ERGEG Public Consultation on Draft GGP for Operational Security in Electricity

Evaluation of the Comments Received

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1 Introduction

1.1 Recap of the ERGEG Consultation Paper

This document contains the evaluation by ERGEG of the comments received during the ERGEG public consultation on Draft Guidelines of Good Practice for Operational Security in Electricity[1].

The public consultation was held between 17 April 2008 and 11 June 2008. The purpose of the public consultation was to provide ERGEG with the basis for the future EU-wide framework supporting the technical rules and codes of the EU synchronous areas on operational security.

1.2 Responses received

Altogether 17 responses were received from the following organisations:

- University of BONN (E08-PC-28-01)
- Danish Energy Association (E08-PC-28-02)
- DONG Energy (E08-PC-28-03)
- EIRGRID (E08-PC-28-04)
- ENBW (E08-PC-28-05)
- envia NETZ (E08-PC-28-06)
- E.ON A.G. (E08-PC-28-07)
- E.ON Netz (E08-PC-28-08)
- ETSO (E08-PC-28-09)
- IFIEC Europe (E08-PC-28-10)
- NORDEL (E08-PC-28-11)
- RWE TRANSPORTNETZ(E08-PC-28-12)
- Scottish and Southern (E08-PC-28-13)
- Svensk Energi (E08-PC-28-14)
- SWM (E08-PC-28-15)
- UCTE (E08-PC-28-16)
- VE-T (E08-PC-28-17)

[1] ERGEG Draft Guidelines of Good Practice for Operational Security, www.energy-regulators.eu

2 Analysis of Responses

2.1 General

ERGEG has evaluated the comments provided in the public consultation, principally in terms of applicability and consistency. For each comment, the following evaluation template has been used:

#	Guidelines Reference	Original text of the comment	ERGEG evaluation	ERGEG explanation

No. of comment

Guidelines section/chapter to which the comment refers to

original comment text

Yes (accept) or No (reject)

ERGEG explanation (especially if rejected)

The positively evaluated comments from the public consultation will be incorporated into the final ERGEG draft of the Guidelines of Good Practice for Operational Security in Electricity.

This section contains the evaluation of all the comments, organised according to the above mentioned template and according to the organisations and stakeholders that responded. The reference text of the GGP for Operational Security in Electricity is the one from the ERGEG public consultation. The comments have been quoted with their original format and contents as submitted by the organisations and stakeholders. The underlined text means that it was proposed to add new text, the ~~crossed text~~ means text that it was proposed to delete ERGEG. The evaluation also contains the additional modifications to the Guidelines, proposed by ERGEG following the public consultation, that were not delivered by any organisation or stakeholder, but were instead additionally recognised as needed and justified by ERGEG.

2.2 Evaluation of Comments received in the Public Consultation

2.2.1 University of BONN (E08-PC-28-01)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	General	Doubled quotation and legal uncertainty in financial security of grid.	N/A	There is no clear link with the guidelines for operational security.

2.2.2 Danish Energy Association (E08-PC-28-02)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1	4.3	This clause may have considerable economical and practical implications for the affected DSO companies. The guide should stress these tasks to be solved in cooperation/consultation with the DSOs.	N/A	The way these general requirements will be implemented by DSOs can't be defined in these guidelines that need to stay "high level". The detailed relationship between TSOs and DSOs is rather relating to connection to the grid. The required coordination is already explicitly required for load shedding system design.
2	4.3.2	It should be clarified in sub clause 4.3.2, that the extension of the real time measurements and information, the dynamics in "real time" etc. should be discussed and solved in cooperation with the DSOs, and important details like for example the storage over time of the information should be agreed upon. One could suggest the principle, that the part that needs the information shall store it, and accordingly, if the information is only relevant	No	ERGEG considers that it is not the purpose of these guidelines to specify the implementation details. The planned guidelines of good practice on grid connection and access may be more specific concerning information exchanges between DSOs and TSOs.

		for the TSO, then they should be the responsible.		

2.2.3 DONG Energy (E08-PC-28-03)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	4.2.1	We think that good cooperation in emergency situations should be prepared by and could be significantly improved by good cooperation in normal situations. We suggest that this kind of cooperation between experts from the TSO's and other involved stakeholders should be formalized. We recommend that this subject is mentioned in clause 4.2 between the existing points 4 and 5 as a new clause 5: (5) establish expert-forum for continuous coordination of the solution of relevant tasks including exercises with the contribution relevant DSOs, other TSOs, generators and large customers (who are connected at the transmission level)	Partly	Even though cooperation between stakeholders is of course crucial, ERGEG doesn't consider that these guidelines should provide for such specific solutions. However, it is right that coordination and cooperation should not be restricted to emergency situations. Accordingly 4.2.1 (5) can be modified as follows: (5) coordinate operation with DSOs, other TSOs, generators and large consumers (who are connected at the transmission grid level) ~~in case of emergencies~~;
2.	4.3.2	The relevance of new real time operational information should be examined and checked before implementation, and it should at least be verified that the socioeconomic benefits exceeds the extra costs. We recommend that clause 4.3.2 is written (new text in italic): "The DSOs shall provide the TSOs with relevant, necessary and socioeconomic well-proven real-time operational information of the distribution	Partly	Information required from DSOs by TSOs should be that which is necessary to comply with security rules. However the guidelines can be a little bit more specific: 4.3.2 The DSOs shall provide the TSOs with ~~relevant~~ real-time operational information of the distribution network and generation and consumption units connected to the distribution

