables 3.35 and 3.36).
In terms of the amount of time it took to carry out resolution no. 40/04, a look at the disclosed data shows how on a national level, most of the distributors implemented it, using exhibits A, B, C and D per for the activation of new installations, since July 1, 2005. Table 3.37 shows a breakdown of distributors based on their implementation date of resolution no. 40/04.

Insurance for civil gas consumers

In compliance with paragraph 3.3 of resolution no. 152 of December 12, 2003, the Italian Gas Committee (ICG) sent the Authority, by December 31, 2005 and in reference to the thermal year that had just ended, a brief summary of the accident claims it had received, and the status of the reimbursement procedures for the October 1, 2004 – September 30, 2005 period. There was a total number of 56 accident claims, of which 8 for carbon monoxide poisoning and 48 for other incidental events.
The statistical survey of accidents caused by fuel gas, carried out by the ICG in observance of resolution no. 168/04, for the 2004-2005 thermal year, shows that there were 185 accidents attributable to the definition set forth in resolution no. 152/03.

Survey of domestic customer satisfaction

The Authority and ISTAT also entered into an agreement for the 2005-2009 period in order to measure domestic customer satisfaction in relation to electricity and gas services. For gas services, the survey covers an average of 15,000 families, monitoring, on a regional level, their degree of satisfaction with the various aspects subject to quality control, such as the frequency of meter readings, bill transparency, and information about the services. This survey was first taken in 1998 and has been repeated every year: as regards such, it should be noted that the results of the survey for 2004 are not available, as since 2004 the survey has been done in February, while until 2003 it had been conducted in November.

The general user satisfaction level has remained basically unchanged over the years. This year, there has been a slight decrease, although of only a few percentage points, in the satisfaction level compared to the year before in relation to the various aspects of the gas service covered by the survey. In that sense, in order to promote a greater level of efficiency in providing the services, the Authority implemented a procedure to identify a single, mandatory national standard for communication between the natural gas distributors and suppliers, in relation to providing the services set forth by Authority resolution no. 168/04, and to switching of the consumer's gas supplier. Moreover, the Authority published a Document in order to compare the quality of commercial telephone services provided by both gas and electricity sector operators.

TABLE 3.1

2005 Natural gas balance

G(m3)

	Eni	WHOLESALERS				SUPPLIERS			TOTAL
		> 10 G(m3)	1 - 10 G(m3)	0.1 – 1 G(m3)	< 0.1 G(m3)	> 1 G(m3)	0.1 - 1	< 0.1	
Net domestic production	9.6	0.9	0.0	0.6	0.3	0.0	0.0	0.0	11.5
Net imports(A)	47.2	16.0	7.5	1.8	0.1	0.0	0.0	0.0	72.6
of which cross-border Eni sales	0.0	1.5	4.4	0.0	0.0	0.0	0.0	0.0	5.9
Net withdrawals from storages	1.0	0.1	0.0	–0.1	0.0	0.0	0.0	0.0	1.1
- storages at Dec. 31, 2004	2.5	1.4	0.8	0.5	0.0	0.0	0.0	0.0	5.3
- storages at Dec. 31, 2005	1.5	1.3	0.8	0.6	0.0	0.0	0.0	0.0	4.2
Purchases from domestic op.	1.1	9.9	6.5	8.3	0.7	9.5	12.1	4.4	52.4
from Eni	0.0	8.0	1.9	2.4	0.2	2.1	5.6	1.8	22.0
- of which gas release	0.0	0.2	0.4	0.9	0.2	0.0	0.0	0.0	1.7
from Enel	0.0	0.0	0.3	0.0	0.0	5.1	0.9	0.1	6.5
from Edison	0.1	0.8	1.4	0.7	0.0	0.1	2.0	0.5	5.5
from others	0.9	1.1	2.8	5.2	0.4	2.2	3.7	2.0	18.4
of which border purchases(B)	0.0	0.5	1.5	2.1	0.3	0.0	0.1	0.1	4.6
of which VTP purchases	0.0	0.4	0.6	1.0	0.1	0.0	0.1	0.1	2.2
Sales to other operators	22.1	12.4	8.5	8.3	0.6	0.1	0.0	0.0	52.1
of which VTP sales	0.1	0.3	0.7	1.0	0.1	0.0	0.0	0.0	2.0
Net transfers(C)	-21.5	-2.2	-2.0	0.3	-0.2	8.5	11.9	4.6	-0.8
Consumption and losses(D)	0.4	0.2	0.1	0.1	0.0	0.1	0.1	0.0	1.0
End sales and self- consumption	35.9	14.6	5.5	2.5	0.2	8.4	11.8	4.5	83.4
Electricity generation	15.8	14.6	2.3	0.0	0.0	0.3	0.4	0.1	33.5
Domestic, trade and industry	20.1	0.0	3.2	2.4	0.1	8.1	11.4	4.4	49.8
Protected market	6.5	0.0	0.6	1.2	0.0	5.3	8.3	3.2	25.1
<5.000m3	4.1	0.0	0.4	0.8	0.0	3.5	5.9	2.2	16.9
5.000-200.000m3	2.3	0.0	0.2	0.4	0.0	1.5	2.2	0.9	7.4
>200.000m3	0.0	0.0	0.0	0.1	0.0	0.4	0.3	0.1	0.8
Free market	29.4	14.6	4.9	1.3	0.1	3.1	3.5	1.3	58.2
<5.000m3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4
5.000-200.000m3	0.2	0.0	0.0	0.1	0.0	0.4	0.6	0.3	1.7
>200.000m3	29.2	14.6	4.8	1.1	0.1	2.6	2.8	0.9	56.2

A) Imports are net of exports.

B) Includes gas release.

C) Non-zero value of total net transfers is due to the incomplete coverage of operators and inaccurate responses.

D) Consumption and losses estimated based on total consumption and losses published by the Ministry of Productive Activities in proportion to production, imports, storage and domestic purchases.

Source: AEEG calculations on operators' figures and the Ministry of Productive Activities data.

TABLE 3.2

Natural gas production in Italy in 2005

COMPANY	G(m3)	SHARE percent
Eni	9,644	84.1
Edison	902	7.9
Shell Italia E&P	364	3.2
Gas Plus Italiana	232	2.0
Edison Stoccagio	24	0.2
Others	301	2.6
TOTAL	11,467	100.0

Source: AEEG calculations on data provided by the operators.

TABLE 3.3

Measures taken for the 2006 emergency

MEASURES TAKEN	GAS VOLUMES SAVED
Maximization imports and national production (as of 24/12/05) including the reduction in Russian gas	850
Contractual interruptibility (from 23/1/06 to 22/2/06)	110
Dual fuel interruptibility without exceptions (from 27/1/06 to 27/3/06)	180
Dual fuel interruptibility with exceptions and maximization of fuel oil (from 27/1/06 to 27/3/06)	735
Civil consumption control (from 1/2/06 to 28/2/06)	220
TOTAL	2,095

Source: Ministry of Productive Activities data and estimates

TABLE 3.4

Repowering of existing natural gas pipelines

PROJECT	G(m3)/YEAR NOMINAL CAPACITY REPOWERING	LENGTH (km)	COMPLETION DATE FEASIBILITY STUDY	START TRANSPORT CAPACITY ASSIGNMENT PROCEDURE	MPA ESTIMATES FORECAST START YEAR	NOTES
1) Repowering Algeria-Italy natural gas pipeline via Tunisia (Mazara del Vallo): increase in transport capacity along the stretch in Tunisia	3.2	372	2002	2003 (suspended) resumed in 2005	2008	The Eni group company TTPC, has launched a bid for a partial repowering of 3.2 Gm3. AGCM inquiry underway for abuse of dominant position
2) Repowering of the TAG natural gas pipeline to import natural gas from Russia (Tarvisio) repowering TAG in Austria	3.3	380	2002	Started in 2005, postponed several times	2008	
3) Repowering Libya-Italy natural gas pipeline (Gela)	2.0	516	n.a.	n.a.	n.a.	Possible repowering by increasing compression plants in Libya
4) Further repowering of the Algeria-Italy via Tunisia (Mazara del Vallo) natural gas pipeline: increase transport capacity along the Tunisian stretch of the pipeline	3.3	372	2002	n.a.	2011	Further repowering that could be done together with the repowering indicated in point 1
5) Further TAG repowering of natural gas imports from Russia (Tarvisio) repowering TAG in Austria	3.2	380	2002	n.a.	2011	Further repowering that could be done together with the repowering indicated in point 2

Source: Ministry of Productive Activities.

TABLE 3.5

New natural gas pipeline projects

PROJECT	NOMINAL CAPACITY G(m3)/YEAR	LENGTH (km)	PIPELINE DIAMETER (INCHES)	FEASIBILITY STUDY COMPLETION DATE	MPA ESTIMATES FORECAST START YEAR	NOTES
Natural gas pipelines in the project phase						
IGI natural gas pipeline Greece-Italy interconnection - offshore stretch	8/10	212	32"	2005	2010	Engineering phase study underway – obtained financing and regulation for TEN-E-projects, Agreement reached with Greek government for its realization. Procedure underway for insertion in the national natural gas pipeline network
Natural gas pipelines in feasibility study phase						
New natural gas pipeline Algeria-Italy (Sardinia/Corsica)	10	2,000	36"	2005	n.a.	Feasibility study underway
Interconnectirol Project (Bressanone-Innsbruck)	1/2	48	20"	2006	n.a.	Feasibility study underway – obtained financing TEN-E-projects
TAP TransAdriatic Pipeline (Albania /Italy) Project	10	421/500	32"	2007	n.a.	Feasibility study underway – obtained financing and regulation for TEN-E-projects

Source: Ministry of Productive Activities.

TABLE **3.6**

Continual transport capacity in Italy

M(m3) standard per day, unless otherwise indicated; 2005-2006 thermal year

ENTRY POINT IN THE NATIONAL GRID	CONFERRABLE	CONFERRED	AVAILABLE	CONFERRED/ CONFERRABLE AMOUNT
Passo Gries	57.5	57.5	0.0	100%
Tarvisio	88.3	84.1(B)	4.2	95%
Mazara del Vallo	80.5	80.4	0.1	100%
Gorizia	2.0	0.86	1.1	43%
Gela(A)	22.8	22.8	0.0	100%
TOTAL	251.1	245.7	5.4	98%

A) Available capacity starting from January 2006.

B) Capacity indicated in the table corresponds to the capacity conferred starting from January 2006.

Source: AEEG calculations on data from the Ministry of Productive Activities and Snam Rete Gas.

TABLE **3.7**

Conferrals to entry points in the national network interconnected with abroad via natural gas pipelines for the thermal years from 2006-2007 to 2011-2012

M(m3) standard per day

ENTRY POINTS	CONTINUAL CAPACITY	CONFERRED CAPACITY	AVAILABLE CAPACITY
2006-2007 THERMAL YEAR			
TARVISIO	100.9	79.2	21.7
GORIZIA	2.0	0.4	1.6
PASSO GRIES	57.5	53.0	4.5
MAZARA DEL VALLO	86.0	70.3	15.7
GELA	25.0	21.9	3.1
2007-2008 THERMAL YEAR			
TARVISIO	100.9	84.9	16.0
GORIZIA	2.0	-	2.0
PASSO GRIES			
From 01/10/07 to 31/12/07	57.5	52.8	4.7
From 01/01/08 to 30/09/08	57.8	52.8	5.0
MAZARA DEL VALLO	86.0	69.2	16.8
GELA	25.0	21.9	3.1
2008-2009 THERMAL YEAR			
TARVISIO	100.9	85.8	15.1
GORIZIA	2.0	-	2.0
PASSO GRIES	59.4	52.2	7.2
MAZARA DEL VALLO	86.0	69.2	16.8
GELA	25.0	21.9	3.1
2009-2010 THERMAL YEAR			
TARVISIO	100.9	85.8	15.1
GORIZIA	2.0	-	2.0
PASSO GRIES	59.4	52.2	7.2
MAZARA DEL VALLO	86.0	69.2	16.8
GELA	25.0	21.9	3.1
2010-2011 THERMAL YEAR			
TARVISIO	100.9	85.8	15.1
GORIZIA	2.0	-	2.0
PASSO GRIES	59.4	52.2	7.2
MAZARA DEL VALLO	86.0	68.9	17.1
GELA	25.0	21.9	3.1
2011-2012 THERMAL YEAR			
TARVISIO	100.9	85.8	15.1
GORIZIA	2.0	-	2.0
PASSO GRIES	59.4	50.8	8.6
MAZARA DEL VALLO	86.0	52.7	33.3
GELA	25.0	21.9	3.1

TABLE 3.8

Storage availability in Italy

	MILLIONS OF GJ PER DAY FOR THE PEAK	MILLIONS OF m3 STANDARD
Space for strategic storage	199.3	5,110
Space for modulation services, "minerario" storage and operative balancing of the transport network	303.1	7,779
Peak deliverability capacity for strategic storage	1.508	39
Peak deliverability capacity for "minerario" storage, for hourly modulation and operative balancing of the transport network	8.345	214
Peak deliverability capacity for modulation storage (interruptible)	2.674	69

Source: Calculations on Edison Stoccaggio and Stogit data.

