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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 16.7.2009  
SEC(2009) 980 final

**COMMISSION STAFF WORKING DOCUMENT**

*Accompanying document to the*

Proposal for a

**REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**concerning measures to safeguard security of gas supply  
and repealing Directive 2004/67/EC**

**EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT**

{COM(2009) 363}  
{SEC(2009) 979}

## 1. PROBLEM DEFINITION

The Commission set out in the 2<sup>nd</sup> Strategic Energy Review an EU approach to security of energy supply, including a five-point **EU Energy Security and Solidarity Action Plan**<sup>1</sup>. The approach and the Action Plan have been solidly endorsed by Council, Parliament and European Council<sup>2</sup>, also by stakeholders<sup>3</sup>. This impact assessment concerns one element in the Action Plan - the strengthening of provisions for crisis prevention and response in the gas field and in particular, the revision of **Directive 2004/67/EC** on measures concerning the security of gas supply.

The basic idea in the Directive, as in the earlier and subsequent internal gas market Directives, is that the internal gas market should be well-functioning and flexible enough, with sufficient infrastructure, to mitigate most gas supply disruptions. At the same time, for disruptions which turn out to be beyond the capacity of the market to mitigate, the 2004 Directive establishes a framework, compatible with the internal market, for emergency measures. This joint focus on the functioning of the market and emergency measures if needed is a fundamental structure in gas security of supply policy in Europe.

In recent years, much has changed as regards Europe's security of gas supply. Dependence on imports is increasing and at the same time, supply and transit risks are growing. The Russian-Ukrainian gas crisis in January 2009 brought an unprecedented disruption of gas supplies to Europe, far greater than any earlier disruptions. 30% of Europe's imports were cut off for two weeks. This is now a realistic gas supply disruption scenario. The situation within Europe has also been changing. With the growing importance of long-distance network flows of gas and the development of the internal gas market, gas supply crises are quickly felt across large parts of Europe and by the same token, the internal gas market is offering an increasingly powerful means of mitigating gas supply disruptions. The increasingly important European dimension requires an adequate regulatory framework for security of supply at EU level.

There are two main issues. One is whether flexibility in the internal gas market is developing sufficiently to mitigate gas supply disruptions such as that of January 2009. Are updated standards or some other incentive needed? The second is the effectiveness of emergency arrangements as currently implemented at national, regional and EU levels, their impact on capacity of the internal gas market to mitigate disruptions and on solidarity. Is a better organization needed?

The January 2009 gas crisis provided a practical demonstration of the European dimension of today's gas supply disruptions and of the response. By the time Russian supplies via Ukraine reached Europe again, action within Europe had largely compensated for the supply gaps. At the same time, the crisis demonstrated that investments in infrastructures across Europe to prevent disruptions becoming crises are

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<sup>1</sup> COM(2008) 781, "2<sup>nd</sup> Strategic Energy Review: An EU Energy Security and Solidarity Action Plan".

<sup>2</sup> EP Resolution of 2 February 2009 on the 2<sup>nd</sup> Strategic Energy Review (2008/2239(INI)); Energy Council Conclusions, 19 February 2009 (6692/09); Presidency Conclusions, European Council, 19 March 2009.

<sup>3</sup> See report of public consultation, Annex 5.

still needed (e.g. storage, reverse flows, some new interconnectors) and that further market integration would improve security of supply. The question of the compatibility with the internal market of emergency measures of Member States has arisen. The crisis thus supports the two issues identified.

In addition to risks of underinvestment in infrastructure and supplies intended to be available for mitigating disruptions, preventing crises, there seems also to be a regulatory/implementation failure. The notions used in the 2004 Directive to specify security of supply standards and planning for emergencies are not sufficiently precise and effective in today's context. Moreover, implementation has been uneven across the EU, as demonstrated in the Commission's report on the implementation of Directive 2004/67/EC<sup>4</sup>.

The ultimate sufferer from inefficient gas security of supply arrangements in Europe are **European citizens** (dependent on gas for cooking and heat, directly or via district heating; many dependent on gas-fired electricity generation) and **industry** (e.g. power sector, chemicals, fertilizers). While costs for security of supply will normally be reflected in tariffs, impacts of disruptions are likely to be much greater. Substantial job losses could be a result of continuation of inadequate gas security of supply arrangements in Europe. There could also be a substantial impact on the **environment, climate and sustainable development**. With insecure gas supplies, the issue of back-up fuels, often more carbon-intensive comes to the fore. Doubts about security of supply could undermine the contribution expected of gas in the transition to a high-efficiency, low-carbon energy system, notably in the period before renewables are competitive.