		network and generation and consumption units connected to the distribution network, based on well described if requested by the TSO".		network that are necessary for operational security;
3.	5.2.2	In this specific area we recommend, that the expert-forum mentioned above should play an important role in the external consultation, and that the expert-statements from the fore is published as well. We recommend that clause 5.2.2. is supplemented in the following way "…open and transparent manner with all appropriate stakeholders and include evaluation in expert forum.	No	As mentioned before, ERGEG doesn't consider that these guidelines should provide for such a specific solution. This is only one way to comply with them.
4.	5.2.6	It is also important to understand the way two synchronous areas support each other in case of emergency situation, and how and where the needed extra reserves used in this manner are procured. We recommend that the last line in 5.2.6 is written: "These agreements shall be made public in an organized way and be understandable by all interested parties"	No	These agreements are written for their particular purpose and can't be modified to be understandable by anyone.
5.	6.2.1	We understand it in such a way, that limitations coming from one interconnection (to country one) may not be moved to another interconnection (to country two), but since the formulation leaves room for interpretation we recommend a more precise formulation. We recommend that the wording in clause 6.2.1 is written "Interconnection capacities may not be limited in order to solve	No	This general provision only refers to the congestion management guidelines (1.7) that are already in force.

		congestions inside national grids or in order to solve limitations on other interconnection capacities without taking into account ….."		
6.	6.2.4.2	Since the internal European market has developed intraday markets, we think it is important to mention the intraday market in the list in 6.2.4.2. We don't think it is necessary to publish two days ahead. We recommend, that there a new number 4 is added in the list in clause 6.2.4.2: (4) Update and disclosure of the hourly values of the transmission capacity available for commercial purposes, for the following hours (intraday market)	N/A	In principle this change could be made but it is deemed to have no particular impact on operational security, hence N/A for GGP-OPSEC

2.2.4 EIRGRID (E08-PC-28-04)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	Roles and Responsibilities of Different Stakeholders and Market Players	It is desirable that the reporting requirements should be able to be met by reporting already being undertaken by individual TSOs.	N/A	Existing reporting is suitable if it meets the guidelines requirements.
2.	Rules Drafting Principles	Any additional consultation requirement would be duplicative and, therefore, the Rule Drafting requirements should be able to be met by procedures already undertaken in individual systems.	N/A	Same as previous comment.
3.	Technical Framework for	While the general principles should be similar between synchronous areas, the detailed	N/A	ERGEG agrees with this comment and has already considered it when drafting the GGP.

	Operational Security	provisions need to be able to differ significantly between synchronous areas.		There is no clear contradiction with the proposed guidelines.
4.	Training and Certification	The training provisions should therefore be flexible enough to account for the different roles of dispatchers in different jurisdictions.	N/A	ERGEG agrees with this comment and has already considered it when drafting the GGP. There is no clear contradiction with the proposed guidelines.
5.	Glossary of Terms	Terminology currently used by the TSOs and that used in the GGP would have to be carefully monitored and aligned where necessary.	N/A	ERGEG agrees with this comment and has already considered it when drafting the GGP. However, it is not always possible to find one single term used by all stakeholders. Accordingly, some of the terms used in the guidelines need to be defined (at least for the purpose of the guidelines).

2.2.5 ENBW (E08-PC-28-05)

(see RWE Transportnetz, Germany)

2.2.6 envia NETZ (E08-PC-28-06)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	4.3	Operational security is NOT only a task for TSO's and direct connected DSO's. If the operational security is in danger because of high generation of electricity (for instance in times with high generation by windturbines), ALL System Operators in this area have to execute the remedial actions (after the TSO had it ordered) to restore the system to the	Yes	Chapter 4.3 should be modified to take into account subsequently connected DSOs that are significant for the operational security of transmission grids. Introduction to 4.3 can be modified as follows: This section refers ~~only~~ to the~~se~~ DSOs which are directly physically connected to the transmission

		normal operating state without delay.		grid ~~but not to~~ and those which are subsequently connected (e.g. as smaller DSOs) to other DSOs ~~and have no direct connection to transmission grid~~ when it is relevant regarding operational security of the EU electric power transmission grids. And 4.3.4 is added: When the previous requirements apply to subsequently connected DSOs, they shall be met in coordination with and, if necessary, by the intermediary of the other involved DSO(s).
2.	4.3	A data exchange between ALL System Operators, if the data is important for there grid, is necessary.	Yes	See above

2.2.7 E.ON A.G. (E08-PC-28-07)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	Add new 4.1.2	We find it consistent and consequent if also regulators have the duty to co-operate with each other and to focus their activities primarily on a European energy market. 4.1.2 Regulators shall work together in providing such an adequate regulatory framework particularly related to issues of cross-border relevance such as interconnectors and congestion management.	Partly	The Guidelines of Good Practice should focus on operational security related issues. This new 4.1.2 can be: 4.1.2 Regulators shall work together in providing such an adequate regulatory framework particularly related to issues of cross-border relevance.
2.	4.3.2	Amend 4.3.2: This relates particularly to matters of congestion management.	Partly	This specification may be superfluous. However it is necessary that 4.3.2 is not limited to

		Such an amendment would explicitly support the use and further improvement of capacity calculation methods such as the flow based approach by considering more data form distribution system operators if necessary. The calculation, based on a common grid model, in a transparent manner requires the availability of all relevant data and the access of all regional TSOs to those data. Some of the TSOs, according to our information, argue that national legislation do not allow them to submit relevant data to other TSOs today.		real time information: remove "~~real time~~" in 4.3.2
3.	5.3.3	Usually, compliance can or can not be achieved. We doubt whether it makes sense to allow a little bit of compliance. If the relevant rule is relevant for system security TSOs have to be required to be compliant with. Otherwise system security is in danger. Delete 5.3.3: For the measurement of compliance (or non-compliance), it may be necessary to define several compliance (or non-compliance) levels. In this case, these levels shall be clearly described for each rule.	Yes	Actually, the existence of "compliance levels" is an ambiguous principle. 5.3.3 is modified as follows: For a measurement of ~~compliance (~~ ~~or~~ non-compliance~~)~~, it may be necessary to define several ~~compliance or (~~non-compliance~~)~~ levels. In this case, these levels shall be clearly described for each rule.
4.	Add new 5.3.6	E.ON is aware that non-compliance can be either under the responsibility of a TSO or caused by the lack of an adequate legal or regulatory framework. For the sake of learning from any case of noncompliance it is necessary to check whether the legal or regulatory framework is sufficient and to improve it accordingly and what precise	Partly	Actually externalities could be the reason for non-compliance. A new 5.3.6 could be drafted as follows: If the non-compliance mitigation requires an evolution of the legal or regulatory framework, this shall be mentioned in the mitigation plan. This also applies to any other externality.

