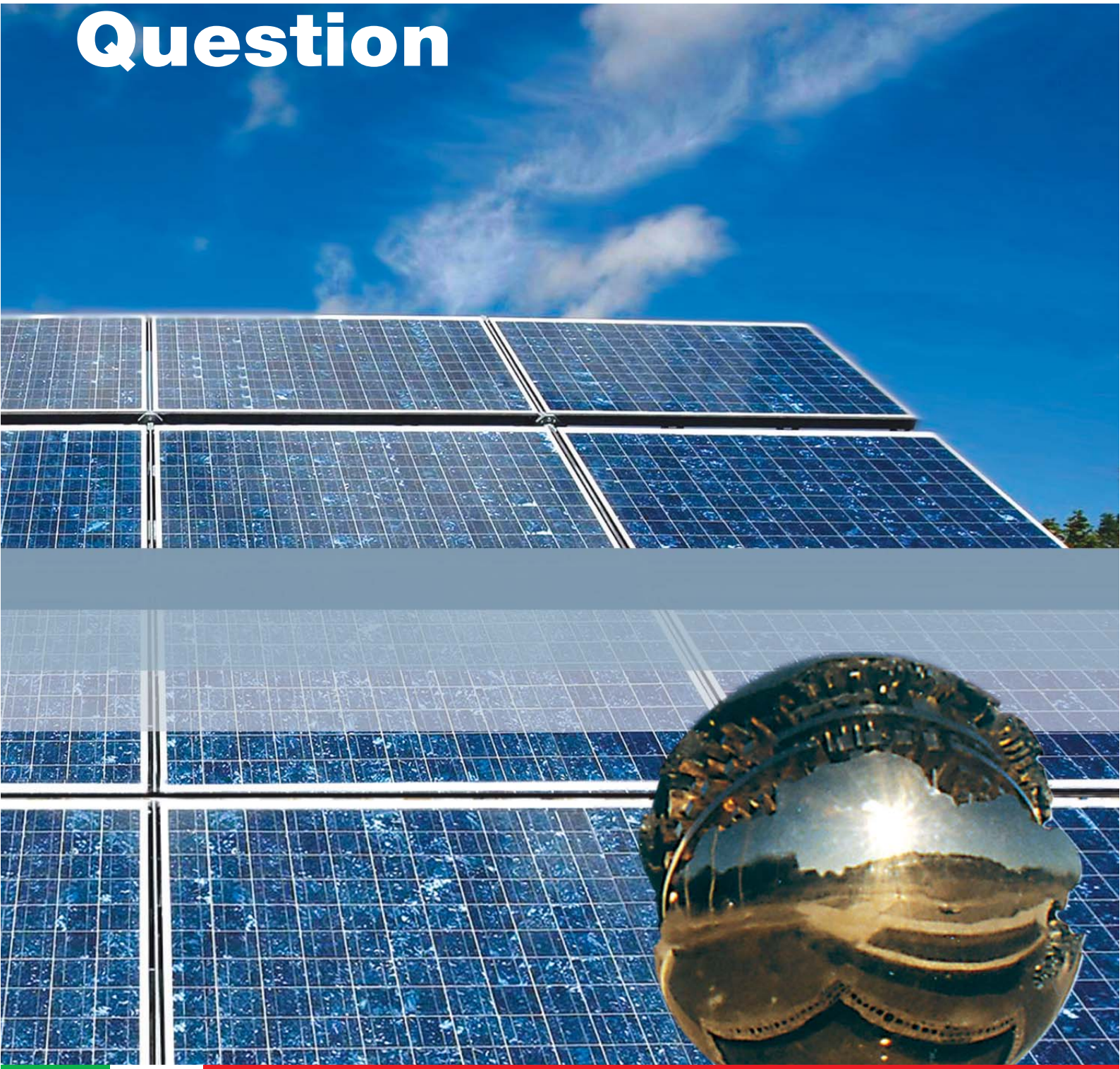
The Energy Question



Ministero degli Affari Esteri

Dossier Farnesina

The energy question

Editor in Chief:
Second Counsellor Marco Villani
Press and Information Service

Editorial Project and Images ANSA News Agency:
Arrigo Santini

Graphic Design:
VOICES S.r.l.

Editor:
Mauro Aprile

Translation:
Darragh Henegan and Marian Dougan

In recognition of their valuable collaboration we would like to thank:
Min. Plen. Giandomenico Magliano
Director General for Multilateral Economic and Financial Cooperation

Min. Plen. Giovanni Manfredi
Head of Office VI, Directorate General for Multilateral Economic and Financial Cooperation

Engineer Dario Garofalo
Expert, Directorate General for Multilateral Economic and Financial Cooperation

The "Farnesina Dossiers" are produced periodically
by the Press and Information Service of the **Ministry of Foreign Affairs**.
They are also published on-line and can be found
on the sites **www.esteri.gov.it** and **www.italplanet.it**

EDIZIONI VOICES
Via F.lli Bronzetti, 21 - 20129 MILANO - Tel. 02.70003310 - Fax 02.70003909 - voices@italplanet.it - **www.italplanet.it**
With **èItalia** Nr.46 July-August 2007

Contents

The Energy Question

Foreword

Climate protection, energy security and reliability, and the competitiveness of the energy market-these are the three fundamental aspects of one of the greatest and most demanding challenges of the new century.

What is needed is an economic development model that, within the scope of that legitimate well being to which every human being aspires, is capable of preserving the environment along with the quality of life. It is the concept of development that needs to be updated; natural resources and ecosystems can no longer be considered goods to be "consumed" for the purposes of a more or less stable or ephemeral growth, but rather represent an undeniable prerequisite for life and prosperity on Earth. In the absence of a rational use of energy and careful watch over the environment no civilisation can hope for a sustainable future.

Italy currently depends on foreign imports for approximately 90% of its energy needs, which is predicted to reach 99% in less than twenty years.

This fact alone highlights the need to shift energy to the forefront of our priorities, beginning with those regarding foreign policy. It will be essential to create an organic framework within which every actor-institutions, businesses and citizens-acts in concert with every other in the pursuance of sustainable and environmentally-respectful development ("decoupling" emissions from economic growth") and stable and security energy supply.

Italy rests its initiatives in the energy sector on three fundamental pillars: first, promotion of energy efficiency and savings; second, diversification of energy sources through the adoption of an appropriate "mix", keeping in mind the ambitious goals of the March 2007 European Council; and, third, support for research and innovative new technologies, without which the

marriage energy security with environmental sustainability would be unimaginable.

But the challenge posed by the energy question, and associated environmental issues, obviously do not concern Italy alone, nor simply the people who populate our planet today. Neither do they regard highly industrialised countries exclusively.

They concern the entire human species and are epic and global in their dimensions. This is because energy resources and the biosphere are not independent variables in the equation of worldwide development.

For instance, unchecked deforestation lowers the rate of carbon absorption into the atmosphere resulting in an increase in greenhouse gasses, which, in turn, causes a significant alteration in climate patterns.

This does not mean that the development aspirations of emerging countries must be curtailed on the basis of the environmental protection priorities of advanced economies. In reality, this is a theme the very nature of which requires a coordinated and univocal response by the entire international community.

The difficulty in finding a solution lies not only in the intrinsic complexity of the matter, but also in the objective limitations of the current global governance system. We in Italy, consistent with our general vision of international relations, believe that a truly effective approach to the energy and environmental questions must arise from ever stronger multilateral cooperation and the pursuance of real partnerships between energy producer and consumer nations. Moreover, we must be aware that energy security cannot remain the prerogative or the objective of any single nation.

