European Energy Regulators' approach to the work on the codes and rules[1] of the internal energy market

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Table of contents

1 Rationale

Experience shows that European legislation may take a long time until implemented and fully complied with. The goal of ERGEG is to achieve a common internal energy market in a timely manner. Therefore, it is considered appropriate to define, structure and prepare the framework for the detailed rules necessary under the 3rd Package at an early stage in order to implement them as soon as possible after the new legislation enters into force.

One particularly important part of the "new" Electricity and Gas Regulations proposed within the 3rd Package is concerning the detailed technical rules and codes, due to be prepared and implemented by the ENTSOs for Electricity and Gas and / or other stakeholders. The framework and contents of those rules and codes are specified in the related Articles of the "new" Regulations.

The rules and codes required for the electricity market are listed in the Article 2c.3 of the "new" Electricity Regulation:

"…

[1] "Codes and rules" refers to the list of anticipated codes and rules of the draft electricity and gas regulation

Article 2c

Tasks of the European Network of Transmission System Operators for Electricity

1. The European Network of Transmission System Operators for Electricity shall adopt:

(a) technical and market codes in the areas mentioned in paragraph 3;

…

(c) a 10-year investment plan, including a generation adequacy outlook, every two years;

…

3. The detailed technical and market codes shall cover the following areas, according to the priorities defined in the annual work programme:

(a) security and reliability rules;

(b) grid connection and access rules;

(c) data exchange and settlement rules;

(d) interoperability rules;

(e) operational procedures in an emergency;

(f) capacity allocation and congestion management rules;

(g) rules for trading;

(h) transparency rules;

(i) balancing rules including reserve power rules;

(j) rules regarding harmonised transportation tariff structures including locational signals and inter-TSO compensation rules;

(k) energy efficiency regarding electricity networks.

…

5. The European Network of Transmission System Operators for Electricity shall publish a Community-wide 10-year network investment plan every two years …

…"

The rules and codes required for the gas market are listed in the Article 2c.3 of the "new" Gas Regulation:

Article 2c

Tasks of the European Network of Transmission System Operators for Gas

1. The European Network of Transmission System Operators for Gas shall adopt:

(a) technical and market codes in the areas mentioned in paragraph 3;

…

(c) a 10-year investment plan every two years;

…

3. The detailed technical and market codes shall cover the following areas, according to the priorities defined in the annual work programme:

(a) security and reliability rules;

(b) grid connection and access rules;

(c) data exchange and settlement rules;

(d) interoperability rules;

(e) operational procedures in an emergency;

(f) capacity allocation and congestion management rules;

(g) rules for trading;

(h) transparency rules;

(i) balancing rules including rules on nominations procedures, rules for imbalance charges and rules for operational balancing between transmission system operators systems;

(j) rules regarding harmonised transportation tariff structures;

(k) energy efficiency regarding gas networks.

…

5. The European Network of Transmission System Operators for Gas shall publish a Community-wide 10-year network investment plan every two years…

…

"Article 4a
Third Party Access services concerning storage and LNG facilities

…

"Article 5a
Principles of Capacity allocation mechanisms and congestion management procedures concerning storage facilities and LNG facilities

…

"Article 6a
Transparency requirements concerning storage facilities and LNG facilities

…

The purpose of this paper is to outline the European Energy Regulators' approach to the development of codes and rules in general and to the definition of the legally binding framework for them in particular, i.e., this paper deals with the framework within which the development and implementation of the technical rules and codes by ENTSOs and other stakeholders shall take place. This document is based on the ERGEG's 'Key Comments on the European Commission's

Third Package'[2] and sketches out the scope and timeframe foreseen to develop guidance in the areas involving substantive discretion (and therefore must be dealt with through a comitology process). It is the aim of ERGEG to develop strategic guidance on those issues which should be dealt with in technical codes to be prepared by the ENTSOs and approved by the Agency.

2 The regulators' approach: strategic guidelines and codes

The 3rd Package should provide the framework to give the Agency (acting in the interest of the EU consumer) the power to take binding regulatory decisions on the defined specific cross-border issues within regulatory framework agreed by the European stakeholders and institutions. Furthermore, the regulators have proposed an alternative approach to the initial concepts of the 3rd Package, which the regulators believe to be consistent with Meroni doctrine. This approach would enable the Agency to take decisions on cross-border issues within a flexible framework set through the comitology process. At the same time it would ensure appropriate involvement of stakeholders and customers. In essence, regulatory policy objectives would be agreed through comitology early enough in the process, which would establish clearly the regulatory decisions that the Agency should make. Mandatory codes and rules would result at the end of the process.

At the beginning of the process, Strategic or Framework Guidelines (that would guide the ENTSOs in their subsequent drafting) would set out the general objective, level of priority, required contents, specific internal / external issues to be dealt with, as well as the roles and responsibilities for each code or rule and should therefore be agreed at a political level. The ENTSOs would then draft the technical codes to meet the Strategic Guidelines. Following the approval by the Agency, the codes and rules become binding. In the view of regulators many of these codes must be legally binding in order to provide the degree of regulatory certainty needed to create a sound investment climate and for competition to develop.

