A contribution to the current EU debate on energy - Focus on the European gas market

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Abstract

The year 2007 is a year of critical choices. Since the beginning of 2006 there has been a continuous debate on energy and climate issues. With the publication of the Energy package early January 2007 the European Commission confirms its ambition to bring forward a comprehensive energy policy for a secure, sustainable and competitive energy market. The Commission intends to release from 2008 onwards concrete measures that will reform the energy scene in Europe.

Eurogas the European union of the Natural gas industry, is committed to the realisation of a secure sustainable and competitive European energy market. While welcoming these general policy signals, Eurogas recommends that the EU policy makers create a stable and consistent set of principles and generally avoid intervention in market forces so as not to distort competition.

The increasing import dependency of Europe on gas sources from far away regions necessitates major investments and further diversification of supply sources and transport routes. A positive investment climate and a stable regulatory and political framework are of paramount importance. To create a competitive European gas market the focus has to be on the integration of 27 national gas markets. A dynamic approach based on closer cooperation between regulators and TSO's is necessary. In this respect, policy makers, regulators and the industry have their role to play but need to be driven by a common and coherent view on the future challenges.

Eurogas is happy to contribute to the current debate. The following analysis will focus on

- The current European energy market
- The Strategic Energy Review and
- Eurogas suggestions to improve the functioning of the European energy market.

1. The European gas market – setting the scene

During the last decade the European gas industry has been confronted with major changes: the opening of the European gas market (European Directives 1998/30/EC and Directive 2003/55/EC concerning common rules for the internal market in natural gas), growing concerns on environmental issues in particular on climate change and the increasing import dependency of Europe raising concerns regarding security of energy supply. These are fundamental challenges for European energy policy involving policy makers, industry and the public.

1.1. To what extent has Europe realised a competitive European energy market?

The opening of the energy market is a complex process and involves a fundamental structural change. It is not an event but a dynamic process requiring time to realise. A lot has been done. Significant progress has been made in implementing the 2003 Gas Directive as noted by the European Commission's 2005 Progress Report (COM (2005) 568 final). The whole gas industry has been working hard on designing and implementing new, more transparent business rules and structures. These were required to ensure non-discriminatory access to gas infrastructures, the central requirement for a competitive gas market to develop. Transportation infrastructures held by integrated companies have been put in legally unbundled entities; this unbundling has been essential to put all potential shippers on an equal footing.

However the transposition of the directives in national law has been implemented in different ways, leading to 27 national markets. The current national laws are not all compliant with the Directive as demonstrated by different infringement procedures launched by the Commission.

1.2. Sustainability

Gas is the cleanest fossil fuel and will make an important contribution to a sustainable development policy. In the "business as usual" scenario, there is a strong growth in gas demand mainly driven by power production. In its reference scenario the IEA is forecasting a growth of the EU's natural gas consumption of 1,4% per year over the period 2004 – 2030 (World Energy

Outlook 2006). However in the alternative scenario based on a policy to further reduce CO2 emission and to enhance security of supply the increase in gas consumption is reduced. Energy efficiency, nuclear energy and renewables play an important role leading to an annual growth of the EU's natural gas consumption of 0,9% over the same period. This means a reduction of 80 bcm in 2030 (which is about the consumption of Germany) compared to a business as usual scenario. Having a clear view on the long term energy policy mix is of course of paramount importance given the long lead times of the investments necessary and the capital intensive characteristics of the gas industry.

1.3. Security of supply

The Russia-Ukraine incident in the beginning of 2006 has given rise to a large public awareness of the dependency of Europe on external gas suppliers.

Europe's indigenous gas production is declining and in combination with a further growth in gas demand this results in an increasing import dependency. More than 80% of the total gas supplies of the EU will be imported from other countries in 2020 compared with 59% in 2005.