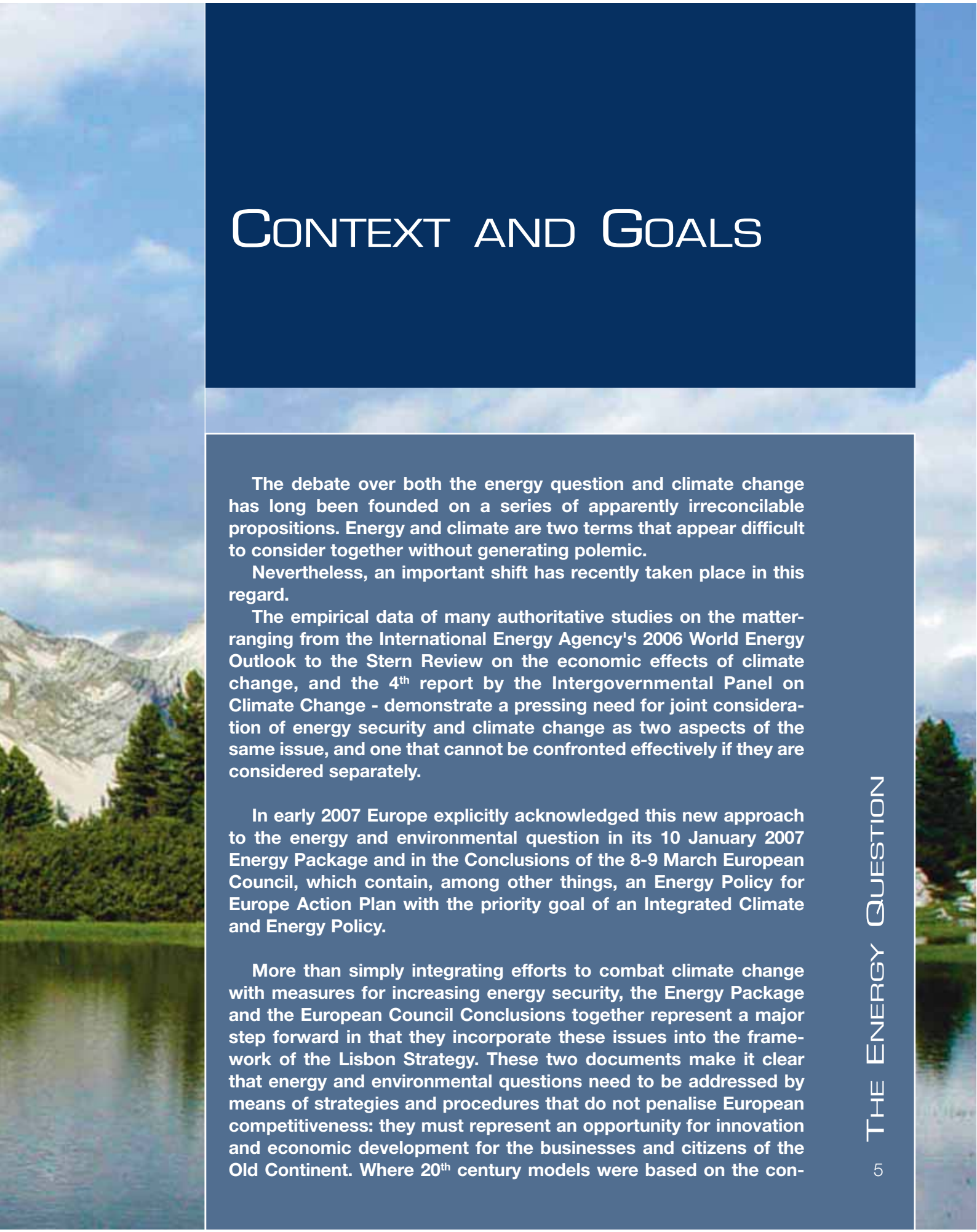
The indivisibility of energy security, to remain within the European context, is common to all our partners in the Union, and must take into account the various combinations and proportions of the energy resources used and go well beyond the merely commercial relationship between energy producer and consumer nations.

This is the scenario upon which the Ministry of Foreign Affairs in playing a more articulated and pro-active role than it has in the past, since it is clear that the energy/environment

context has become a fundamental and priority component of foreign policy.

In this analysis, which represents an array of ideas and data on the subject of environmental protection, energy security and energy market competitiveness, Italy's overall situation-industry, infrastructure and the energy market, as well as national policies in these areas-is viewed within a global context characterised by geopolitical complexity and competition for energy resources.

The decisions that we take today will have a decisive impact on future generations. A deeper understanding of the energy/environment question is essential to guiding us toward operating more effectively and making the most conscientious and farsighted choices.



Context and Goals

The debate over both the energy question and climate change has long been founded on a series of apparently irreconcilable propositions. Energy and climate are two terms that appear difficult to consider together without generating polemic.

Nevertheless, an important shift has recently taken place in this regard.

The empirical data of many authoritative studies on the matter- ranging from the International Energy Agency's 2006 World Energy Outlook to the Stern Review on the economic effects of climate change, and the 4th report by the Intergovernmental Panel on Climate Change - demonstrate a pressing need for joint consideration of energy security and climate change as two aspects of the same issue, and one that cannot be confronted effectively if they are considered separately.

In early 2007 Europe explicitly acknowledged this new approach to the energy and environmental question in its 10 January 2007 Energy Package and in the Conclusions of the 8-9 March European Council, which contain, among other things, an Energy Policy for Europe Action Plan with the priority goal of an Integrated Climate and Energy Policy.

More than simply integrating efforts to combat climate change with measures for increasing energy security, the Energy Package and the European Council Conclusions together represent a major step forward in that they incorporate these issues into the framework of the Lisbon Strategy. These two documents make it clear that energy and environmental questions need to be addressed by means of strategies and procedures that do not penalise European competitiveness: they must represent an opportunity for innovation and economic development for the businesses and citizens of the Old Continent. Where 20th century models were based on the con-

sumption of fossil fuels, it is now necessary to trigger the development of sustainable and environmentally friendly forms of energy, i.e. ones that are efficient and renewable.

The following are the main objectives of Europe's new energy policy, which Member States are now obliged to take into consideration when outlining their own detailed long-range plans:

a) **Climate protection.** Efforts to combat global warming and to protect the environment have become one of the priorities of our times. There is spreading awareness of the fact that our development model, based on consuming the planet's resources, will not be sustainable over the long term, and there is no longer any question regarding the cause-effect relationship between human activities-particularly the use of fossil fuels-and climate change. Therefore, a long-range energy strategy, as it is now to be understood, must begin precisely with climate protection and reduction of greenhouse gas emissions. With this in mind the European Council of March 2007 approved a series of new measures that can be summarised as follows:

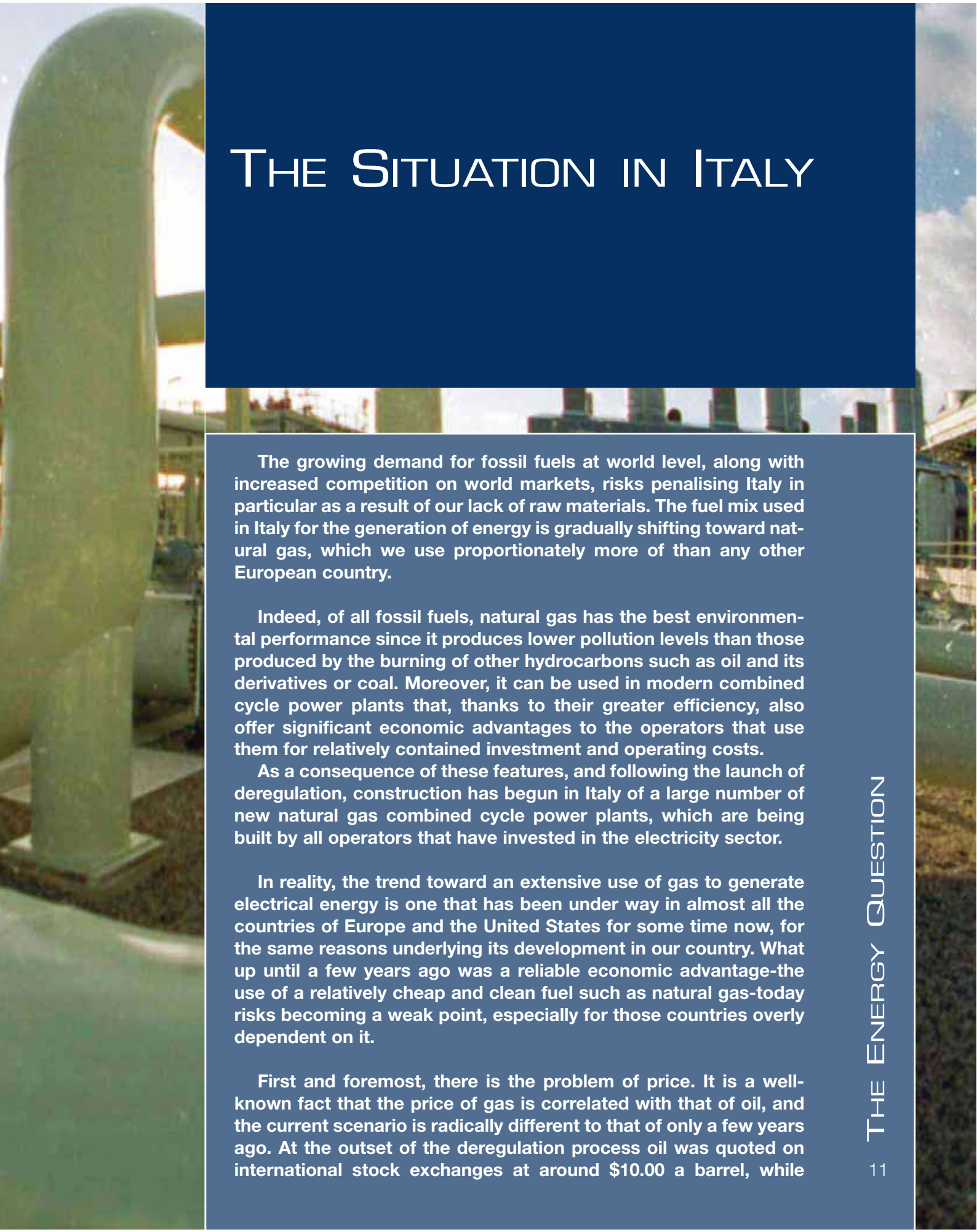
- a 20% reduction in greenhouse gas emissions, as compared with 1990 levels, by 2020 and the willingness to raise that to 30% if other developed countries commit to doing the same;
- an increase in the EU's energy efficiency in such a way as to lead to energy consumption savings of 20% compared with the estimates for 2020 in the Commission Green Paper on energy efficiency;
- a gradual increase in the amount of energy from renewable sources of the EU's total energy consumption, with a view to reaching 20% by 2020;
- a minimum of 10% bio-fuel for automobiles out total EU consumption by 2020.