We note that the structure of the next two sections in this paper (scope of guidance) refer to the above quoted articles of the "new" Regulations. Such structure is subject to changes, depending on the outcome of the Third Package legislative process and the final legal text approved by the Institutions. It must be emphasized however, that the approach outlined in this paper is compatible with whatever decision is taken in the 3rd Legislative Package in the sense of type and scope of the "guidelines"; i.e. the specifications and provisions described below are considered necessary:

(i) as the main part of the (preferred by regulators) "strategic guidelines",

or

(ii) as a part and component of the "framework guidelines" (under ongoing discussion now)

or

(iii) within the initially proposed framework within which the Agency would give a justified opinion on the codes prepared by ENTSOs .

[2] see http://www.energy-regulators.eu

It is also important to bear in mind that the specific contents, features and "non-features" (i.e. the issues which are explicitly not foreseen to be tackled by the proposed approach), are considered substantial and crucial for achievement of the goals of the 3rd Package, in terms of competition and market, in terms of security of supply and sustainability.

Furthermore, the European Energy Regulators intend to use the approach and concepts summarized here, while designing, implementing and applying the compliance monitoring criteria which will be used by regulators in their assessment of whether the intended purpose of a given technical code / set of rules, has been fulfilled, or, if this is not the case, what amendments and improvements need to be undertaken by a given stakeholder / author(s) of the specific code or rules.

3 Scope of guidance – Electricity issues

The scope of intended Guidelines for Electricity are presented in this chapter. The Guidelines shall not cover such technical details, which shall be delivered within the related detailed rules and codes to be prepared by the ENTSO and / or other stakeholders.

The intended Guidelines shall not overlap with other Guidelines. The Guidelines shall, however, provide a clear and well defined specification of interfaces and common issues with other related Guidelines.

3.1 Security and reliability rules (Article 2c.3 a)

The common operational security rules need to be defined and agreed at the synchronous area level and between synchronous areas. These rules shall meet those common provisions which are necessary in order to ensure security of electricity supply and proper functioning of the electricity market. The following general operational security issues shall be addressed:

- The objectives and necessary contents of the regulatory framework for operational security of the EU transmission networks and synchronous areas
- The applicability and intended audience(s) for such a framework
- The relationship between the EU-wide framework and the grid codes and operational security rules of the individual Member States and/or control areas
- Derogation and change management procedures
- Enforcement and supervision/monitoring.

The following specific issues to be dealt with include:

- Roles and responsibilities of different stakeholders and market players
- Organisational framework for technical rules and codes for synchronous power system operation
- Technical framework for operational security including security criteria aspects, network operational planning and real-time operation aspects, etc.
- Training and certification provisions for the TSO staff.

The scope of the Guidelines on Operational Security will cover the above issues with issues of data exchange, interoperability and emergency having relevance to operational security.

3.2 Grid connection and access rules (Article 2c.3 b)

The common grid connection and access rules are needed throughout the European Internal Electricity Market in order to ensure a non-discriminatory treatment of all grid users and equal grid connection and access conditions for all market participants. The general issues to be addressed include among others:

- The objectives and necessary contents
- Applicability and intended audience(s)
- The relation between the grid connection and access rules and the grid codes and operational security rules of the individual Member States and/or control areas and/or synchronous areas
- Derogation and change management procedures,
- Enforcement and supervision/monitoring.

The specific issues to be considered shall include among others:

- EU-wide common connection requirements for generation including distributed generation, for load customers and for DSOs
- Voltage and frequency quality provisions, etc.

The grid connection and access rules shall be based on the comparative analysis and extraction of the common denominator from the European grid codes. At the same time, they shall represent no redundancy to the national grid codes but rather a complementary addendum to those codes, ensuring EU-wide equal, non-discriminatory and balanced treatment of all grid users and transmission grids.

The scope of the Guidelines on Grid Connection and Access will cover the above general and specific issues.

3.3 Data exchange and settlement rules (Article 2c.3 c)

The TSO may only use network user data required for the performance of its duties in accordance with the relevant statutory provisions. It may only, to the necessary and legally permissible extent, forward such data to market participants which require it to perform their functions. The TSO shall provide relevant market participants with the information and data required by them to perform their functions, and to operate the network safely and efficiently, coordinate network upgrading and expansion, and maintain interoperability. Analogous duties to inform apply to the network users. The extent of data exchange and settlement shall be defined within the context of relevant guidelines i.e. Guidelines of Operational Security, Guidelines of Balancing, and there is no need for establishing separate guidelines on these issues. Furthermore, data exchange and settlement shall be affected in the manner specified by the related codes prepared and implemented by ENTSOs. In the synchronous operation and synchronous areas of the EU transmission networks (control areas), the definition and implementation of the data exchange and settlement rules is anticipated within the general framework of technical rules for the secure and coordinated control areas' operation. An example for such a set of rules – albeit not yet legally binding – are the respective policies of the UCTE Operational Handbook or the related rules of the Nordic Grid Code.

Data exchange and settlement issues will be covered in the Guidelines on Operational Security and in the Guidelines for Balancing including Reserve Power and thus there is no need for separate Guidelines.