TABLE 3.9

Conferrals of storage capacity relative to the cyclical modulation service

	2004-2005 THERMAL YEAR		2005-2006 THERMAL YEAR	
STORAGE COMPANIES	NUMBER OPERATORS	CAPACITY (GJ)	NUMBER OF OPERATORS	CAPACITY (GJ)
Stogit	29	289,060,000(A)	34	290.550.000(A)
Edison Stoccaggio	5	8,859,424 + 952,500 (non guaranteed)	7	12.397.483

A) For the Stogit storage system, the reference GCV is 38.8 MJ/m3 standard in 2004-2005 and 39 in 2005-2006.

Source: Calculations on Edison Stoccaggio and Stogit data.

TABLE 3.10

Storage concession petitions at March 2006

PROJECT	WORKING GAS M(m3)	PEAK M(m^3)/ 3 DAY	FEASIBILITY STUDY	PROJECT START-UP	NOTES
Alfonsine	1,650	15.0	2006	n.a.	Stogit must submit the development program to the valuation of the MPA
Bordolano	1,200-1,500	12.5-20.0	2006	2006	Stogit must submit the development program to the valuation of the MPA
Cornegliano	590-1,010	16.5	2002	2004	Assigned to Ial Gas Storage - MATT screening to be done
Cotignola(A)	915	8.0	2002	2004	Assigned to Edison Stoccaggio - VIA underway
San Potito(A)					
Cugno le Macine(A)	742	6.6	2002	2004	Assigned to Geogas - MATT screening to be done
Serra Pizzuta(A)					
Canton (in deep aquifer)	1,500	15.5	2003	n.a.	Suspended while waiting for the Rivara project outcome
Rivara (in deep aquifer)	3,000	32	2003	2004	Assigned IGM for 20 years with verification schedule to be presented within 5 years - MATT screening to be done

A) Integrated management of the San Potito-Cotignola and Cugno Le Macine-Serra Pizzuta reservoirs is scheduled.

Source: Ministry of Productive Activities.

TABLE 3.11

Status of new LNG terminal projects at March 31, 2006

Projects, proposing companies, regassification capacity in G(m3)/year, permit status

PROJECT	COMPANY	CAPACITY	STATUS
Porto Levante offshore (RO)	Terminale GNL Adriatico (will be extended to the following companies: 10% Edison, 45% ExxonMobil, 45% Qatar Terminal)	Expansion up to 8	Expansion permit issued 11/11/04. Third party access exemption issued on 26/11/04 for 80 percent of capacity for 25 years pursuant to law no. 239/04 and EC Directive 55/03; European Commission consent obtained. Construction of facility in Spain and of tanks in Korea has begun.
Brindisi	Brindisi LNG (100% British Gas Italia)	8	Permit issued 21/1/03 – Municipality and Province of Brindisi contested validity of the consent given by previous municipal and provincial administrations. Third party access exemption issued on 06/4/05 for 80 percent of capacity for 20 years pursuant to law no. 239/04 and EC Directive 55/03 on 06/4/05; European Commission consent obtained. Enel sold its 50 percent participation stake in the company Brindisi LNG to BG Italia. Favourable opinion obtained for preliminary project from the Consiglio superiore dei Lavori Pubblici (authority that oversees public works)
Toscana offshore (LI)	OLT – Offshore LNG Terminal (ownership extension underway with 51% Endesa Europa – Amga – Asa, 49% OLT Energy Toscana)	3 (expandable to 6)	After almost two years, the phase relating to the obtainment of the opinions of local authorities has been completed, the majority being favourable, with specific regulations for tourism and environmental reasons. Positive opinion about the national VIA from Regione Toscana. The project is valued in comparison to the Rosignano terminal project, which is also in the inquest phase. Olt has reached an agreement with the Municipality of Pisa regarding the compensatory measures and the possibility of moving the plant to the South during the executive planning phase in compliance with the decree of VIA.
Rosignano (LI)	Edison – BP – Solway	8	During the VIA procedure, the local authorities expressed a negative opinion for urbanistic and environmental reasons; negative opinion from Regione Toscana on the environmental compatibility of the project. The Ministry of Environment made a positive VIA. On 20/4/05 a Services Conference was called for Edison to present a new project relocated within the Solvay plant in Rosignano, extended to 8 billion of capacity. New VIA underway
Gioia Tauro (RC)	LNG Terminal (100% CrossGas)	12	The project derives from the merger of two projects called, respectively, “Gioia Tauro” of the company Petrolifera Gioia (for a terminal of 4.2 G(m3)/year, expandable to 8) and “S. Ferdinando” of the company LNG Terminal (for a terminal of 8 G(m3)/year, expandable to 12), the procedure for which began in 2003 and was then suspended to adjust the project to the opening of the second mouth of the port. On 16/3/05 a new unified project was presented by LNG MedGas Terminal (100 percent CrossGas, controlled in turn 40 percent by the Sensi group and 60 percent by the Belleli group) in the port of Gioia Tauro for 12 G(m3)/year. First meeting of the new Services Conference held. VIA underway
Taranto	Gas Natural	8	First Services Conference meeting held. SIA submitted to port authority. VIA underway
Zaule (TS)	Gas Natural	8	Authorization procedure carried out by Regione Friuli Venezia Giulia. First Services Conference meeting held. VIA underway
Trieste offshore (TS)	Endesa Italia	8	Project presented by Endesa in collaboration with Friulia, the regional finance company of Friuli Venezia Giulia that will handle the project financing. First Services Conference meeting scheduled.
Porto Empedocle (AG)	Nuove Energie	8 (expandable to 12)	Authorization procedure started by Regione Sicilia, with a first Services Conference meeting.
Rada di Augusta (SR)	ERG Power&Gas - Shell Energy Italia	Phase 1: 8 Phase 2: 12	Project presented to Regione Sicilia. First Services Conference meeting held. VIA underway.

Source: Ministry of Productive Activities

TABLE **3.12**

Natural gas distributed by region

Volumes of natural gas distributed on secondary networks to the residential, tertiary, industrial and thermoelectric sectors

REGION	2004		2005			
	M(m3)	REGIONAL SHARE percent	NUMBER OF CUSTOMERS	M(m3)	REGIONAL SHARE percent	AVERAGE VOLUME (m3)
Val d'Aosta	39.3	0.11	15,763	42.5	0.13	2,693
Piedmont	4,205.4	12.13	1,675,103	3,863.6	12.09	2,306
Liguria	956.6	2.76	680,367	831.6	2.60	1,222
Lombardy	9,304.7	26.83	3,883,932	8,487.2	26.55	2,185
Trentino Alto Adige	567.8	1.64	184,923	506.6	1.59	2,740
Veneto	4,325.2	12.47	1,679,733	3,987.2	12.47	2,374
Friuli Venezia Giulia	897.0	2.59	410,130	748.7	2.34	1,826
Emilia Romagna	4,868.8	14.04	1,740,533	4,450.3	13.92	2,557
Tuscany	2,461.5	7.10	1,207,430	2,187.9	6.85	1,812
Lazio	2,030.4	5.86	1,839,581	2,092.5	6.55	1,137
Marche	827.6	2.39	517,613	884.2	2.77	1,708
Umbria	550.4	1.59	284,651	539.8	1.69	1,896
Abruzzo	636.4	1.84	384,242	589.7	1.85	1,535
Molise	32.8	0.09	64,645	88.1	0.28	1,362
Campania	979.4	2.82	961,611	863.7	2.70	898
Puglia	982.3	2.83	596,881	602.4	1.88	1,009
Basilicata	187.1	0.54	147,063	184.0	0.58	1,251
Calabria	226.3	0.65	260,707	247.2	0.77	948
Sicily	595.7	1.72	709,966	764.8	2.39	1,077
Sardinia	0	0	0	0	0	0
ITALY	**34,674.7**	**100.0**	**17,244,874**	**31,962.0**	**100.0**	**1,853**

Source: For 2004 Ministry of Productive Activities data; for 2005 AEEG calculations on data provided by the operators.

TABLE 3.13

Wholesaler activity in the 2002-2005 period

	2002	2003	2004	2005
NUMBER OF OPERATORS	55	40	41	60
Eni Gas & Power	1	1	1	1
Wholesalers with sales of over 10 G(m3)	1	1	1	2
Wholesalers w/sales btwn 1 and 10 G(m3)	4	4	6	8
Wholesalers w/sales btwn 0.1 and 1 G(m3)	17	20	19	29
Wholesalers with sales of under 0.1 G(m3)	32	14	14	20
VOLUME SOLD (billions of m3)	85.2	90.6	95.9	110.5
Eni Gas & Power	52.3	51.3	53.6	58.0
Wholesalers with sales of over 10 G(m3)	12.9	17.8	16.3	27.0
Wholesalers w/sales btwn 1 and 10 G(m3)	15.8	15.6	18.4	14.0
Wholesalers w/sales btwn 0.1 and 1 G(m3)	4.0	5.6	7.6	10.8
Wholesalers with sales of under 0.1 G(m3)	0.2	0.2	0.1	0.7
AVERAGE UNIT VOLUME (millions of m3)	1,550	2,264	2,340	1,842
Eni Gas & Power	52,349	51,320	53,632	58,027
Wholesalers with sales of over 10 G(m3)	12,865	17,808	16,268	13,486
Wholesalers w/sales btwn 1 and 10 G(m3)	3,954	3,902	3,061	1,748
Wholesalers w/sales btwn 0.1 and 1 G(m3)	234	279	399	372
Wholesalers with sales of under 0.1 G(m3)	7	17	7	37

Source: AEEG calculations on data provided by the operators.

TABLE 3.14

Sales of the largest wholesalers in 2005

M(m3)

COMPANY	TO WHOLESALERS AND SUPPLIERS	TO CONSUMERS	TOTAL(A)
Eni	22,144	35,883	58,027
Enel Trade	6,593	8,776	15,369
Edison	5,780	5,822	11,602
Plurigas	2,378	821	3,198
Aem Trading(B)	1,163	1,087	2,250
Energia	1,306	733	2,039
Gaz de France	324	1,231	1,555
Blumet	556	893	1,449
Gas Natural Vendita Italia	870	397	1,267
Blugas	1,100	68	1,169
Dalmine Energie	798	256	1,055
Italtrading	900	48	948
Amga	384	383	767
2B ENERGIA	686	0	686
Hera Trading	656	0	656
Gas Plus Italiana	608	16	624
Utilità	205	351	556
ENOI	458	67	525
Energy Trade	521	0	521
Acea Electrabel Trading	481	0	481
Linea Group	87	373	460
ETA3	47	338	385
Elettrogas	347	0	347
EGL Italia	309	37	345
Shell Italia E&P	326	0	326
Energas	268	48	316
Others	2,632	966	3,598
TOTAL	51,927	58,593	110,521

A) Internal purchases from other wholesalers and/or suppliers are equivalent to the difference between sales and procurements.

B) Including amounts of gas reserved for the running of the thermoelectric plants with tolling agreements.

Source: AEEG calculations on data provided by the operators.