b) **Supply security.** The gas crisis of the winter of 2005 resulting from the tensions between Russia and Ukraine over increases in the price of Russian gas, and subsequent oil sector tensions between Russia, Georgia and Belarus, also had an impact on Italy. These events have clearly demonstrated how indispensable energy has become for both a nation's economy and its security, and one of the strategic instruments in relations between producer and consumer countries. The current international panorama is further complicated by increased competition for energy resources as a result of the emergence of new economic giants such as China, India and Brazil. In this context Europe risks being weakened as a result of inner fragmentation and excessive dependence on a limited number of supplier countries. According to the International Energy Agency (see its World Energy Outlook 2006) the most plausible energy scenario for

at least the next two or three decades includes a rise in the use of fossil fuels, despite environmental pressures and the increased dependency of the world's principle economies on limited areas of production.

It is therefore necessary to identify and rapidly implement the most appropriate instruments by which to ensure European businesses and consumers the energy they need in a stable and secure manner. It is also necessary to define a multilateral approach to eventual international market crises or structural energy shortages.

c) **Competitiveness.** Along with the ability to innovate, the energy sector and its effective functioning represent an essential component in Europe's businesses competitiveness and its overall economic development. As a result of recent tensions over prices and a series of technical problems (the November 2006 black-out) the process of deregulating European energy markets is a slow and uneven one that is delaying achievement of the main goal of deregulation itself: a single, liquid and efficient continental energy market. In reality, the process of opening up the market to competition, although still incomplete, has already led to a profound transformation in the European energy sector and to massive programmes of investment, particularly in new electrical power plants. Nevertheless, especially in terms of the construction and running of transport infrastructures and links, there is still a great deal of room for improving efficiency and for meeting the best Western standards, represented in the first place by the British market and the Scandinavian Nordpool. Indeed, over the long run, volatile energy prices risk undermining the competitiveness of energy-hungry European steel, aluminium and electro-chemical industries. These sectors, essential to the continent's economic development, are today being forced to compete on world markets with a sort of “handicap” owing to inefficiency and high prices. The third element in an effective energy strategy therefore must regard the creation of a continental electrical power and gas market both from the legislative standpoint as well as that of infrastructure, and the creation of a regulatory framework capable of spurring operators to be more competitive, thereby stimulating efficiency in terms of both price and service quality.



The Situation in Italy

The growing demand for fossil fuels at world level, along with increased competition on world markets, risks penalising Italy in particular as a result of our lack of raw materials. The fuel mix used in Italy for the generation of energy is gradually shifting toward natural gas, which we use proportionately more of than any other European country.

Indeed, of all fossil fuels, natural gas has the best environmental performance since it produces lower pollution levels than those produced by the burning of other hydrocarbons such as oil and its derivatives or coal. Moreover, it can be used in modern combined cycle power plants that, thanks to their greater efficiency, also offer significant economic advantages to the operators that use them for relatively contained investment and operating costs.

As a consequence of these features, and following the launch of deregulation, construction has begun in Italy of a large number of new natural gas combined cycle power plants, which are being built by all operators that have invested in the electricity sector.

In reality, the trend toward an extensive use of gas to generate electrical energy is one that has been under way in almost all the countries of Europe and the United States for some time now, for the same reasons underlying its development in our country. What up until a few years ago was a reliable economic advantage-the use of a relatively cheap and clean fuel such as natural gas-today risks becoming a weak point, especially for those countries overly dependent on it.

First and foremost, there is the problem of price. It is a well-known fact that the price of gas is correlated with that of oil, and the current scenario is radically different to that of only a few years ago. At the outset of the deregulation process oil was quoted on international stock exchanges at around $10.00 a barrel, while

today's price ranges from $60.00 to $80.00 a barrel! In such a context of high tension and rising prices gas is subject a similar dynamic, and that has begun to penalise our economy more than those of other countries that depend on it less, such as France, for instance.

Furthermore, excessive dependence on gas also implies serious risks in terms of energy security. The combined effect of increased demand and the gradual exhaustion of the majority of European deposits, and in Italy in particular, is also leading to an increase in the continent's dependence on major producer countries-Russia and Algeria at the top of the list.

As for availability of "national" resources and dependence on imports: Italy currently imports almost all the coal as well as a very high percentage of the oil and gas it uses, and this trend is destined to worsen. It has been estimated that our country will be importing practically all the raw materials it needs to satisfy its energy needs by 2025 (*figure 1*).

Although renewable energy is a highly important concept undergoing rapid development, the fact it will only be capable of partially satisfying our national energy needs for many years to come was indirectly confirmed by the European Council of March 2007, which set a goal of 20% by 2020. From this it is clear that dependence on energy producing countries and fossil fuel supply security, along with its sustainable use, will be crucial to development over the coming years.

In addition to Italy's costly and excessively gas-dependent fuel mix, another weakness is represented by an infrastructure system partly inadequate to the gradual evolution of demand, especially with regard to gas transport and storage. Indeed, while we have made enormous advances in our capacity to generate electricity (*figure 2*) thanks to deregulation and the use of gas power pants, this has not been followed by the necessary upgrading of the infrastructure required for the supply and storage of raw materials.

As a result of a variety of feasibility problems and regulatory uncertainties, investments in these infrastructures have not accelerated at the same rate as those in the electricity sector in recent years. Although it is one of Europe's principal gas users, Italy still has only one regasification terminal in Panigaglia with, moreover, a limited capacity, and a pipeline transport and storage capacity partly insufficient to satisfy the growing demand (*figure 3*).

Nevertheless, Italy has been engaged in recent years in overcoming the infrastructure gap in the energy sector both at institutional and business levels. Bearing witness to this are the numerous legislative provisions recently approved, from the last legislature's "jumpstart the power plants" decree to a second Bersani package on deregulation containing important measures for the energy sector.

Dependence on Primary Sources in Italy and in Europe

Rapporto fra import netto per fonte e consumo lordo

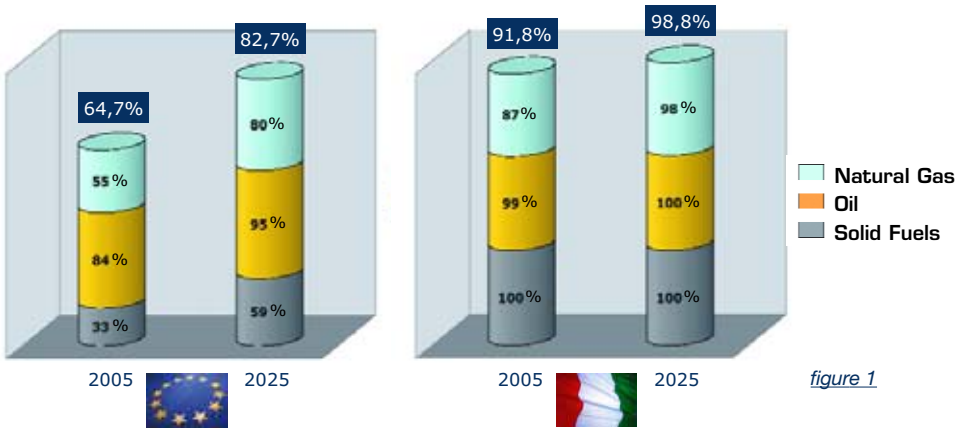


figure 1

Effects of Deregulation: New Plant Investment Cycle (Italy-MW)