3.4 Interoperability rules (Article 2c.3 d) 3

TSOs shall ensure that their system can operate as smoothly as possible with other TSOs' power systems. This requires co-ordination in protection measures and in operation of the power systems. The requirements for system protection shall be set so as to maximise transmission capacity without violating the secure system operation. System protection shall limit the consequences of operational disturbances to a minimum in the interconnected system. System protection procedures shall be co-ordinated among TSOs. These procedures shall be described and agreed among relevant TSOs to ensure interoperability within and between synchronous areas.

For each interconnector TSOs shall define who is responsible for operation of that specific interconnector and if both TSOs have responsibilities, the responsibility boundary for operation of the interconnector has to be agreed between TSOs. These responsibilities include switching schedules and operations, monitoring of operation and disturbance management. Furthermore, operation of interconnectors shall include definition of transmission and trading capacity, procedures to define transmission capacity, operation monitoring and control during system operation, voltage control, outage planning and disturbance handling.

TSOs having interconnections to other synchronous areas shall ensure that operation of these interconnections is compatible with interconnections within a synchronous area and thus the secure system operation between synchronous areas is ensured. Effects of disturbances are not allowed to spread from one synchronous system to another. Only disconnection of the interconnection joining the systems is allowed.

Any agreement relating to inter-TSO co-operation shall be formally established. in particular, it must specifically identify respective tasks and responsibilities.

Interoperability issues will be covered in the Guidelines on Operational Security and thus there is no need for separate Guidelines on Interoperability.

3.5 Operational procedures in an emergency (Article 2c.3 e) 4

The extent of the effect of the disturbances on power system operation is reflected in the operating states that differ from the normal operating state. Recovery or restoration from the disturbed to the normal operating state shall occur as fast and efficiently as possible in order to avoid new disturbances and/or further deterioration of system security.

[3] In Electricity, as a part of the Guidelines on Operational Security

[4] In Electricity, as a part of the Guidelines on Operational Security

In particular, TSOs shall define when the power system is in the normal operating state and when it diverges from normal state. TSOs have to ensure that these definitions are common across the synchronous area and between synchronous areas in order to avoid adverse effects in network operation. Furthermore, the characteristics which cause the operating state to differ from normal state shall be defined accordingly including e.g. flows in the TSO grid and on interconnectors: active power reserves (primary, secondary, tertiary reserves); reactive power reserves; status of network control system and stability of the system (voltage, frequency and power angle).

In the case of disturbances, the TSO shall execute the remedial actions to restore the system to the normal operating state without delay. Remedial actions are dependent on the nature of the disturbance and they shall accordingly be used to restore the state of the system to normal as efficiently as possible within a predefined time frame. Procedures for remedial actions shall be defined by TSOs.

The TSO is responsible for remedial actions in the case of disturbances within its power system. In the case of disturbances on an interconnector, the TSOs concerned are responsible for necessary actions on their side of the interconnector, unless otherwise agreed between the neighbouring TSOs. Coordinated procedures between neighbouring TSOs shall be implemented to complement the national rules and procedures. The remedial actions may include e.g. the activation of the power or reactive reserves, the automatic load shedding or any other emergency measure.

Automatic load shedding systems design shall be harmonised and co-ordinated across synchronous areas. In this respect, The DSOs involved shall cooperate with TSOs. Responsibilities regarding load shedding system installation and maintenance shall be clearly defined in each control area. The efficiency of load shedding systems shall be regularly evaluated.

System restoration includes a number of measures to restore the normal operational state or to ensure electric power grid operation as close as possible to the normal state. The TSOs are responsible for the restoration of the power system and may give orders (within the context of maintaining the power system operational security and integrity) to those connected to their network in order to efficiently restore the system operation.

TSOs shall maintain sufficient black start and islanding capability within their control area to ensure the efficient and fast restoration after power system blackouts.

To this end, the restoration plans shall be defined, agreed and maintained by TSOs at synchronous area level. Restoration plans must be coordinated among TSOs to allow the organised restoration of the whole synchronous area and shall be evaluated by regulatory authorities. Furthermore, TSO personnel are to be trained to manage these exceptional incidents. TSOs shall test these restoration plans regularly and shall make adjustments to these plans where appropriate. The process for this shall be described transparently and communicated to all involved parties by TSOs.

The restoration, after a blackout, of the affected part of the system shall be executed as soon as possible. In the aftermath of the event, TSOs shall be able to determine the status of their network, particularly the presence of any faulty grid element. This status shall be used as an essential input to properly implement the restoration. Any event requiring such restoration shall be analysed by the TSO and communicated to market participants and concerned regulatory authorities.

Emergency issues will be covered in the Guidelines on Operational Security and thus there is no need for separate Guidelines on Operational Procedures in Emergency.

