



**COUNCIL OF
THE EUROPEAN UNION**

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NOTE

from : General Secretariat of the Council
to : Delegations
Subject : 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

Delegations will find attached a revised version of the Articles and the annexes of the abovementioned proposal, taking Member States' oral and written comments into account. Changes compared to the previous version as in 16742/09 have been underlined, deletions are marked as [.]
In Annex I (Calculation of the N-1 Formula), only the changes compared to the non-paper of 15 December 2009 are marked.

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**

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

[Recitals to be examined at a later stage]

HAVE ADOPTED THIS REGULATION:

Article 1

Subject-matter

This Regulation establishes measures aimed at safeguarding the security of gas supply so as to ensure the proper and continuous functioning of the internal market for gas by providing for a clear definition and attribution of responsibilities and for a coordination of the response at the level of the natural gas undertakings, the Member States and the Union regarding both preventive action and the reaction to concrete disruptions of supply.

Article 2

Definitions

For the purpose of this Regulation the definitions of Directive 2009/73/EC¹ (the "Gas Directive"), Regulation 2009/715/EC and the Regulation 2009/713/EC² (the "Agency Regulation") shall apply. In addition the following definitions shall apply:

1. "protected customers" means all household customers [...] and in addition, if the Member State concerned so decides, can also include small and medium-sized enterprises and essential social services provided that all such customers are connected to a gas distribution network and do not represent more than 40 % in the final use of gas;
2. "Competent Authority" means the national governmental authority or the national regulatory authority designated by each Member State[...] to be responsible for the definition and the implementation of the measures set out in this Regulation. This is without prejudice to the choice of Member States to allocate certain tasks in this Regulation to other authorities than the Competent Authority. These tasks shall be performed under the supervision of the Competent Authority and shall be specified in the plans referred to in Article 4.

Article 3

Responsibility for security of gas supply

1. Security of gas supply is a shared responsibility of the natural gas undertakings, Competent Authorities, Member States, the Commission and, where appropriate, the industrial gas customers, within their respective areas of activities and competence. It requires a high degree of cooperation between them at national, regional and Union level.³

¹ Directive 2009/xxx/EC of the European Parliament and of the Council amending the Directive 2003/55/EC concerning the common rules for the internal market in natural gas (OJ L []).

² Regulation of the European Parliament and of the Council establishing an Agency for the Cooperation of Energy Regulators (OJ L []).

³ *The following addition is suggested to recital 15:*

"The roles and responsibilities should be established in a way so as to ensure that a three level approach is respected which would first involve the relevant undertakings and industry, then Member States at national or regional level, and then the Union."

2. Each Member State shall designate a Competent Authority that designs and implements the measures provided in this Regulation. The measures shall include the performance of a risk assessment, the establishment of the Preventive Action Plans, the establishment of the Emergency Plan, and the continuous monitoring of security of gas supply at national level. Competent Authorities shall cooperate with each other to prevent a supply disruption and to limit damages in case it occurs.
3. Each Member State shall notify to the Commission the designated Competent Authority by [6 months from entry into force] at the latest.
4. The Commission shall coordinate the actions of the Competent Authorities at the Union level, *inter alia* through the Gas Coordination Group or the crisis management group in particular in the case of a Union Emergency as referred to in Article 10(1).
5. The measures to ensure the security of supply contained in the Preventive Action Plans and in the Emergency Plans shall be clearly defined, transparent, proportionate, non-discriminatory, verifiable, and shall not unduly distort competition and the effective functioning of the internal market.

Article 4

Establishment of Preventive Action Plan and Emergency Plan

1. Without prejudice to paragraph 3, [[18] months from entry into force] at the latest, the Competent Authority of each Member State, after consultation of the natural gas undertakings, of the relevant organisations representing the interests of household and industrial customers and of the regulatory authority, where it is not the Competent Authority, shall adopt:
 - (a) A Preventive Action Plan containing the measures needed to mitigate the risks identified; and
 - (b) An Emergency Plan containing the measures to be taken to mitigate the impact of a gas supply disruption.

2. Before adopting those national Plans the Competent Authorities shall exchange information and consult each other at the appropriate regional level and the Commission to ensure that their proposed Plans and measures are mutually consistent [.]. Such consultation shall be carried out in particular in the case of energy islands and interconnected Member States as identified in Annex IV. These consultations shall cover *inter alia* interconnections, cross-border supplies, cross-border access to storage facilities [.]. and the physical capacity to transport gas in both directions.

[.]