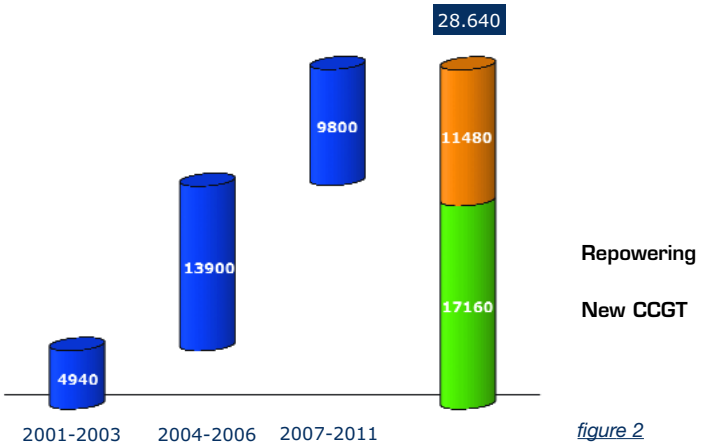


figure 2

Limited and Concentrate Natural Gas Supply Sources

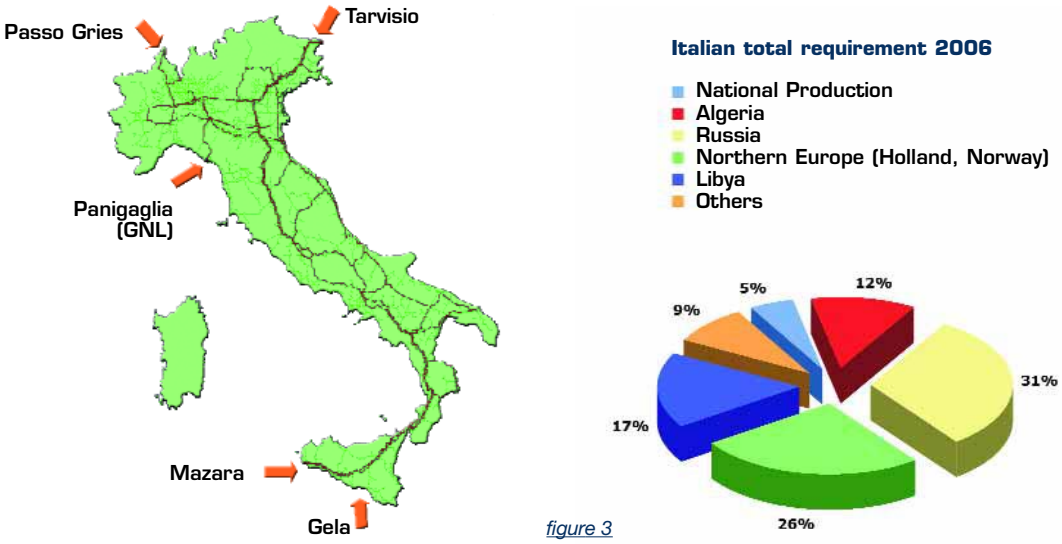


figure 3

The Most Important Interventions

Apart from the special requirements of the transport sector, which will not be treated in this document, Italy's interventions in the context of an effective national energy strategy can be divided into three main groups:

a) National interventions;
b) European Union interventions;
c) Policies regarding fuel producing nations.

National interventions

On the national front, i.e. on Italian soil and relative to the Italian industry and market, it is necessary to intervene on three main fronts: first by diversifying the fuel mix used and introducing energy-saving measures; then by building new energy infrastructures, especially for the transport, regasification and storage of gas; and, finally, through the successful completion of a fully competitive market and its integration into that of Europe.

- *Diversification of the fuel mix, development of renewable energy sources and the introduction of energy-saving measures*. As previously pointed out, the process of deregulating electricity has led to a massive programme of investments in new natural gas combined cycle power plants. Indeed, this type of plant represents one of the more rational choices in a market regime where private investments are aimed at making a profit. In the case of Italy, the main consequence of this trend has been the gradual replacement of a dependence on oil-which characterised the energy sector from the 1980s onward, following the rejection of nuclear power-with a dependence on gas. Thus in order to minimise the risk of energy crises owing to interruptions or shortages in the supply of this raw material, such as that of the winter of 2005, the fuel mix used for the generation of electricity needs to be revised with a view to striking a new balance by means of measures that foster the development of new sources and technologies. A first step toward achieving the new national goals

ding climate change established by the March 2007 European Council would be to increase investments in plants for the production of renewable energy. Obviously support must be given to the sources and technologies that are the most promising from the standpoint of production efficiency and generating costs. Secondly, it is necessary to fund research in all those technologies that help to limit the impact of fossil fuels by increasing efficiency and reducing greenhouse gas emissions. An example in this sense is Carbon Capture and Sequestration (CCS), which is currently in the development phase in many countries around the world: an experimental technique whereby the CO2 emitted when coal burns is “captured” and prevented from being dispersed into the atmosphere and later “injected” into special geological deposits such as methane exhaust deposits, for instance. But only small prototypes of these exist to date, as there are still many uncertainties regarding the real sustainability of this technology in larger operations. More in general, despite the fact that more modern technologies significantly reduce harmful emissions, the environmental hazards associated with the use of coal are not to be underestimated. On the other hand, Carbon Capture and Sequestration holds the promise of further medium-term development and it is probable that its future widespread use could contribute to the reduction of CO2 emissions. The European Union's recent Energy Package also devotes a special chapter to the subject and considers the development so-called “clean coal” research, which is a fundamental aspect in its energy strategy as it can contribute to increasing the continent's energy security and facilitating the transition to a “low carbon” economy.

It is interesting to note that the countries equipped with the most efficient and environment-friendly coal technologies will, in turn, be able to help many countries in transition or that have only recently gone industrial-such as China and India, whose economies depend heavily on the use of coal-to make the necessary technological leap toward a more environmentally respectful development model.

Finally, it is necessary to invest heavily in increased energy efficiency, both on the production front as well as in terms of energy consumption. As pointed out in the European Commission's Energy Package of earlier this year, and the final declaration by the Heiligendamm G8, energy efficiency is the most immediate route to uniting supply security, competitiveness and environmental sustainability, and is an indispensable strategic instrument for successfully confronting the energy question in all its complexity. In this case too, based on the consumption savings goal of 20% by 2020 envisaged by the European Council, it is necessary that our country equip itself with a plan for increasing energy efficiency, not only throughout the entire energy sector, but also in all those sectors capable of signifi-

cant energy savings, ranging from industry to transport to construction, all the way down to the individual consumer.

- Transport infrastructure and natural gas storage. Recent gas transport crises have shown that the national infrastructure for the transport and storage of natural gas is not sufficient for confronting the increased volatility in demand or eventual supply crises. Despite the fact that our country is proportionately one of the largest consumers of gas in Europe, the infrastructure networks for gas supply that are vital to energy security have not been adequately developed over recent years. Recent provisions by the Ministry of Economic Development aimed at jumpstarting the long-suspended construction of plants are headed in the right direction since Italy is still a long way from having an infrastructure system adequate to its needs and comparable to those of many other countries. By way of comparison, Spain, a country as dependent on gas as we are, recently began construction on its seventh re-gasification facility.

A priority objective is, therefore, the rapid construction of at least three or four regasification facilities, for a combined capacity of from 25 to 30 billion cubic metres annually that would allow Italy to reduce its dependence on pipeline imports, but it is not sufficient as a solution in any case. It is also necessary to increase the capacity of existing pipelines, build new ones-such as Algeria's GALSI pipeline and the IGI pipeline channelling gas from the Caspian Sea across Greece and Turkey-and to significantly increase storage capacity.

The issue of the increased transport capacity of pipeline infrastructures often clashes with that of multi-annual contracts for gas importation. Such agreements, usually signed on a “take or pay” basis-the most appropriate for long-term continuous supply-ensure companies a return on their investments in transport infrastructures and contribute to overall demand security. However, they almost always exhaust the available capacity of the new gas pipeline, thereby hindering any real opening of the market to new operators. Precisely as a result of these characteristics the champions of competition accuse dominant operators of using these long-term agreements as a way of preventing their competitors gaining access to the market, thereby arresting the liquidity and development of the market itself.