TABLE 3.15

Retailer activity in the 2002–2005 Period

	2002	2003	2004	2005
NUMBER OF OPERATORS	**504**	**432**	**353**	**257**
Retailers with sales of over 1.000 M(m3)	2	5	4	4
Retailers with sales of between 100 and 1,000 M(m3)	42	40	37	40
Retailers with sales of between 10 and 100 M(m3)	222	176	149	102
Retailers with sales of less than 10 M(m3)	237	211	163	111
VOLUMES SOLD G(m3)	**26.6**	**33.0**	**31.4**	**24.9**
Retailers with sales of over 1,000 M(m3)	7.5	15.8	14.6	8.5
Retailers with sales of between 100 and 1,000 M(m3)	11.2	11.1	11.6	11.8
Retailers with sales of between 10 e 100 M(m3)	6.8	5.2	4.6	4.2
Retailers with sales of less than 10 M(m3)	1.0	0.8	0.7	0.3
AVERAGE UNIT VOLUMES M(m3)	**53**	**76**	**89**	**97**
Retailers with sales of over 1,000 M(m3)	3,756	3,169	3,640	2,135
Retailers with sales of between 100 and 1,000 M(m3)	267	279	313	295
Retailers with sales of between 10 and 100 M(m3)	31	30	31	42
Retailers with sales of less than 10 M(m3)	4	4	4	4

Source: AEEG calculations on data provided by the operators.

TABLE 3.16

Sales of the largest suppliers in 2005

M(m3)

COMPANY	TO WHOLESALERS AND SUPPLIERS	TO CONSUMERS	TOTAL(A)
Enel Gas	67	4,422	4,488
Hera Comm	0	1,722	1,723
E.On Vendita	26	1,245	1,270
Aem Acquisto e Vendita Energia	-	1,059	1,059
Italcogim Vendite	-	812	812
Ascotrade	2	800	802
Fiorentina Gas Clienti	-	575	575
Napoletana Gas Clienti	-	522	522
Asm Energia e Ambiente	-	519	519
Toscana Gas Clienti	-	504	504
Arcalgas Energie	-	492	492
Edison Energia	-	418	418
ConsiaGas Servizi Energetici	-	376	376
Amps Energie	-	373	373
APS Trade	-	371	371
Edison Per Voi	4	365	369
MetaEnergy	-	348	348
Estgas	14	324	338
Trenta	-	331	331
Agsm Verona	-	314	314
Enercom	0	305	305
SGR Servizi	-	301	301
Erogasmet Vendita – Vivigas	1	298	298
Prometeo	3	263	267
Gas Plus Vendite	0	246	246
Sinergas	-	242	242
Others	9	7,221	7,230
TOTAL	**128**	**24,766**	**24,894**

A) Internal purchases from other wholesalers and/or suppliers are equivalent to the difference between sales and procurements.

Source: Calculations on data from AEEG surveys.

TABLE 3.17

Supplier switching at June 1, 2005

AREA OF EXIT FROM THE NATIONAL GRID	NUMBER ACTIVE RE-DELIVERY POINTS AT JUNE 1, 2005 SUBJECT TO SWITCH IN SUPPLIER(A)				VOLUMES DISTRIBUTED ANNUALLY (m3) SUBJECT TO SWITCH IN SUPPLIER(B)			
	< 5,000 m3/year	> 5,000 and < 200,000 m3/year	> 200,000 m3/year	Total	< 5,000 m3/year	> 5,000 and < 200,000 M3/year	> 200,000 m3/year	Total
A Friuli Venezia Giulia	1.25%	9.48%	31.71%	1.53%	1.47%	13.78%	24.46%	18.01%
B Trentino Alto Adige and Veneto	0.30%	2.96%	15.87%	0.42%	0.39%	4.83%	31.13%	17.58%
C Eastern Lombardy	0.21%	1.48%	18.48%	0.27%	0.25%	3.64%	26.78%	13.91%
D Western Lombardy	1.12%	3.66%	28.67%	1.23%	1.03%	7.72%	44.98%	28.87%
E1 North Piedmont	0.11%	1.97%	17.97%	0.19%	0.15%	3.37%	49.36%	29.02%
E2 South Piedmont and Liguria	1.11%	8.13%	24.42%	1.31%	1.65%	13.33%	77.72%	58.72%
F Emilia and Liguria	1.63%	4.26%	22.44%	1.74%	1.66%	5.93%	56.59%	32.63%
G Lower Veneto	0.97%	4.98%	15.87%	1.12%	0.92%	6.92%	71.41%	58.85%
H Tuscany and Lazio	0.54%	4.29%	21.34%	0.63%	0.61%	7.42%	50.62%	37.47%
I Romagna	0.05%	1.35%	23.44%	0.11%	0.06%	3.45%	53.42%	40.86%
L Umbria and Marche	0.19%	2.01%	16.14%	0.24%	0.30%	2.91%	53.02%	35.58%
M Marche and Abruzzo	1.74%	5.61%	30.30%	1.82%	1.57%	7.31%	39.53%	27.93%
N Lazio	0.08%	3.59%	16.78%	0.15%	0.16%	5.56%	32.25%	13.30%
O Basilicata and Puglia	0.10%	1.06%	21.48%	0.11%	0.13%	2.25%	19.53%	13.15%
P Campania	0.11%	4.06%	24.68%	0.15%	0.19%	4.94%	34.83%	22.98%
Q Calabria	0.00%	0.74%	12.96%	0.01%	0.01%	1.25%t	88.38%	73.70%
R Sicily	0.08%	0.02%	25.95%	0.08%	0.08%	0.40%	66.26%	57.68%
TOTALS	0.64%	3.57%	22.16%	0.73%	0.76%	6.28%	52.67%	35.58%.

A) Points of re-delivery to consumers (direct customers) that switched suppliers from the time Legislative Decree no. 164/00 (June 21, 2000) took effect and June 1, 2005. Changes due to company transformations of the supplier are not included.

B) The amounts of gas distributed in an entire thermal year, with reference to the most updated data available (where possible, the 2003-2004 thermal year).

Source: AEEG calculations on declarations by operators.

TABLE 3.18

Degree of awareness of liberalization

Percentage of answers to the question: "Do you know that companies have the option of freely choosing their gas supplier?"

	LOCAL UNITS WITH ANNUAL CONSUMPTION					
	Up to 2,500 m3	from 2,501 to 10,000 m3	from 10,001 to 100,000 m3	from 100,001 to 500,000 m3	Over 500,000 m3	Total
Yes, I do	60.02	64.92	78.62	91.92	98.53	66.85
No, I don't	39.98	35.08	21.38	8.08	1.47	33.15

Source: Multiple customer survey "Energy 2005"

TABLE 3.19

Means of awareness of liberalization

Percentage of answers to the question: "How did you become aware of the liberalization of the gas market?"

	LOCAL UNITS WITH ANNUAL CONSUMPTION					
	Up to 2,500 m3	from 2,501 to 10,000 m3	from 10,001 to 100,000 m3	from 100,001 to 500,000 m3	Over 500,000 m3	Total
Communication from the customer's energy supplier	7.74	1.03	2.76	2.55	5.25	4.07
Communication from other energy suppliers	2.5	6.66	10.28	13.42	21.02	7.26
Communication from trade associations/ industrial associations	3.04	5.09	11.58	31.58	36.41	6.22
From the web sites of electricity suppliers	3.2	0.64	1.27	3.73	12.64	1.54
Advertising	33.36	35.75	39.73	33.75	13.01	39.56
Articles on newspapers/magazines	35.44	50.30	41.41	28.86	31.43	33.99
Word of mouth	12.22	8.63	2.74	0.18	6.55	10.27
Through the media News/TV	12.17	8.69	3.64	0.53	1.50	7.01

Source: Multiple customer survey "Energy 2005"

TABLE 3.20

Attitude toward liberalization

Percentage of answers to the question: "How did your company react to the liberalization of the market?"

	LOCAL UNITS WITH ANNUAL CONSUMPTION					
	Up to 2,500 m3	from 2,501 to 10,000 m3	from 10,001 to 100,000 m3	from 100,001 to 500,000 m3	Over 500,000 m3	Total
Entered into a new contract with a new supplier	1.63	0.35	3.77	24.81	37.75	2.86
Entered into a new contract with a new supplier, but then went back to the previous supplier	0	0	0	0	0.45	0
Entered into a new contract with the old supplier	0.39	2.73	1.32	13.76	13.69	1.55
Did nothing and maintained the old supplier	97.98	96.93	94.91	61.44	48.11	95.59

Source: Multiple customer survey "Energy 2005"

TABLE 3.21

Transport and dispatching tariffs

Commodity fees; 2005-2006 thermal year

VARIABLE UNIT FEES (€/GJ)	
CV	0.158444
CVP	0.018596

TABLE 3.21 cont'd

Transport and dispatching tariffs

National grid unit capacity fees; 2005-2006 thermal year; €/year/m3 standard/day

COSTS BY ENTRY POINT					
5 interconnection points with import foreign methane pipelines					
Mazara del Vallo		2.079495	Tarvisio		0.677268
Gela		1.913407	Gorizia		0.418577
Passo Gries		0.319976			
1 point from the LNG regassification plant					
LNG panigaglia		0.455039			
Storage Hub					
Stogit Storages/Edison Storage		0.203371			
68 points from the main national production fields or from their hubs					
Bordolano, Casteggio, Caviaga, Cornegliano, Corte-Colombarola, Fornovo, Leno, Ovanengo, Piadena Est, Piadena Ovest, Pontetidone, Quarto, Romanengo, Settala, Soresina, Trecate		0.058425	Alfonsine, Casalborsetti, Certaldo, Correggio, Cotignola, Manara, Montenevoso, Muzza, Pomposa, Ravenna Mare, San Potito, Santerno, Scandiano, Spilamberto, Tresigallo-Sabbioncello, Vittorio V.-S. Antonio-S. Andrea		0.203649
Calderasi-Monteverdese, Ferrandina, Metaponto, Monte Alpi, Pisticci A.P./B.P., Sinni (Policoro)		0.833217	Larino, Fonte Filippo, Poggiofiorito, Reggente, S. Salvo-Capello, Santo Stefano Mare		0.596610
Rubiconde		0.162629	Falconara, Fano		0.444276
Carassai, Cellino, Fontevecchia, Grottamare, Montecosaro, Pineto, Rapagnano, San Benedetto del Tronto, San Giorgio Mare, Settefinestre-Passatempo		0.633615	Candela, Masseria Spavento, Roseto-Torrente Vulgano, Torrente Tona		0.671351
Crotone, Hera Lacinia, Lavinia		1.604398	Bronte, Gagliano, Mazara-Lippone, Noto		1.677216
FEES BY POINT OF EXIT					
5 interconnection points with exports					
Bizzarrone		1.545288	Passo Gries		1.158986
Gorizia		0.877378	Tarvisio		0.548865
Republic of San Marino		0.740740			
17 withdrawal areas distributed on the entire national territory					
Friuli Venezia Giulia	A	0.608200	Romagna	I	0.543436
Trentino Alto Adige and Veneto	B	0.764898	Umbria and Marche	L	0.431834
Eastern Lombardy	C	0.833515	Marche and Abruzzo	M	0.420930
Western Lombardy	D	0.986361	Lazio	N	0.486475
North Piedmont	E1	1.207823	Basilicata and Puglia	O	0.595535
South Piedmont and Liguria	E2	0.986361	Campania	P	0.374072
Emilia and Liguria	F	0.764898	Calabria	Q	0.374072
Lower Veneto	G	0.642688	Sicily	R	0.152610
Tuscany and Lazio	H	0.653296			

TABLE 3.21 cont'd

Transport and dispatching tariffs

Regional grid unit capacity fees; 2005-2006 thermal year; €/year/m3 standard/day

Regional grid unit capacity fees	
Comunità Montana della Valtellina di Sondrio	4.477873
Netenergy Service	0.058400
Retragas	1.810070
Snam Rete Gas	1.265192
Società Gasdotti Italia and Consorzio Frosinone	2.161763