		actions with what kind of deadline were agreed between the TSO and the regulator. Add 5.3.6: If a TSO does not comply with a rule the regulator concerned shall make immediately public what has been agreed with the TSO to overcome such non-compliance and whether the current legal and regulatory framework is adequate for the remedial action required.		The non-compliant TSO and the concerned regulatory authorities shall take all necessary action to remove the possible barriers to non-compliance mitigation.

2.2.8 E.ON Netz (E08-PC-28-08)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	General 3.	These Guidelines of Good Practice are intended to provide a basis for an EU-wide regulatory and legally binding framework	Partly	GGP are not legally binding but they can become legally binding if EC goes with them to the Comitology. Revise to be: These Guidelines of Good Practice are intended to provide a basis for an EU-wide regulatory framework
2.	General 3.2	"It is therefore of the utmost importance to provide a regulatory and legally binding framework for the technical rules for interoperability and operational security and that is precisely the intention and key objective of these Guidelines of Good Practice." TSO comment: The operational security of the electricity grid is only possible, if all market participants work together. Therefore it is important that in an	Yes	Comment will be taken into account when revising the responsibilities of market actors in the GGP.

		unbundled market the rights and obligations are clear regulated. Under this aspect we can see, that a lot of requirements out of this GPP don't have a clear receiver e.g. TSOs, DSOs, Generators…		
3.	General 3.3	a. These GGP specify at a "meta-level" which issues and in which way they must be defined and implemented within the technical rules and codes for operational security of the EU transmission grids/synchronous areas; furthermore the Guidelines also address the issues of organisation, compatibility and coherence as far as necessary, but b. These GGP do not deal with any actual and detailed technical issue – this must remain an issue for the rules and codes mentioned already above. TSO comment: The problem of this structure is how the technical rules get a legally binding character? In our opinion the ERGEG should authorise TSO associations to design technical rules and ERGEG approves formally the developed technical rules of the associations to bring them in legally binding character.	N/A	The procedure to make these Guidelines legally binding is outside the scope of these GGP. ERGEG cannot authorise TSOs to design rules. Furthermore, ERGEG cannot approve formally these rules to give them legally binding character. These rules can be made legally binding only through Comitology according to the Regulation 1228/2003. ERGEG can advise EC on this matter.
4.	4.1.1	The regulatory authorities shall enable, enhance and enforce a secure operation of the electricity grids as well as the cooperation and coordination among the TSOs, DSOs and other stakeholders and market participants through adequate regulatory framework.	Yes	Regulators shall enable, enhance and enforce cooperation and coordination for secure operation of the electricity grids. Coordination and cooperation are not an issue as such but for secure network operation. Revise the text as

				For the secure operation of the power system the regulatory authorities shall enable, enhance and enforce the cooperation and coordination among the TSOs, DSOs and other stakeholders and market participants through an adequate regulatory framework.
5.	Add 4.1.2	The regulators have to ensure that in emergency situations the TSOs have full power to give dispatching orders to market participants to ensure system operation.	Partly	In the GGP only the powers existing presently within regulators can be applied. The legislator can change powers of regulators. Revise the text as The regulators shall do everything in their power to ensure that in emergency situations the TSOs have full power to give dispatching orders to market participants to ensure system operation.
6.	4.2.1 (1)	(1) ~~coordinate and~~ follow up the actions of market participants and customers in order to achieve adequate operational security and efficient utilisation of the power system;	Yes	The TSO haven't the rights to coordinate the market participants.
7.	4.2.1 (2)	(2) prepare and distribute information about power system-related matters that have relevance to the electricity market, as well as matters of significance to the general security of supply;	Partly	The GGP should define requirements which are necessary for secure system operation. This requirement shall be reformulated. Revise the text as: (2) prepare and distribute information about power system-related matters that have relevance to the secure operation of the power system ~~the electricity market~~, as well as matters that are of significance for the general security of supply;

8.	4.2.1 (4)	(4) inform the regulators about developments in the power system. ~~and the short term balance between supply and demand;~~	Partly	Comment is to delete second part of requirement, because the exact meaning of this requirement is not clear. Here the short term does not mean operational hour. It means balance between supply and demand in the time frame up to one year (e.g. winter/summer outlook) in a foreseeable future. Revise the text as: (4) inform the regulators about developments in the power system and the foreseen ~~the~~ short term evolution of balance between supply and demand;
9	4.2.1 (6)	(6) have the responsibility to implement appropriate defence and restoration plans and procedures ~~load shedding systems~~ in coordination with other TSOs and;	Yes	Load shedding may be only one of the elements of the "Defence Plan". TSOs are also responsible for the restoration plans, therefore this point should be formulated more generally as "defence and restoration plans and procedures". Revise the text as: (6) have the responsibility to implement appropriate defence and restoration plans and procedures (such as load shedding systems)~~load shedding systems~~ in coordination with other TSOs and;
10.	4.2.1 (7)	(7) ~~have full powers to~~ give dispatching orders to market participants to ensure system operation in emergency situations.	Yes	Revise the text as. (7) ~~have full powers to~~ give dispatching orders to market participants to ensure system operation in emergency situations.
11.	4.3	This section refers only to those DSOs which are directly physically connected to the	Yes	See 2.2.6.1.