3.6 Capacity allocation and congestion management rules (Article 2c.3 f)

Capacity allocation and congestion management rules shall follow the provisions and requirements as specified in the actually applicable version of the Congestion Management Guidelines (cf. EC Decision 2006/770/EC). Beyond that, the specific issues of capacity calculation in relation to the security and reliability rules shall be taken into account accordingly, including among others the following issues:

- Information on transmission capacity available for commercial purposes to the market players that intend to import or export electricity, calculated according to the well defined and described methodology and taking into account all the applicable security criteria
- The transmission capacity available for commercial purposes must take into account a specific reliability margin required to cope with uncertainties related to system operation, generation-consumption balance and any lacking information on the location of injections and off-takes. TSOs shall identify precisely which uncertainties are covered by the reliability margin. This calculation method shall also be agreed among involved TSOs.
- Principles for the determination of the base cases for capacity calculation, and especially the conditions for the inclusion of specific types of exchanges in the base case should be transparent, non- discriminatory and ensure an efficient functioning of the electricity market. Those principles shall be approved by regulatory authorities
- The data and information to be published concerning capacity calculation shall include: the capacity calculation method, the relevant base cases, maximum physical capacity and adopted reliability margin, duly justified, per interconnection, bottleneck or critical branch, for the different time frames.
- The methods for capacity calculation covering all time frames to be applied during one considered period (by default the following year) should be submitted for approval to the regulatory authorities not later than 6 months before the beginning of this period (only if methods change).
- Furthermore, TSOs shall jointly define and publish the deadlines for: notification of long-term transmission capacity studies, publication of the transmission capacity available for imports/exports each month, update and disclosure of the hourly values of the transmission capacity available for commercial purposes

The scope of the Guidelines on Capacity Allocation and Congestion Management will cover the amended Congestion Management Guidelines (EC Decision 2006/770/EC) with the above capacity allocation issues.

3.7 Rules for trading (Article 2c.3 g)

The products traded in electricity market are both physical (day ahead / intraday) and financial (derivatives like futures and options). Regulatory oversight on wholesale markets will be necessary. In this context it will be important to clarify the relation between proposals in Art. 2c No. 3 lit. g) of the “new” Regulation (EC) 1228/2003 (rules for trading) and in Art. 22f Dir. 2003/54

(record keeping and transparency requirements) and to assess to what extent “rules for trading” belong to the proposed “11 areas”, that basically cover network related issues.

For the time being, no explicit contents and scope for the related “Guidelines for Trading” is foreseen.

3.8 Transparency rules (Article 2c.3 h)

The transparency rules shall follow up the implementation of the ERGEG Guidelines of Good Practice for Information Management and Transparency (GGP IMT) and the implementation of the relevant transparency provisions from the CM Guidelines throughout the EU. Specific text/inputs for the legally binding framework on transparency and information management based on the GGP-IMT shall be eventually defined either as an amendment to the CM Guidelines or within a dedicated regulation / EU legislation.

The scope of the Transparency Guidelines shall correspond to the amended ERGEG GGP IMT.

3.9 Balancing rules including reserve power rules (Article 2c.3 i)

In the longer term, the creation of a single EU electricity market will include the integration or at least full interaction of European balancing markets as far as is technically possible and economically efficient. Beyond that, the interaction of balancing with automatically activated reserves on the one and with the intra-day trade on the other hand will have to be taken into account in order to optimise economic efficiency and security of operation and supply. The definition and implementation of the rules for balancing and reserve power shall follow the framework of the ERGEG Guidelines of Good Practice for Electricity Balancing Markets Integration (GGP-EBMI).

The scope of the Guidelines for Balancing including Reserve Power, shall correspond to the amended ERGEG GGP-EBMI, encompassing also automatically activated reserves and intraday market issues.

3.10 Rules regarding harmonised transportation tariff structures including locational signals and inter-TSO compensation rules (Article 2c.3 j)

ERGEG delivered its advice on the Tarification Guidelines to the European Commission in July 2005. The objective of these guidelines was to serve as a first step for the harmonisation of charges paid by generation on the transmission network level. The draft Tarification Guidelines reviewed the current position in the ranges of national tariffs as a starting point for harmonisation and stated that further work on this issue, e.g. on locational signals, would be undertaken.
During the year 2007 ERGEG prepared ToR for a study on tariff harmonisation and locational signals and reported tarification and ITC issues within the Monitoring Report on Compliance with Regulation 1228/2003/EC. Continuing the development of Transmission Tarification Guidelines, a study on further harmonisation of transmission tariff structures and review of locational signals at European level will be launched in order to analyse the effects and possibilities of a more harmonised fee structure for TSOs across EU in more detail. The work shall result in draft amended Transmission Tarification Guidelines and may include also among others incentives for investments, harmonisation of tarification, tarification of generation and load and tarification structure.

The Guidelines shall correspond to the scope and contents of the Inter-TSO Compensation and Transmission Tarification. Furthermore, all tarification and Inter-TSO compensation rules are

included in these Guidelines and there is no need for related detailed rules and codes prepared by the ENTSO and / or other stakeholder.

3.11 Energy efficiency regarding electricity networks (Article 2c.3 k)

Treatment of networklosses is an issue of special importance for the energy efficiency regarding electricity networks. This refers in particular to the following issues:

- Definitions:

  There is no common definition of losses within the EU. This leads to a situation in which there are different definitions in the Member States. It is obvious that the technical losses are the main part of network losses but there are Member States which include losses also non-technical losses like non-metered consumption. A comparison of the network losses and goal setting for efficiency needs a common definition of losses.