Interruptible tariff of Snam Rete Gas percentage reduction in fees

CASES OF INTERRUPTIBILITY	% REDUCTION
First level annual interruptibility For a maximum interruption of 30 days with advance notice by 12 p.m. Thursday of the week before the interruption is to begin.	10
First level seasonal interruptibility For a maximum interruption of 40 days with advance notice by 4 p.m. of the third gas day before the interruption is to begin.	10
For an interruption without advance notice due to the absence of a net physical outflow in the re-delivery point of Vittorio Veneto (REMI 34569001)	10
Second level annual interruptibility For a maximum interruption of 60 days with advance notice by 12 p.m. Thursday of the week before the interruption is to begin.	20
Second level seasonal interruptibility For a maximum interruption of 60 days with advance notice by 4 p.m. of the third gas day before the interruption is to begin.	20

TABLE 3.22

Continuative service regassification tariff for use of the Panigaglia terminal of GNL Italia

2005-2006 Thermal Year

FEE	UNIT OF MEASURE	VALUE
Unit commitment fee associated with contractual amounts of LNG	€/m3 liquid	2.814806
Unit fee associated with actual mooring points	€/mooring point	17,477.786218
Unit variable fee for energy associated with regassified volumes	€/GJ €/GJ	0.036556 0.004424
Percentage to cover consumption and leakage paid by the terminal user	per m3 delivered	2 %

TABLE 3.23

Spot service regassification tariff for use of the terminal in Panigaglia of GNL Italia

2005-2006 Thermal Year

FEE	UNIT OF MEASURE	VALUE
Unit commitment fee associated with contractual amounts of LNG	€/m3 liquid	1.970364
Unit fee associated with actual mooring points	€/mooring point	17,477.786218
Unit variable fee for energy associated with regassified volumes	€/GJ €/GJ	0.036556 0.004424
Percentage to cover consumption and leakage paid by the terminal user	per m3 delivered	2 %

TABLE 3.24

Single storage fees included in the tariff

UNIT FEES	VALUE
for space	0.155673 (€/GJ/year)
for injection capacity	9.503475 (€/GJ/day)
for distribution capacity	11.295975 (€/GJ/day)
for gas movement	0.102119 (€/GJ)
for strategic storage	0.156773 (€/GJ/year)

TABLE 3.25

Average sales prices net of taxes on the end market

C€/m3

CUSTOMER TYPE	2004	2005	% VAR.
Protected market			
Consumption of under 5,000 m3	35.32	37.01	4.8
Consumption of between 5,000 and 200,000 m3	30.44	32.12	5.5
Consumption of over 200,000 m3	27.04	29.39	8.7
AVERAGE PROTECTED MARKET	33.65	35.35	5.0
Free market			
Consumption of under 5,000 m3	32.99	31.95	–3.2
Consumption of between 5,000 and 200,000 m3	27.24	29.75	9.2
Consumption of over 200,000 m3	18.46	22.93	24.2
AVERAGE FREE MARKET	18.76	22.78	21.5

Source: AEEG calculations on data provided by the operators.

TABLE **3.26**

ISTAT monthly gas price indices

Index numbers (1995=100) and percentage variations

MONTH	2004				2005			
	NOMINAL PRICE	2004-2003 % VAR.	REAL PRICE (A)	2004- 2003 % VAR.	NOMINAL PRICE	2005- 2004 % VAR.	REAL PRICE (A)	2005- 2004 % VAR.
January	128.7	4.3	104.5	2.1	132.6	3.0	105.9	1.4
February	127.6	2.4	103.2	0.1	132.8	4.1	105.7	2.4
March	127.3	1.8	102.9	-0.2	133.2	4.6	105.7	2.7
April	127.3	-0.7	102.7	-2.8	134.7	5.8	106.7	3.9
May	127.3	-0.9	102.3	-3.0	134.8	5.9	106.5	4.1
June	127.1	-1.0	102.0	-3.2	134.8	6.1	106.4	4.3
July	126.9	-1.3	101.8	-3.5	138.9	9.5	109.3	7.4
August	126.9	-1.2	101.5	-3.4	138.9	9.5	109.1	7.5
September	127.2	-1.2	101.8	-3.2	139.3	9.5	109.4	7.5
October	128.1	-0.5	102.5	-2.4	142.0	10.9	111.4	8.7
November	129.1	0.2	103.2	-1.5	143.5	11.2	112.5	9.0
December	129.6	0.5	103.5	-1.3	143.6	10.8	112.5	8.6
Annual average	127.8	0.2	102.7	-1.9	137.4	7.6	108.4	5.6

A) Gas price index as a percentage of the general index (excluding tobacco products).

Source: Calculations on Istat data, index numbers for entire population – national indices.

TABLE 3.27

Taxes on gas

c€/m3 for excise duties and percentage rates for VAT, in effect in 2005

TARIFF	T1	T2		T3	T4
USE	COOKING AND HOT WATER	I NDIVIDUAL HEATING		CENTRAL HEATING COMM. AND ART. USES	INDUSTRIAL USES
TAXES		<250 m3/a	>250 m3/a		
Excise duties					
Normal	4.48491	7.88526	17.33074	17.33074	1.24980
Towns in formerly subsidized area of Southern Italy (ex Cassa del Mezzogiorno) (A)	3.86516	3.86516	12.42182	12.42182	1.24980
Regional surcharge (B)					
Piedmont	2.2425	2.5800	2.5800	2.5800	0.6249
Veneto	0.5165	0.5165	1.2911	1.2911	0.6249
Liguria(C)	2.2425	2.5800	2.5800	2.5800	0.6249
Emilia Romagna	2.2425	3.09874	3.09874	3.09874	0.6249
Tuscany	2.0000	2.0000	2.6000	2.6000	0.6000
Umbria	0.5200	0.5200	0.5200	0.5200	0.5200
Marche	1.5500	1.5500	1.5500	1.5500	0.6249
Lazio	2.2425(D)	3.09874(D)	3.1000	3.1000	0.6200
Abruzzo	1.9326	1.9326	2.582(E)	2.582(E)	0.6249
Molise(F)	1.5000	1.5000	1.5000	1.5000	1.5000
Campania	1.93258	1.93258	3.1000	3.1000	0.6249
Puglia	1.93258	1.93258	2.5800	2.5800	0.6249
Basilicata	1.93258	1.93258	2.5800	2.5800	0.6249
Calabria	1.93258	1.93258	2.58228	2.58228	0.6249
VAT rate (percent)	**10**	**20**	**20**	**20**	**20**

A) These are the regions of: Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, Sicily and Sardinia; the provinces of: Frosinone, Latina; a few municipalities in the province of Rome included in the Latina reclamation district; municipalities in the province of Rieti included in the former district of Cittaducale; a few municipalities in the province of Ascoli Piceno included in the Tronto reclamation district; the islands of Elba, Giglio and Capraia.

B) The special-status regions set the regional surcharge at zero; the region of Lombardy, on the other hand, abolished it in 2002 (art. 1, paragraph 10, regional law no. 27 dated December 18, 2001).

C) For tariffs T1, T2 and T3, rate unchanged and lowered to 1,55 for municipalities included in climate zone "E" and to 1.03 for those in zone "F".

D) Rate reduced to 1.93258 in the areas that were formerly subsidized in Southern Italy (ex Cassa del Mezzogiorno).

E) Rate of 1.033 in the areas included in climate zones "E" and "F".

F) Rate of 2.8 in the areas included in climate zone "C"; rate of 2.1 in climate zone "D" and of 0.8 in climate zone "F".

TABLE 3.28

Leakages broken down by type

Year 2005

LOCATION	NUMBER OF LEAKAGES FOUND AFTER SCHEDULED INSPECTIONS					NUMBER OF LEAKAGES FOUND AFTER THIRD PARTY NOTIFICATION					TOTAL
	A1	A2	B	C	TOTAL	A1	A2	B	C	TOTAL	
On the grid	1,254	1,120	1,345	1,581	5,300	4,186	1,422	957	735	7,300	12,600
on user derivation plant (sunken part)	180	253	526	613	1,572	3,791	2,434	1,852	1,734	9,811	11,383
on user derivation plant (aerial part)	689	126	164	2,391	3,370	13,113	6,655	6,530	16,064	42,362	45,732
On metering unit	126	82	109	349	666	25,665	10,125	5,965	18,952	60,707	61,373
TOTAL	2,249	1,581	2,144	4,934	10,908	46,755	20,636	15,304	37,485	120,180	131,088

Source: Operators data provided to AEEG.

TABLE **3.29**

Emergency intervention relevant to the large operators in 2005

COMPANY	CONSUMERS	DISTRIBUTION PLANT		AFTER THE DELIVERY POINT		TOTAL CASES
		CASES	CASES EVERY 1,000 CONSUMERS	CASES	CASES EVERY 1,000 CONSUMERS	
Società Italiana per il Gas	4,600,000	68,462	14.9	6,185	1.34	74,647
Enel Rete Gas	1,955,189	29,909	15.3	1,590	0.81	31,499
Hera	956,305	14,910	15.6	392	0.41	15,302
Aem Distribuzione Gas e Calore	851,270	16,357	19.2	528	0.62	16,885
Napoletana Gas	684,303	14,634	21.4	187	0.27	14,821
Italcogim Reti	573,366	8,083	14.1	262	0.46	8,345
Azienda Energia e Servizi	461,446	6,100	13.2	1,054	2.28	7,154
Enìa	365,392	6,038	16.5	249	0.68	6,287
Fiorentina Gas	326,251	5,895	18.1	493	1.51	6,388
Azienda Mediterranea Gas e Acqua	325,587	4,912	15.1	15	0.05	4,927
Ascopiave	300,970	2,291	7.6	340	1.13	2,631
Toscana Gas	258,724	3,142	12.1	186	0.72	3,328
AcegasAps	255,937	1,757	6.9	397	1.55	2,154
Asm Brescia	239,066	1,513	6.3	510	2.13	2,023
Siciliana Gas	217,316	4,121	19.0	447	2.06	4,568
Arcalgas Progetti	215,137	1,924	8.9	-	0.00	1,924
Consiag Reti	164,148	1,446	8.8	141	0.86	1,587
Thüga Padana	155,286	1,331	8.6	152	0.98	1,483
SGR Reti	151,768	1,215	8.0	382	2.52	1,597
Thüga Mediterranea	136,332	1,504	11.0	88	0.65	1,592
Amg Energia	130,264	4,811	36.9	782	6.00	5,593
Agsm Rete Gas	129,145	2,409	18.7	638	4.94	3,047
Edison DG	128,777	1,977	15.4	136	1.06	2,113
Trentino Servizi	114,527	220	1.9	88	0.77	308
G.E.I. Gestione Energetica impianti	110,648	983	8.9	81	0.73	1,064
Azienda Municipale del Gas Bari	109,760	1,658	15.1	-	0.00	1,658
Erogasmet	105,108	2,490	23.7	8	0.08	2,498
Acam Gas	104,550	1,787	17.1	723	6.92	2,510
Thüga Laghi	103,312	1,470	14.2	174	1.68	1,644
TOTAL	**14.229.884**	**213,349**	**15.0**	**16,228**	**1.1**	**229,577**

Source: Operators data provided to AEEG.

