

**Proposal for a Directive of the European Parliament and the Council concerning measures to safeguard security of natural gas supply**

(2002/C 331 E/41)

(Text with EEA relevance)

COM(2002) 488 final — 2002/0220(COD)

(Submitted by the Commission on 11 September 2002)

**EXPLANATORY MEMORANDUM**

**1. Background**

*1.1. Completion of the internal market for energy*

The European Union is making steady progress towards the completion of the internal market for gas and electricity. In fact, the EU is in the process of creating the largest, integrated and most open regional electricity and gas market in the world. As demonstrated by the Green Paper 'Towards a European strategy for security of energy supply' (COM(2000) 769), this market integration will contribute to security of supply, provided, however, that markets are truly integrated. The European Council at Barcelona on 15-16 March 2002 therefore stressed the importance of powerful and integrated energy networks as the backbone of the internal market and an important precondition for connecting the European economies.

However, market opening and sufficient physical interconnection of markets are not in itself a guarantee of a liquid market based on secure gas supplies from both indigenous and external sources. It is therefore important that the current profound changes in the market and the transition towards a fully open internal energy market are supplemented by transparent and unambiguous new policies defining the overall framework as well as clear roles and responsibilities of the different market players with regard to security of supply within the new market context.

In order to ensure the continued well-functioning of the internal market for gas, it is equally important to ensure that appropriate measures are implemented to deal with extraordinary supply situation.

*1.2. Increasing importance of gas and expected rising import dependence*

Natural gas is becoming an increasingly important source of energy in the EU's fuel mix. In 2000, natural gas accounted for approximately 24 % of total EU primary energy supply compared to 16 % in 1985 and less than 2 % in 1960. The steady growth trend continues, even in times of low economic growth. In 2001, Western European gas consumption increased by 2.5 % notably as a result of significant increase in the number of household customers and in gas consumption in power generation.

Natural gas has sustained its position as the fuel of choice in EU power generation. Since 1995, gas-fired power generation has every year represented 50-60 % of new investments in EU power generation. The most remarkable development over the last decade has been the increasing share of combined-cycle gas turbines (CCGTs) due to a combination of a change in the EC stance on gas-fired power generation at the start of the 1990s, technological progress, relatively competitive gas and environmental considerations.

EU demand for gas and electricity is expected to increase considerably over the coming twenty years. Both EU gas and electricity demand is expected to increase by more than 40 % before 2020 and a market share of gas in EU energy supply of up to around 30 % is realistic. The key driver in gas demand growth is power generation. Two-thirds of the increase in gas demand is forecast to come from gas-fired power generation and co-generation. The increasing dependence on gas in power generation raises a number of issues with regard to the increasing interdependence between the two sectors notably with regard to security of supply.

Europe, however, is in a relatively favourable gas supply situation with significant own gas reserves and 70-80 % of global gas reserves within economic reach of the European market. When implementing the EU Gas Directive later this year, Norway will become a fully integrated part of the internal gas market. Combined EU/EEA gas production is expected to increase over the coming decade based on proven and additional discovered gas reserve potential. By 2010, the internal EU/EEA gas market is expected to depend on imports for up to 25-30 %. An enlarged internal market including the 10 Central and Eastern European candidate countries is expected to depend on imports for 35-40 % by 2010.

Further EU/EEA gas reserves may well be mobilised before 2010, which could help further sustain EU/EEA gas production levels and hence delay a significant increase in EU/EEA gas import dependency. However, as a function of the expected rapid increase in gas demand combined with an expected gradual levelling off and decline in domestic EU/EEA gas production at some point in time, the EU/EEA is expected in the longer-term to become increasingly dependent on imported gas. Based on the current demand forecast by Eurogas and the Commission and production forecast by the International Association of Oil and Gas Producers (OGP) for EU and Norway, the level of import dependency of EU15/EEA could reach nearly 60 % by 2020. For EU25/EEA, the level could reach 65 % by 2020. According to recent analysis made by the OGP, these levels could, however, be lower if allowance is made for developing possible upside resource potential including 'undiscovered potential' and given the right economic conditions.

On the other hand, however, the import dependency of the EU as such (i.e. without Norway) would be significantly higher and possibly as high as three-quarters by 2020 for EU15.

Import dependency varies significantly between Member States. A number of EU Member States are already completely dependent on imports while others will see their dependence rise close to 100 %.

On this background, security of supply and Europe's continued ability to attract sufficient gas supply naturally becomes a priority. Security and continuity of supply is particularly crucial in the power-generating sector. Cost of failing security of supply can be very substantial to modern society as the California electricity supply crisis has borne evidence to. The cost to society of the rolling black-outs in California in January 2001 has been estimated at 42 billion USD or some 3.4 % of California's GDP.

Continuity of gas supply is also essential to other consumer categories notably small customers without switching capabilities to alternative fuel such as many large industrial customer have notably with the possibility to interrupt gas supply and switch to back-up oil supply.

The Green Paper 'Towards a European strategy for the security of energy supply' (COM(2000) 769) therefore suggested that in order to widen and renew policy of fuel stocks, the European Union 'could consider extending the [oil] stocks mechanism to natural gas . . . The Union needs to guard itself against excessive vulnerability, resulting from too great a degree of dependence'.

In its Communication on 'Security of EU Gas Supply' (COM(1999) 571 final), the Commission announced that it would report on a regular basis to the Council and the European Parliament on EU gas security issues and if and when appropriate, the Commission would 'make proposals to strengthen security of EU gas supply and further develop the common framework for security of gas supply'.

### 1.3. *The internal market for natural gas of the EU and security of supply*

The completion of the internal market for natural gas in the European Union and ensuring security of supply are compatible objectives. It is obvious that a well functioning single market for gas relies on a sufficient level of secure gas supplies from a diversified range of supply sources. For this reason, an integral part of the creation of the EU internal gas market are measures ensuring security of gas supplies in the new market environment.

Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998 concerning common rules for the internal market in natural gas <sup>(1)</sup> has made very important contributions towards the creation of the internal market for gas. The directive already acknowledged the importance of security of supply for the internal market. Consequently, it allows Member States the possibility of imposing public service obligations on natural gas undertakings in relation to security of supply.