3. Based on these consultations and possible recommendations of the Commission, the Competent Authorities may [.]. decide to adopt joint Plans at regional level, in stead of or in addition to separate national Plans.

4. The Competent Authority and, in the case of joint Plans, the concerned Competent Authorities, while respecting the confidentiality of sensitive data, shall adopt and publish their Plans, including amended versions according to paragraph 5, and notify them to the Commission without delay.

5. Within six months after the notification of the Plans by the Competent Authorities, the Commission shall assess the notified Plans [.]. The Commission shall consult [.]. the Gas Coordination Group¹ and other concerned stakeholders on those plans. [.]

Where the Commission, based on these consultations, considers that a Plan is not effective to mitigate the risks as identified in the risk assessment, it may recommend to the Member States concerned to amend the Plan.

Where the Commission, based on these consultations, considers that a Plan is inconsistent with the risk scenarios or the Plans of other Member States, or that it does not comply with the provisions of this Regulation or other provisions of Union law, it shall require the revision of the Plan.

¹ *The following recital is suggested:*

"The Gas Coordination Group is the main body to be consulted by the Commission in the context of the establishment of the Preventive Action Plans and the Emergency Plans. It is recalled that the European Network of Transmission System Operators for Gas ("ENTSO-G") and the Agency for the Cooperation of Energy Regulators ("ACER") are members of the Gas Coordination Group and will be consulted in that context."

Within [4] months from notification of the Commission's request, the Competent Authority concerned shall amend its Plan and notify the amended Plan to the Commission or shall set out to the Commission why it does not agree with the request. In that case, the Commission may amend or withdraw its request or convene the Gas Coordination Group in order to consider the issue. The Competent Authority shall fully take account of the recommendation of the Commission based on that consultation of the Gas Coordination Group.

[.]

Article 5

Content of the Preventive Action Plan

1. The Preventive Action Plan shall contain:
 - (a) the risk assessment as laid down in Article 8;
 - (b) the measures and the timing needed to fulfil the infrastructure and supply standards, as laid down in Articles 6 and 7; these measures shall include at least the planning to meet the infrastructure standard including appropriate demand side measures, volumes and capacities needed to supply [.] customers in the defined high demand periods, the demand side measures and obligations imposed on natural gas undertakings and other relevant bodies;
 - (c) the other preventive measures to address the risks identified and to ensure the safe operation of gas networks and systems at all times;
 - (d) information on the relevant Public Service Obligations.
2. The Preventive Action Plan, in particular the actions to meet the infrastructure standard as laid down in Article 6, shall take into account the ten year network development plan to be elaborated by the ENTSO-G[.].
3. The Preventive Action Plan shall take into account economic effectiveness, effects on the functioning of the internal energy market and environmental impact and shall not put an undue burden on gas undertakings.
4. The Preventive Action Plan shall be updated every two years, unless required more often by circumstances.

Article 6

Infrastructure standard

1. The Competent Authority shall require natural gas undertakings to ensure that by [[4] years after entry into force] at the latest, in the event of a disruption of the single largest gas supply infrastructure, the remaining infrastructure (N-1 formula) has the capacity [...] to satisfy total gas demand of the calculated area during a [...] day[...] of exceptionally high gas demand [...] statistically occurring once every twenty years. This obligation shall also be considered to be fulfilled where the Competent Authority demonstrates in the Preventive Action Plan referred to in Article 5 that a supply disruption may be sufficiently and timely compensated for by demand side measures.
2. For the calculation of the infrastructure standard, the N-1 formula as provided in Annex I shall be used. [...]
3. In the case of application of Article 4(3), the Competent Authorities shall ensure that the obligation is fulfilled at a regional level. [...] The calculated area as referred to in Annex I shall be extended to the appropriate regional level, where necessary. The single largest infrastructure of that calculated area shall be used for the calculation of the N-1 formula.
4. Each Competent Authority shall report to the Commission without delay any non-compliance with the obligation set out in paragraph 1 and inform on the reasons for that non-compliance.
5. The transmission system operators shall enable permanent physical capacity to transport gas in both directions on all cross-border interconnections as early as possible and at the latest within [three] years from the entry into force of this Regulation, except in cases such as [...]connections to production facilities, to LNG facilities and interconnections with third countries or where at the request of at least one of the concerned Competent Authorities, the Commission decides that the addition of a bi-directional flow capacity would not significantly enhance the security of supply of any Member State or region. Such decision may be reviewed if circumstances change.