TABLE **3.30**

Grid inspected by large operators in 2005

COMPANY	LOW PRESSURE GRID			HIGH PRESSURE GRID		
	GRID LENGTH IN km(A)	LENGTH OF GRID INSPECTED IN km	% OF GRID INSPECTED	GRIDLENGTH IN km(A)	LENGTH OF GRID INSPECTED IN km	% OF GRID INSPECTED
Società Italiana per il Gas	24,029	7,744	32.2	17,058	6,498	38,1
Enel Rete Gas	17,308	8,197	47.4	10,932	5,143	47,0
Hera	4,394	1,402	31.9	7,870	2,442	31,0
Aem Distribuzione Gas e Calore	2,459	1,703	69.3	493	483	98,0
Napoletana Gas	3,258	1,166	35.8	1,427	488	34.2
Italcogim Reti	4,331	1,939	44.8	2,921	1,440	49.3
Azienda Energia e Servizi	1,131	507	44.8	180	85	47.2
Enìa	2,692	1,497	55.6	2,548	1,554	61.0
Fiorentina Gas	1,204	564	46.9	1,420	667	47.0
Azienda Mediterranea Gas e Acqua	1,232	399	32.3	416	122	29.4
Ascopiave	4,253	1,531	36.0	2,025	779	38.5
Toscana Gas	2,221	1,583	71.3	1,086	820	75.5
AcegasAps	1,666	1,229	73.7	407	341	84.0
Asm Brescia	1,739	1,381	79.4	268	161	59.8
Siciliana Gas	1,596	350	21.9	938	297	31.7
Arcalgas Progetti	1,799	303	16.8	1,974	450	22.8
Consiag Reti	899	230	25.6	467	237	50.6
Thüga Padana	1,567	367	23.5	1,147	322	28.1
SGR Reti	1,215	359	29.6	1,327	427	32.2
Thüga Mediterranea	1,878	589	31.4	1,704	534	31.3
Amg Energia	482	482	100.0	182	187	102.7
Agsm Rete Gas	820	638	77.9	286	229	80.0
Edison DG	1,254	872	69.5	965	524	54.3
Trentino Servizi	1,026	376	36.6	400	201	50.1
G.E.I. Gestione Energetica impianti	1,370	469	34.2	543	169	31.2
Azienda Municipale del Gas Bari	382	381	99.8	104	101	97.1
Erogasmet	874	272	31.1	333	121	36.2
Acam Gas	1,115	460	41.3	317	287	90.5
Thüga Laghi	1,125	358	31.9	543	173	31.9
TOTAL	89,317	37,349	41.8	60,282	25,281	41.9

A) The grid length includes that of the plants of municipalities in the start-up phase and of the plants that provided service to less than 1,000 consumers at December 31,1999.

Source: Operators data provided to AEEG.

TABLE **3.31**

Leakages detected in large operator grids in 2005

COMPANY				NUMBER OF LEAKAGES			
	METERS OF GRID PER CONSUMER	GRID LENGTH IN km	LENGTH OF GRID INSPECTED IN km	FROM INSPECTED GRID	PER km OF INSPECTED GRID	NOTIFIED BY THIRD PARTIES	PER km BASED ON THIRD PARTY NOTIFICATION
Società Italiana per il Gas	9.19	41,087	14,242	955	0.07	26,580	0.65
Enel Rete Gas	14.75	28,239	13,339	395	0.03	12,280	0.43
Hera	12.80	12,264	3,845	296	0.08	7,674	0.63
Aem Distribuzione Gas e Calore	3.49	2,951	2,185	2021	0.92	10,612	3.60
Napoletana Gas	6.96	4,685	1,654	273	0.17	8,436	1.80
Italcogim Reti	13.37	7,252	3,379	25	0.01	3,073	0.42
Azienda Energia e Servizi	2.87	1,311	592	23	0.04	3,433	2.62
Enìa	14.69	5,240	3,051	217	0.07	2,968	0.57
Fiorentina Gas	8.19	2,624	1,231	55	0.04	2,783	1.06
Azienda Mediterranea Gas e Acqua	5.10	1,648	521	841	1.61	3,875	2.35
Ascopiave	21.34	6,277	2,311	43	0.02	654	0.10
Toscana Gas	13.21	3,307	2,403	85	0.04	1,101	0.33
AcegasAps	8.18	2,073	1,570	195	0.12	753	0.36
Asm Brescia	8.52	2,007	1,541	102	0.07	662	0.33
Siciliana Gas	12.00	2,534	647	0	-	2,653	1.05
Arcalgas Progetti	18.83	3,773	753	192	0.25	1,223	0.32
Consiag Reti	8.51	1,366	467	3	0.01	417	0.31
Thüga Padana	16.58	2,714	690	1180	1.71	682	0.25
SGR Reti	17.25	2,542	786	14	0.02	660	0.26
Thüga Mediterranea	18.57	3,581	1,123	26	0.02	703	0.20
Amg Energia	5.21	663	668	7	0.01	3,648	5.50
Agsm Rete Gas	8.38	1,106	867	78	0.09	624	0.56
Edison DG	17.87	2,219	1,395	66	0.05	581	0.26
Trentino Servizi	12.86	1,427	577	7	0.01	119	0.08
G.E.I. Gestione Energetica impianti	17.80	1,913	638	20	0.03	960	0.50
Azienda Municipale del Gas Bari	4.50	486	482	108	0.22	891	1.83
Erogasmet	11.80	1,207	393	81	0.21	1,541	1.28
Acam Gas	13.80	1,432	747	171	0.23	1,197	0.84
Thüga Laghi	16.23	1,668	531	555	1.04	517	0.31
TOTAL	**10.69**	**149,598**	**62,630**	**8,034**	**0.13**	**101,300**	**0.68**

Source: Operators data provided to AEEG..

TABLE 3.32

Cathode protection of large operators grids in 2005

COMPANY	NETWORK LENGTH IN km	LENGTH OF STEEL NETWORK IN km	LENGTH STEEL NETWORK WITH CATHODE PROTECTION IN km	LENGTH OF STEEL NETWORK WITHOUT PROTECTION IN km	% STEEL NETWORK WITH CATHODE PROTECTION
Società Italiana per il Gas	41,087	33,172.0	32,912.6	259.4	99.2
Enel Rete Gas	28,239	26,679.4	26,042.4	637.0	97.6
Hera	12,264	10,409.0	10,380.4	28.6	99.7
Aem Distribuzione Gas e Calore	2,951	1,069.2	669.0	400.2	62.6
Napoletana Gas	4,685	3,655.7	3,515.9	139.8	96.2
Italcogim Reti	7,252	6,631.6	6,631.6	-	100.0
Azienda Energia e Servizi	1,311	508.8	508.8	-	100.0
Enìa	5,240	5,003.1	4,665.9	337.2	93.3
Fiorentina Gas	2,624	1,724.1	1,630.2	93.9	94.6
Azienda Mediterranea Gas e Acqua	1,648	498.6	50.0	448.6	10.0
Ascopiave	6,277	6,202.1	6,202.1	-	100.0
Toscana Gas	3,307	3,225.1	2,108.2	1.117.0	65.4
AcegasAps	2,073	672.4	468.1	204.3	69.6
Asm Brescia	2,007	996.7	430.7	566.1	43.2
Siciliana Gas	2,534	2,013.4	2,013.4	-	100.0
Arcalgas Progetti	3,773	2,750.3	2,730.5	19.8	99.3
Consiag Reti	1,366	1,275.5	1,269.2	6.3	99.5
Thüga Padana	2,714	2,707.4	2,609.6	97.8	96.4
SGR Reti	2,542	2,528.0	2.528.0	-	100.0
Thüga Mediterranea	3,581	3,103.1	3,019.4	83.7	97.3
Amg Energia	663	188.7	188.7	-	100.0
Agsm Rete Gas	1,106	805.0	770.4	34.6	95.7
Edison DG	2,219	1,457.9	1,457.9	-	100.0
Trentino Servizi	1,427	1,389.6	1,389.6	-	100.0
G.E.I. Gestione Energetica impianti	1,913	1,877.8	1,877.8	-	100.0
Azienda Municipale del Gas Bari	486	472.7	258.5	214.2	54.7
Erogasmet	1,207	1,206.6	1,206.6	-	100.0
Acam Gas	1,432	1.319,4	818,7	500.7	62.0
Thüga Laghi	1,668	1.649,1	1.649,1	-	100.0
TOTAL	149,598	125.192,8	120.003,7	5.189.1	95.9

Source: Operators data provided to AEEG.

TABLE 3.33

Number of reimbursements paid due to non-compliance with commercial quality standards

1997-2005 period; operators with more than 5,000 consumers

	CHARTER OF SERVICE				COMMERCIAL QUALITY REGULATION				
	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cases of non-compliance with standards subject to reimbursement	14,265	12,366	11,212	14,635	16,424	14,651	11,766	25,826	34,330
Actual reimbursements paid during the year	1,237	707	1,640	3,709	12,086	13,368	8,535	19,249	31,189

Source: declarations of operators provided to AEEG..

TABLE 3.34

Services subject to automatic refund for low pressure supplied consumers with metering unit up to class G6

2004-2005 period

		2004			2005		
SERVICE	AUTHORITY STANDARD	NUMBER OF REQUESTS	ACTUAL AVERAGE TIME	NUMBER OF AUTOMATIC COMPENSATIONS	NUMBER OF REQUESTS	ACTUAL AVERAGE TIME	NUMBER OF AUTOMATIC COMPENSATIONS
Estimates for simple works	15 working days	257,883	5.6 working days	4,372	269,872	6.2 working days	9,313
Execution of simple works	15 working days	204,411	6.8 working days	4,172	214,529	7.4 working days	8,027
Connections	10 working days	674,768	2.4 working days	6,930	682,610	3.9 working days	6,539
Disconnections	5 working days	311,683	2.4 working days	1,651	332,543	2.3 working days	2,850
Reconnections due to delayed payment	2 working days	39,279	0.8 working days	252	44,552	0.7 working days	534
Punctuality range for personalized appointments	3 hours	225,135		1,315	181,753		2,259
TOTAL		1,713,159		18,692	1,725,859		29,522

TABLE 3.35

Summary of data relative to resolution no. 40/04 provided by distributors

2004-2005 thermal year

TYPE OF INSTALLATION	REQUESTS WITH POSITIVE INSPECTION	REQUESTS WITH NEGATIVE INSPECTION	INSTALLATIONS WITH MORE THAN ONE INSPECTION
≥ 34.8 kW	71,515	6,616	5,605
> 34.8 kW and ≤ 116 kW	3,528	462	547
> 116 kW	2,266	107	61
TOTAL	77,309	7,185	6,213

Source: Declarations of operators provided to AEEG.

TABLE 3.36

Summary of data relative to resolution no. 40/04 provided by gas distributors based on distributor size

DISTRIBUTORS	REQUESTS WITH POSITIVE INSPECTIONS	REQUESTS WITH NEGATIVE INSPECTIONS	INSTALLATIONS WITH MORE THAN ONE INSPECTION
Large	46,704	4,097	3,434
Medium	26,650	2,535	1,990
Small	3,955	553	789
TOTAL	77,309	7,185	6,213

Source: declarations of operators provided to AEEG.

TABLE 3.37

Breakdown of distributors based on implementation date of resolution no. 40/04

IMPLEMENTATION DATE	DISTRIBUTORS	CONSUMERS AT DECEMBER 31, 2004
By June 30, 2005	31	2,412,036
Since July 1, 2005	146	14,529,365
TOTAL	177	16,941,401

Source: Company figures provided to AEEG.

TABLE 3.38

Overall satisfaction with the gas service

Percentages obtained from "very satisfied" and "quite satisfied" responses

	1998	1999	2000	2001	2002	2003	2005
North West	94.9	95.0	94.6	94.7	95.4	94.7	94.7
North East	94.5	94.8	94.0	94.5	93.1	94.3	92.3
Centre	94.3	95.7	94.9	94.3	95.0	94.6	92.9
South	94.5	95.1	94.9	96.0	94.0	93.9	92.5
Islands	89.6	95.6	91.5	96.3	94.6	90.8	95.3
Italy	94.5	95.2	94.5	94.9	94.6	94.3	93.4

Source: Multi-purpose survey by Istat for 1998-2005.