The creation and development of an internal market for natural gas inevitably renders Member States increasingly interdependent regarding security of supply issues. As a result, failure to adopt adequate measures in one Member State can have serious consequences regarding the operation of the internal market throughout the European Union. It is therefore essential, in order to ensure the proper functioning of the internal market, to provide for a minimum level of harmonisation regarding security of gas supply policies in each Member State, in order to avoid market distortions and ensure the well functioning of the internal market for gas on a level playing field.

Liquidity forms an indispensable ingredient of a proper functioning EU internal gas market. Measures aimed at enhancing liquidity, such as spot markets, incentives for new gas supplies from internal and external sources and non-discriminatory authorisation procedures for building storage and LNG facilities, should, among other things, be fully taken into account by security of supply policies in a competitive market environment.

## **2. The European gas market in transition — clear security of supply rules are important as an integral part of the internal market.**

The European gas industry has managed security of supply in a steadily growing European gas market over the last four decades very successfully. However, the European gas market is undergoing rapid change these years and the role of traditional market actors is also changing.

Hitherto, the task of planning and developing the gas network to fulfil gas security targets (as often defined by the gas industry itself) was relatively straightforward as the dominant suppliers controlled all the infrastructure requirements, gas supply and demand side portfolio, information and other necessary instruments to conduct this planning. In addition, direct state involvement was less necessary as the national gas companies responsible for security of supply in many cases were partly or fully publicly owned. Until now, few Member States have therefore been directly involved in setting security of supply policies for natural gas.

In the new liberalised gas market, however, no single player will necessarily maintain the overall responsibility for short- and longer-term security of gas supply at national level as industry restructures, national markets integrate, new entrants emerge and competition develops. While security of gas supply forms an integral part of the internal market for gas, security of supply policies and procedures need to be reviewed and formalised in this new context, which represents different circumstances. In a competitive market, it is not evident that strategic priority will be given by gas suppliers to security of supply. The primary objective and role of gas companies is changing towards being competitive. Organising security of supply can therefore not be left to industry alone and Member States have an obligation to ensure that all market players take minimum measures with regard to security of supply. Moreover, security measures can be costly and it is perfectly feasible that certain operators could neglect these measures to reduce costs if no agreed minimum standards apply.

The adoption by Member States of measures requiring industry to meet minimum standards is therefore an important integral part of market opening. The creation of an internal market is not simply freeing customers to choice, but also ensuring that the market provides high levels of public service, foremost amongst which is security of supply. The existing Gas Directive (98/30/EC) therefore acknowledges the right of Member States to consider security of supply as a public service obligation. Security provisions are not a consequence of the creation of the internal market, but a central part of it. Without a common framework establishing harmonised minimum standards with respect to security of supply obligations, a real risk of market distortion exists.

<sup>(1)</sup> OJ L 204, 21.7.1998, p. 1.

Security of supply and competition are compatible objectives and gas security can be enhanced in the single EU gas market when properly planned for by companies in liaison with the responsible authorities. A sufficient and appropriate level of security of supply will contribute to a proper functioning of the internal market. The transition to the new market regime is obviously particularly important with regard to clearly defining the new rules and ensuring in operational terms a continued high level of security of gas supply.

Article 24 of Directive 98/30/EC concerning common rules for the internal market in natural gas allows Member States to take necessary safeguard measures in the event of a sudden crisis in the energy market. Such measures shall, however, cause the least possible disturbance to the functioning of the internal market and shall be least restrictive to competition. Measures taken shall be notified to other Member States and the Commission, which may decide that the Member State concerned must amend or abolish such measures if they distort competition or trade in a manner which is not in the common interest. It is necessary to complement these measures by establishing minimum levels of action by each Member State, which need to be compatible with the requirements of the internal market.

A clear need exists therefore to have such emergency measures defined and agreed in advance rather than Member States developing these if and when a sudden crisis arises.

The European gas industry including both GTE (the European association of transmission system operators) and Eurogas have stressed the need for the definition of clear roles and responsibilities of the individual market players with regard to security of supply<sup>(1)</sup>. In a rapidly changing market, it is extremely important that any uncertainty with regard to security of supply responsibilities is avoided. Lack of clarity with regard to security of supply will in itself increase the risk of a supply crisis.

The primary responsibility for an overall definition of such clear roles and responsibilities within the new legislative, regulatory and market framework of the internal market lies with Member States.

While the operational responsibility must remain with the gas industry, Member State governments as well as the Community have therefore an important coordinating and supporting role to play in this respect. The role of government will be to ensure that the market is working efficiently and giving true signals to guide the participants in interpreting and managing change while maintaining the appropriate level of security of supply. The role of the Community will be to monitor implementation of the new security of supply policies and ensure their compatibility with the requirements of a well functioning internal market.

The fifth meeting held in February 2002 of the European Gas Regulatory Forum, which brings together the Commission, national regulatory authorities, Member States and all relevant gas market stakeholders agreed on a set of recommendations on 'Guidelines for Good Practice' in relation to third party access services. The guidelines include some initial elements aimed at clarifying the roles and responsibilities of the main parties in gas transportation notably the transmission system operators (TSOs) and network users. In addition, the Forum agreed that<sup>(2)</sup>:

'Within the new regulatory and market environment of the internal market for gas characterised by a multitude of market players and unbundling of integrated gas companies, security of supply can no longer be assumed to be the responsibility of one single party.

A new chain of responsibilities with regard to security of supply and infrastructure planning between public authorities and the different market players including shippers and TSOs therefore needs to be enshrined in order to ensure certainty in this respect. Obligations must be allocated clearly to different players and appropriate to their role.

In this respect Member States will have a role in defining security of supply output standards within a public policy framework. Within this framework it may be left to the market and industry to develop the most efficient solutions to meet the agreed outputs.'

<sup>(1)</sup> GTE i.a. in 'GTE Position Paper', 15 June 2001. Eurogas i.a. in 'Response of Eurogas to the DG TREN Strategy Paper', 19 March 2001.