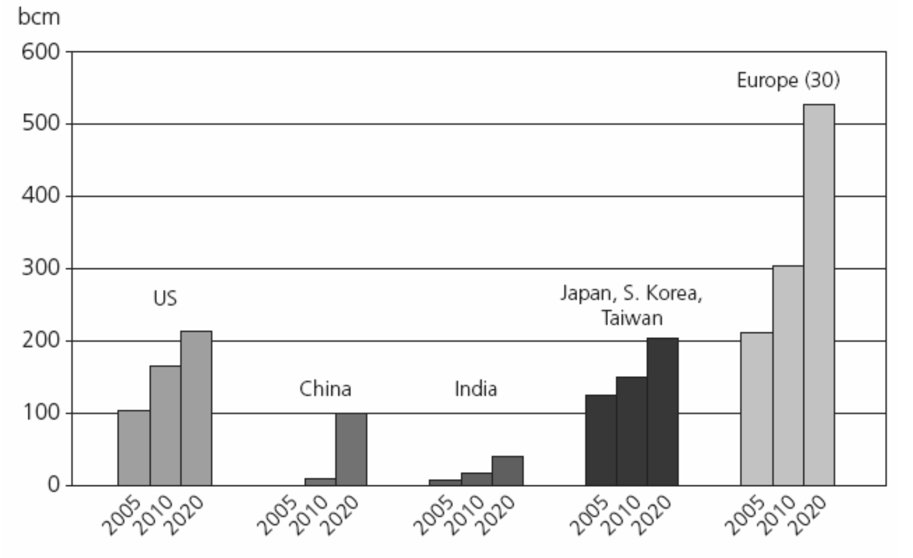
As illustrated by graph I. all consuming regions will need additional imports but Europe is by far the largest importer. Filling the supply gap will be a challenge for the industry. Gas reserves are abundant although mainly concentrated in two areas: Russia and the Middle East region (Graph II.). Growth in world gas consumption will imply higher reliance on large scale-development of international trade and long distance transportation with strong expansion of the LNG trade. Pipeline gas will continue to contribute to the increasing supply needs of Europe. New pipeline infrastructure to bring additional gas from Russia, Norway and Algeria is projected for the following years. To further diversify gas supplies, a consortium of different European gas companies has set up the Nabucco project to supply gas from the Caspian region to Europe.

LNG is playing an increasing role. Currently it represents 15% of the European gas imports (Graph III.) or about 8% of the European gas supplies. By 2020 LNG is expected to provide 15% to 18% of the European gas needs. LNG increases the diversification options and it paves the way for more flexible supplies.

LNG will increase its importance worldwide. Graph IV. illustrates the growing role of LNG flows in the global exports.

For the new LNG sources, Europe is not the only attractive market. Europe will have to compete with the Asia-Pacific region and the US market for LNG supplies. LNG suppliers from the Middle East could well focus on these lucrative markets rather than on Europe.