TABLE 3.39

Overall satisfaction and satisfaction with the various aspects of the gas service

Percentages obtained from "very satisfied" and "quite satisfied" responses

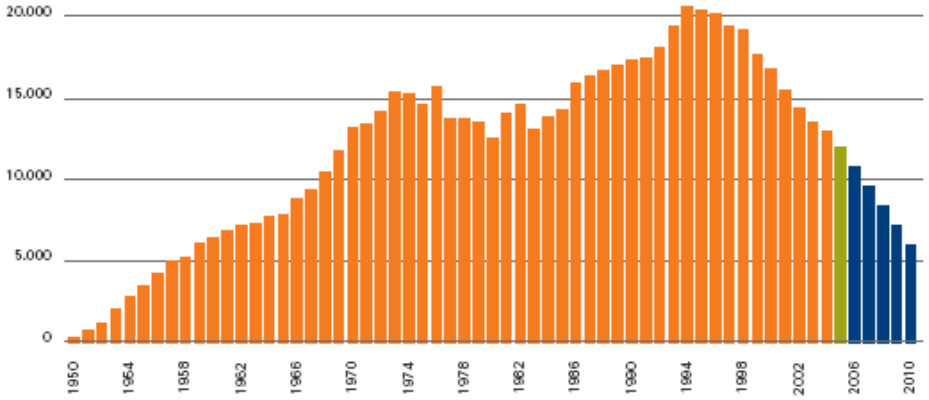
	1998	1999	2000	2001	2002	2003	2005
Meter reading frequency	86.1	86.9	85.7	82.9	82.4	81.0	78.5
Bill transparency	80.2	81.5	79.6	80.4	78.4	77.0	74.4
Information about the service	79.4	81.1	79.5	79.0	77.3	75.8	72.9
Contract take-overs or new hook-ups	68.2	68.7	73.8	73.3	74.0	70.5	69.8
Overall satisfaction	94.5	95.2	94.5	94.9	94.6	94.3	93.4

Source: Multi-purpose survey by Istat for 1998-2005.

FIG. 3.1

Domestic natural gas production since 1950

M(m3); historic values from 1950 to 2004; preliminary 2005 and forecasts from 2006 to 2010

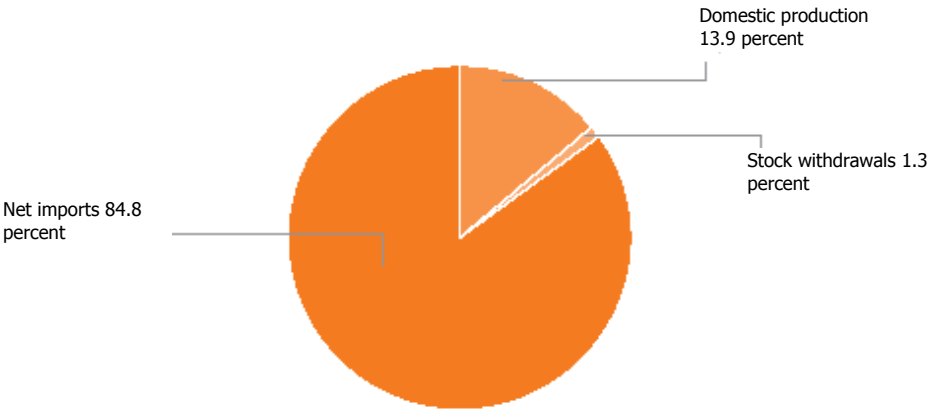


Source: Ministry of Productive Activities.

FIG. 3.2

Grid injections in 2005

Percentages

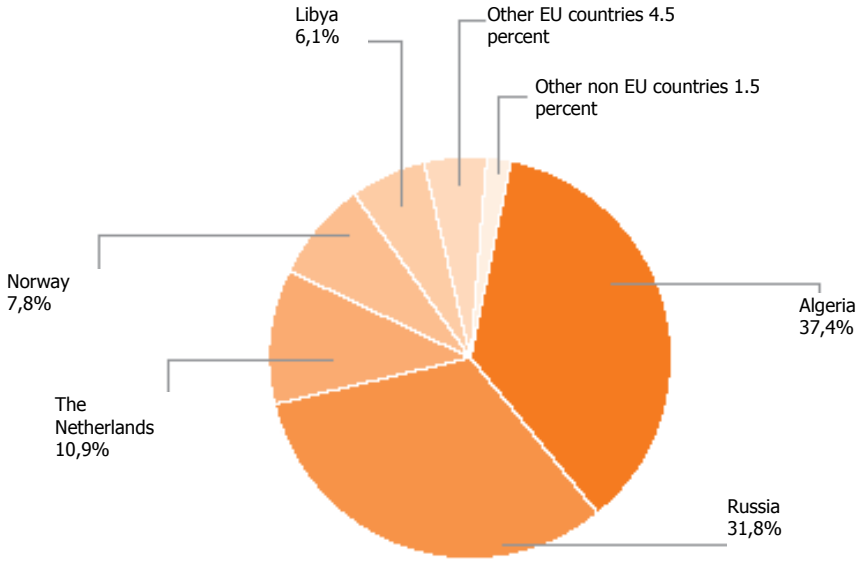


Source: AEEG calculations on data from the Ministry of Productive Activities.

FIG. 3.3

2005 gas imports based on country of origin

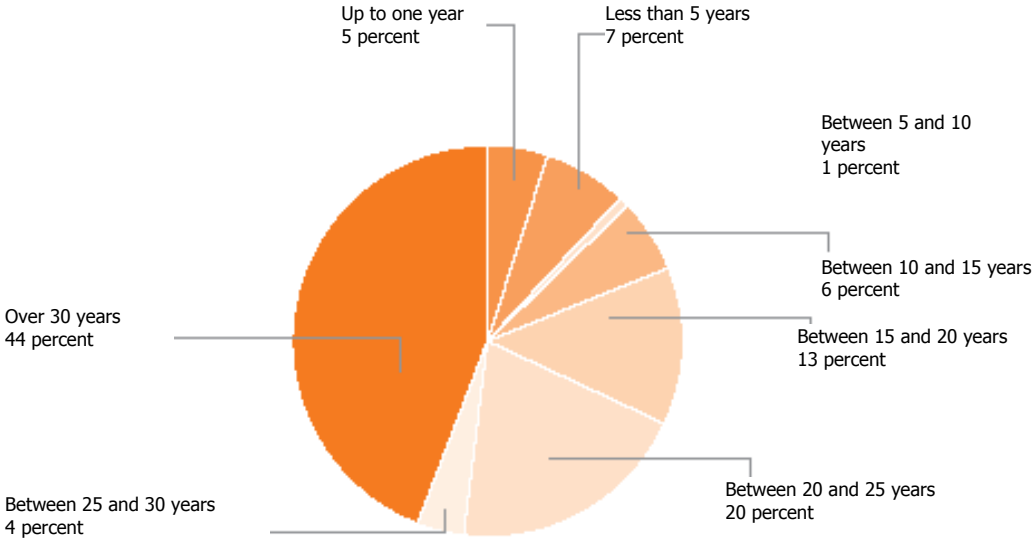
Percentages



Source: AEEG calculations on data from the Ministry of Productive Activities.

FIG. 3.4

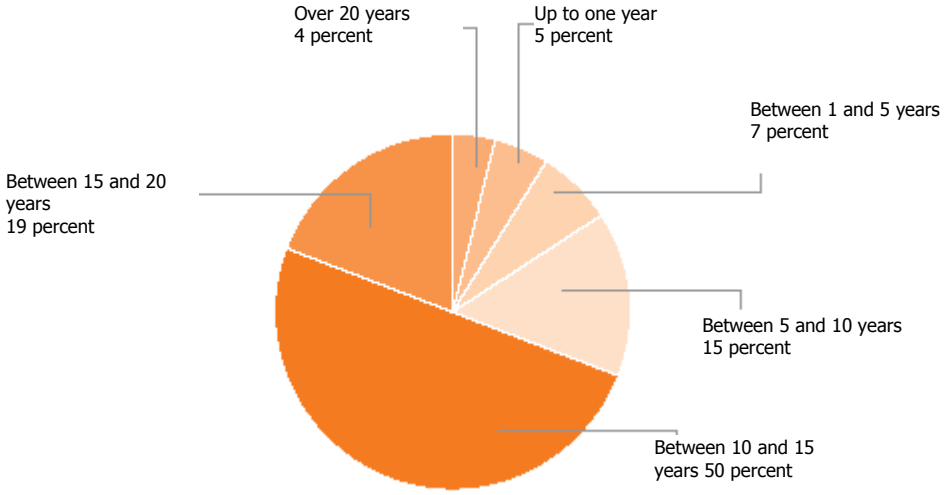
Structure of active contracts (annual and multi-year) in 2005, based on entire validity period



Source: AEEG calculations on data from the Ministry of Productive Activities.

FIG 3.5

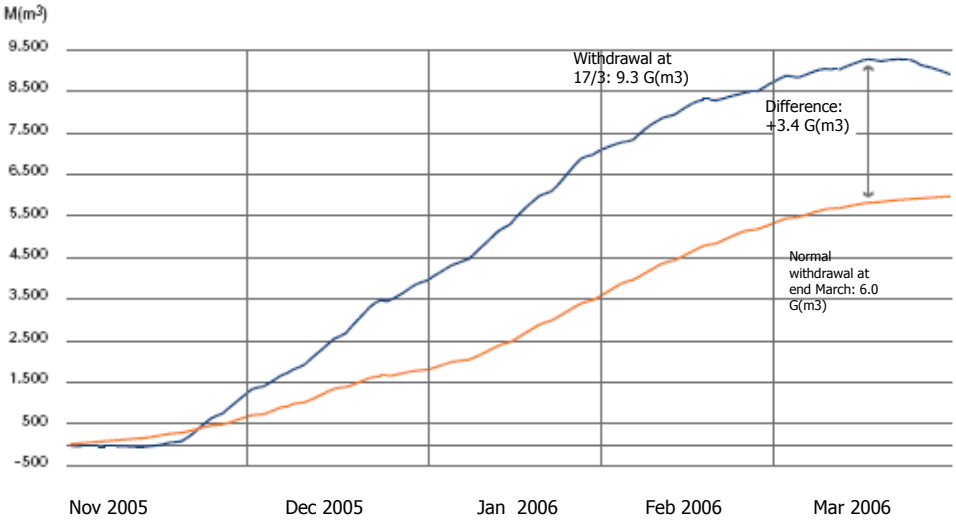
Structure of active contracts (annual and multi-year) in 2005, based on residual validity period



Source: AEEG calculations on data from the Ministry of Productive Activities.

FIG. 3.6

Withdrawal from the storage system in the winter of 2005-2006



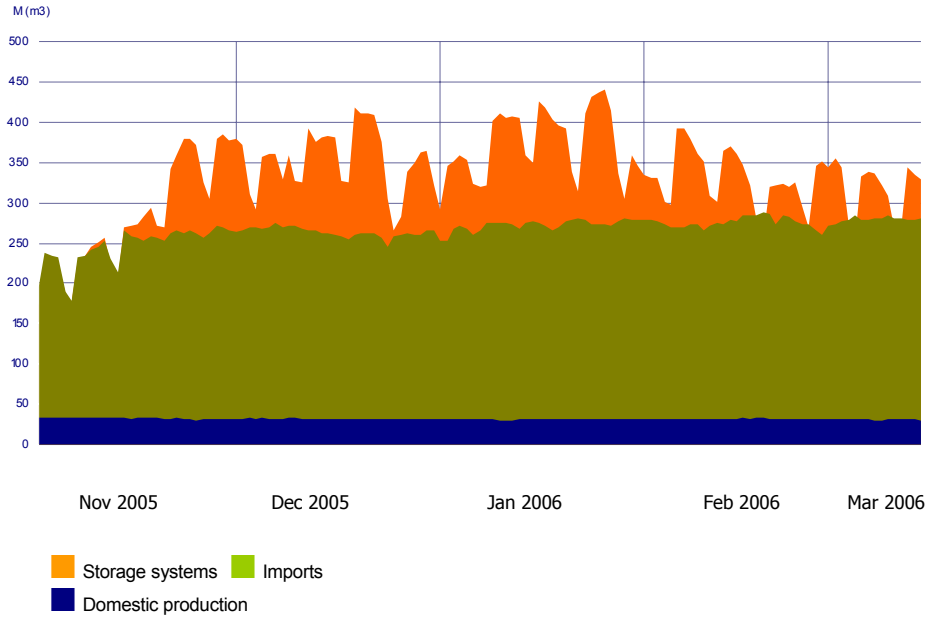
Normal winter withdrawal

Actual withdrawal

Source: Ministry of Productive Activities.