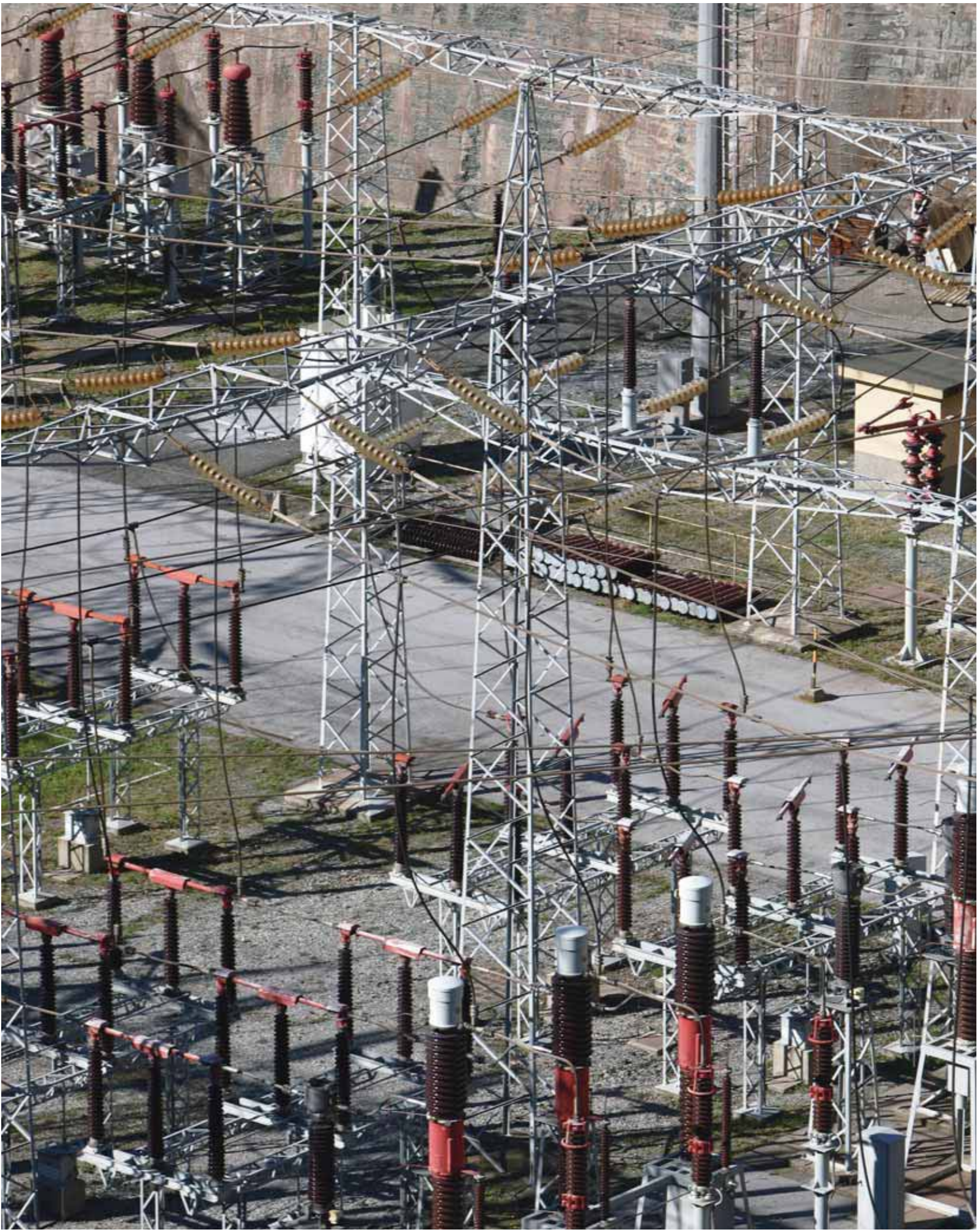
In turn, operators that invest in pipeline infrastructures maintain that these extremely complex and costly investments would not be profitable if there were not also the guarantee of low cost raw materials for resale.

The problem is further complicated by the fact that these pipelines almost always cross through a series of different countries

and are subject therefore to a variety of transit laws. Some of them are even located outside the borders of the European Union. If the creation of the energy market is to go forward as expected, the problem of multi-annual gas supply contracts, which has been under the scrutiny of the European Commission for many years, will have to be resolved. One possible solution would be to associate growing quantities of additional transport capacity to supply contracts of varying duration in such a way as to address the legitimate claims to adequate remuneration of operators making risky investments, as well as the goal of an efficient and liquid gas market and, lastly, consumer satisfaction. Moreover, clauses impeding the exportation elsewhere of gas originally destined for a specific country (Final Destination Clause) could be gradually eliminated. These, in fact, constitute a significant impediment to the development of market liquidity both in countries of transit and of final destination;

- **A Competitive Energy Market.** As regards the energy market, it is necessary to complete the process of deregulation now under way, keeping in mind new energy security needs and environmental sustainability. This must lead to measures adequate for achieving European goals, for example, in matters of renewable and efficient energy, on the condition that they are compatible with a market regime. Furthermore, it is necessary to give new impetus to the integration of national electricity and gas markets into the single continental market. The creation of a truly European energy market would be advantageous for Italy in terms of the efficiency and security of the system. After the black-out of 4 November 2006 that led to a breakdown of the German high-tension network and involved many European areas, from Paris to Appuglia, highlighted the need to improve technical and operational coordination among network operators as well as to harmonise regulations and national security mechanisms.

Apropos of the gas market, it should be stressed that the sector's peculiar structure, characterised by producer countries often very different and far away and from consumer countries, and by the transport of fuel by means of physical facilities, such as pipelines, that cross over a multitude of States, renders any deregulation conceived at national level absolutely ineffective, as the experience of Europe has taught. On this point the debate has lately been concentrating on the need, or otherwise, to resort to “unbundling”, i.e. to force dominant and vertically integrated operators to separate the activities of transport from those of production and sale, and possibly turn them over to others. The entire process of deregulating transport networks and gas storage facilities needs to be re-analysed from a truly European standpoint and no longer to



be considered exclusively in terms of individual national sensibilities and needs

European Union interventions

National energy policies cannot disregard the continental context and the obligations and objectives decided on the community level. Indeed, European institutions have been viewing the energy question as one of the continent's priorities for a long time now. In confirmation of this- following the Sector Inquiry on the status of energy deregulation in Europe published in February 2006, and the energy efficiency plan of the summer of 2006-on 10 January 2007 the European Commission published its Strategic Energy Review, which contains guidelines for confronting the climate and energy emergency and for drafting a joint Union policy on the matter. Finally, underscoring the need for a new integrated climate and energy policy, the March 2007 European Council approved the Action Plan outlining an Energy Policy for Europe.

From the beginning the energy question has been debated in Europe in function of Member State reluctance to delegate decisions on an issue so strategic to their national interests, and of the need to jointly confront global challenges such as energy security, global warming and economic globalisation with other continental partners-challenges, moreover, that cannot be met by a fragmented and disjunctive Europe.

Within this framework the initiatives that our country has set in motion must be consistent with European objectives, since an energy strategy divergent from that of the European Union would not only not make sense but neither would it be possible. In general, one of Italy's primary interests, given its dependence on imported energy, is to support the Commission's stance, since in the medium-term the creation of a continental energy market and the drafting of a common energy policy represent the best instrument for ensuring supply security, protecting the environment and defending consumers and businesses from potential negative effects of globalisation such as loss of competitiveness and production outsourcing. The interventions that Italy supports, in part already outlined in recently published community documents, regard:

- integration of national electrical power markets;
- a true opening and integration of gas markets;
- investments in energy transport and storage infrastructures;
- a common Union foreign policy on energy.

As the Commission itself has acknowledged, a great deal of progress has been made with regard to the electricity market since the launch of the deregulation process in the 1990s. There are, however, some situations impeding completion of the process, partly as a result of a series of attitudes that tend to privilege national

interests over community ones. Indeed, thanks to the recent disservices, several States have refused to open their domestic markets to real competition, citing reasons of security or consumer protection but, in reality, protecting their own national facilities and halting the integration of markets at continental level.

But what the recent blackouts that affected several areas of Europe brought out is exactly the contrary: greater coordination between national systems is what is needed, and a level of integration such that a malfunction in northern Germany is not able to trigger a blackout in France or Italy. It is necessary to proceed rapidly toward integrating national electricity markets, and harmonising the powers of regulatory authorities and the operational procedures of individual national markets, thereby gradually abolishing regulated tariffs, especially those keeping new operators out of the market by being fixed at a lower than market level. It is necessary to foster closer integration between Transmission System Operators (TSO) managing the national high and very high tension electrical networks, beginning with the effective and transparent management of cross-border energy flows and network congestion.

The situation regarding the gas sector is somewhat different from that of the electricity market, which suffers from a greater lack of openness and limitation. Indeed, as previously pointed out, the gas market of the majority of European countries consists of: the production phase (upstream) outsourced to a third country often located outside the European Union itself, a pipeline transport phase (midstream) that could cross over any number of transit countries, and the typically national phases of storage and consumption (downstream).

In this context the process itself of European deregulation that began with the opening of Member State national markets proved uneven and ineffective, as a result of the characteristics, timeframes and levels of openness of the various, and very different, internal geographic zones of Europe.