<sup>(2)</sup> 'Conclusions of the 5<sup>th</sup> meeting of the European Gas Regulatory Forum, Madrid, 7-8 February 2002'.

However, security of gas supply is not merely a question of balancing demand and supply in a competitive market every day. It also has a long-term strategic aspect.

In view of the above and in view of the transition towards a fully operational and integrated single gas market, Member States should therefore, in function of their gas market features and structures, monitor and ensure that security of gas supply policies are adapted to the new market environment and properly translated into clear roles, operational responsibilities, security criteria and emergency procedures for all participants involved in the gas business within the new legislative framework. This is also important in order to avoid that different approaches to security of supply become a barrier to entry and cross-border trade and so impede the completion and well functioning of the internal gas market. It is equally important, however, to ensure that the new framework and procedures are implemented in a way which does not create significant difficulties for companies with small market shares or new market entrants.

### 3. The importance of storage

Gas production and long-distance transportation is capital-intensive. Due to much lower energy density for gas than, for example, for oil, the cost of gas transportation per unit of energy is much higher for gas than for oil and represents a very significant part of the total end-consumer price for gas. In practice therefore, most production from far away fields and long-distance gas transportation pipelines are operated at high utilisation rates with a relatively constant flow. As, however, demand for gas fluctuates considerably during the year, a significant difference exists between supply and demand profiles.

For optimum results, gas storage facilities (either in underground depleted fields, aquifers or salt cavities or in above-ground LNG peak shaving installations) are therefore used, preferably close to demand centres, to help balance the inevitable mismatch between supply and demand thereby reducing unit costs of gas supply. If there were no gas storage at all, both production and transportation capacity would have had to be designed to meet the peak day demand and therefore most of the time have significant over-capacity.

Underground gas storage therefore plays a key role in EU gas supply both under normal operational circumstances as well as in case of supply emergencies and there are economic and strategic reasons why gas storage should be located close to the market. Gas companies therefore seek, as far as geology and economy allows, to spread storage facilities as well as possible and to locate them as near to large demand centres as possible i.e. preferably not too far from large cities.

Underground storage therefore serves several functions including:

- strategic reserve for security of supply in case of disruption (particularly used in Member States with high dependence on non-EU gas imports);
- seasonal load balancing to match peak demand (gas is pumped into the storage during the spring and summer and typically withdrawn from October/November to February/March);
- achieving daily balance;
- arbitrage of gas prices i.e. commercial optimisation of variations in gas prices e.g. around periods of recalculation of gas prices (e.g. beginning of quarters) and more generally as a commercial tool in liberalised markets (notably in the UK). As gas prices in a competitive gas market is expected to increasingly reflect demand and supply for gas, new patterns of price variations and volatility may be expected. Under such circumstances, it should be expected that gas from storage would be released in case of high prices hence limiting volatility.

- overall system optimisation including facilitating swaps;
- transmission support such as mitigating localised capacity constraints or critical pressure thresholds.

While there may be short-term adjustments with regard to requirements for storage and the wish of market players to carry the costs of gas storage, it is generally expected that availability of storage facilities will become increasingly important over time due to growing EU gas demand and import dependency and thus the need for additional storage for security of supply reasons. Furthermore, additional need for storage will exist for load balancing and due to increasing import dependency and relative declining flexibility from domestic production.

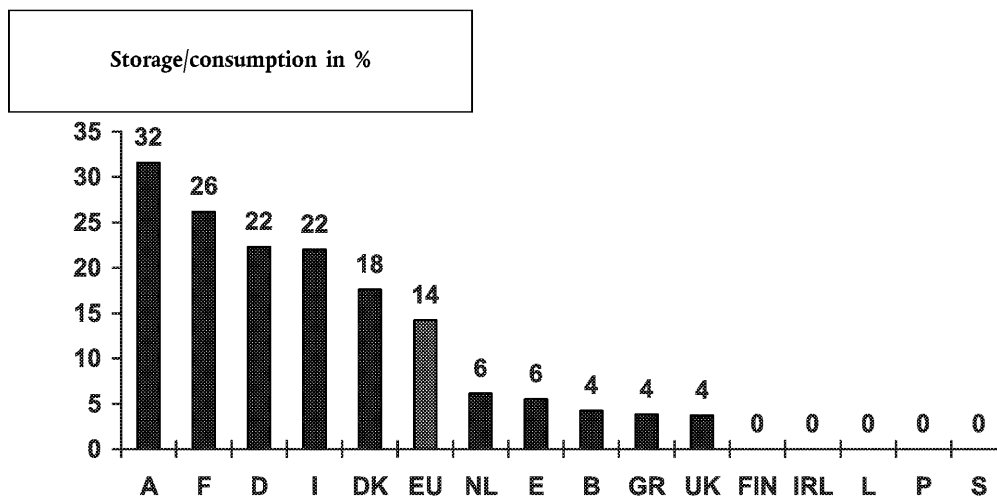
The availability of storage and equivalent alternative flexibility mechanisms as an integrated part of the overall gas supply system is crucial for an efficient operation of the gas system. Providing for non-discriminatory third party access to storage is therefore essential both for the functioning of the internal market and for security of supply reasons. In addition, based on experience from other regions of the world, it may be expected that the development of the internal market will offer new commercial opportunities to owners of storage facilities. It is therefore important that the European Union is prepared to meet the challenges, which this represents in terms of ensuring sufficient development and availability of storage.

The Community should therefore also give high priority to support the development of gas storage as appropriate under the TEN-Energy programme.

The development of a fully operational and liquid internal market for gas with spot markets gradually developing will contribute to security of supply. Security schemes and gas stock requirements at national level should be compatible with and not hamper but support the development of a competitive internal market for gas. In this respect, non-discriminatory access to storage is particularly important.

#### Mixed picture regarding storage requirements at Member State level

The graph below shows the storage volume in percentage of annual gas consumption.