FIG. 3.7

Coverage of gas demand in the winter of 2005-2006

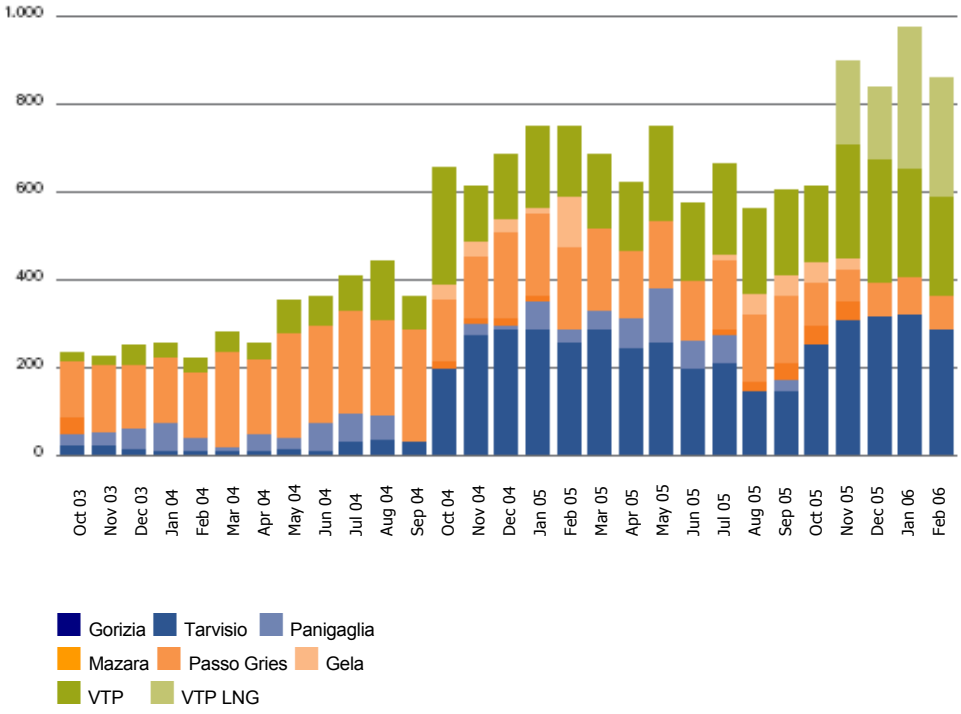


Source: AEEG calculations on IEA data.

FIG. 3.8

Transactions at the entry points in the national grid in the October 2003 – March 2006 period

M(m3) standard of 38.1 MJ; the transactions carried out refer to gas injected by the conveying user.

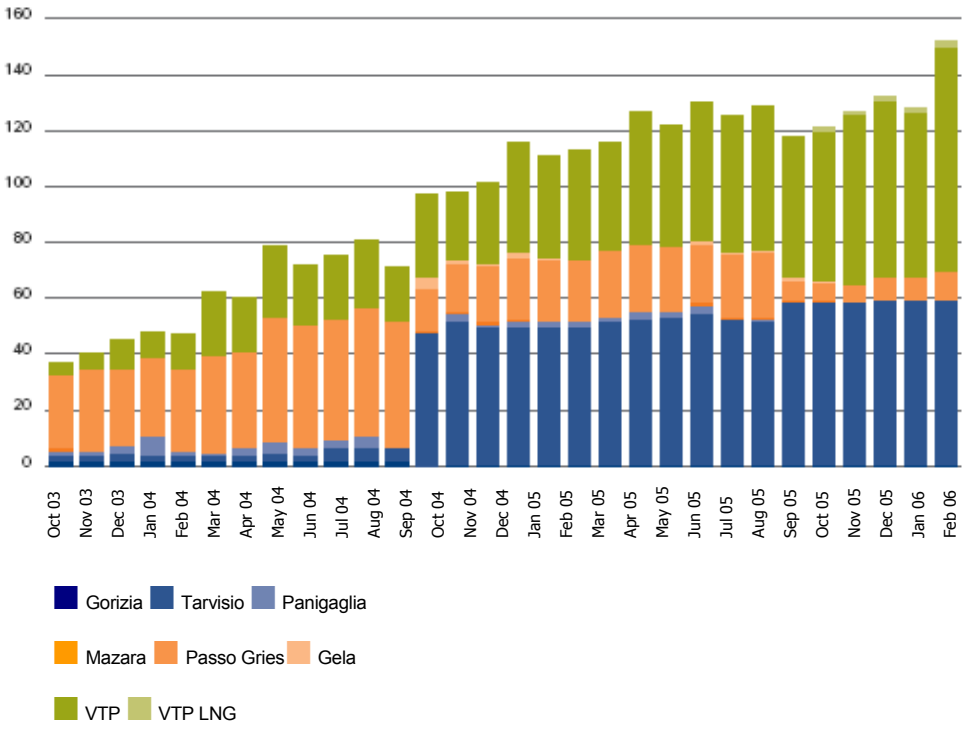


Source: AEEG calculations on Snam Rete Gas data.

FIG. 3.9

Italian side transactions in the October 2003 – March 2006 period

Number of transactions per month

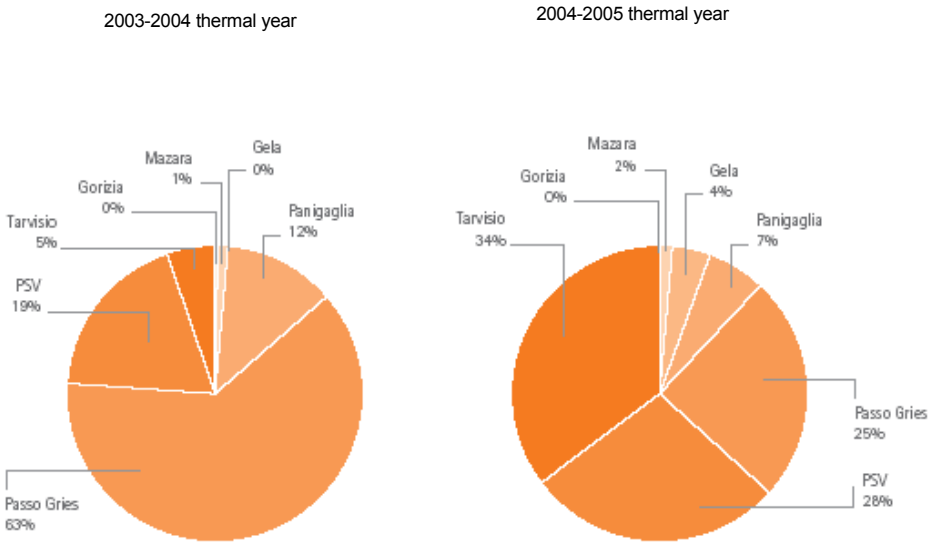


Source: AEEG calculations on Snam Rete Gas data.

FIG. 3.10

Breakdown of volumes traded/conveyed at the entry points of the national grid interconnected with abroad and the VTP

Comparison between the 2003-2004 and 2004-2005 thermal years

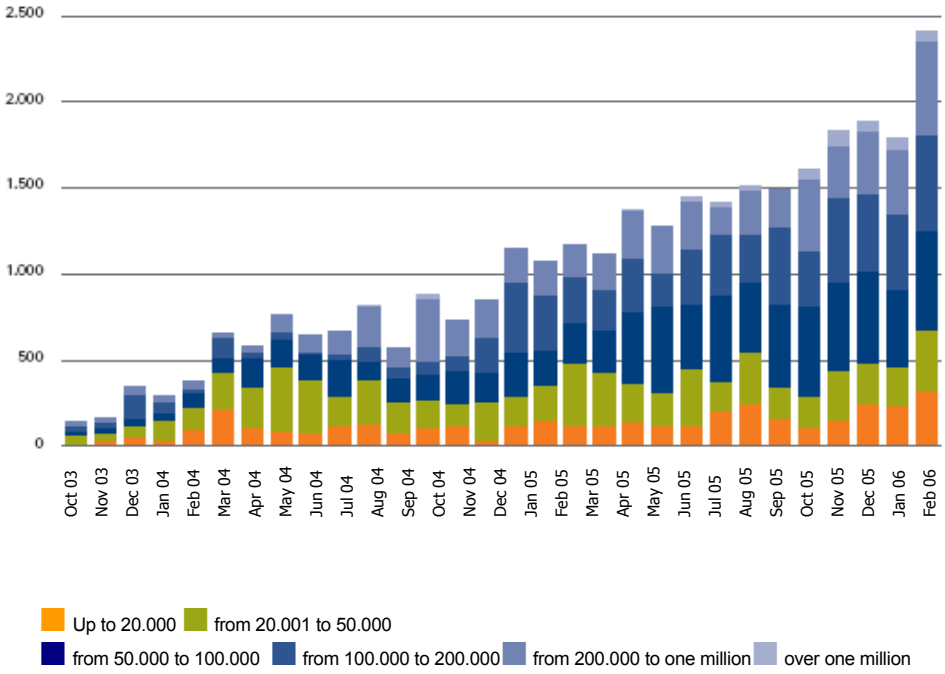


Source: AEEG calculations on Snam Rete Gas data.

FIG. 3.11

Frequency of volumes traded at the VTP in the October 2003 – March 2006 period

Number of transactions by gas volume class (values in m3 standard of 38.1 MJ)

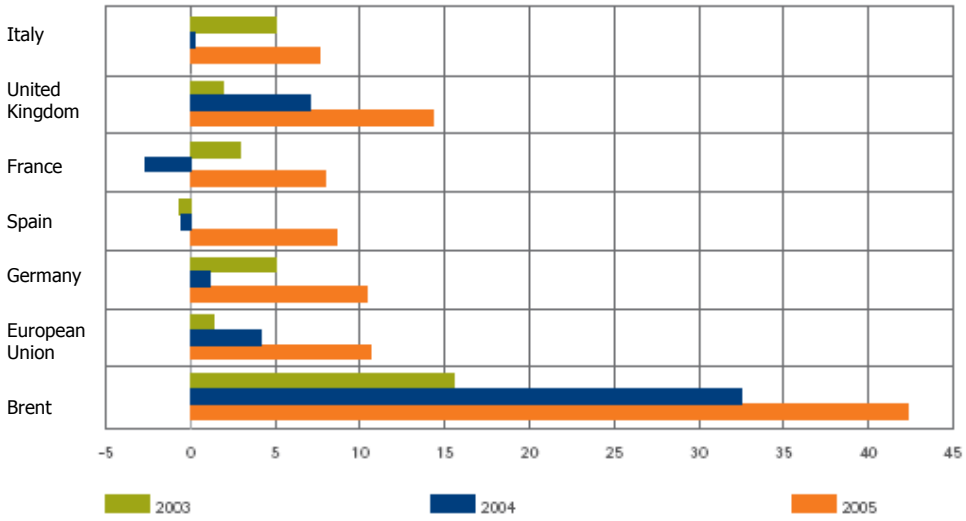


Source: AEEG calculations on Snam Rete Gas data.

FIG. 3.12

Gas prices variations in the main European countries

YoY percentage variations

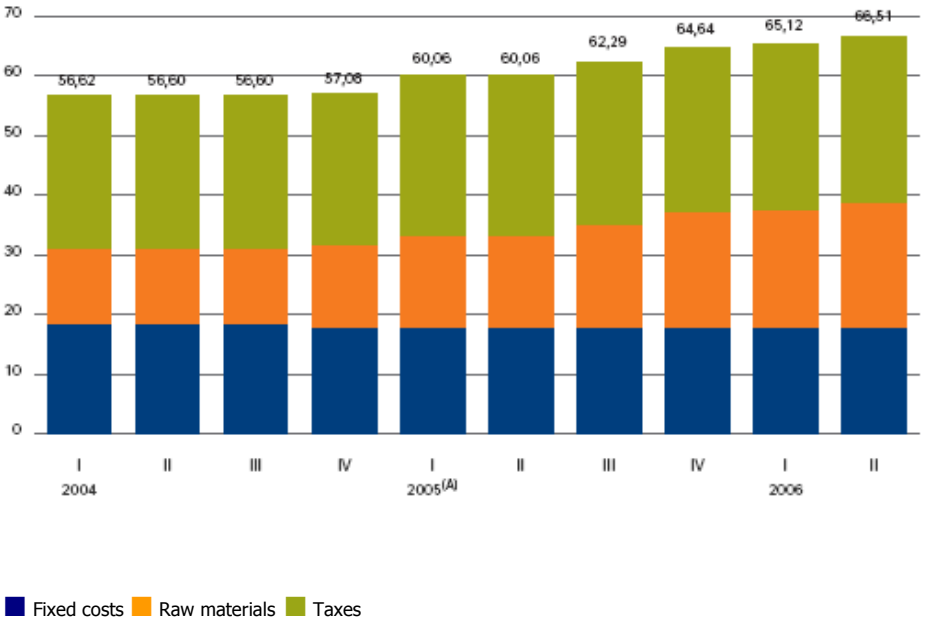


Source: Calculations on Eurostat data, harmonized consumer price index figures.