		transmission grid, but not to those which are subsequently connected (e.g. as smaller DSOs) to other DSOs and have no direct connection to transmission grid. TSO comment: This requirement isn't free of discrimination. All DSOs directly connected or subsequently connected must support operational security by their means (such as under frequency load shedding). We propose to add point 4.3.4.		
12.	4.3.3	The DSOs shall participate in emergency planning, restoration procedures and exercises planned and carried out by TSOs. In particular, the DSOs shall contribute to operational security by installing and maintaining load shedding systems, designed in coordination with TSOs. The DSO's shall realize the dispatching orders given by the TSO's to ensure system operation in emergency situations	Yes	Comment is to add last sentence, because of a secure grid operation. Also normal operation shall be taken into account, not only emergency situations. Revise text as (divide it into two chapters): 4.3.3 The DSO's shall execute the instructions given by the TSOs to ensure system operational security both in normal and in emergency situations 4.3.4 The DSOs shall participate in emergency planning, restoration procedures and exercises planned and carried out by TSOs. In particular, the DSOs shall contribute to operational security by installing and maintaining load shedding systems, designed in coordination with TSOs.
13.	Add 4.3.5	The DSOs which have a direct connection to the TSO grid must ensure that in case they have subsequently connected DSOs the instructions from the TSO are distributed to	Yes	Add the cascade principle as new text, section 4.3.5. All DSOs directly connected or subsequently connected must support operational

		them.		security to the extent that it is withing their means. Add new text as section 4.3.5: Particularly, the DSOs which are directly connected to the transmission grid shall ensure that the instructions from the TSO are transmitted to the subsequently connected DSOs.
14.	Add 4.3.5	The DSOs shall (1) accept and fulfil the grid connection agreement (2) ensure the requested data supply to TSO	Yes / Partly	TSO requests that these requirements be added and wishes to make sure that TSOs will legally be entitled to force all market participants to comply with them. These requirements are necessary for a secure grid operation. Without them TSOs will have no ability to ensure secure grid operation. ERGEG agrees to include this into the GGP. However, inclusion of this requires the definition of corresponding responsibilities and tasks (to set terms and conditions in connection and access agreements and to define clearly the information to be requested from actors) for TSOs (and probably for regulators to ensure that this task is done properly). The text will be redrafted to take into account this comment and the text of this chapter with be adjusted. Add 4.1.5 The regulators shall check that the requirements set out in the agreements concluded between TSOs and grid users, balance responsible parties or traders are suitable to ensure the operational security of the EU electric power transmission

				grids. Particularly they shall check that the required data are clearly defined. Add (8) to 4.2.1 set terms and conditions in connection and access agreements and define clearly the requested information from actors. Add 4.3.6: These requirements are specified in the agreement concluded between the DSOs and the TSO (or another DSO) on connection and access to the grid. The DSOs shall comply with this agreement.
15.	4.4.1	~~The~~ All generators (inclusive the renewables) shall:	No	Comment requires that in principle all generators have to fulfil the requirements. ERGEG considers that text already includes all generators and no revision of the text is needed. Also pointing out one production type here is not good because not all renewable production has problems with intermittency.
16.	Add 4.4.1 (4), (5)	(4) accept and fulfil the grid connection agreement (5) ensure the requested data supply to TSO	Yes / Partly	TSO requests that these requirements be added and wishes to make sure that TSOs will legally be entitled to force all market participants to comply with them. These requirements are necessary for a secure grid operation. Without them TSOs have will have no ability to ensure secure grid operation. ERGEG agrees to include this in the GGP. However, inclusion of this requires the definition

				of corresponding responsibilities and tasks (to set terms and conditions in connection and access agreements and to define clearly the requested information from actors) for TSOs (and probably for regulators to ensure that this task is done properly). The text will be redrafted to take into account this comment and the text of this chapter with be adjusted. Add (4) provide the TSOs/DSOs with requested data. 4.4.2. These requirements and the data to be transmitted to the TSO are specified in the agreement concluded between the producers and the TSO (or DSO) concerning connection and access to the grid. Generators shall comply with this agreement.
17.	Add 4.6	Traders / Balance-responsible-parties	Yes	TSO requests that this group be added because a further important group of market participants is missing (the Trader/Balance-responsible-parties) ERGEG agrees with this comment and will include both balance responsible parties and traders separately in the GGP. However, traders do not have a direct role in operational security. Their role is to provide sufficient information to the balance responsible parties. New sections 4.6 and 4.7 will be included in the

				GGP for balance responsible parties and traders.
18.	Add 4.6.1	(1) accept and fulfil the balance-group-agreement (2) ensure the requested data supply to TSO	Yes / Partly	TSO requests that these requirements be added. These requirements are necessary for secure grid operation. ERGEG agrees to include this in the GGP. However, inclusion of this requires the definition of corresponding responsibilities and tasks (to set terms and conditions in connection and access agreements and to define clearly the requested information from actors) for TSOs (and probably for regulators to ensure that this task is done properly). The text will be redrafted to take into account this comment and the text of this chapter will be adjusted. Add: 4.6.1. Balance responsible parties shall provide the TSO with all the data relevant to the operation of the system. 4.6.2. This requirement is specified in the agreement concluded between the balance responsible parties and the TSO. The balance responsible parties shall comply with this agreement. And: 4.7.1. Traders shall provide the balance responsible parties (or any other relevant actor) with all the data relevant to the operation of the