The graph clearly illustrates the different relative importance of underground gas storage in the different Member States and the absence in some Member States of storage. On average, EU gas storage capacity is equivalent to approximately 50 days of gas consumption (or 14 % of total consumption). Austria holds storage equivalent to 115 days of average gas demand, France for 95 days, Germany and Italy for around 80 days and Denmark for around 65 days. The UK, Greece, Belgium, Spain and The Netherlands have storage equivalent to in the order of 10-20 days of average gas consumption while the remaining Member States have no storage capacity. In some Member States, the geological sites available for construction of new underground gas storage facilities are limited or non-existent. Some Member States therefore rely on storage or back-up services from other Member States. Normally it would not be optimal — but it can be necessary — to cover a storage need in a specific area through remote storage facilities. With a view to both strengthen the internal EU solidarity and co-operation with external suppliers, there may be certain projects of common interest with regard to storage development in Europe which merit further analysis.

#### **4. The importance of long-term contracts and liquid gas markets**

Long-term Take-or-Pay contracts have played a very important role for the build-up and development of the European gas market. In particular, in the past, investment in the gas supply industry has usually been underpinned by the conclusion of long-term contracts by European gas companies. Long-term contracts provide an important element of stability for external suppliers and enhance their ability to continue the development of large-scale capital-intensive gas supply projects. Long-term contracts may also facilitate the diversification in the medium term of EU's gas supply and help bring new sources of gas to the market hence enhance supply-side competition.

The Commission considers that the conditions established by the internal energy market will ensure that such contracts will continue to exist, and will continue to underpin security of supply in the internal gas market in an appropriate manner. Indeed, it is clear that EU gas undertakings, as part of their overall contract portfolio, will continue to meet gas needs through such contracts for supply in a competitive market.

Nonetheless, given the importance of long-term contracts for the security of supply of the EU gas market — such contracts are likely to remain necessary to underpin the financing of major new gas supply projects such as the Stockman field — it is appropriate to provide for a safety net, in the unlikely and unforeseeable event that insufficient long-term contracts develop. It is equally important, however, that the existence of long-term contracts does not frustrate competition either via the explicit inclusion of restrictive conditions, or by significantly foreclosing markets. Furthermore, it is important that long-term Take-or-Pay contracts evolve and adapt to the new gas market environment.

On the other hand, it is important to ensure that sufficient liquid gas supplies develop to enable the internal gas market to function properly and competitively, and also to provide the necessary conditions for gas companies to adopt a balanced contract portfolio.

This implies not only the development of gas spot markets throughout the EU — which can provide certainty that producers, suppliers or customers having sold or bought gas on a long-term basis can sell the gas, at the prevailing spot price, if they are unable to find direct outlet for the gas in the market — but equally concerns the adoption, where necessary, of gas release programmes by Member States.

Considerable progress on the development of liquid gas supplies has been made in recent years, notably in the UK and North-Western Europe where trading hubs are operating or emerging. In certain countries, gas release programmes have been implemented and have contributed to new market entry. Furthermore, action taken by the Commission under competition law in the gas sector, such as the GFU case, have further contributed to increased liquidity. The Commission is convinced that this process will, and indeed needs to, continue. Nonetheless, again a safety net needs to be provided in the event that such development do not take place.

## 5. Existing security of supply policies at Member State level

It is important to notice that the gas supply situation varies considerably between Member States as natural resource, geological and market circumstances differ. The supply situations of Member States vary significantly both in terms of availability of domestic gas production, the importance of gas in the overall energy balance, dependence on external gas supplies, availability of underground storage, the level of interconnection etc.

Member States and their gas industries therefore also deal with security of supply in different ways depending on their individual circumstances, market characteristics and technical options available and their relative costs.

Given these different situations, the European gas industry employs different combinations of supply-side and demand-side tools and procedures to respond to short-term security of supply difficulties. These include system and supply-side flexibility; storage and interruptible customers. The range of facilities available to gas companies allow them to ensure that gas demand and supply are matched at any given time i.e. seasonally and within-day, and that emergency situations can be dealt with.

In order to meet customer demand, the gas supply system necessarily needs to be designed to meet the combined, aggregated peak demand. Gas supply systems are often designed to meet the peak demand of the coldest day, which statistically occurs, for example, once every 20 year and the coldest winter, which statistically occurs once every 50 year.

A number of Member States and large gas companies have in some way specified conditions which need to be fulfilled in relation to security of supply or availability of storage for existing and new entrants into the market:

- In Italy, for example, new entrants importing non-EU gas into the Italian market are required to hold gas stocks equivalent to 10 % of the annual supply.
- In Spain, overall gas supply dependency upon any single external supply source must not exceed 60 % and there is an obligation on gas suppliers to keep gas reserves for at least 35 days of supply.
- In the UK, security of supply standards are defined to meet '1 in 20 years' peak day demand and '1 in 50 years' winter duration. Similar standards are applied in The Netherlands and France and other Member States.
- The French gas system has also been designed in order to be able to withstand (notably through strategic gas stocks) disruption of the largest source of supply for up to one year.
- In Denmark, the integrated gas company, has designed its back-up and storage capacity to be able to continue gas supplies to the non-interruptible market with no alternative fuel switching capacity in case of a disruption of one of the two offshore gas pipelines supplying gas to Denmark.

## 6. Effective mechanisms essential for dealing with extraordinary supply situations

While it appears that a number of Member States base their security of gas supply on a combination of extreme weather conditions and an 'n-1' availability of gas supply sources i.e. that one of the range of supply sources available is disrupted, there appears to be a lack of transparency in the security of supply policies applied at national level which in many cases appear not to be sufficiently well-defined and formalised and not reflecting the market changes taking place. Improving coordination at both national and EU level and improving transparency in this respect must therefore be a first priority.



Despite the diversity in the supply situations in Member States and due to the structure of the gas supply to the EU, the main supply risks of individual Member States is often a common risk shared with other countries. The risk of disruption in gas supplies to Europe from any of the principle suppliers, for example, would have serious implications in a number of Member States. In such a situation, only coordinated efforts to remedy a disruption will be sufficient. This gives a common EU dimension to measures aimed at preventing or managing a major gas supply crisis and it requires solidarity at EU level to minimise any negative impact.