FIG. 3.13

Breakdown of the average national reference natural gas tariff for the last two years

C€/m3



A) The value of 1Q 2005 was recalculated (based on the methodology set forth by resolution no. 195/02) and modified retroactively when tariffs were updated for the second quarter.

FIG. 3.14

Percentage breakdown of the average national reference natural gas tariff at April 1, 2006

Reference tariff for consumption of less than 200,000 m3 per year; c€/m3

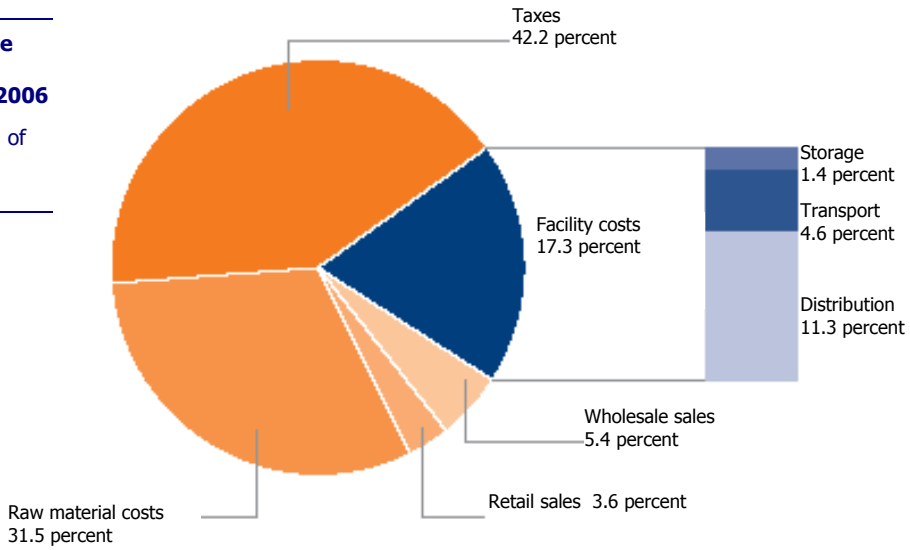


FIG. 3.15

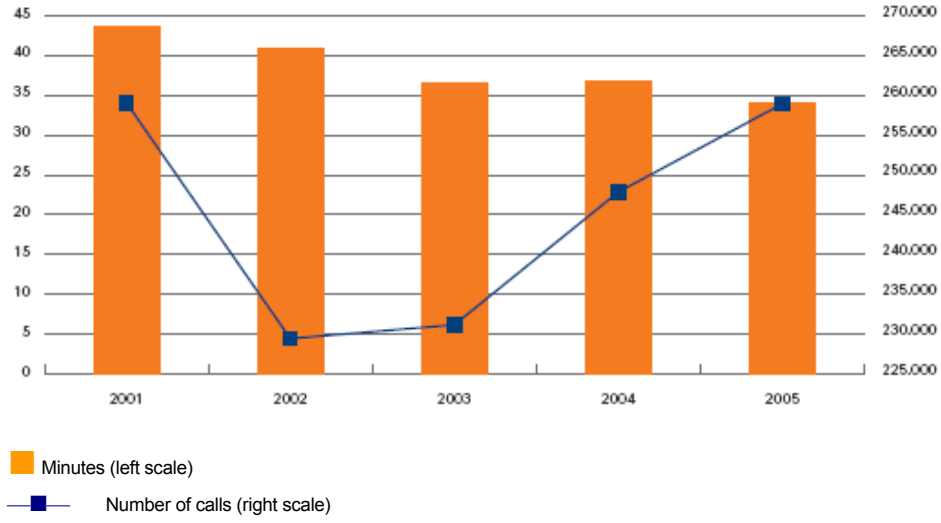
Percentage of grid inspected during the 1997-2005 period

Source: Operators data provided to AEEG.

FIG. 3.16

Calls for emergency intervention on distribution grid

2001-2005 period; actual average time (in minutes) and number of calls

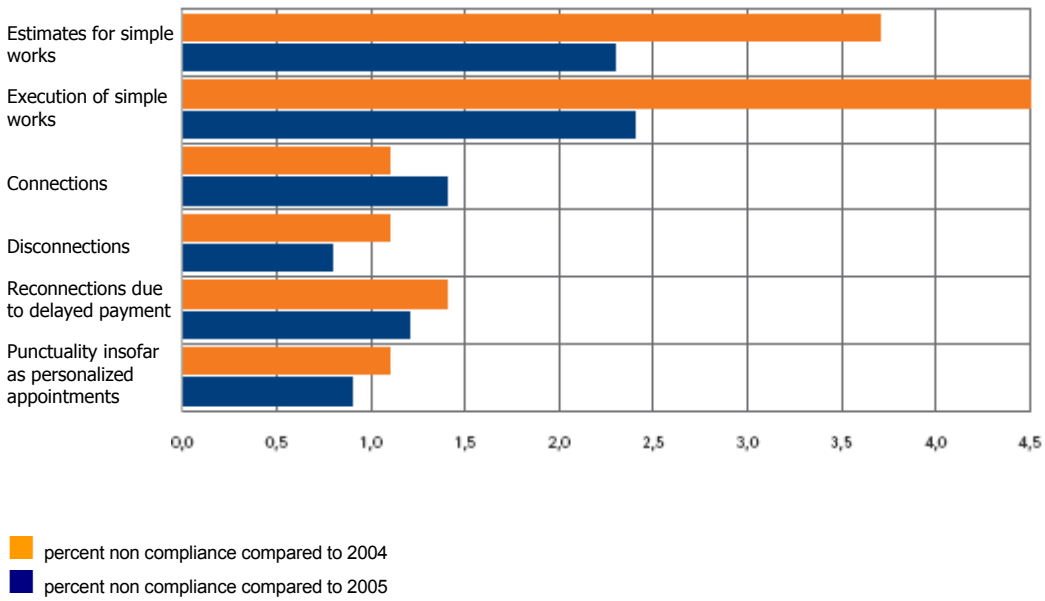


Source: Operators data provided to AEEG.

FIG. 3.17

Percentage of non-compliance with guaranteed quality standards

2004-2005 period; operators with more than 5,000 consumers

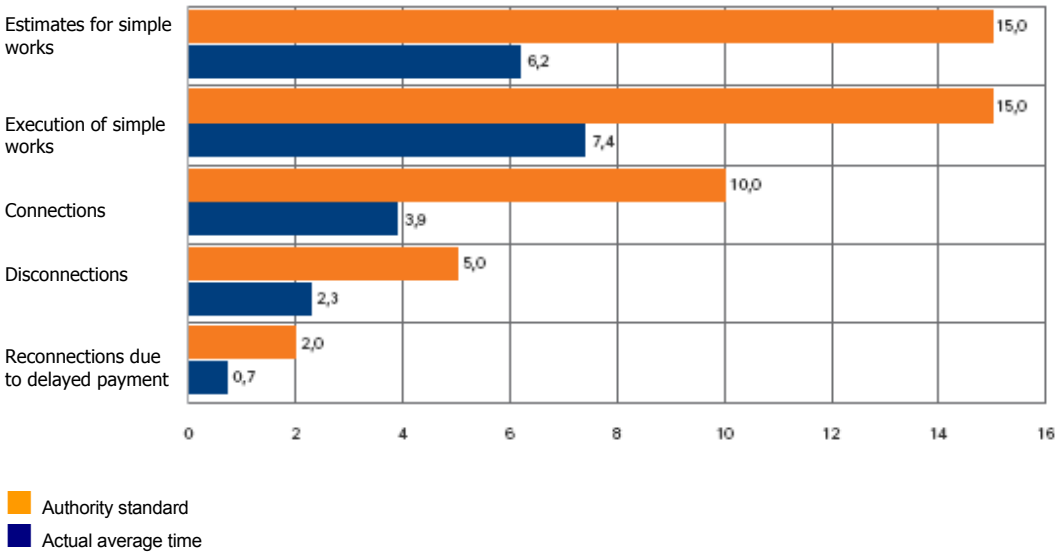


Source: declarations of operators provided to AEEG.

FIG. 3.18

Comparison of standard average actual time and standard defined by the authority for commercial quality services for customers with metering unit up to G6

2005; operators with more than 5,000 consumers

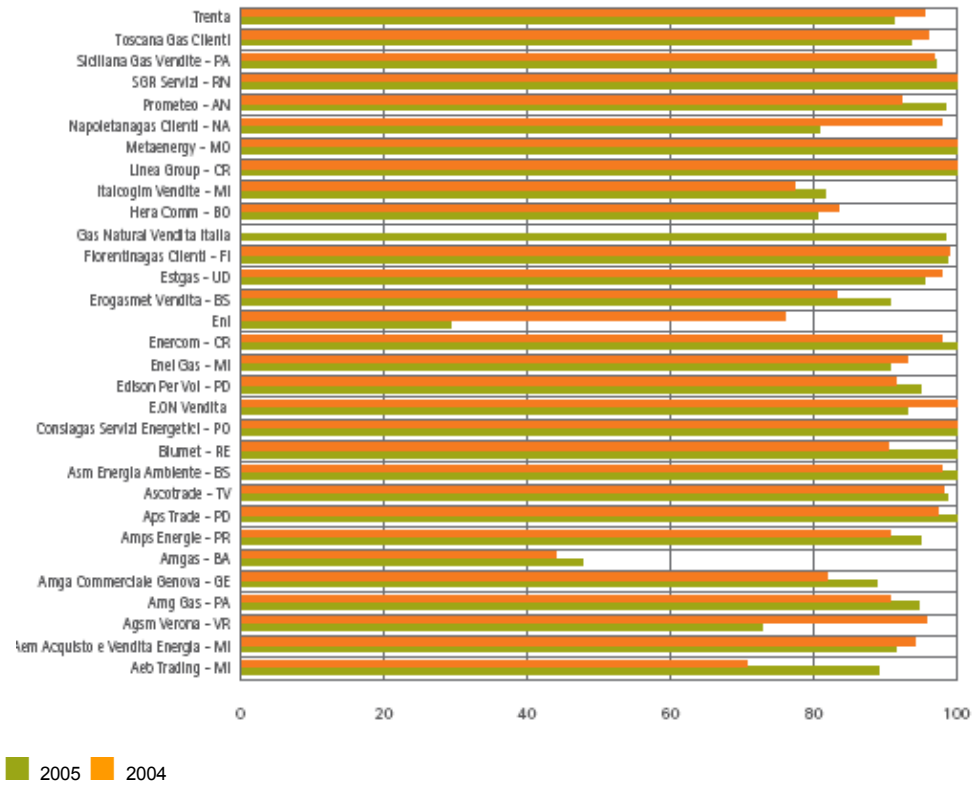


Source: declarations of operators provided to AEEG..

FIG. 3.19

Response to complaints from low pressure supplied consumers and with a metering unit up to class G6

2005; actual percentage of compliance



Source: Declarations of operators provided to AEEG.

AUTORITÀ PER L'ENERGIA ELETTRICA E IL GAS

Annual Report on Regulatory Activities and of Services

31 march 2006

Authority for electricity and gas
Strategy, Research and Documentation dept.
Piazza Cavour, 5 - 20121 Milan
Tel 02655651
e-mail: info@autorita.energia.it
www.autorita.energia.it