## 2. ANALYSIS OF SUBSIDIARITY

The inclusion of security of energy supply in the Lisbon Treaty energy article and the endorsement of the 2<sup>nd</sup> Strategic Energy Review point to an EU role, consistent with the growing reality of the internal energy market.

The adoption of the 3<sup>rd</sup> internal energy market package will strengthen the market. In a situation in which national markets are being integrated, it will not be possible to consider security of supply primarily as a national concern. Consequently the legal basis of the related EU legislation should no longer be disconnected from the internal market rules of the EU Treaty. Any proposal should – consistently with the legal basis for the internal energy market of which it is arguably an extension – be based on Article 95. This is the legal basis of a similar instrument adopted in 2005 in the field of electricity (Directive 2005/89/EC).

No single Member State, acting on its own, can assure sufficient regulatory framework and investments in the internal market for security of gas supply. Only EU-wide action can do this. No single Member State, acting on its own, can ensure that all Member States have effective provisions in place to handle gas supply emergencies. Moreover, individual non-coordinated actions by Member States might hamper further development of the internal market; lead to discriminatory treatment and might even put security of supply in other Member States at risk.

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<sup>4</sup> November 2008 evaluation report on the implementation of Directive 2004/67/EC.

### **3. OBJECTIVES OF THE EU INITIATIVE : WHAT ARE THE MAIN POLICY OBJECTIVES?**

The general policy objective is to secure an **adequate level of preparedness** in Europe for gas supply disruptions. The weaknesses made evident in the 2009 gas crisis must be tackled quickly, before any further crisis.

This initiative is complementary to the 3rd internal market package which enhances market transparency; facilitates cross-border trade and investment and enables increased solidarity among the EU countries.

Reflecting the two issues identified, the specific/operational objectives are:

- (i) Achievement of sufficient flexibility in the internal gas market to mitigate most gas supply disruptions, by establishing the necessary incentives for investments in infrastructures and gas and the well-functioning of the market.
- (ii) Effective cooperation in dealing with gas supply emergencies in Europe, with pre-defined emergency plans involving all players, at Member State and EU levels, geared to supply disruptions of the size and scope experienced in January 2009.

### **4. POLICY OPTIONS: WHICH OPTIONS HAVE BEEN CONSIDERED AND WHICH HAVE BEEN ASSESSED IN DETAIL?**

Five options have been identified:

1. No new EU action
2. Better enforcement of the 2004 Directive
3. Voluntary approach by industry
4. A new directive
5. A new regulation

The baseline scenario – no new EU action - may well partially deliver the objectives over the next years, through the 3<sup>rd</sup> internal energy market package, the European Economic Recovery Plan, the revision Council Regulation (EC) No 736/96 on notification of investment projects in the gas, electricity and petroleum sector, the TEN-E programme, the existing 2004 gas security of supply Directive and cooperation on emergency planning following the January gas crisis, In terms of timing, as the 3<sup>rd</sup> package will not be fully operational until 2011 and a new gas supply disruption could happen at any time, cooperation on network development planning has been started in advance. Nevertheless, there is arguably need for clear guidance and support at EU level, such as agreement on a security of supply standard for infrastructures could provide, to enable regulators and Transmission System Operators to tackle, at Member State, regional and EU level, the difficult questions of which additional investments make most sense, who should pay for them.. The current security of supply standards in the 2004 Directive are too imprecise.

As regards option 2, the Commission's report on the implementation of the 2004 Directive demonstrated very heterogeneous results and uneven implementation. With such imprecise standards and unclear obligations, strict enforcement is impossible, which is why the option 2 "Better enforcement of 2004 Directive" has not been analysed further.