Graph I: Natural gas imports needs per region

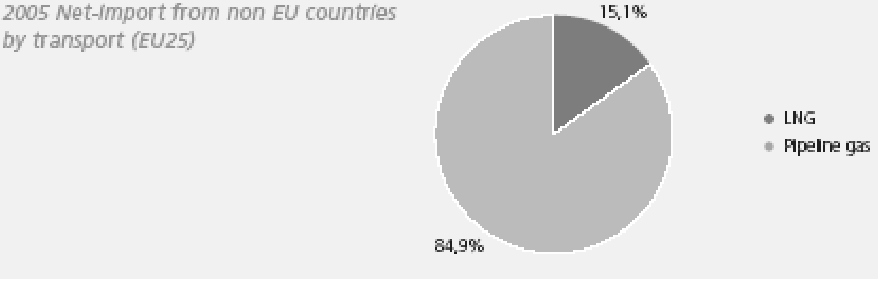


Source: Wood Mackenzie, industry

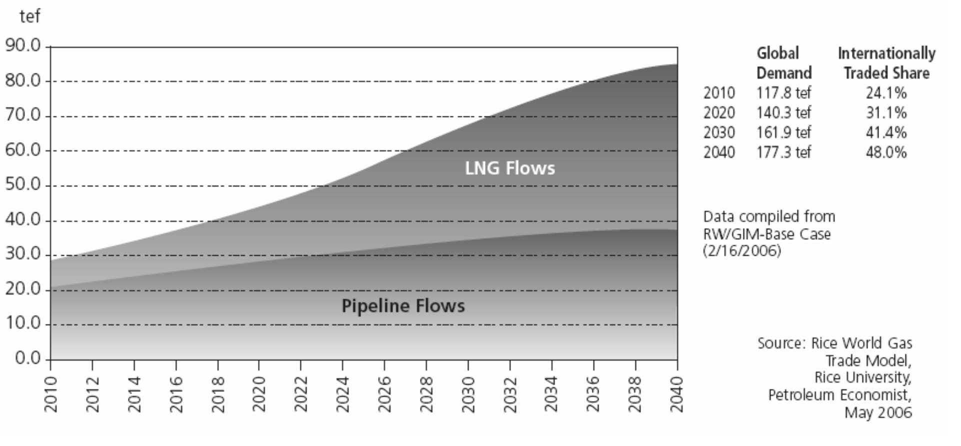
Graph II: World gas reserves – 180.000 milliards m³ R/P ratio + - 66 years

Source: BP Statistical Review 2005.

Graph III: 2005 Net import from non EU countries by transport (EU 25)



Graph IV: Global exports by source



1.4. Main challenges

Today's challenges for the European gas industry are mainly:

- Enhancing its important role in the EU energy mix.

- The environmental qualities of natural gas are well known and therefore natural gas is in a good position to make an important contribution to the EU policy of sustainable development; nonetheless environmental policy emphasis and uncertainties about future supplies could have an important impact on the role of gas in the future energy mix.

- To ensure secure supplies to Europe important investments need to be made in infrastructure (transport, LNG terminals, storage) and in exploration and production.

- Further progress has to be made in the creation of a fully functioning and competitive internal energy market.

2. The Energy Package proposed by the European Commission

2.1. Recent EU Developments

In the *"Energy Policy for Europe"* of 10 January 2007 and in the EU Presidency conclusion of 8/9 March 2007, the European Commission and the European Council set out an action plan to respond to the challenges of the European energy market, dealing with the principal questions of sustainability, security of supply and competitiveness.

In both documents, the action plans set out a wide range of initiatives, making the following points in particular:

- The importance of improving sustainability in energy consumption and production is strongly emphasised. Increasing the role of energy efficiency and the share of renewables in the mix are both top of the agenda. The papers foresee not only binding objectives, but also emphasise necessary innovation in energy technologies.

- Energy is vital to economic development and quality of life and therefore security of energy supply is a main concern. The concentration of primary energy sources in particular areas combined with geopolitical issues, are factors affecting EU policy and necessitate dialogue with the producing and transit countries. The European Council makes a strong call for an international energy policy, with a broad range of initiatives for bilateral and multilateral dialogues.

- Finally the papers describe the role a truly competitive, interconnected and single European internal market for gas and electricity would play in increasing competitiveness, bringing major benefits to EU consumers, and in increasing security of supply. Of paramount importance are the effective separation of the grid activities from the supply and production activities; strengthening the independence and power of national energy regulators, together with an independent mechanism to improve cooperation between them; and necessary consumer protection.

2.2. Sustainability and energy mix

The *"Energy Policy for Europe"* document states, "The present energy policies within the EU are not sustainable". The Council has accepted a unilateral target of 20% greenhouse gases (GHG) reduction in 2020 compared to 1990; a 30% reduction is considered in the framework of an international agreement with the developed countries. The main proposals are to develop proper technologies to provide energy from renewables, and to improve energy efficiency[1].