- Calculation methodologies:

  The determination of network losses is complicated, because they have to be calculated and can not be measured in most cases. The measurement of network losses would only be possible in networks with smart metering or with load profiles of the whole consumption and generation, which is not state of the art especially on the low voltage level. As network losses have to be calculated a comparison of network losses has also to include an overview about the different calculation methodologies in the Member States. It is also of relevance on which voltage levels it is possible the measure the network losses.

- Procurement of network losses:

  Directive 2003/54/EC obliges the network operators to procure the energy they use to cover energy losses according to transparent, non-discriminatory and market based procedures, whenever they have this duty. In many Member States the network operators are responsible for the procurement of losses but it is also possible to oblige the suppliers to cover the losses. In those cases there is no need of a separate procurement system for network losses.

- Consideration of costs in the tariff system:

  In many Member States there are separate network tariff components for network losses whereas other Member States include costs of network losses in general network tariffs.

- Regulatory incentives for the reduction of losses:

  Energy efficiency is an issue of increasing importance. Therefore an incentive to take measures for the reduction of losses shall be given to the network operators. There are also different approaches for such incentives which have to be compared.

ERGEG's analysis on network losses gives an overview about national practices on the determination, procurement, financial recovery of network losses and incentives for their reduction. Beyond that it shows the actual practice on network losses in Europe by means of representative case studies of some Member States. It is the background for further discussions and the development of Guidelines on losses, which will serve as the basis for future detailed technical rules and / or codes.

Beyond network losses, a number of electricity related issues which are important for enhancing energy efficiency are defined in the Energy End-Use Efficiency Directive 2006/77/EC. These

issues will need to be further analysed in detail to evaluate whether they need a dedicated consideration within this Article 2c.3 k).

The scope of the future Guidelines on Energy Efficiency in Electricity will be defined depending on the outcome of the ongoing ERGEG work on network losses mentioned above, on the implementation of the Energy End-Use Efficiency Directive and other related issues, notably also dependent on the "Green Package".

3.12 10-year investment plan (Article 2c.1 c)

At present, there exists no coordinated electricity grid planning neither at the European level, nor at the level of the synchronous areas. Whereas the System Adequacy Forecasts (SAF) of a given synchronous area (e.g. UCTE SAF) do contain the findings and more or less indirect suggestions on what grid expansions and new infrastructure / investments are needed, it is not sufficient.

With respect to the new infrastructure, the 10-year investment plan for the European electricity grid(s) shall address among others:

- All the inter- and intra-control area new lines at the 220/380-kV (or higher) that are to be built and enter operation in the next 10 years
- Each of those projects shall be specified in terms of:
  - § Rationale behind / justification
  - § Costs
  - § Responsible TSOs and / or other parties (e.g. investors)
  - § Implementation and completion time
  - § Expected benefits for security of supply and for the market

With respect to the general System Adequacy Forecast, the 10-years investment plan shall be build around the present concepts of the e.g. UCTE SAF or Nordel SAF, but enhanced in line with the results of the 2008 cooperation with ETSO within the ESS-3 task

The 10-years investment plan shall be developed and updated by the ENTSOs on an bi-annual basis and approved by the Agency.

The Guidelines for Joint Grid Planning shall correspond to the scope and contents of the process leading to the 10-year investment plan including System Adequacy Forecast respectively.

4 Scope of guidance – Gas issues

The scope of the guidance outlined in this section is based on an initial analysis of the issues which should be dealt with in technical codes to be prepared by the European Network of Transmission System Operators for Gas (ENTSOG). In some areas ERGEG has already developed guidelines and work in these areas is therefore more advanced than in other areas. Where appropriate, the guidance will be built on already existing ERGEG work. Each of the guidelines will be worked out in detail and will be subject to a public consultation according to ERGEG's public consultation procedure.

It has to be stated that ERGEG's intention is not to harmonize all existing national rules, but rather to stress the need for harmonisation in those areas where it is necessary for the creation of a functioning internal gas market and to ensure the compatibility of existing networks, subject to the principle of subsidiarity. The scope outlined provides sketches out for illustration purposes the regulators' current thinking on the main issues to be dealt with in the codes and rules.

4.1 Security and reliability rules (Article 2c.3 a)

4.1.1 Scope of the Guidelines on security and reliability

The introduction of an incident prevention policy and a safety management system should be defined in thze guidelines. The incident prevention policy should contain concrete goals relating to incident reduction, to be evaluated on a regular basis on the basis of agreed criteria which should be outlined in the guidelines. This policy should have the objective to guarantee a high level of protection of the installations by means of appropriate measures and structures. A safety management system should serve as a tool to implement the policy. It should contain the organisational structure, responsibilities, roles and procedures and.

4.1.2 Out of the scope of the Guidelines on security and reliability

The intended guidelines shall not cover any actual technical and / or operational standards and rules which must in turn be delivered within the related detailed rules and codes to be prepared by the ENTSOG and / or other stakeholders.

An emergency plan has to be defined. This will be treated under article 2c.3 e with the operational procedures in an emergency.

The Guidelines on security and reliability shall not overlap with other Guidelines; the Guidelines shall however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and the framework.