The capacity level of the bi-directional flows [...] shall be defined in a cost efficient way and at least take into account the capacity required to meet the supply standard set in Article 7.

Within that [three] year period, the gas transmission system operator shall adapt the functioning of the transmission system as a whole so as to enable bi-directional gas flows.

6. The Competent Authority shall ensure that any new transmission infrastructure contributes to the security of supply through the development of a well connected network by means of a sufficient number of entry and exit points.
7. National Regulatory Authorities shall take into account the costs of fulfilling the obligation set out in paragraph 1 and the costs of enabling the permanent physical capacity to transport gas in both directions when fixing or approving the tariffs or methodologies in line with Article 41(8) of Directive 2009/73/EC. In the case of costs incurred in more than one Member State, the national regulatory authorities of all Member States concerned shall jointly decide on cost allocation. Article 8(1) of Regulation (EC) No 713/2009 shall apply.

Article 7

Supply standard

1. [...] Natural gas undertakings shall take the measures to ensure the gas supply to the protected customers of the Member State in the case of periods statistically occurring once every twenty years:
 - a) extreme temperatures during a seven days peak period; and
 - b) any period of [45] days of exceptionally high gas demand.
2. The Competent Authority shall require natural gas undertakings to take the measures to ensure the gas supply to the protected customers for the period of [45] days also in the event of an Emergency as defined in Article 9(2). The natural gas undertakings and the Competent Authority shall endeavour to maintain the supply for the protected customers as long as possible.

3. The obligations imposed on natural gas undertakings for the fulfilment of the supply standard as laid down in paragraph 1 and 2 shall be non-discriminatory and shall not impose an undue burden on these undertakings.
4. The Competent Authority shall allow the natural gas undertakings to meet these obligations on a regional or Union level where appropriate and shall not require that these standards are met based on infrastructure located only within its territory.
5. The Competent Authority shall ensure that conditions for supplies to protected customers are established without prejudice to the proper functioning of the internal gas market and at a price respecting the market value of the supplies.

Article 8

Risk assessment

1. By [[12] months after entry into force] each Competent Authority shall fully assess the risks affecting the security of gas supply in its Member State by:
 - a) using the standards specified in Articles 6 and 7, showing the calculation of the N-1 formula, the assumptions used and the data necessary for such calculation;
 - b) taking into account all relevant national and regional circumstances, in particular network configuration, actual flows, including outflows from the concerned Member State, the presence of production and storage and the role of gas in the energy mix, in particular with respect to district heating and power generation, and safety and gas quality considerations;
 - c) running various scenarios of exceptionally high demand and supply disruption, such as failure of main transmission infrastructures, storages, LNG terminals, and disruption of supplies from third country suppliers, including the probability, season and duration of their occurrence, and assessing the likely consequences of these scenarios;
 - d) identifying the interaction and correlation of risks with other Member States;
 - e) taking into account the maximal interconnection capacity of each entry and exit points to and from the gas systems.

- 1a. Where Article 4(3) is applied, the Competent Authorities concerned shall also perform a joint risk assessment at regional level.
2. The natural gas undertakings, the relevant organisations representing the interests of household and industrial customers including relevant power generators, Member States and the regulatory authority, where it is not the Competent Authority, shall cooperate with the Competent Authority and provide all necessary information for the risk assessment.
3. The risk assessment shall be repeated every two years before 30 September of that year unless required more often by circumstances, and take account of progress made in investments needed to cope with the infrastructure standard defined in Article 6 and of country specific difficulties encountered in the implementation of new alternative solutions.

Article 9

Emergency Plan and Crisis Levels

1. The national or regional Emergency Plans shall:
 - (1) Build upon the crisis levels according to paragraph 2;
 - (2) Define the role and responsibilities of the natural gas undertakings and of the industrial customers including relevant power generators, and their interaction with the Competent Authorities and where appropriate with the regulatory authorities;¹
 - (3) Define the role and responsibilities of the Competent Authorities;
 - (4) Establish detailed procedures and measures to be followed for each crisis level, including the corresponding schemes on information flows;
 - (5) Designate a crisis manager or team and define its role;
 - (6) Identify the contribution of the market based measures, notably those listed in Annex II, for coping with the situation in the Alert level and mitigating the situation in the Emergency level;

¹ See addition to recital 15 (linked to Article 3, p. 3)

- (7) Identify the contribution of the non-market based measures planned or to be implemented for the Emergency level, notably those listed in Annex III and assess the degree to which the use of non-market based measures is necessary to cope with the crisis, assess their effects and define the procedures to implement them;
- (8) Incorporate safety considerations in the operation of the network and gas systems;
- (9) Describe the mechanisms used to cooperate with other Member States for each crisis level;
- (10) Detail the reporting obligations imposed on the natural gas undertakings in the Alert and Emergency level;
- (11) A list of predefined actions to make gas available in the case of an Emergency, including the compensation mechanisms where appropriate and commercial agreements between the parties involved in such actions, taking due account of the confidentiality of sensitive data. Such actions may involve cross-border agreements between Member States and/or natural gas undertakings.