In order to mitigate GHG emissions, the EC will strengthen the role of the "EU Emissions Trading Scheme" as a tool to create a flexible and cost-efficient framework for more climate-friendly energy production.

It should however be mentioned that the European Commission does not analyse in these documents how these two proposals would affect the energy mix, in particular with regard to natural gas demand from 2005 to 2020.

2.3. Improving security of supply

The position of the European Council and Commission assumes that electricity generation will be heavily dependent on gas and that, without a significant technological breakthrough, oil will continue to dominate transport. So the security of supply of these fuels will continue to be vital to the EU economy.

The Commission recognises the political and economic risks of the increasing dependency on energy supply from imports. Furthermore mechanisms to ensure solidarity between Member States in the event of an energy crisis are not yet in place. Indeed, several Member States are largely or completely dependent on one single gas supplier.

The increase in demand, assuming 'business as usual', and the progressive dependence on primary energy from remote sources, require predictable and effective internal gas and electricity markets to allow the necessary long-term investments to take place. The European Commission's analysis is that these are not yet in place.

[1] The proposed strategy indicates two objectives by 2020: renewables moving from less then 7% to 20% of the energy mix; and an increase of energy efficiency by up to 20%

The European Council and Commission propose increased coordination as part of their action plan, calling for more co-operation and exchange of information among Member States to further enhance security of supply. The Gas Co-ordination Group, set up under Directive 2004/67/EC, plays a role to improve co-operation among Member States, to make their security of supply objectives and means more transparent, and to exchange information on policies.

Another main point is *"…the need to make further progress in ensuring solidarity between Member States in the event of an energy crisis or a disruption in supplies"*. Effective mechanisms need to be put in place to deal with this. The Commission intends to issue a Communication on strategic stocks in 2007 advocating stronger measures if appropriate.

A further initiative calls for Member States to pursue the goal of security of supply with a common voice, forging effective partnerships to translate these into a meaningful external policy. The European Council has endorsed the vision of a long-term framework for external energy, and has agreed to establish a network of energy security correspondents which will provide an early warning system and improve the EU's ability to react when the security of external energy is under threat.

Monitoring, transparency and reporting will be essential elements in the progressive development of an effective European energy policy. The Commission is proposing to establish an Energy Observatory within the Directorate General for Energy and Transport. This Observatory would be responsible for basic functions regarding energy demand and supply in Europe. Its responsibilities would include increasing transparency on future investment needs in the EU for electricity and gas infrastructure and generation facilities and the exchange of best practice, encouraging Member States to develop their energy mix in a way that contributes effectively to the EU's energy goals.

2.4. Towards a competitive market

Provided that the right policy and legislative frameworks are in place, the internal energy market should stimulate fair and competitive energy prices and energy savings, as well as higher investments. However, not all the conditions to achieve this exist. This prevents EU citizens and the EU economy from enjoying the full benefits of energy liberalisation.

To promote a fully functioning internal market, the EU is committed to further unbundling to deliver greater competition, increased investment and more choice for energy users. This will be achieved either through *'ownership unbundling',* or through a fully *'independent system operator'.*

The Commission believes the evidence suggests that ownership unbundling is the most effective way to ensure choice for energy users and to encourage investment. Following the conclusions of the European Council of 9 March 2007 and the position of the European Parliament, the Commission will bring forward a legislative proposal. The European Commission envisages a relationship between unbundling and the level of regulation. Markets in which there is less ownership unbundling require more detailed, complex and prescriptive regulation. In these circumstances, national regulators need more effective and punitive powers to prevent discrimination. However, the Commission considers that obstacles to adequate investment in networks cannot be fully addressed by regulators without ownership unbundling.