4.2 Grid connection and access rules (Article 2c.3 b)

4.2.1 Scope of the Guidelines on grid connection and access rules

Grid connection and access rules should be harmonized on a level to allow for the efficient functioning of the internal gas market. Connection procedures should be made clear for end-customers and other operators, covering new connections and extensions. The economic feasibility of the connection and the related sharing of the connection costs as well as the contribution of the investment to the totality of the development of the existing system are two criteria to be evaluated. Conditions on indemnifications and guarantees should be transparent. Undue discrimination of access to the grid has to be avoided. Conditions for priority access should be set out to prevent undue discrimination.

4.2.2 Scope of the Guidelines on grid connection and access rules

The intended Guidelines shall not cover any actual technical and / or operational standards and rules on grid access / connection, which must in turn be delivered within the related detailed rules and codes to be prepared by the ENTSOG and / or other stakeholders.

The Guidelines on Grid Connection and Access shall also not overlap with other Guidelines; the Guidelines shall however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and framework.

4.3 Data exchange and settlement rules (Article 2c.3 c)

4.3.1 Scope of the Guidelines on data exchange and settlement

The TSO may only use network user data required for the performance of its duties in accordance with the relevant statutory provisions. It may only, to the necessary and legally permissible extent, forward such data to market participants which require it to perform their functions while ensuring confidentiality and commercial sensitivity. The TSO should provide relevant market participants with the information and data required by them to perform their functions, and to operate the network safely and efficiently, coordinate network upgrading and expansion, and maintain interoperability. Analogous duties to inform should apply to the network user in respect of the transmission company/transportation rights holder into whose network it injects gas. The data transfers should be effected in the manner specified by Codes prepared by ENTSOG ensuring confidentiality and commercial sensitivity.

4.3.2 Outside of the scope of the Guidelines on data exchange and settlement

The intended Guidelines should not cover any actual technical and / or operational data exchange protocols, data formats or other technical details which must in turn be delivered within the related detailed rules and codes to be prepared by the ENTSOG and / or other stakeholders.

The Guidelines on Data Exchange and Settlement should also not overlap with other Guidelines; the Guidelines should however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and framework.

4.4 Interoperability rules (Article 2c.3 d)

4.4.1 Scope of the Guidelines on Interoperability

Gas specifications on interconnection points are historically being dealt with in the supply contracts, because only one party on each side of the border existed. With multiple network users on both sides, the interoperability rules should be common and transparent for everybody and laid down in an agreement between system operators. The conclusion of interconnection agreements on each interconnection point is a must. Technical specifications (e.g., gas day) on pressure and quality should be specified therein. Nomination and renomination procedures should be harmonized at interconnection points.

4.4.2 Outside of the scope of the Guidelines on Interoperability

The intended Guidelines shall not cover any actual technical and / or operational standards for interoperability, neither shall they contain details on gas specifications, pressure or other technical specifications which must in turn be delivered within the related detailed rules and codes to be prepared by the ENTSOG and / or other stakeholders.

The Guidelines on Interoperability shall not overlap with other Guidelines; the Guidelines shall however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and framework.

4.5 Operational procedures in an emergency (Article 2c.3 e)

4.5.1 Scope of the Guidelines on Operational Procedures in Emergency

Robust operational procedures are required to prevent network emergencies and to return the system to stable operating conditions when an emergency has occurred. Co-operation between

TSOs is essential to ensure that an emergency in one area does not cause one in a neighbouring system. Emergency plans need to be compatible. Provision for co-operation between TSO to assist in potential emergency situations should be formalised. The roles and responsibilities of all parties need to be clearly set out in the emergencies procedures. Provision for co-operation of neighbouring TSOs should be provided for in the codes.

4.5.2 Outside of the scope of the Guidelines on Operational Procedures in Emergency

The intended Guidelines shall not cover any actual technical and / or operational standards and rules for emergency control, which must in turn be delivered within the related detailed rules and codes to be prepared by the ENTSOG and / or other stakeholders.

The Guidelines on Operational Procedures in Emergency shall not overlap with other Guidelines; the Guidelines shall however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and framework.

4.6 Capacity allocation and congestion management rules (Articles: 2c.3. f)

4.6.1 Scope of the Guidelines on Capacity Allocation (CAM) and Congestion Management (CMP)

CAMs and CMPs should to be coordinated among adjacent system operators. This is already explained in ERGEG's GGPOS: adjacent system operators must offer compatible products, in compatible quantities, using compatible timing and processes, including compatible information processes.

As a first recommendation TSOs should set aside a non-negligible portion of their new capacity for one-year capacity bookings and shorter term needs (with appropriate lead times regarding the respective duration of these bookings). The current Regulation states that short term services have to be offered, but does not lay down any threshold. One-year bookings and shorter term capacity is especially important for new entrants which do not have the financial wherewithal to book capacity for as long and as long in advance as incumbents. Building more capacity for short term bookings on top of the capacity secured by long term contracts is also positive in terms of flexibility, which new entrants are usually short of, and in terms of facilitating arbitrage opportunities as well as the ultimate emergence of a common market.