				system. 4.7.2. This requirement is specified in the agreement concluded between the trader and the balance responsible party. The traders shall comply with this agreement.
19.	5.2.2	Within a synchronous area, associations of the TSOs (e.g. ENTSO) shall ~~jointly~~ define a drafting procedure, describing the steps from its initiation to rules implementation.	Partly	It shall not be restricted only to associations of the TSOs, but neither excludes associations of TSOs. Thus present wording is maintained, where definition will happen on synchronous area level.
20.	5.2.3	The description of the rules shall leave no room for interpretation. In this respect, compliance criteria shall identify precisely what the TSOs, DSOs, generators and balance-responsible parties have to do or which requirements they should meet to comply with these rules.	Yes	Other market participants will be added here, because TSO aren't the only market participants having the impact on reliability. Revise the text (second last paragraph) as: The description of the rules shall leave no room for interpretation. In this respect, compliance criteria shall identify precisely what the TSOs, DSOs, generators and balance-responsible parties have to do or which requirements they should meet to comply with these rules.
21.	5.2.4	Synchronous area rules shall be published in an organised manner. Even if these rules apply to TSOs, they should be understandable by all affected ~~interested~~ parties.	Yes	The rules shall be understandable for affected parties. Revise the text as: Synchronous area rules shall be published in an organised manner. Even if these rules apply to TSOs, they should be understandable by all affected ~~interested~~ parties.

22.	5.2.6	When such an interface involves third countries, EU TSOs shall try to reach an agreement with the TSOs from these countries providing for a high level of operational security. These agreements shall be made public as far as they concern operational security.	Yes	These agreements might contain sensible information concerning the security of the grid operation and in this case they should be made available only for involved regulators. Revise the text as: When such an interface involves third countries, EU TSOs shall try to reach an agreement with the TSOs from these countries providing for a high level of operational security. As far as they concern operational security, these agreements shall be made available at least for the involved regulators ~~public as far as they concern operational security~~.
23.	5.3.2	The compliance monitoring process shall rely, at least partly, on on-site audits. The audit shall be executed by experts from the TSO and one supervising member from regulatory authorities. ~~independent auditors e.g. representatives from the Commission and regulatory authorities.~~ The appropriate implementation of self assessment methodology should be one of the aspects under review during these audits.	Partly	TSO comments that "Compliance monitoring audits" should not be executed entirely by representatives of the EC and regulators, but by TSO organization (the future ENTSO-E) with the participation of representatives of EC and regulatory authorities. Such a solution will be sufficient for providing transparency in the compliance monitoring process. ERGEG agrees on this but revises the text as: The compliance monitoring process shall rely, at least partly, on on-site audits. The audit shall be executed by experts from the involved TSOs with the participation of ~~independent auditors e.g.~~representatives from the Commission and regulatory authorities. The appropriate implementation of self assessment methodology

				should be one of the aspects under review during these audits.
24.	5.3.4	A comprehensive description of any non-compliance: involved TSO, concerned rule, non-compliance level, ~~remedial measures and mitigation plan,~~ consequences of the non-compliance on operational security;	Partly	To publish this sensitive information in the report isn't useful according to the contributor's comment. However, this information could be at least given to the regulatory authorities. This information is important for ensuring operational security. Revise the text as: A comprehensive description of any non-compliance: involved TSO, concerned rule, non-compliance level, ~~remedial measures and mitigation plan,~~ consequences of the non-compliance on operational security; Add text after (5): Furthermore, the corresponding remedial measures and mitigation plan shall be sent at least to the relevant regulatory authorities if they can't be made public for security reason.
25.	5.3.5	Any TSO which can no longer comply with an operational rule shall immediately inform any possibly impacted TSOs and the compliance monitoring authority. Remedial measures shall be implemented without any delay to preserve the secure system operation. These measures shall be agreed with the other impacted TSOs. As soon as possible, the affected TSO shall establish a mitigation plan that will allow the TSO to comply with the violated rule(s). This	Yes	TSO has commented that it is important that the TSO organization which monitors the compliance is informed of the compliance problem and of the mitigation plan. This is to constantly have a good overview of the compliance situation in the synchronous system. Furthermore, the compliance monitoring organization must agree on the formal correctness of the mitigation plan. ERGEG agrees partly with this, but the process should be that TSOs involved shall agree upon

		~~plan shall be agreed~~ ~~by other impacted TSOs~~ shall be formally agreed upon by the compliance monitoring organisation which sets the rules for mitigation plans.		mitigation plans and time tables and that these should then be reviewed by the regulators. Revise the text as: Any TSO which can no longer comply with an operational rule shall immediately inform ~~any possibly impacted TSOs~~ the other TSOs of its synchronous area, the relevant regulatory authorities and any other impacted TSO. Remedial measures shall be implemented without any delay to preserve secure system operation. These measures shall be agreed with the other impacted TSOs. As soon as possible, the affected TSO shall establish a mitigation plan that will allow the TSO to comply with the violated rule(s). This plan shall be formally agreed ~~by other impacted TSOs~~ upon by the TSOs of the synchronous area and reviewed by the relevant regulatory authorities.
26.	6.1	Security criteria defined at the synchronous area level should be in line with the common accepted technological development. ~~are "the lowest common denominator".~~ Each TSO can define stronger criteria if it is necessary for their particular situation.	Yes	TSO comment that while "best practice" may be an inappropriately high standard, the "lowest common denominator" approach might be not sufficient to ensure an adequate level of system reliability. ERGEG agrees with this comment. Furthermore, according to the comment if new measures must be implemented, it has to be ensured that the TSOs get back the money through grid utilisation costs. The regulators' role concerning the approval of these additional costs