The European Commission also argues that the powers and independence of energy regulators need to be harmonised on the basis of the highest, not the lowest, common denominator in the EU. In addition, they believe that for cross-border trade to function effectively, the necessary technical standards have to be standardised. The creation of the European Regulators' Group for Electricity and Gas (ERGEG) and the electricity and gas regulations have not provided the governance required. Most of the relevant technical standards remain different in each Member State, making cross-border trade difficult and sometimes impossible. The Commission therefore offers different solutions from reinforcing collaboration between national regulators to setting up a new single body at community level. The solution preferred by the European Council consists in reinforcing the role of ERGEG. "ERGEG+" would have to structure binding decisions for regulators and relevant market players, such as network operators, power exchanges or generators, on certain precisely defined technical issues and mechanisms relating to cross-border issues.

Achieving sufficient liquidity in the commodity markets is essential for a secure and competitive supply. Liquidity is the result of investments in capacity and commodity infrastructure, so these investments require effective regulation to govern the interdependence between capacities and operations along the logistics chain.

3. The way forward: Eurogas vision

Eurogas endorses the importance the Energy package accords to the three interlinked objectives of a secure, sustainable and competitive European energy market and is fully committed to their realisation.

3.1. The way forward to a competitive market

Although progress has been achieved in implementing the 2003 Gas Directive, Eurogas is keen to see further improvements made.

Proper functioning of the market can be achieved by:

(a) improved regional co-operation as a step towards a fully integrated EU market;

(b) an effective non-discriminatory access regime throughout Europe;

(c) an effective customer switching process underpinned by the necessary transparency, better interoperability, more liquidity, robust investment; and

(d) an improved, harmonised regulatory process.

Full and timely implementation of existing legislation, regulations and voluntary agreements will also achieve progress. Member States' governments, national regulators, and companies all have different responsibilities and opportunities in this area. If new legislation is required to achieve these objectives, a careful impact assessment is necessary and Eurogas has welcomed the Commission's commitment in this respect.

More focus has to be put on creating an integrated European gas market. Eurogas therefore supports the action proposed in the energy policy package to achieve this objective: effective regulation in every Member State through harmonising the powers and independence of energy regulators; speeding up harmonisation of technical standards and development of common business practices necessary to improve interoperability and to permit cross border trade to work effectively; increased cooperation between transmission system operators; increased transparency; fast track planning and approval procedures for infrastructure projects, and finally coordinated European action on international energy issues.

To realise a competitive European market Eurogas considers the following aspects are the main drivers.

3.1.1. Regulation

Eurogas also supports the proposal for an improved supra-national regulatory approach on well-defined issues related to further market integration such as cross-border trade. The objectives and scope of this European level of regulation have to be clearly defined so that an informed choice of the mechanism (ERGEG or other process) to achieve the best results can be made, balancing national and Community interests to achieve a genuinely integrated market.

3.1.2. Unbundling

Effective unbundling is a key element in market liberalisation. However the approach should be appropriate to the type and importance of the objective addressed. Any solution must guarantee non-discriminatory access and a level playing field. Effective unbundling is essential to put all potential shippers on an equal footing. Proper implementation of unbundling should recognise the need to establish an appropriate economic and financial dimension to strengthen market players in today's global competition. The response should be proportionate and minimise the risk of some countries running into legal questions or raising problems from an industrial or social point of view. Most companies who are members of Eurogas think that options based on legal and functional unbundling should be further considered, combined with an enhanced effective regulation and compliance system.

The unbundling proposals contained in the package do not address the issue of the required level of future investments. Whilst there are some common requirements (e.g. transparency), non-discriminatory access, the development of investment and the development of regional markets are clearly different objectives requiring different policy tools. A pragmatic approach aimed at meeting different objectives will achieve the greatest progress towards a single European gas market.

3.1.3. Improving the functioning of the market

A fully functioning internal market will enhance efficiency, which is in the customers' interests, and contribute to security of supply. Effective competition and customer choice should bring innovation in offers and services, including energy efficiency services, and should also drive technological development to improve Europe's competitiveness.