Secondly, scarce capacity that is systematically unused must be placed back into the market in a firm way. The current Regulation 1775/2005 mentions interruptible day ahead UIOLI mechanisms as a way to avoid capacity hoarding also including long-term firm UIOLI requirements.. LT UIOLI measures are effective preventive tools that discourage large players from booking too much capacity and / or encourage shippers to release unused capacity on the secondary market if needed by other shippers. If the mechanism is carefully designed it will be used only at the request of shippers wanting to acquire capacity and under precise conditions, thus avoiding unfair expropriations and risks of contract cancellation for TSOs.

The rules to be set should provide guidance for the CAMs and CMPs which are today commonly used, or, at least, at hand in Europe. These CAMs and CMPs include, among others, open subscription periods, short term UIOLI mechanisms, secondary market, rucksack principle, and interruptible capacity.

4.6.2 Outside of the scope of the Guidelines on Capacity Allocation and Congestion Management

The intended Guidelines should only cover capacity allocation and congestion management issues, but not details on calculation of available capacity or any actual technical and / or operational standards and rules, which must in turn be delivered within the related detailed rules and codes to be prepared by the ENTSOG and / or other stakeholders.

The Guidelines shall not overlap with other Guidelines; the Guidelines shall however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and framework.

4.7 Rules for trading (Articles 2c.3. g)

4.7.1 Scope of the Guidelines on Trading

Guidance should be given for network related rules for commodity trading (e.g. at virtual hubs) and TSOs related services in secondary capacity trading. Here, guidance on the necessary cooperation between TSOs and capacity trading platform operators should be given.

4.7.2 Out of the scope of the Guidelines on Trading

In this area, the guidelines shall not contain technical and / or operational rules on data exchange protocols, data formats or other technical details which must in turn be delivered within the related detailed rules and codes to be prepared by the ENTSOG and / or other stakeholders.

The Guidelines shall not overlap with other Guidelines; the Guidelines shall however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and framework.

4.8 Transparency rules (Article 2c.3 h)

4.8.1 Scope of the Guidelines on Transparency

It is proposed that these Guidelines will address the publication of network related data, specifically: technical information, definition of relevant points, tariff information, capacity information, balancing information and user-friendliness of the information provided by TSOs. In this context, transparency refers only to the information to be provided by TSOs and does not cover other areas of transparency, e.g., storage and LNG.

4.8.2 Out of the scope of the Guidelines on Transparency

The intended Guidelines should not cover details on the harmonisation of units, calculation of available capacity or any actual technical and / or operational standards and rules, which must in turn be delivered within the related detailed rules and codes to be prepared by the ENTSOG and / or other stakeholders.

Guidance on other areas of transparency, such as storage and LNG should be treated separately in guidelines for these areas.

4.9 Balancing rules (Article 2c.3 i)

4.9.1 Scope of the Guidelines on Balancing

The focus of these Guidelines should be on creating the right conditions to incentivise a reduction in the number of balancing zones and on addressing cross border difficulties. These should be the guiding objectives in considering individual elements of the code.

The following issues are examples of the types of considerations that will have to be addressed when evaluating the respective content of the Guidelines and the codes:

- Balancing period: at a policy level the balancing period will need to be specified, either as a fully harmonised period or as a menu of balancing period options.
- Imbalance charges: for example, the necessary design principles of charges could be set out in the guidelines, with the detailed methodology contained in the code
- Penalty charges: situations where penalties should be imposed and the principles behind calculation of penalties and their application.
- Access to sources of flexibility: Trading and pooling of imbalance positions: tolerance levels, services and access to sources of flexibility; consideration needs to be given to the extent to which these issues are relevant to cross-border balancing
- Agreements on interconnections: the conclusion of interconnection agreements on each interconnection point is a must. The agreement shall establish operational balancing accounts.

4.9.2 Out of the scope of the Guidelines on Balancing

The intended Guidelines shall not cover details on the harmonisation of gas days, balancing periods or balancing zones or any actual technical and / or operational standards and rules, which must in turn be delivered within the related detailed rules and codes to be prepared by the ENTSOG and / or other stakeholders.

The Guidelines shall not overlap with other Guidelines; the Guidelines shall however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and framework.

4.10 Rules regarding harmonised transportation tariffs (Article 2c.3 j)

4.10.1 Scope of the Guidelines on Tariffs

Basic cost and tariff principles should ensure a certain level of harmonisation of tariff derivation across Members States. Close cooperation between NRAs is especially required when setting entry and exit tariffs in order to avoid pancaking. Harmonisation is needed for the design of incentives for (extension) investments in new infrastructure. The benefit of a harmonised tariff framework for new investments should foster a positive investment climate. Furthermore, guidance should be given on the design of tariffs for interruptible and short-term capacity products.

4.10.2 Out of scope of the Guidelines on Tariffs

The intended Guidelines shall not cover details on the tariff calculation methodology.

The Guidelines shall not overlap with other Guidelines and / or market and regulatory framework; the Guidelines shall however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and framework.

4.11 Energy efficiency regarding gas networks (Article 2c.3 k)

4.11.1 Scope of the Guidelines on Energy Efficiency regarding gas networks

Energy efficiency is an important issue that should be taken into consideration when decisions have to be made concerning investments. It can be the trigger for investment in new installations or the decision not to maintain or upgrade old equipment. The obligation to use Best Available Techniques which are economically justifiable is a policy decision that should be considered under this topic. The aim to cooperation with other operators to optimize installations on a technical performance level is another one. Optimisation of system operation can result in real energy savings from reduced balancing actions and reduction in compressor operations. Harmonising operating regimes and co-operation between TSOs should be fully exploited to maximise potential savings.