2. The three main crisis levels shall be as follows:

- (1) Early warning level (Early Warning): when there is concrete, serious and reliable information, possibly triggered by an Early Warning Mechanism, that an event may occur which will significantly deteriorate the supply conditions;
- (2) Alert level (Alert): when a supply disruption or exceptionally high demand occurs which significantly deteriorates the supply conditions, but the market is still able to resolve the situation without the intervention of the Competent Authority;
- (3) Emergency level (Emergency): in the event of exceptionally high gas demand or the disruption of the largest gas infrastructure capacity and when all market measures used by natural gas undertakings are not sufficient so that non-market measures have to be introduced as a complement to meet the supply standard set out in Article 7 [.]

3. The Emergency Plan shall ensure that cross-border access to infrastructure in line with Regulation (EC) No 715/2009 is maintained also in case of emergency. The Emergency Plan shall not introduce any measure unduly restricting the flow of gas across the borders.
4. When the Competent Authority declares any of the crisis levels, it shall immediately inform the Commission and provide it with all the necessary information [.]. In the event of an emergency which may result in a call for assistance from the EU and its Member States the Competent Authority of the Member State concerned shall without delay notify the Commission's Civil Protection Monitoring and Information Centre.
5. When the Competent Authority declares an Emergency it shall follow the pre-defined actions as defined in its Emergency Plan and shall immediately inform the Commission in particular of the actions it intends to take according to Article 9(1). The Commission may convene the Gas Coordination Group.
6. The Commission shall verify within [five] days whether the declaration of an Emergency is compliant with the actions as listed in the Emergency Plan and whether it does not impose an undue burden on the natural gas undertakings and on the functioning of the internal market. The Commission may, in particular, ask the Competent Authority to modify measures imposing an undue burden on natural gas undertakings. The Commission may, at the request of a Competent Authority, natural gas undertakings or on its own initiative, also ask the Competent Authority to modify the measures where these measures do not follow the predefined actions of the Emergency Plan and to lift its declaration of Emergency if the Commission considers that it is not or no longer justified.

Article 10

Union and regional emergency responses

1. The Commission may declare a Union Emergency at the request of one Competent Authority or when the Union, according to the calculation made by ENTO-G, loses more than [10%] of its daily gas import from third countries [.] or more than [5] of the amount of its daily gas demand. It shall declare a Union Emergency where more than two Competent Authorities have declared Emergency following the verification in accordance with Article 9(6). It may declare a regional Emergency for specifically affected geographical regions comprising more than one Member State.

2. The Commission shall convene the Gas Coordination Group as soon as it declares Union Emergency or a regional Emergency.
3. In a Union or a regional Emergency, the Commission shall coordinate the actions of the Competent Authorities. In particular the Commission shall
 - a) ensure the exchange of information,
 - b) ensure the consistency and effectiveness of the actions at Member State and regional level in relation to the Union level,
 - c) require that the Competent Authority or natural gas undertakings do not introduce any measure unduly restricting the flow of gas within the internal market [..], notably the flow of gas to the affected markets;
 - d) require Member States to ensure that cross-border access to infrastructure in line with Regulation (EC) No 715/2009 is maintained; and
 - e) coordinate the actions with regard to third countries.
- 3a. The Commission may convene a crisis management group composed of the crisis managers, as referred to in point 5 of Article 9(1), of the Member States concerned by the Emergency.¹
4. If, at the request of a Competent Authority or a natural gas undertaking or on its own initiative, the Commission considers that in a Union or regional Emergency, an action taken by a Member State, a Competent Authority or natural gas undertakings [..] seriously endangers the situation in another Member State or unduly restricts the flow of gas within the internal market, notably the flow of gas to the affected markets, the Commission shall require the Member State, the Competent Authority or the natural gas undertaking to change its action.