The essential mechanisms envisaged for competitiveness and integration still present a challenge. Enabling customers to switch supply is the first requirement for creating competitive behaviour in the energy market, and ensuring non-discriminatory access to gas infrastructures is a central requirements for a competitive gas market.

Market integration must be improved, as the need to import gas into the EU increases; it becomes even more important that new supplies are able to cross EU networks seamlessly.

Commercial transactions such as swaps can be used as an alternative to the physical transport of gas. Voluntary industry guidelines can complement formal legislation, provided they are universally implemented.

The development of liquid hubs should be promoted to facilitate the exchange of gas within and across Europe. Hubs have their part to play alongside long-term contracts as an important means of generating competition in the internal gas market. Hubs also provide optimisation opportunities. Their role is particularly useful for new market entrants in a zone where their resource base for gas is still limited. Hubs can assist them in gradually building up their portfolio as their market penetration grows.

Entry-exit zones and market-based balancing are required to alleviate physical limitations wherever possible, as they simplify transportation and balancing for users and support liquidity at hubs. Market-based balancing should be the objective.

A successful market-based balancing regime requires a liquid market, with sufficient participants with access to flexible gas supplies and other sources of flexibility and associated transport. There must also be valid and accurate information provided to all users simultaneously within the balancing period by the transmission system operators (TSO) on a common platform to ensure non-discrimination, sufficient to allow participants to manage their own exposure. Ways of improving harmonisation between neighbouring balancing regimes should be investigated. Incompatibility between neighbouring regimes (e.g. between daily and hourly) should not lead to the imposition of extra costs on users.

Capacity allocation must be treated carefully; secondary market and use it or lose it (lend-it) UIOLI rules are essential. Unavoidably, there will be occasions where demand exceeds existing transportation capacity. In these cases, a set of practices and rules is required that promotes and supports competition in the supply of gas, is not anti-competitive, and makes best use of the system. It is very important to encourage a secondary market in capacity trading by capacity holders, but there should also be effective use-it-or-lose-it (lend-it) rules (UIOLI).

The development of these market models should be compatible with the network users' need for long-term certainty and access to reliable capacity, although it must avoid capacity hoarding.

It should be noted that regulated third party access recognising long-term booking of capacity could also provide a regime that would encourage high investments.

As a consequence, the EU gas industry is in the process of radical restructuring and consolidation. The challenge is the emergence of large European companies that should be managed so as not to jeopardise internal competition. In fact, 'industry consolidation' has raised questions regarding its effect on competition and on how to preserve the interests of Europe's consumers, including the right to have a real choice of energy supplier from a range of competing large and smaller supply companies and traders who are able to meet customers' needs at competitive prices. Provided, however, that this consolidation is in line with competition rules, it will bring benefits to European consumers, and will also contribute to the strengthening of the purchasing power of Europe as a whole.

3.2. Security of supply

European consumers will be best placed to enjoy the benefits gas brings in a competitive gas market, only if security of supply to the market is assured. Natural gas is imported increasingly from far away regions at the same time as Europe's gas reserves see an accelerated depletion. Diversification of sources and transport routes is of paramount importance.

So, beside the above considerations on the functioning of the internal market, our key messages on the way forward are very much focussed on how security of supply can be delivered within a fully functioning internal market, exploiting the environmental qualities of gas.

- Each country has developed and should retain responsibility for setting its national security of supply standards within principles set by the Directive safeguarding gas security of supply. It is important, however, that some level of Europe-wide coherence is developed for example to promote and facilitate diversification of supply, while ensuring that national security of supply standards are compatible with the development of an internal gas market.

- Negotiation between suppliers and sellers at industry level was and is the fundamental basis for organising European gas supply. But it is very necessary that this relation be supported by solid political relations, in bilateral and most importantly European dialogues between consumer countries on the one hand and producing and transiting countries on the other hand. This political dialogue has to be supportive of the efforts of the European gas industry. In today's world, energy is a geopolitical issue that cannot be resolved by market dynamics alone although these must continue to be promoted along the supply chain. It is necessary for Europe to speak with one voice in a global energy market.