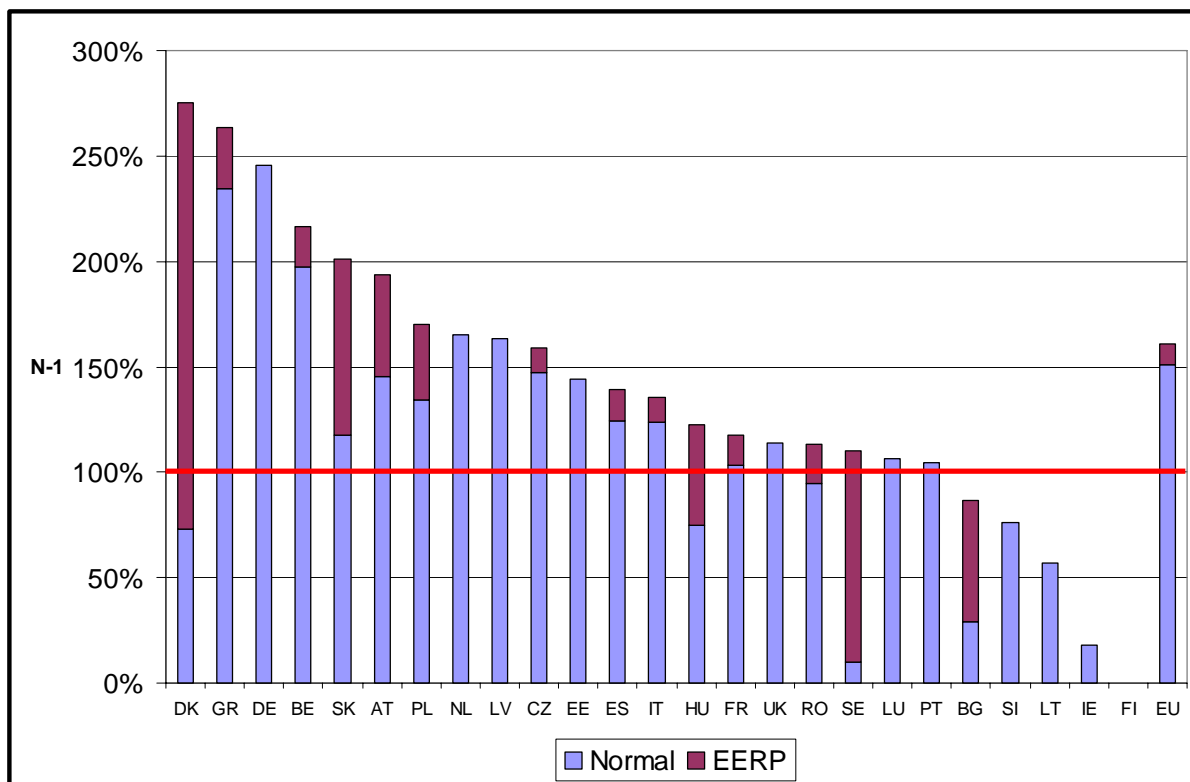
A voluntary approach by some stakeholders involved to some aspects of security of supply inadequately covered by the Directive could be imagined and some initiatives have already been taken. A disadvantage of a voluntary approach is that reliance on market forces to deliver security of gas supply has limits. Provisions for emergencies cannot be left to the market. A further disadvantage is that participation of all participants cannot be guaranteed. Many aspects of security of supply rely on a collective effort. Any work of industry on developing standards would need to be followed through into a binding instrument. On these grounds, option 3 has not been analysed further.

The two policy options (4 and 5) will introduce new elements: clear standards for security of supply and confidence that they will be met; clear definition of emergency plans at Member State and EU level. These two policy options as well as "No new EU action" have been assessed in details in sections 5 and 6.

**5. ASSESSMENT OF IMPACTS: WHAT ARE THE MAIN ECONOMIC, ENVIRONMENTAL AND SOCIAL IMPACTS OF EACH OPTION PARTICULARLY IN TERMS OF (QUANTIFIED/MONETISED) BENEFITS AND COSTS (INCLUDING ESTIMATES ON ADMINISTRATIVE BURDEN), OTHER COMPLIANCE COSTS AND IMPLEMENTATION COSTS FOR PUBLIC ADMINISTRATIONS)?**

The economic impacts of both short listed Policy Options would be dominated by the investment costs and the resultant benefits of the implementation of the n-1 standard and subsequent Preventive Action Plans. The preliminary calculations of n-1 can give an appreciation of the improvements in infrastructures and supplies which may be necessary across Europe to reduce the risk of unmanageable gas supply disruptions. Eligible projects under the European Economic Recovery Plan, except reverse flow projects (for data reasons), have been included in the following chart:

**PRELIMINARY CALCULATION OF N-1 FOR MEMBER STATES:**



The major infrastructure – "1" in "n-1" - is the main import pipeline in most Member States. For UK, Netherlands and Denmark it is the main production facility. For Spain and Portugal it is the main LNG terminal. In many of the importing countries, storage is important but the usually the main import pipeline has a higher capacity than the main storage facility.