¹ The following recital 23a will be added: "In case of Union or regional Emergency, the Commission may convene a meeting of the crisis management group. The Group is composed of the crisis managers as appointed by the Competent Authorities under the Emergency Plans of the Member States affected by the Emergency."

Within three days from notification of the Commission's request, the Member State, the Competent Authority or the natural gas undertaking concerned shall change its action and notify the Commission or shall set out to the Commission why it does not agree with the request. In that case, the Commission may amend or withdraw its request or convene the Gas Coordination Group in order to consider the issue. The Member State, the Competent Authority or the gas undertaking shall fully take account of the recommendation of the Commission based on that consultation of the Gas Coordination Group.

[.]

7. The Commission shall establish a permanent reserve list for a monitoring task force consisting of industry experts and representatives of the Commission. This monitoring task force may be deployed outside the Union when necessary and shall monitor and report on the gas flows into the Union [.] in cooperation with the supplying and transiting countries.
8. The Competent Authority shall provide to the Commission's Civil Protection Monitoring and Information Centre the information on any need for assistance. The Civil Protection Monitoring and Information Centre shall assess the overall situation and provide advice on the assistance that should be provided to the most affected Member States, and where appropriate to third countries.

Article 11

Gas Coordination Group

1. A Gas Coordination Group is established to facilitate the coordination of measures concerning the security of supply. The Group shall be composed of representatives of the Member States, the Competent Authorities, ACER, ENTSO-G and representative bodies of the industry concerned and relevant customers. The Commission, in consultation with the Member States, shall decide on the composition of the Group ensuring its representativity and shall chair the Group. The Group shall establish its rules of procedure.

2. The Gas Coordination Group shall assist the Commission in particular on issues related to:
 - (a) security of gas supply, at any time and more especially in times of Emergency;
 - (b) all information relevant for security of gas supply at national, regional and Union levels;
 - (c) best practices and possible guidelines to all the parties concerned;
 - (d) the level of security of supply, benchmarks and assessment methodologies;
 - (e) national, regional and Union scenarios and testing the levels of preparedness;
 - (ea) the assessment of the Preventive Action Plans and the Emergency Plans [.] and the implementation of the measures foreseen in those plans;
 - (f) coordination of measures to deal with Emergency within the Union, Energy Community Treaty Countries and with third Countries;
 - (h) assistance needed by the most affected Member States.
3. The Commission shall convene the Gas Coordination Group on a regular basis.

Article 12

Information exchange

1. The Competent Authority during the Emergency shall have in particular the following information available on a daily basis:
 - (a) daily gas demand and supply forecasts for the following three days;
 - (b) daily flow of gas at all cross-border entry and exit points as well as all points connecting a production facility to the network, storage, LNG in mcm/d;

- (c) period, expressed in days, during which it is possible to ensure gas supply to the protected customers
2. The Commission is entitled, in the case of a Union or regional Emergency, to request the Competent Authority to provide it without delay at least:
 - (a) the information as laid down in paragraph 1;
 - (b) information on the measures planned to be undertaken and already implemented by the Competent Authority to mitigate the Emergency, and their effectiveness;
 - (c) the requests made for additional measures to be taken by other Competent Authorities;
 - (d) the measures implemented at the request of other Competent Authorities.
 3. The Competent Authorities and the Commission shall ensure the confidentiality of commercially sensitive information.
 5. After an Emergency, the Competent Authority shall within a reasonable timeframe provide to the Commission a detailed assessment of the Emergency and the effectiveness of the implemented measures, including the assessment of economic impact of the Emergency, [...] the impact on the electricity sector and the assistance provided to and/or received from the Union and its Member States. Such assessment shall be reflected in the revisions of the Preventive Action Plans and the Emergency Plans.
 6. By [[12] months after entry into force] at the latest in order to allow the Commission to assess the situation of the security of supply at Union level:
 - a) Member States shall submit to the Commission the existing inter-governmental agreements concluded with third countries which have an impact on the development of gas infrastructures and supplies; before concluding new inter-governmental agreements, the Member States shall inform the Commission to assess their compliance with the internal market legislation;

b) Natural gas undertakings shall notify the Competent Authority of the following details of the contracts concluded with suppliers from third countries:

- Contract duration and extension provisions;
- Contracted volumes in total, on an annual basis and the average volume per month;
- Flexibility of contracted volumes, including [...] take-or-pay obligations.
- Contracted delivery points.

The Competent Authority shall notify these data in aggregate form to the Commission.

[.]