4.11.2 Out of scope of the Guidelines on Energy Efficiency regarding gas networks

The intended Guidelines shall not cover any actual technical and / or operational standards and rules which must in turn be delivered within the related detailed rules and codes to be prepared by ENTSOG and / or other stakeholders.

The Guidelines on Energy Efficiency regarding gas networks shall not overlap with other Guidelines; the Guidelines shall however provide a clear and well defined specification of interfaces and common issues with all other related Guidelines and framework.

4.12 10-year investment plan (Article 2c.1 c)

As trade and interdependence between EU countries grows, it will be especially important to look at plans from an EU point of view in order to coordinate investments in gas infrastructure across Europe, which is why the 3rd package calls for ENTSOG to adopt an EU-wide 10-year investment plan and regional investments plans to be updated every two years.

The plan should:

- Cover investments aimed at increasing or maintaining capacity levels on the main high pressure transmission networks (at entry and exit points as well as inside the network);
- Cover investments in conversion facilities;
- Take into account storage, LNG and CCGT projects (not because ENTSOG must propose what facilities are to be constructed, but because these facilities will have a big impact on demand for transmission capacity).

Furthermore, the plan should:

1. Provide a map of existing, decided and planned infrastructure (both regulated and not);
2. Provide sufficient information about worldwide and EU gas demand and supply trends (the sources used to elaborate these trends can have a big impact on investment plans and may need to be defined in the strategic guidelines –some issues as to the information powers of ENTSOG that may need to be addressed);
3. Include a summary of investment plans drafted at national level and of any additional input submitted through the Gas Regional Initiatives (GRIs);
4. Identify physical congestions, particularly at cross-border level, that will result from EU demand and supply trends;
5. Identify the potential projects that could resolve physical congestions, , including a cost-benefit analysis and / or assess the probability of the realisation of each project;
6. Propose an investment plan, with the following axis:

- Development of entry points into the European market;
- Internal debottlenecking and interconnection between member states;
- Development of exit points (notably storage and CCGT connections).

A certain degree of TSOs' commitment referred to construction of the infrastructures included in the plan is advisable. The plan should also include an assessments of the conditions under which the TSOs would commit themselves to undertake the infrastructures construction, i.e. considerations on internal rate of return, market demand, etc.

4.13 Guidelines of Good Practice

In addition to providing guidance in the areas of the 11 codes and rules and the 10-year investment plan to be developed by the ENTSOG, guidelines addressed to other infrastructure operators will also be developed by ERGEG. Under the new legislative framework these guidelines could eventually be made legally binding when, and if, deemed necessary by the Commission.

4.13.1 Storage (Articles: 4a, 5a, 6a and 8)

Capacity allocation mechanisms and congestion management procedures are important issues as most European storage facilities are fully booked. Poor transparency in access conditions is a major issue for a large number of storage users and may result in a barrier to entry for new entrants. In many cases, the absence of effective and non-discriminatory procedures for capacity allocation and congestion management and the modest development of secondary markets facilitate capacity hoarding.

The scope of the Guidelines on Storage should correspond to the ERGEG GGPSSO.

4.13.2 LNG (Articles: 4a, 5a, 6a and 8)

Previous ERGEG LNG Guidelines have identified the main areas where a certain level of harmonisation is required by undertakings. These areas refer to common operational issues, definitions and procedures, i.e. transparency, roles and responsibilities, capacity allocation mechanisms, congestion management procedures or ship approval procedures, among others. Nevertheless, it has been pointed out that the right balance between regulation and market incentives is desirable. Regulatory provisions on LNG should allow for sufficient flexibility to adapt to technical specificities and the particular market context of each facility.

The scope of the Guidelines on LNG should correspond to the ERGEG GGPLNG.

4.13.3 Art. 22 guidelines

Directive 2003/55/EC, concerning common rules for the internal market in natural gas and especially Article 22 thereof, aims at the promotion of effective competition and security of supply by creating incentives for efficient investments in new infrastructure projects, while at the same time recognizing the need for non-discriminatory access to relevant infrastructures.
In order to prevent "forum shopping" by investors in different member states, the application and detailed conditions of Art. 22 procedures to allow for or refuse exemptions should be well harmonized. This is to allow for comparable investment conditions in the Member States. ERGEG

has developed Article 22 guidelines and consulted upon them with the market. These should provide guidance to competent authorities and ACER when deciding upon an exemption request. The scope of the Guidelines on Article 22 should correspond to the ERGEG Guidelines on Article 22.

5 Cooperation with ENTSOs and Stakeholders

ERGEG undertakes to closely cooperate and coordinate at an early stage with GTE and ETSO in the development of the strategic/framework guidelines.

The strategic guidance developed by ERGEG will be publicly consulted according to the ERGEG statutes and usual practice. After the consultation, a detailed evaluation of consultation results will be performed and the deliverables' documents updated accordingly. If considered necessary by ERGEG, a public hearing can be organised.