In view of the increased market integration within the internal gas market and the European interdependence (the 'weakest link' in security terms could have an impact on security elsewhere in the internal gas market) and in order to ensure a balanced, transparent and coherent system of risk sharing, it is necessary to ensure that adequate and effective European mechanisms for safeguarding security of supply and coordination and intervention at EU level in case of extraordinary supply situations are adopted with a view to ensuring proper functioning of the internal market.

It is important that in pursuing this, proper account is taken of the diversity of supply situations in Member States and that the European gas industry maintains the operational responsibility for implementing the necessary measures.

With regard to gas, the proposed new Community framework pursues the same aims regarding security of supply as the proposal regarding oil stocks. Thus, it introduces strict and quantitative requirements with regard to security of supply standards, and defines the manner in which these standards must be met. In particular, it requires Member States to define and publish the manner in which they guarantee that non-interruptible customers, i.e. customers who cannot immediately switch to alternative back up fuels, are ensured continued supplies during sixty days in the event of a disruption of the largest supply source to the market in question. Similar provisions exist regarding extreme weather conditions and thus extraordinarily high demand, which require supplies to such customers to be guaranteed throughout the entire period of exceptional demand in question.

Given the considerable differences between the gas and oil markets, these measures are de facto equivalent to the obligation to maintain minimum oil stocks. However, the new framework does not envisage at this stage, as for oil stocks, the definition of minimum gas stock levels that Member States should hold in order to guarantee security of supply. This is because not all Member States have equal geological conditions for underground storage and indeed in some countries no suitable storage sites exist. Thus, each country needs to rely on a different mix of instruments to achieve the 60 day obligations and the high demand coverage requirements, based on storage (within or outside the country in question), production flexibility arrangements, linepack and other available measures.

Furthermore, whilst the different geological conditions and the significant advantages of having storage close to demand (and thus avoiding the additional costs of relying on distant storage) mean that a legally binding minimum storage requirement on a Member-State by Member-State basis would not at this stage be appropriate, storage will and must play an important role in Member States' security policies. The proposal therefore requires all Member States to publish indicative quantitative targets for the future contribution of storage in meeting their security of supply standards.

Finally, it is important to underline that, in view of the different degree of availability of storage in Member States and hence the importance of ensuring Community solidarity and co-operation across borders, non-discriminatory access to available underground storage capacity, as emphasised in the Commission's proposal of March 2001 for a Directive amending Directives 96/92/EC and 98/30/EC concerning common rules for the internal markets in electricity and natural gas, is essential.

More generally, it is absolutely indispensable that the security of supply policies to be defined and implemented by Member States are compatible with and contribute to the completion of a fully operational internal market for gas. It is particularly important that the security of supply policies are implemented in a non-discriminatory manner and in no way hamper the entrance of new market participants.

## 7. Technical expertise supporting the implementation of the measures

The creation of the internal market for energy is gradual and very complex in particular in relation to the implementation of technical rules. It is therefore important to ensure that the new legislative framework is applied in an effective, efficient, non-discriminatory and homogeneous manner by all market participants under conditions, which will guarantee the competitiveness of the companies.

The various phases of the development of the internal market for gas and electricity should therefore be accompanied by measures which would allow notably to convene national regulatory authorities, Member States, market operators and the Commission in the context of technical working groups. These working group meetings should examine the most appropriate measures to be taken in order to implement the opening of the gas and electricity markets, and should regularly make technical recommendations to the Commission.

Similarly, the new Community framework, which will be created in order to enhance security of gas supply, within the context of the internal energy market, will require complex and technical tasks to be undertaken and accomplished. These will notably relate to monitoring the development of international markets and assessing their impact on safety and security of supply. The effectiveness of the measures in place will have to be continuously evaluated. In this respect, the measures aimed at guaranteeing security of gas supply including the level of gas stocks held by Member States will have to be monitored. In order to be able to carry out these tasks, objective, reliable and comparable data will be necessary.

In the event of an energy crisis, the European Commission may issue recommendations on appropriate measures to be taken by Member States or may, by decision, require Member States to take specified measures. The effects of these measures will need to be evaluated.

It therefore appears essential to create, within the Services of the Commission, a European Observation System for supply of hydrocarbons, which will gather the necessary expertise in order to respond to the highly technical issues involved in these tasks. It will provide, under the aegis of the Commission, the technical and scientific assistance and a high level of expertise to assist in the correct application of Community legislation in the field of gas supply.

The European Observation System shall be run by the Commission, which should invite to the meetings representatives of the Member States as well as representatives of the sectors concerned.

## 8. Conclusions

On the basis of the foregoing, it may be concluded that security of gas supply will not diminish in strategic importance to the European Union. On the contrary. In view of the demand and supply outlook for gas for the EU and in view of the rapid ongoing change with the completion of the internal market for gas, there is a need to undertake co-ordinated action to ensure that security of gas supply is safeguarded and by this will complement other actions taken to achieve the completion of the EU internal energy market. Security of supply policies in a competitive market have to be based on clearly defined and non-discriminatory policies and operational responsibilities. Appropriate monitoring and safeguard mechanism as well as adequate emergency response measures will have to be implemented and kept under review at national and Community level.

The Commission therefore presents the following proposal for a Directive concerning measures to safeguard security of EU gas supply. These measures will ensure the proper functioning of the EU internal gas market by safeguarding security of gas supplies in a competitive market framework. In the event of a crisis, they will ensure the solidarity and the joint Community action necessary in order to respond effectively to uncertainties in the energy market and to promote in this context the proper functioning of the internal market. Article 95 of the Treaty therefore represents the appropriate legal basis for the proposal for a Directive.