Article 14

Monitoring by the Commission

By [...] the Commission, having assessed the notified Plans and after consulting the Gas Coordination Group, shall draw conclusions as to possible means to enhance security of supply at Union level and shall report to the European Parliament and the Council on the implementation of this Regulation. The report shall include, where appropriate, recommendations for improvement of this Regulation.

P.m.: Derogation for Cyprus and Malta

Article 15

Repeal

Directive 2004/67/EC is repealed.

Article 16

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

Articles 6(7), 9(3) and 10(3) shall apply from 3 March 2011.

This Regulation shall be binding in its entirety and directly applicable in all Member States

Done at Brussels,

For the European Parliament

The President

For the Council

The President

ANNEX I: CALCULATION OF THE N-1 FORMULA

1. Definition of the N-1 formula

The N-1 formula describes the ability of the gas infrastructure's technical capacity to satisfy total gas demand in the calculated area in case of disruption of the single largest gas infrastructure during a day of exceptionally high gas demand statistically occurring once every twenty years.

Gas infrastructure includes the natural gas transmission network as well as production, LNG and storage facilities connected to the calculated area.

The technical capacity¹ of all remaining available gas infrastructure in the event of disruption of the single largest gas infrastructure should be at least equal to the sum of the total daily gas demand of the calculated area during a day of exceptionally high demand statistically occurring once every twenty years.

The results of the N-1 formula, as calculated below, should at least equal 100%.

2. Calculation method of the N-1 formula

$$N - 1 [\%] = \frac{EP_m + P_m + S_m + LNG_m - I_m}{D_{max}} \times 100, \quad N - 1 \geq 100\%$$

3. Definitions of the parameters of the N-1 formula:

"Calculated area" means a geographical area for which the N-1 formula is calculated. The calculated area can refer to the national or regional level.

¹ Regulation (EC) No 715/2009 of the European Parliament and of the Council on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 Article 2(18) "technical capacity" means the maximum firm capacity that the transmission system operator can offer to the network users, taking account of system integrity and the operational requirements of the transmission network.

Demand-side definitions

Dmax – means the total daily gas demand (in mcm/d) of the calculated area during a day of exceptionally high demand statistically occurring once every twenty years.

Supply-side definitions

EPm – Physical technical capacity of entry points (in mcm/d) means the sum of the technical capacity [.] of all entry points capable of supplying gas to the calculated area;

Pm – Maximal production capability (in mcm/d) means the sum of the maximal daily production capability of all gas production facilities which can be delivered to the entry points in the calculated area;

Sm – Storage deliverability (in mcm/d) means the sum of the maximum daily withdrawal capacity of all storage facilities which can be delivered to the entry points of the calculated area, taking into account their respective physical characteristics;

LNGm – Maximal LNG facility capacity (in mcm/d) means the sum of the maximal technical daily send-out capacities at all LNG facilities in the calculated area, taking into account critical elements like offloading, ancillary services, temporary storage and re-gasification of LNG as well as technical send-out capacity to the system;

Im – Technical capacity of the single largest gas infrastructure (in mcm/d) with the [.] highest capacity to supply the calculated area.

ANNEX II: LIST OF MARKET BASED SECURITY OF GAS SUPPLY MEASURES

In developing the Preventive and Emergency Plans the Competent Authority shall take into account the following indicative and non-exhaustive list of measures:

Supply side

- Increased production flexibility
- Increased import flexibility
- Commercial gas storage – withdrawal capacity and volume of gas in storage
- LNG terminal capacity and maximal send-out capacity
- Diversification of supplies and routes
- Reverse flows
- Coordinated dispatching by transmission system operators
- Long-term and short-term contracts
- Investments in infrastructure
- Contractual arrangements to ensure security of gas supply

Demand side

- Interruptible contracts
- Fuel switch possibility – alternative back-up fuels in industrial and power generation plants
- Increased efficiency
- Increased use of renewable energy sources

ANNEX III: LIST OF NON-MARKET BASED SECURITY OF GAS SUPPLY MEASURES

In developing the Preventive and Emergency Plans the Competent Authority shall consider the contribution of the following indicative and non-exhaustive list of measures only in the case of an Emergency:

Supply side

- Strategic gas storage
- Forced fuel switch
 - Use of stocks of alternative fuels (e.g. in line with 90 days of oil stocks obligation)
 - Use of electricity generated from other sources other than gas

Demand side

- Various steps of compulsory demand reduction

ANNEX IV: REGIONAL COOPERATION

An updated version, based on the non-paper of 15 December 2009, will be added shortly.