It is therefore important to review the process, keeping in mind precisely its industrial features; to set clear community level minimum requirements for access by all operators to transport and storage networks, and establish this initial level of market openness through the greater coordination and integration of existing network operators and, if possible, contemporaneously in all Member States. It would thus be possible to define non-discriminatory access conditions capable of fostering real competition among all operators, while exchanges between the companies of many nations that abound today in Europe-and which are often erroneously cited as proof of the existence of a truly competitive market-would be penalised.

A fundamental role in opening up the gas market is played, once again, by investments in transport infrastructures and in multi-annual contracts. As observed above, gas pipeline infrastructures take a long time and a great deal of capital and the companies involved normally associate a return on their investments with a multi-annual supply contract with the producer country and the sale of the gas to the final end user.

The problem cannot but be resolved in a gradual and prudent manner. Supply security requirements and the role of long-term contracts are not to be underestimated, but on the other hand a truly liquid and transparent market, characterised by the presence of efficient, sufficiently large and competitive operators is the best guarantee for consumers both in terms of price and supply security. The problem is associated with the period necessary for achieving the transition from one model to the other. In order to foster greater market openness it is possible to define new rules for the assignment of added capacity to existing gas pipelines, with the idea of obliging the dominant operator to turn over a quota of those contracts to other operators, obviously under the proper conditions. Moreover, even though multi-annual contracts are less common in the electricity sector, analogous measures have already been applied successfully there as well.

A second intervention that could help deregulate transport capacity concerns how to ensure economic return on investments in such infrastructures. In this case, in addition to innovative legislation on tax deductions, possible compensation for at least a part of the risk undertaken could result from a special transport fee fixed by the community. In this way part of the new pipeline capacity would not necessarily be bound by multi-annual contracts since a return on the investment in the pipeline would be guaranteed at least partially by the transport fee, leaving use of that capacity available to other operators. Substantially, this would mean unbundling the transport fee from the sale of the raw material in such a way as to free up additional capacity.

The European Commission observes, in any case, that unbundling of gas transport and storage infrastructures is the most effective first step to any solution. Member States do not all have the same opinion on this point and at the present moment a unified stance does not seem to be in sight.

In any case an essential prerequisite for making those measures efficient seems to be, above all, the community level drafting, and contemporaneous application in all Member States, of the same rules. For “international” gas transport facilities as well, in order to make the sector truly competitive it is necessary to overcome the national dimension in order to embrace that of the single continental market.

One last consideration regarding the opening and integration of markets concerns the proposal for the establishment of a European regulatory authority.

It seems obvious that an authority, or association, based on a series of national regulatory bodies with powers stemming from often non-homogeneous individual State regulations, and whose objectives and authorities are centred mainly at national level, is not the most effective way to draft an efficient regulatory framework for a single continental market.

It therefore appears necessary to establish a regulatory level superior to the national level and one concerned with market integration at least at regional level. But in this case as well many countries are opposed to a European or regional regulatory authority for fear that such a body could complicate and further delay an already complex decision-making process.

A binding form of harmonisation and coordination of the regulatory authority, of network managers and their powers-which, at least initially, deals only with a series of technical issues such as, for example, operational procedures, administration of concessions, investments in new cross-border interconnections-is needed in order to ensure the process of integration which, if left solely to national institutions seems destined to an extremely slow evolution, if not to outright failure.

The third front on which to intervene regards the need to draft and implement a priority energy European infrastructure network plan. Just as in the case of its markets, European energy networks are also feeling the effect of recent national policies: i.e. the fruit of the autonomous decisions by Member States that have always operated in the absence of coordination and, once again, with scarce attention to market integration. The result is an almost always modern and efficient energy network within national borders but with poor interconnectibility and difficulties in administration when considered at continental level.

While respecting the autonomous decision-making capacity of national governments regarding the energy issue, it is nevertheless important to go beyond this fragmentary approach and introduce forms of close coordination among all the actors concerned, outlining a functional community infrastructure plan focused on greater openness and integration of energy markets and increased security for European consumers.

In reality the 2007 Energy Package introduces a community infrastructure plan, but the approach used and the interventions outlined as priority for Europe in the original document-only three lines of electrical interconnection and the “Nabucco” gas pipeline leading from the Caspian Sea to Central Europe-are a long way from offering a sufficient solution.


Wind is free


Wind is free

Nevertheless, despite the fact that the ICI gas pipeline running from the Caspian Sea to Greece and Italy was inserted later among these priority projects, it would almost seem that the fate of these infrastructures were linked more with the needs and insistence of one or another State, which is not a realistic overall vision of the market.

Another extremely important and complex theme in the context of energy networks, but especially as regards electrical power networks, is closely linked with the goal of developing renewable sources and of what are known as “smart grids”.

Those renewable sources have two particular features: that power-generating plants are often made up of numerous separate elements, and that each of them produces energy in a discontinuous and unpredictable manner. The simplest example of these features are wind power “farms”, made up of numerous wind turbines-each of which having its own generating capacity-that obviously produce energy in function of the presence and intensity of wind, a far from predictable element.

These “farms” are cropping up all over Europe in pursuance of the objectives for developing renewable sources, to the extent that they have obtained considerable importance in the overall continental mix.

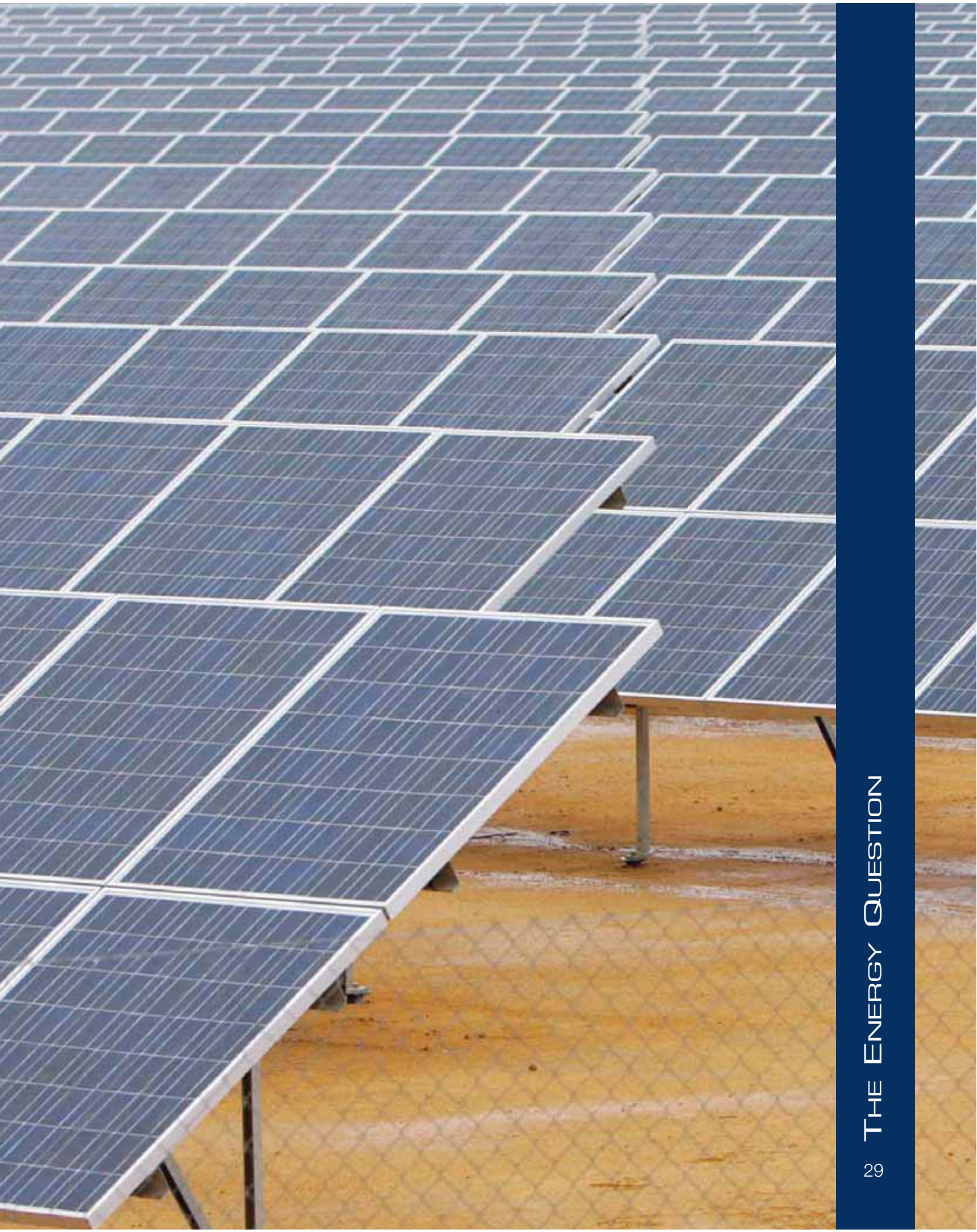
There is, however, a operational problem associated with these plants. Existing traditional electrical power plants are not suited to handling a large number of generators of this sort, since they were designed to handle thermoelectric power for the most part-which is entirely predictable.