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 95 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the Economic and Social Committee,

Having regard to the opinion of the Committee of the Regions,

Acting in accordance with the procedure laid down in Article 251 of the Treaty,

Whereas:

- (1) Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998 concerning common rules for the internal market in natural gas<sup>(1)</sup> has made very important contributions towards the creation of internal market for gas. Directive 98/30/EC allows Member States the possibility of imposing public service obligations on natural gas undertakings, inter alia, in relation to security of supply;
- (2) The European Council at Barcelona agreed on a rapid adoption of the pending proposals for a completion of the internal market for gas and electricity. The completion of the internal market for gas will significantly change the market framework and must be supplemented with common rules with respect to the security of supply context and the appropriate policies required in this respect;
- (3) The guarantee of a high level of security of supply is therefore a key condition for the successful operation of the internal gas market. With a view to complete the internal market for gas and thereby ensuring a level playing field, a minimum common approach to supply security is necessary throughout the Community in order to avoid market distortions;
- (4) Gas is becoming an increasingly important component in EU energy supply. In function of the increased importance of gas, ensuring the proper functioning of the single EU natural gas market by safeguarding security of gas supply also becomes of higher strategic importance;
- (5) A competitive single EU gas market necessitates transparent and non-discriminatory security of supply policies compatible with the requirements of such a market. Definition of clear roles and responsibilities of all market actors is therefore crucial in safeguarding the well-functioning of the internal market and security of gas supply while at the same time avoiding creating obstacles to new entry or significant difficulties for companies with small market shares;
- (6) As indicated by the Green Paper 'Towards a European strategy for the security of energy supply', the European Union is expected in the longer term to become increasingly dependent on gas imported from non-EU sources of supply;
- (7) In order to meet growing demand for gas and diversify gas supplies as a condition for a competitive internal market for gas, the EU will need to mobilise significant additional volumes of gas over the coming decades much of which will have to come from distant sources and transported over long distances;
- (8) The European Union has a strong common interest with gas supplying and transit countries in ensuring continued investments in gas supply infrastructure;
- (9) Long-term contracts have played a very important role in securing gas supplies for Europe and will continue to do so. Whilst the current level of long term contracts is more than satisfactory on the Community level, it is believed that such contracts will continue to make a significant contribution to overall gas supplies as companies continue to include such contracts in their overall supply portfolio and it is appropriate to provide a safety net in this respect;
- (10) The development of liquid gas supplies in the internal market plays an important role in enabling the internal gas market to function properly and competitively. Considerable progress has been made in developing liquid trading platforms and through gas release programmes at national level. This trend is expected to continue. Nonetheless, it is appropriate to provide for a safety net in this respect;
- (11) It is important that Member States lay down an unambiguous framework which will facilitate security of supply and is conducive to investments in gas supply infrastructure. It is important to monitor that appropriate measures are taken to ensure regulatory and fiscal frameworks for exploration and production, storage and transport of natural gas which provide appropriate incentives for investment;

<sup>(1)</sup> OJ L 204, 21.7.1998, p. 1.

(12) Domestic gas resources and measures designed to extend their availability, in a non-discriminatory manner that is compatible with the requirements of a competitive single market for natural gas and competition rules, contribute to enhancing the level of security of supply in the internal gas market;

(13) In the interest of a well functioning internal market for gas to which secure gas supplies are crucial, the supply/demand balance in individual Member States should be monitored and appropriate action taken if security of supply is compromised on a Community level;

(14) For the well functioning of the internal market for gas and the security of supply, solidarity between Member States in emergency supply situations is essential;

(15) It is inherent to the creation and development of an internal market that Member States become increasingly interdependent regarding security of supply issues. Failure to adopt adequate measures in one Member State can have serious consequences regarding the operation of the internal market throughout the Community. It is therefore essential, in order to ensure the proper functioning of the internal market, to provide for a minimum level of harmonisation regarding security of gas supply policies in each Member State;

(16) In the event of extraordinary gas supply situations, the Commission shall take appropriate action proportionate to the severity of the supply situation to ensure that the necessary measures to provide specific assistance to those Member States particularly affected by the gas supply disruption are implemented in order to safeguard, as far as possible, the continued functioning of the internal market for gas;

(17) With a view to assist in preparing and implementing Community legislation in the field of safety and security of gas supply, to monitor its application and assist in evaluating the effectiveness of the measures in force as well as to better monitor the development of security of gas supply, a European Observation System of hydrocarbons should be established within the services of the Commission;

(18) The necessary measures should be adopted for the

implementation of this Directive in conformity with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred to the Commission <sup>(1)</sup>;

(19) In accordance with the principles of subsidiarity and proportionality as set out in Article 5 of the Treaty, the objectives of the proposed action, namely the creation of a fully operational internal gas market, based on fair competition and secure natural gas supplies, cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale and effects of the action, be better achieved by the Community. This Directive confines itself to the minimum required in order to achieve those objectives and does not go beyond what is necessary for that purpose.

HAVE ADOPTED THIS DIRECTIVE:

#### *Article 1*

This Directive establishes measures aimed at ensuring the proper functioning of the EU internal market for gas by safeguarding security of gas supply. It establishes a common framework within which Member States shall define general, transparent and non-discriminatory security of supply policies compatible with the requirements of a competitive single EU market for gas; clarify the general roles and responsibilities of the different market actors and implement specific non-discriminatory procedures to safeguard security of gas supply.

#### *Article 2*

For the purpose of this Directive:

1. 'source of gas supply' shall mean gas supply originating from one single gas supply country;
2. 'long-term gas supply contract' shall mean a gas supply contract with a duration of more than one year;
3. 'new market entrants' shall mean undertakings that are not yet active in the Member State in gas supply, or have only entered the market within 5 years following the entry into force of this Directive and which have a small market share;
4. 'small market share' shall mean a market share of less than 10 % of the national gas market.

<sup>(1)</sup> OJ L 184, 17.7.1999, p. 23.

*Article 3*

1. Member States shall take the necessary measures to define the general policies for security of supply which are necessary and integral part of competitive internal natural gas market. This may include clarifying the general roles and responsibilities of the different market actors in fulfilling the security of supply standards.

2. The measures and standards to ensure security of supply in the context of the internal gas market shall be developed in accordance with paragraph 3 of this article and with article 4. The implementation of these measures and standards shall complement the completion of the internal gas market, shall be implemented in a non-discriminatory and transparent way and shall be published.