				shall be defined. ERGEG partly agrees with this comment, but approval of additional costs is not the subject of this GGP. Revise the text as: Security criteria defined at the synchronous area level shall ensure optimisation between a high level of operational security and effective costs to achieve it. ~~are "the lowest common denominator". Each TSO can define stronger criteria if it is necessary for their particular situation.~~
27.	6.1.1.2	TSOs at the regional level and at the level of the whole synchronous areas shall define and implement security criteria and contingency analysis ~~(for both the dynamic and probabilistic ones)~~ beyond the own control area border, taking into account the following aspects: (1) all interconnection tie lines between control areas; (2) cross-effect of contingencies of critical network elements in one control area on the situation in the adjacent control area; (3) Cross-effects of relevant ~~any~~ external impacts (e.g. weather, social events, etc.) own ~~one~~ contingencies/security criteria between the control areas.	Yes	ERGEG mainly agrees with the comments and proposes that rephrasing shall be based on the comments. Revise text as: TSOs at the regional level and at the level of the whole synchronous areas shall define and implement security criteria and contingency analysis ~~(for both the dynamic and probabilistic ones)~~ beyond their own control area borders, taking into account the following aspects: (1) all interconnections ~~tie lines~~ between control areas; (2) cross-effect of contingencies of critical network elements in one control area on the situation in the adjacent control area;

				(3) cross-effects of relevant ~~any~~ external impacts (e.g. weather, social events, etc.) upon contingencies/security criteria between the control areas. See also 2.2.17.25.
28.	6.1.1.4	Beyond the static approach, each TSO shall assume the obligation to define the dynamic scenarios and possible adaptations to the contingency lists in advance.	Yes	TSO comment that It is not clear what is meant by "dynamic scenarios". Today that isn't possible for such a big grid in real time. ERGEG states that there is need for dynamic scenarios, but only for operational planning. Revise the text as: Beyond the static approach, each TSO shall ~~assume the obligation to~~ define the dynamic scenarios and possible adaptations to the contingency lists in advance for operational planning purposes.
29.	6.1.1.5	Any effects from changes in the security criteria shall be ~~clearly~~ explained by the concerned TSO to the concerned regulatory authorities and communicated towards the affected market participants.	Yes	TSO's opinion is that this clearly means that everyone must understand explanations. TSO thinks that only the relevant groups must understand it. Revise the text as: Any effects from changes in the security criteria shall be ~~clearly~~ explained by the concerned TSO to the concerned regulatory authorities and communicated to~~wards~~ the affected market participants.

30.	6.1.1.7	The implementation of the defined security criteria shall be completed, at the very least, through the regular ~~steady state~~ security assessment, run on a periodical basis within the (n-1 or n-X) contingency analysis in each control area.	Yes	TSO comment that it is not clear what is meant by "steady state" in this context. ERGEG proposes to replace 'steady state' with 'load flow'. Revise the text as: The implementation of the defined security criteria shall be completed, at the very least, through the ~~steady~~ security assessment based on load flow and shall be run on a periodic basis within the (n-1 or n-X) contingency analysis in each control area.
31.	6.1.1.9	The actual outcome of the contingency analysis within the control areas concerning cross-border effects of contingencies shall be exchanged between the affected TSOs.	Yes	TSO comment that to exchange every result of the n-1 security calculation isn't necessary. An exchange is only necessary if there is a cross-border effect on contingencies. ERGEG agrees with this comment and proposes redrafting the text. Revise the text as: The actual outcome of the contingency analysis within the control areas that affects other control areas shall be exchanged between the ~~affected~~ involved TSOs.
32.	6.1.2.4	At an operational planning stage, each TSO does everything in its power ~~shall ensure~~ that sufficient levels of auxiliary services (e.g. active and reactive power reserves, balancing service) will be available in real time to meet security criteria and the requirements set at	Partly	TSO comment that TSOs can't ensure enough available power plants. ERGEG sees that each TSO shall apply services from power plants to ensure a sufficient level of these reserves during the operational hours.

		synchronous area level. Cross-border exchange of active power reserves shall be agreed between TSOs.		Revise the text as: At an operational planning stage, each TSO shall ensure that it has access to sufficient levels of ancillary services (e.g. active and reactive power reserves, balancing power) will be available in real time to meet security criteria and the requirements set at synchronous area level. Cross-border exchange of active power reserves shall be agreed between TSOs.
33.	6.1.2.5	Reactive power flows on cross-border lines and voltage at boundary substations shall be jointly studied and agreed at the operational planning stage by the TSOs involved. In principle, reactive power exchanges shall be kept at minimum or zero.	Partly	TSO comment that reactive power exchanges are a normal physical phenomenon that can only barely be controlled. The right approach is to fix the voltage level at each side and to control them. ERGEG sees that TSOs have to agree on voltage control at each end of the cross-border lines. Revise the text as: Voltage control across interconnections between control areas (e.g. reactive power flows on cross-border lines and voltage at boundary substations) shall be jointly studied and agreed at the operational planning stage by the TSOs involved. In principle, voltage control at boundary substations shall be planned to keep reactive power exchanges shall be kept at minimum or zero compatible with secure operation of the system.
34.	6.2	Transmission Capacity calculation determination	No	Proposal is to use this wording in the whole of section 6.2 because to get the amount of the transmission capacities is often just a

				determination instead of an exact calculation. This comment is rejected in order to be consistent with the Regulation and the CM Guidelines, where the term 'calculation' is used.
35.	6.2.1	As stipulated in the CM guidelines (annex to Regulation (EC) 1228/2003), capacity ~~calculation~~ determination methods have to be coordinated within defined regions, including the use of a common transmission model dealing efficiently with interdependent physical loop-flows and having regard to discrepancies between physical and commercial flows. Interconnection capacities may not be limited in order to solve congestions inside national grids without taking into account cost-effectiveness and the minimisation of the impact on the Internal Electricity Market.	No	TSO comment that the guidelines should state whether TSOs shall be obliged to create virtual cross border capacity by costly measures (e.g. Redispatch). Regulators shall be obliged to approve related costs. Furthermore, the development of load flow based capacity calculation and allocation methods is accompanied by the fact that all grid devices are taken into account regardless of whether it is an interconnection or not. In this context the TSO accepts that this rule softens the requirement from the Regulation (EC) No 1228/2003. ERGEG disagrees with this comment because the rule does not soften the requirement in the Regulation 1228/2003. This chapter refers only to the relevant parts of the Regulation. See also 2.2.8.34
36.	6.2.2	Methodology for Transmission Capacity ~~calculation~~ determination	No	See 2.2.8.34
37.	6.2.2.1	TSOs must carry out all necessary studies for transmission capacity ~~calculation~~ determination and provide the resulting information on transmission capacity available for commercial purposes to the market players	No	See 2.2.8.34