The new activity in which these smart grids should be engaging is the automatic and continuous shifting of production into the areas in which these plants actually produce energy, making the most of all the generation contributions and, if necessary, modulating the load by activating and deactivating so-called “interruptible clients” where the risk of imbalance is created in particular parts of the network.

Moreover, smart grids should be bi-directional. Energy currently moves in one direction only- from production plant to consumer plant-but with the spread of solar panels and micro-generators of various sorts, every consumer could theoretically become a producer and consumer at the same time.

The “smart grid” would thus be capable of supplying energy to every consumer when necessary and of channelling back into the network the energy that client produces with his micro-power plant when it exceeds his needs, and all of this, obviously in real time and absolute safety.

It is clear that the development of smart networks is an extremely complex matter, from a technical standpoint, especially when



considered on a continental scale where timeframes are not brief and investments are massive.

It should be pointed out, however, that Italy is first in the world for installing smart metres on a national scale-an initial step in the creation of a “smart grid”-and is currently the world leader in this sector, exporting its experience to other countries as well.

Finally, the creation of a single continental energy market constitutes the basis and prerequisite for the Union's common foreign policy on energy. The European Commission has been stressing this for some time now, noting that, in the long run, it is the most effective strategy for giving Member States a single voice in addressing the main energy issues-producer supply security or climate change strategies-rather than proceeding haphazardly and, in some cases, at cross-purposes. Also in this case, in consideration of the differences in productive mixes and some European countries' reluctance to hand over a portion of their decision-making autonomy to community bodies on questions of strategic interest, a pragmatic approach to foreign policy would initially need to clarify a series of common interests, in which the advantage of a consensual agreement, as compared with a separate approach, is clear and possibly quantifiable.

The goal should be to define common positions on selected, essential topics with a view to combining the interests and consensus of a nucleus of Member States, and then to proceed toward gradually enriching this policy and strengthening the market.

Policies regarding fuel producing nations

The creation of a single European market and the drafting of a common foreign policy on energy are fundamental to ensuring our country's supply security and competitiveness over the medium term. Some strategic issues, however, such as relations with the main fuel producing nations, need to addressed immediately.

In the case of energy importation, Italy is feeling the effect of difficulties that are partly analogous to those already indicated above with regard to the fuel mix: it is entirely dependent on a limited number of producer countries.

The best way to offset a limitation of this sort, other than the already cited diversification of the fuel mix used, is to diversify as much as possible also at the level of supplier country and transit route. To this end, it is necessary to exploit the potential offered by new investments in import infrastructures to the maximum.

Italy depends largely on Russian and Algerian imports for natural gas that, which is one of the fundamental elements in its fuel mix, in addition to being in increasing demand on international markets.

Russia has had trade relations with Italy for many years now and has always proved to be a reliable source. Recent tensions between some of the countries of the former Soviet Union and Russia have

partly changed this perception, demonstrating the potential risks for our country as well, which are amplified by our growing dependence on gas and the shortage of investments in Russian production and transport infrastructures.

For this reason it is necessary to keep in mind that Russian is no longer, in reality, a classic exporter: in order to satisfy its own domestic needs and Europe's export demands Russia has, in fact, acted also as a “trader”, importing gas from the countries of Central Asia that it does not need for itself and reselling it to Europe. The main underlying cause for this, considering the fact that Russia has immense gas deposits, derives from its substantial and continuing lack of investment in the sectors of gas prospecting, extraction and transport, and that the majority of its plants date back to the Soviet era.

The joint effect of the growing European and Russian demand, new opportunities for sale on the Chinese market, and the age and inadequacy of Russian plants could, over the medium term, combine to create a situation in which Russia has difficulty honouring existing contracts with its European partners, with the resulting risk to the consumers of countries more dependent on imports like ours.

On the other hand, it is necessary to consider that negotiating closer trade relations with Russian is also an opportunity. Agreements that allow the Russian companies such as Gazprom to take advantage of rich European markets and European companies to invest upstream in Russia, such as the one recently signed between ENI and Gazprom, are the best guarantee for a secure energy future for both, in as much as they more closely bind Russian interests to European markets and allow for the investments and technology flows that the Russians need.

As for energy supply, no country can expect the European Union to succeed in achieving the objectives that it has set for itself. Nevertheless, the hope is that the necessary national level initiatives take place in a context of greater coordination.

Long-term relations with Russia need to be handled by mediating between our supply security needs and those of Russia regarding demand security, without giving up the efficiency and competitiveness of the European market; necessary at the same time is a stable and transparent legislative and regulatory framework from Russia, capable of attracting the Western capital and technologies necessary to modernise its infrastructures.

In terms of energy supplier diversification, in addition to Russia Italy is hard at work strengthening relations with the countries of the southern shores of the Mediterranean, Algeria first and foremost.

Algeria is our country's second largest gas supplier and, in this case also, it would be advisable for Italy to strive to anchor that country's economy to Europe by promoting investments in trans-

port infrastructure, such as GALSI (the new Algeria-Sardinia-Tuscany gas pipeline now in the development stage), giving its support to an adequate legislative and regulatory framework and involving its industrial sectors in a continuous exchange of experience and professional skill.

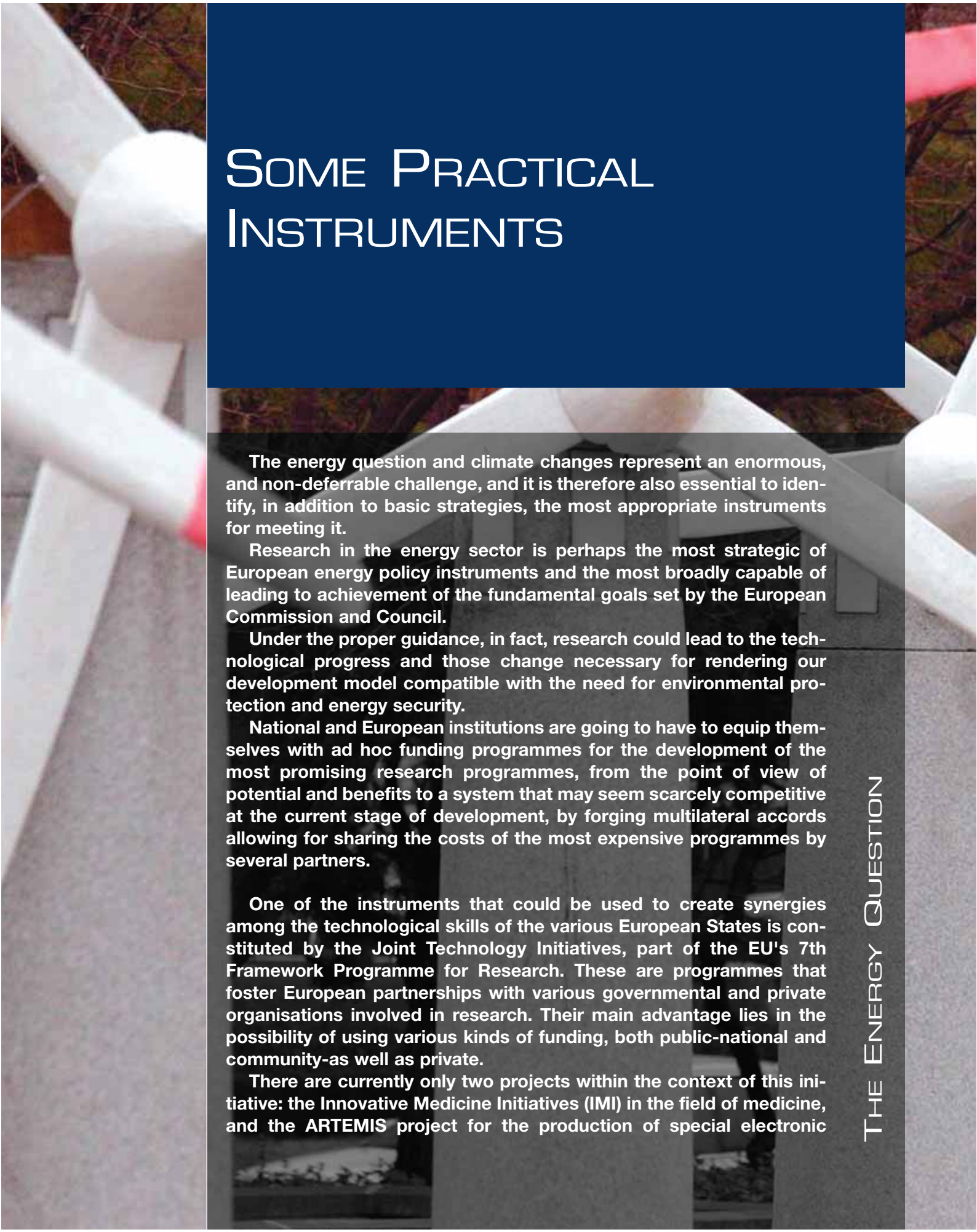
In general, at least as regards energy supply, Italy could play a guiding role in Europe in relations with the countries of the southern shores of the Mediterranean such as Egypt, Libya, Tunisia and Morocco, counter-balancing the weight of Russian supply and European attention toward its new members, for the most part concentrated in the eastern part of the continent.