Based on this preliminary calculation, nine Member States do not meet the proposed n-1 standard. These Member States are in a variety of situations, and can bring a variety of security of supply measures to bear. A good idea of necessary infrastructure developments can be developed. Many if not most of the necessary infrastructure projects are in the list of eligible projects in the European Economic Recovery Plan. The total European Economic Recovery Plan support for gas infrastructure projects is 1440 m € over 2 years, a maximum of 50% of the eligible project costs. Thus, as an order of magnitude, the n-1 standard applied Europe wide, could imply an investment cost of a few b € However, if the projects are already launched under the European Economic Recovery Plan, the extra investment costs from the application of the n-1 standard Europe-wide would be smaller.

There would be a positive interaction with the internal market through strengthening incentives for investment, creating a level playing field in terms of security of supply obligations, and clearly delimiting emergency situations in which non-market instruments could be brought into play. The infrastructure improvements, such as more

flexible interconnections, should improve trade possibilities, liquidity and price formation in the internal market as well as security of supply.

The administrative costs for businesses and for public authorities of both short-listed Policy Options would be marginal compared to investment and other costs.

As regards jobs, the substantial use of gas in industry suggests that job losses are possible as a direct result of any lack of confidence in supplies. Some 25% of gas consumption in the EU is in industry (fertilizers, other chemicals etc.).

As regards the environment, inadequate provisions for security of gas supply will encourage ad hoc recourse to substitute fuels. In power generation, in the period before renewables are competitive and the necessary grid developments have been put into place, and before Carbon Capture and Sequestration is commercially available, this could mean more investment in coal-fired generation and the lock-in of high CO<sub>2</sub> emissions technologies.

**6. COMPARISON OF OPTIONS: WHAT IS THE PREFERRED OPTION ON THE BASIS OF WHICH CRITERIA/ JUSTIFICATION?**

The impacts of the baseline option and two short-listed Policy Options can be compared as follows:

Policy Option	Effectiveness in achieving objectives	Efficiency	Coherence
No new EU policy	May partially deliver, through the 3 <sup>rd</sup> IEM package, the European Economic Recovery Plan, TEN-E, awareness of the need for effective cooperation on crises. However, timing issue, as 3 <sup>rd</sup> package not be fully operational until 2011. Also, absence of clear security of supply standard for infrastructure could make work of TSOs and regulators on network development more difficult.	Implementation of 3 <sup>rd</sup> package likely to need support, notably assessments of potential gas supply disruptions at EU level and practical guidance to regulators; current security of supply standards in the 2004 Directive too imprecise.	Not relevant
Revision of Directive	Yes	Would imply well-focused, limited investment costs; also provisions by market participants, similarly well-focused and on a	Would have a positive effect on the development and functioning of the internal energy market; positive effect on the environment, notably by reducing unplanned

		level playing field; would diminish disincentives to investment in security of supply by market participants, thus relieving the burden on the public and public authorities; would imply administrative burden on public authorities as regards emergency provisions	recourse to higher-emissions substitute fuels; positive effect on competitiveness and jobs in gas-using industry, and on households.
New Regulation	Yes	Compared to a revision of the Directive, would have the advantage of being operational more quickly; a major gas supply disruption could happen anytime; also a more direct impact on provisions and investments by market participants; would be more effective in achieving clear arrangements for cooperation around emergencies with clear obligation to cooperate; comparable administrative burden on public authorities as regards emergency provisions;	If it can be achieved, it would constitute a more direct engagement of public authorities and market participants in security of gas supply in an EU perspective, with systems in place earlier. The costs would not be very different from those implied in the revision of the Directive

Both short-listed Policy Options would have similar economic, social and environmental impacts compared to the no new EU policy option. The major difference between them concerns the speed and effectiveness of their implementation. Arguably the Regulation option is more likely to be effective (clearly attributing responsibilities to market participants), fair (a level playing field in terms of security of supply obligations) and could be in place and in effect more quickly.

**7. 7. MONITORING AND EVALUATION: WHAT ARE THE ARRANGEMENTS TO ESTABLISH THE ACTUAL COSTS AND BENEFITS AND THE ACHIEVEMENT OF THE DESIRED EFFECTS?**

A reporting and monitoring system is in place for the internal energy market. In addition, the role of the Gas Coordination Group could be expanded to include regular monitoring and assessment, drawing from the envisaged reviews of risk assessments by Member States. EU-level analyses should support evaluations of security of supply risks.