3. In developing the measures and standards referred to in paragraph 1, Member States shall take the utmost account of:

- a) the importance of ensuring continuity of gas supplies under severe conditions notably to household customers without alternative fuel options;
- b) the need to ensure adequate levels of gas storage or alternative back-up fuels;
- c) the need to diversify supplies and ensure a reasonable balance between different gas supply sources;
- d) the need to create incentives for new gas supplies from internal and external sources to the single European gas market;
- e) the risk of the most serious system failure or of disruption of the largest single supply source and the cost related to mitigate such supply disruption;
- f) the internal market and the possibilities for cross-border cooperation in relation to security of gas supply.

4. In developing the measures and standards referred to in paragraph 1, Member States shall also take account of the need for setting high security of supply standards for gas supplies for power generation in particular with regard to the level of interruptible demand and alternative fuel back-up capacities in this sector.

5. The security of supply policies shall be compatible with and contribute to the completion of a fully operational internal

market for gas. The security of supply policies shall be implemented in a non-discriminatory manner and shall in no way hamper the entrance of new market participants.

6. In order to ensure that security of supply criteria established by Member States would not lead to a significant restriction of competition or barriers to market entry, Member States shall exempt companies with small market shares and new entrants from obligations imposed pursuant to articles 3 and 4 of this Directive.

Where Member States consider that the imposition of obligations adopted pursuant to articles 3 and 4 of this Directive would not result in a significant restriction of competition or barriers to market entry, they may apply to the Commission for authorisation to lift this exemption. The Commission shall decide on the request in conformity with article 9, paragraph 2 of this Directive.

*Article 4*

1. In order to fulfil the security of supply policies and achieve the standards referred to in article 3, Member States shall take the necessary measures to ensure that security of supply can be maintained to non-interruptible customers without fuel switching capabilities in case of disruption of the single largest source of gas supply during sixty days given average weather conditions.

2. Member States shall take the necessary measures to ensure that security of supply can be maintained to non-interruptible customers without fuel switching capabilities in case of extremely cold temperatures during a period of three days statistically occurring every twenty years.

3. Member States shall take the necessary measures to ensure that security of supply can be maintained to non-interruptible customers without fuel switching capabilities in case of a cold winter statistically occurring every fifty years.

4. In order to achieve these security of supply standards, Member States may use a combination of at least the following instruments:

- a) interruptible customers
- b) gas storage
- c) supply flexibility
- d) spot markets

5. Member States shall take the necessary measures to ensure that gas storage, either located within or outside the territory of the Member State, contributes to a necessary minimum degree to achieving the security of supply standards referred to in this article in function of the geological and economical feasibility of storage within each Member State.

In this respect, Member States shall, initially not later than one year after the entry into force of this Directive and every two years thereafter, adopt and publish a report setting national indicative targets for future contribution of storage, either located within or outside the territory of the Member State, to security of supply in terms of gas storage working volume and withdrawal capacities and the percentage of gas storage capacity of gas consumption for the next ten years. The targets for future contribution of storage shall be established in accordance with the form set out in the annex to this Directive.

6. The security of supply criteria set out in this article shall be established by Member States in a manner compatible with the objectives of the internal gas market including the harmonisation of the measures implementing these criteria where economically and technically possible and appropriate. In particular, minimum storage objectives imposed on undertakings shall take account of the availability of non-discriminatory access to storage and the terms and conditions on which such access is granted by those companies that operate storage facilities.

7. When implementing security of supply standards and imposing obligations on a market participant established and registered in another Member State, Member States shall take proper account of measures already taken by the market participant in fulfilling security of supply criteria in that Member State.

#### Article 5

1. In the Report published by Member States pursuant to article [4a] of Directive .../.../EC [proposed new Directive amending Directives 96/92/EC and 98/30/EC concerning rules for the internal markets in electricity and natural gas], Member States shall, in particular, cover the following:

- a) the competitive impact of the measures taken pursuant to articles 3 and 4 of this Directive on companies with small market shares or new market entrants and in particular the effectiveness of measures taken by Member States pursuant to article 3 paragraph 6 to redress any restriction of

competition or barrier to entry to such companies resulting from these measures;

- b) the supply/demand balance on their territory;
- c) the level of expected future demand and available supplies;
- d) envisaged additional capacity under planning or construction;
- e) the emergency and contingency instruments in place to cater for a sudden crisis in the market;
- f) the levels of stocks and the measures taken and to be taken in order to achieve the indicative storage targets and
- g) the extent of long-term contracts concluded by companies established and registered on their territory.

In addition, Member States shall monitor that appropriate measures are taken to ensure regulatory and fiscal frameworks for exploration and production, storage, LNG and transport of natural gas which provide appropriate incentives for new investment.

2. In the Report issued by the Commission pursuant to article [28] of Directive .../.../EC [proposed new Directive amending Directives 96/92/EC and 98/30/EC concerning rules for the internal markets in electricity and natural gas], the Commission shall examine

- a) issues relating to security of supply in the Community, and in particular the existing and projected balance between demand and supply including the appropriateness of incentives given to investment in new gas supply infrastructure;
- b) the scope for harmonisation of security of supply measures aiming at better functioning of the single European gas market;
- c) the situation with regard to stock levels in relation to the indicative storage targets;
- d) the level of long-term contracts for gas, and the consequences in practice of this level for ensuring adequate levels of new gas supplies for the European Union in the future.

Where appropriate, this report shall include recommendations.

#### Article 6

1. With a view to ensure continued long-term security of gas supply for the Community and the gradual development of a more liquid internal market for gas, the Commission shall closely monitor the degree of new gas supply import contracts from non-EU countries concluded on a long-term basis as well as the existence of adequate liquid gas supplies and transparent gas price references within the Community to underpin stable long-term gas supplies. The Commission may issue Recommendations on appropriate measures to be taken by Member States in this respect. The Recommendations may only address an insufficient degree of such contracts on a Community level. Member States shall inform the Commission of the manner in which the Recommendations are implemented. In making such Recommendations, the Commission shall pay particular attention to the possible effect such measures may have on companies with small market shares and new entrants.