Relations with the countries of the region of the Caspian Sea and the Gulf area are another medium term objective that requires mediation between community initiatives already under way and national level strategies. Despite the current absence of infrastructures for transporting gas into our country, also as a result of geographical distances, these surely play a strategic role in diversifying Russian and Algerian gas supply, both as a result of new pipelines as well as, and above all, the development of liquid natural gas (LNG).

With regard to the Caspian region, finally, it would be advisable to point out the strategic location of Turkey, a country without any large energy reserves of its own but which is a key country of transit between Europe and the countries of that area, including Iran.

The agreement announced in July 2007 between the Turkish and Iranian governments on the construction of a gas pipeline capable of transporting up to 30 million cubic metres of Iranian gas to Europe shows that Turkey has perfectly understood its potential role in this context.

Negotiations on accession to the European Union and the Europe's future strategies with regard to Turkey should be viewed in light of this role that Turkey could play in the continent's energy security.



Some Practical Instruments

The energy question and climate changes represent an enormous, and non-deferrable challenge, and it is therefore also essential to identify, in addition to basic strategies, the most appropriate instruments for meeting it.

Research in the energy sector is perhaps the most strategic of European energy policy instruments and the most broadly capable of leading to achievement of the fundamental goals set by the European Commission and Council.

Under the proper guidance, in fact, research could lead to the technological progress and those change necessary for rendering our development model compatible with the need for environmental protection and energy security.

National and European institutions are going to have to equip themselves with ad hoc funding programmes for the development of the most promising research programmes, from the point of view of potential and benefits to a system that may seem scarcely competitive at the current stage of development, by forging multilateral accords allowing for sharing the costs of the most expensive programmes by several partners.

One of the instruments that could be used to create synergies among the technological skills of the various European States is constituted by the Joint Technology Initiatives, part of the EU's 7th Framework Programme for Research. These are programmes that foster European partnerships with various governmental and private organisations involved in research. Their main advantage lies in the possibility of using various kinds of funding, both public-national and community-as well as private.

There are currently only two projects within the context of this initiative: the Innovative Medicine Initiatives (IMI) in the field of medicine, and the ARTEMIS project for the production of special electronic

microprocessor systems known as “embedded systems”.

Energy, in one of its many applications, could become a context within which to launch a pan-European Joint Technology Initiative.

As regards technologies that have already passed the pure experimental phase and that only require incentives to pave the way toward further diffusion, thereby eliminating the burden of residual costs, there could be temporary subsidies-or better yet, adequate market instruments-that would make them more attractive to consumers and accelerate market development.

The main research sectors to watch are, first of all, those capable of contributing to reducing dependence on fossil fuels, lowering CO2 emissions and increasing the efficient energy use and savings.

In addition to the development of research in the energy field it is necessary to integrate and coordinate the strategies of individual national governments with the instruments used at European level.

An effective approach could be to support the current European deregulation process with specific investments or market regulation priorities and adequate instruments for their implementation, shifting a portion of the authority and responsibility now in the hands of national governments to community institutions.

The reason for which it would be advisable to assign forms of coordination to supranational institutions, at least on a regional basis, is that today's European energy panorama is a sort of “patchwork” of national markets, regulatory approaches and various dedicated institutions, which are often quite different and in conflict with one another, and the strength of Member State desire has, in many cases, not been enough to spur the rapid and effective integration necessary.

Delegating the specific powers currently in the hands of regulators or national system operators to supranational coordinating authorities could trigger the interconnection of the main European energy infrastructures and harmonisation of the regulations and procedures for their use, resulting in clear advantages with regard to the efficiency of the process itself.

Obviously, introducing new bodies and new powers also leads to a series of problems associated mainly with the fact that the overlapping of a multitude of already authorised institutional actors, both national and community level ones could be a source of conflict, but we believe that this is a risk that needs to be run on the basis of the fact that, in the context of European integration, an exclusively national policy approach is bound to fail.

The practical mechanisms already working at national level as well as continental level, such as the Emission Trading System (ETS) for CO2 emissions, or the major cross-border rail and road transport corridors, are attractive examples of specific objectives and instruments that combine community aims with national responsibility.

By way of example, Cap and Trade mechanisms could be used at community level to help spread the use of renewable energy in Europe, without, however, creating significant national market distortions; while the experience of the European transport corridors could be useful in confronting the problem of interconnecting international energy networks or gas storage plant, no longer in an exclusively national framework but in the wider one of regional market development.

Considering their compatibility with market regulations, apart from the future harmonisation of national policies, fiscal measures could be highly effective in selecting appropriate types of investments and related deductions, or ways of supporting energy efficiency programmes. The translation of the indications contained in the conclusions of the March 2007 European Council into binding regulations for all could give decisive impetus to the achievement of the objectives assigned to each country.

Finally, a note on existing European financial investment support instruments and their possible application in the field of energy.

The European Investment Bank (EIB), the European Reconstruction and Development Bank (ERDB) and Structural Funds have been active for a long time on this front, but must be called upon to play a more incisive role than the one they are currently playing, especially in terms of financing major research projects and infrastructures for the transport and interconnection of energy networks and gas storage.

Indeed, when viewed within the process of deregulation currently under way, all the current initiatives of this type can contribute effectively to the creation of a continental energy market, thereby accelerating continental Europe and its economy's transition toward a more secure and sustainable energy future.

èItalia

La rivista **èItalia**, definita dalla stampa estera **"la Bandiera dell'informazione italiana nel mondo"**, nasce nel 1999 per promuovere il patrimonio economico, turistico e culturale italiano, permettendo alla comunità internazionale di avere costantemente una visione generale del Sistema Italia.

L'apprezzamento del Presidente Emerito Carlo Azeglio Ciampi (con un messaggio appositamente scritto per il primo numero), l'interesse mostrato da parte del Ministero degli Affari Esteri, del Ministero del Commercio Internazionale e delle Camere di Commercio Italiane all'Estero, confermano il prezioso ruolo della distribuzione mirata della rivista, che raggiunge direttamente nei loro Paesi gli Italiani residenti all'estero, le nostre Istituzioni e la business community rappresentata primariamente dalle aziende socie delle Camere di Commercio Italiane, a cui si offre, attraverso i contenuti generali della rivista, un'informazione aggiornata del nostro Sistema Paese.

Caratteristiche e diffusione:
Bimestrale a colori, in edizione multilingue, la rivista è diffusa in 200.000 copie in Italia ed all'estero a: Ministeri, Regioni, Province e Comuni capoluogo, Associazioni di categoria, CCIAA, Biblioteche, Tour operators e Agenzie di viaggio, Ambasciate e Consolati, Camere di Commercio Italiane all'Estero e loro Soci, uffici ENIT e ICE, Aziende leaders.

In edicola: negli **USA** *èItalia* viene diffusa con il quotidiano **America Oggi** e con il **NY Times**, e in **Italia** con il settimanale **Panorama Economy**. La scelta di *Economy* permette di ampliare ancora di più il bacino di utenza garantito da *èItalia* con un settimanale che per autorevolezza e diffusione, raggiunge il mondo delle piccole e medie imprese, oltre a essere riconosciuto come interlocutore serio e affidabile dalle grandi aziende.

Inoltre è on-line all'interno del sito **www.italplanet.it**

EDIZIONI VOICES
Via F.lli Bronzetti, 21 - 20129 MILANO - Tel. 02.70003310 - Fax 02.70003909
voices@italplanet.it - www.italplanet.it

Ministero degli Affari Esteri - Servizio Stampa e Informazione

www.esteri.it

VOICES

Edizioni VOICES -Via F.lli Bronzetti, 21 - 20129 Milano - Tel 02.70003310 Fax 02.70003909 E-mail: voices@italplanet.it www.italplanet.it
Allegato Redazionale al n.46 di Italia · anno VIII-2007 - spedizione. in a.p. art. 2 comma/b legge 662/96 - Filiale di Milano