- Large investments are necessary to bridge the gap between supply and demand; these include not only investments in distant production zones but also in Europe for transmission, LNG terminals and gas storages. With the number of both EU and non EU Member States that new suppliers have to cross, these investments have a broader cross border impact and often require a very long lead time requiring a long-term strategic view of the new gas business. Therefore a policy framework is needed that recognises the necessary long-term requirements and provides appropriate incentives, and it should be a priority of the European agenda to facilitate these investments in supporting all actors involved in these projects (financing institutions, producers, buyers, infrastructure developers, etc.). The impact of the regulatory framework is crucial in this respect since appropriate exemption mechanisms, the long term rate of return allowed for regulated activities, the stability of regulations, stream-lining of planning processes all play a part in ensuring the necessary infrastructure and facilities are in place.

- For suppliers, long term take or pay contracts should remain crucial and for most companies indeed will be the backbone of their supply strategies not only for their contribution in securing investments along the whole gas chain by the predictability they give, but also because they tie together buyer and seller with a mutually acceptable balance of risks.

- At the same time a more liquid market supported by shorter-term contracts, spot, and hub development, has to be achieved to complement longer-term arrangements, widen supply options by improving flexibility and enhancing portfolio optimisation.

3.3. Sustainability

Eurogas endorses the call to intensify efforts to combat climate change. It is also confident that gas will remain the fuel of choice, and will make an important contribution to a sustainable development policy thanks to its abundant reserves in the world, its relatively low emissions of CO_2, and its clean combustion.

To avoid a number of conflicting support schemes for renewables across the EU, it could perhaps be more effective, and more coherent with internal energy market objectives, to set a single long-term EU target for CO_2 reduction, thus allowing Member States to choose their own energy mix, instead of setting individual targets for different fuels and activities.

The EU Emissions Trading Scheme (ETS) is a key part of the EU's strategy for reducing emissions from industry. Eurogas supports measures to improve the effectiveness of the ETS and ensure it provides a market value for carbon, but urges caution in the introduction of other trading schemes and advises that this should be managed carefully, so that it does not unduly add to the administrative burden of suppliers and energy users. We therefore support the widening of the scope of the ETS after 2012 to incorporate other sectors.

Carbon capture and storage (CCS) will also require some further changes to the legal framework for CO_2 storage. Eurogas does not favour specific CCS obligations or other mandatory measures. By building the price of carbon

into the power price, the EU ETS will assist the technology, should it prove viable.
Advanced gas technologies can also play a useful role, improving the efficiency of energy distribution and enhancing utilisation of efficiency, together with other instruments in the energy Efficiency Action Plan.

Energy efficiency has a key role in responding to the challenge of climate change. Eurogas members are already involved in a range of energy efficiency schemes and their relationship with customers means they are well placed to support initiatives in this area. However, intervention in the market must be consistent with competition/market principles and structures, and in the longer term should be linked with wider carbon-based trading schemes.

Eurogas believes it is essential that the policy framework ensures gas can play a full role in meeting the objectives of sustainable energy supply, in order to create the best energy mix in environmental terms.

4. Conclusions

Eurogas fully supports the threefold objectives of a secure sustainable and competitive market. Looking at the challenges the gas industry faces the main priorities are to realise further market integration and create an environment conducive to new investments.

A consistent and balanced approach between internal market aspects and the external dimension is of paramount importance for a well-functioning gas market. In a globalising gas market Europe has to compete with other regions for new gas resources, at an increasing distance from Europe and under the control of a limited number of mostly state-controlled suppliers. Large investments are needed and a stable regulatory and political framework is a pre-condition for their realisation. European level dialogues are essential with producer and transit countries that are aimed at solid political relations, based on the principle of reciprocity and will promote market dynamics, that support gas industry business.