2. Where the measures taken by Member States in relation to the Recommendations referred to in paragraph 1 are inadequate with regard to the long-term security of gas supply, the Commission may, by Decision, in conformity with the procedure laid down in article 9, paragraph 3 require the Member States concerned to take specified measures to ensure that an appropriate minimum share of new gas supply from non-EU countries over the five years following the entry into force of this Directive is based on long-term contracts and that adequate liquid gas supplies are developing and transparent gas price references are available within the Community to underpin stable long-term gas supplies. When taking such Decisions, the Commission shall pay particular attention to the possible effect such measures may have on companies with small market shares and new entrants.

3. The Commission shall, within five years of the entry into force of this Directive, submit a review report to the European Parliament and the Council on the experience gained from the application of this Article, so as to allow the European Parliament and the Council to consider, in due course, the need to adjust it.

#### Article 7

With a view to enhancing liquidity of natural gas, Member States shall take appropriate measures to ensure non-discriminatory authorisation procedures for building storage and LNG facilities and remove any obstacles for building such facilities. These procedures shall apply equally to EU natural gas undertakings as to non-EU gas suppliers.

#### Article 8

1. The Commission may, in conformity with the procedure laid down in article 9, paragraph 2, in the event of extra-

ordinary gas supply situations including a major interruption of gas supplies from one of the European Union's principal gas suppliers, issue Recommendations to Member States to take the necessary measures to provide specific assistance to those Member States particularly effected by the gas supply disruption. Such measures may include, but are not limited to, the following:

- a) release of gas stocks;
- b) provision of pipeline capacity enabling diversion of gas supplies to affected areas;
- c) interruption of interruptible demand to allow reallocation of gas and system flexibility.

2. Member States shall inform the Commission of their implementation of the Recommendations.

3. Where the measures taken by Member States are inadequate in the light of market developments, and/or where the economic consequences of the extraordinary gas supply situation become extremely severe, the Commission may, by Decision, in conformity with the procedure laid down in article 9, paragraph 3, require Member States to take specified measures to provide necessary assistance to those Member States particularly affected by the gas supply disruption. Such measures may include, but are not limited to, those mentioned in paragraph 1 points a), b) and c).

4. The recommendations and decisions to be taken in accordance with this article shall restrict competition as little as possible. The Commission shall ensure that this principle is complied with throughout the entire period of application of the measures.

#### Article 9

1. The Commission shall be assisted by a Committee of representatives of the Member States and chaired by the representative of the Commission.

2. Where reference is made to this paragraph, articles 3 and 7 of Council Decision 1999/468/EC shall apply in respect of the provisions of article 8 of that Council Decision.

3. Where reference is made to this paragraph, articles 5 and 7 of Council Decision 1999/468/EC shall apply in respect of the provisions of article 8 of that Council Decision.

The period foreseen in article 5, paragraph 6 of Council Decision 1999/468/EC shall be one week.

4. The Committee shall establish its internal rules.

*Article 10*

1. Not later than 1 January 2004, the Commission shall make the necessary arrangements to set up a European Observation System for supply of hydrocarbons to assist in preparing and implement Community legislation in the field of gas supply, to monitor its application and assist in evaluating the effectiveness of the measures in force and their effects on the functioning of the internal natural gas market. The Commission shall ensure that adequate resources are made available to enable the effective monitoring of measures provided for in the present Directive.

2. The European Observation System for supply of hydrocarbons shall be run by the Commission, which should invite to meetings representatives of Member States as well as representatives of sectors concerned. It shall provide the Commission with the technical assistance necessary for the formulation and evaluation of measures taken in relation to the application of the present Directive and shall contribute to a better understanding of the evolution of the internal market and the international gas market and the factors driving these markets.

3. The European Observation System for supply of hydrocarbons shall carry out, in the field of natural gas, following technical tasks:

- a) Monitor the functioning of the internal market and the international market for gas;
- b) Contribute to the implementation of a physical monitoring system of the internal EU and external gas infrastructures to the European Union which contribute to the security of gas supply;
- c) Monitor gas supply and the procedures aimed at guaranteeing security of gas supply in cases of emergency;
- d) Monitor the level of strategic gas stocks and the procedures for their use as well as the procedures applied with regard to access to storage including aspects of market dominance in relation to access to storage;

- e) Create a basis of objective, reliable and comparable data as a basis for fulfilling its tasks.

*Article 11*

The Commission shall closely monitor the manner in which Member States implement this Directive, and in particular the compatibility of the measures taken with regard to article 4 and their effect on the internal gas market and the development of competition within the European Union. The Commission shall closely monitor the availability of third party access to storage on non-discriminatory terms and conditions. In the light of the results of this monitoring, the Commission shall, if necessary, no later than 1 January 2004 present proposals regarding further measures to ensure effective access to storage.

Where appropriate, the Commission shall issue recommendations or make appropriate proposals.

*Article 12*

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 1 January 2004. They shall forthwith inform the Commission thereof.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

*Article 13*

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Communities*.

*Article 14*

This Directive is addressed to the Member States.

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## ANNEX

**EU storage capacity — national indicative targets**

The table below illustrates gas storage capacities in absolute as well as relative terms in relation to consumption.

**Storage capacities at 1 January 2001**

	Working Volume (BCM)	In % of 2000 Demand	Withdrawal capacity (million m <sup>3</sup> /day)	2010 Target BCM Storage	2010 Target %	2010 Target Withdrawal capacity
Austria	2.295	31.6	24			
Belgium	0.675	4.2	19			
Denmark	0.810	17.6	25			
France	11.1	26.2	180			
Finland	0.0	0.0	0			
Germany	18.556	22.3	425			
Greece	0.075	3.8	5			
Ireland	0.0	0.0	0			
Italy	15.1	22.0	265			
Luxembourg	0.0	0.0	0			
Netherlands	2.5	6.1	145			
Portugal	0.0	0.0	0			
Spain	1.0	5.5	8			
Sweden	0.0	0.0	0			
UK	3.577	3.7	137			
<b>EU-15</b>	<b>55.688</b>	<b>14.2</b>	<b>1 233</b>			