		that intend to import or export electricity.		
38.	6.2.2.2	In transmission capacity ~~calculation~~ determination, the TSOs shall apply the security criteria defined in 6~~5~~.1.	Partly	Reference is corrected. Otherwise see 2.2.8.34
39.	6.2.2.4	As stated in article 5(2) of Regulation (EC) 1228/2003, the general scheme for the ~~calculation~~ determination of the total interconnection capacity and necessary margins based upon the electrical and physical features of the network shall be published and subject to the approval of the regulatory authorities.	No	Rejected because in the Regulation it is 'general scheme for the calculation of the total transfer capacity ...' See also 2.2.8.34
40.	6.2.2.5	This ~~calculation~~ determination method shall also be agreed among involved TSOs.	No	See 2.2.8.34
41.	6.2.2.6	TSOs shall perform a ~~calculation~~ determination of both long-term (including the following year and the following months) and short-term transmission capacities (in particular for each hour of the following day and preferably also for the following week).	No	See 2.2.8.34
42.	6.2.2.7	For long term capacity ~~calculation~~ determination, transmission capacity shall be based on the definition of forecasted worst-case scenarios. The ~~calculation~~ determination methodology shall include the determination of base case(s) taking into account different generation (including different hydro and wind regimes), load and network topology scenarios and, if necessary, assumptions on loop flows generated by countries external to	No	See 2.2.8.34

		the region.		
43.	6.2.2.8	For short term capacity, the ~~calculation~~ determination of the technical transmission capacity shall include the determination of a base case indicating the level(s) of pre-existing flows taken as the starting point for the ~~calculation~~ determination process.	No	See 2.2.8.34
44.	6.2.2.9	Those principles shall be approved by regulatory authorities as part of the general scheme (paragraph 5.2.2.4).	Yes	Correct reference Reference to right paragraph shall be made in the final GGP (here it should be 6.2.2.4)
45.	6.2.2.10	The security criteria applied for transmission capacity ~~calculation~~ determination shall be ~~clearly~~ defined and approved by regulatory authorities as part of the general scheme (paragraph 5.2.2.4). Their coordinated and coherent implementation throughout the affected synchronous areas and the integrated electricity market shall be guaranteed by the TSOs through the compliance monitoring process and regularly evaluated by regulatory authorities.	Partly	See 6.2 Reference to right paragraph shall be made in the final GGP (here it should be 6.2.2.4). TSO comment that such a standardisation is difficult because the security levels and the frameworks are different. ERGEG disagrees because implementation shall be coordinated and coherent and this is ensured through compliance monitoring. Furthermore these guidelines shouldn't be defined to reflect the current situation but rather to provide for improvements. Revise the text as: The security criteria applied for transmission capacity calculation shall be ~~clearly~~ defined and approved by regulatory authorities as part of the general scheme (paragraph ~~5~~6.2.2.4). Their

				coordinated and coherent implementation throughout the affected synchronous areas and the integrated electricity market shall be guaranteed by the TSOs through the compliance monitoring process and shall be regularly evaluated by the regulatory authorities.
46.	6.2.2.11	For the different time frames; TSOs must exchange all necessary information to ~~calculate~~ determine transmission capacity in a co-ordinated and co-operative manner. In particular, each TSO shall use a common network model for ~~calculation~~ determination.	No	See 2.2.8.34
47.	6.2.2.12	The principles for ~~calculation~~ determination in the transmission capacity available to the market shall be agreed by the affected TSOs of the interconnected systems and principles for agreement must be published.	Partly	TSO comment that in the near future TSOs will not calculate the NTC values any more but will use the flow based capacity allocation method. Thus TSOs must agree on the principles for calculation. ERGEG states that word 'calculation' is not in the original text. Revise the text as: The transmission capacity available to the market shall be agreed by the affected TSOs of the interconnected systems and principles for agreement must be published.
48.	6.2.3.1 (2)	(2) The relevant base cases and hypothesis, with assumptions made for generation, load, DC interconnections and loop flows, including the flows of electricity through each interconnection, bottleneck or critical branch pre-existing to the allocation process, for the	Partly	TSO comment that with this requirement TSOs would have to publish sensitive data of critical infrastructure which could be used by terrorists. ERGEG agrees not to publish this sensitive information to the market. However, this

		different time frames;		information should be given to the regulatory authority if requested. Revise the text as: 1) delete 6.2.3.1 (2) 2) rename present (3) as (2) 3) add at the end of 6.2.3.1: The relevant base cases and hypothesis (with assumptions made for generation, load, DC interconnections and loop flows, including the flows of electricity through each interconnection, bottleneck or critical branch pre-existing to the allocation process), for the different time frames, shall be made available at least to the regulatory authority if requested.
50.	6.2.3.1 (3)	(3) Maximum physical capacity and adopted reliability margin, duly justified, per all interconnections between adjacent TSOs, in specific cases also per bottleneck or critical branch, for the different time frames.	Yes	TSO comment that the proposed text is inaccurate when speaking about interconnections. It should be clearly stated that this term does not mean single tie lines, but the totality of tie lines connecting the neighbouring TSOs. This is because a misinterpretation would mean that the reliability margin should be calculated and published per single line – a method that is not only impractical, but also impossible in the case of complex interconnections encompassing high number of tie lines which can be operated on different voltage levels. ERGEG agrees with this comment but proposes some amendments:

				(3) Maximum physical capacity and adopted reliability margin, duly justified, per electrical interface between adjacent TSOs (may group several interconnections) and if relevant per bottleneck or critical branch, for the different time frames.
51.	6.2.4.1	The methods for capacity ~~calculation~~ determination 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).	Yes	TSO request to make regulators' obligations clear. This seems to be a national standard. There are no rules and timeframe for proceedings for use in cases in which the regulator does not accept the methods. ERGEG agrees with the comment and revises the text to include timeframe for regulatory review. If regulator does not accept the methods then the national appeal process will handle this issue. See also 2.2.8.34 Revise the text as: 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). Regulators shall finalise their review within 4 months after receiving the methods for approval.
52.	6.3.1	Moreover, a high degree of coherence and co-ordination is ~~also~~ necessary ~~throughout each~~ inside of a synchronous areas and limited	No	TSO comment that a high degree of coordination between synchronous areas isn't necessary.

		coordination inbetween synchronous areas.		ERGEG disagrees and emphasizes that co-ordination between areas is also important. Revision of the text is, however, proposed. Revise the text as: Moreover, a high degree of coherence and co-ordination is ~~also~~ necessary ~~throughout each~~ inside synchronous areas and between synchronous areas.
53.	6.3.2.1	Outage scheduling for the purpose of maintenance of network elements ~~generators and significant consumption units~~ shall be agreed among involved TSOs. In this respect, all scheduled outages that influence two or more TSOs shall be considered. TSOs shall establish a joint scheduling process providing for long-term and short-term planning of outages. This process shall be settled at the level of synchronous areas and agreed between the areas accordingly.	Partly	TSO comment that in an unbundled market TSOs can't determine maintenance schedules of other market participants unless the regulator authorises the TSO to do so (e.g. TSO has to permit a generator's maintenance application). ERGEG will redraft the text to address the exchange between TSOs in synchronous areas of information concerning the maintenance of generators and consumption units. Revise the text as: Outage scheduling for the purpose of maintenance of network elements ~~generators and significant consumption units~~ shall be agreed among involved TSOs. Furthermore, involved TSOs shall exchange information on scheduled outages of significant generation and consumption units. In this respect, all scheduled outages that influence two or more TSOs shall be considered. TSOs shall establish a joint scheduling process providing for long-term and short-term planning of outages. This process shall

				be settled at the level of synchronous areas and agreed between the areas accordingly.
54.	6.3.2.2 (4)	(4) Possible preventive and (in case of failures or unplanned disturbances) remedial measures based on the detected congestions of an analysis of probable/expected problem scenarios. These "scenario-based" analyses shall be based on operational experiences and especially on lessons learned from large disturbances that have occurred in the past.	Yes	TSO comment that this requirement is deleted, because it isn't necessary. An outage of an element will only be realised if the grid is N-1 secure after the switching operation. ERGEG agrees with the comment for N-1 security requirement, but would like to emphasize that this chapter applies to several failures in the near timeframe and requires that some preventative measures should be considered. Text will be redrafted to make this clear. Revise the text as. ~~(~~4) Possible preventative and (in case of several failures or unplanned disturbances within a short time) remedial measures based on an analysis of probable/expected problem scenarios. These ~~"scenario-based"~~ analyses shall be based on operational experiences and especially on lessons learned from large disturbances that have occurred in the past.
55.	6.3.2.6	The coordinated maintenance and revision plan for the market relevant elements shall be presented to the regulators for information and published for market participants.	Yes	TSO comment that the maintenance plan is changed by small acts of maintenance every day. It makes no sense to publish this and send it to the regulator, if it is not relevant to the market. ERGEG agrees, but redrafting is proposed Revise the text as: The coordinated maintenance and revision plan

				shall be presented to the regulators for information and published for market participants. This plan shall include elements having relevance to the electricity markets.
56.	6.3.3.1	TSOs ~~must inform and~~ coordinate any commissioning and entering into operation of any network element~~, generator or significant consumption unit in their grid~~.	Partly	TSO comment that there is confusion in the meaning of "inform and coordinate". TSOs do not have the right to coordinate the commissioning of generators and significant consumption units. ERGEG agrees, but information about commissioning of these other elements has to be provided. Revise the text as: TSOs shall~~must inform and~~ coordinate ~~any~~ commissioning and entering into operation of any network element~~, generator or significant consumption unit in their grid~~. Furthermore, TSOs shall inform each other about commissioning of significant generation and consumption units.
57.	6.3.4.4	TSOs shall exchange all the necessary data and information required in order to accomplish the tasks mentioned in 5.3.4.1 and 5.3.4.2. In this respect, TSOs shall in particular agree on data format, protocols, communication infrastructure and media.	Yes	Reference to right paragraph shall be made in the final GGP (here it should be 6.3.4.1 and 6.3.4.2).
58.	6.4.2.1	TSOs shall regularly perform (within a determined and mutually agreed time period): (1) Data collection and storage State estimation, filtering out all the faulty/wrong measurements (2) Load flow calculation;	Partly	TSO requires some clarification in (1) and deletion of (3). In (1): What is the frequency (how often?) for "storage State estimation"? In (3): Dynamic stability analysis is very complex. TSOs can't calculate it in a regular short time frame. In networks with no obvious critical stability

		(3) Static and dynamic stability analysis; (4) Reactive power and voltage analysis in order to be able to identify conditions for undertaking measures to prevent voltage collapse.		problems dynamic studies are only performed on special occasion. ERGEG agrees partly and will redraft the text accordingly Revise the text as: TSOs shall regularly perform (within a predefined ~~determined~~ and mutually agreed time period): (1) Data collection and storage; state estimation, filtering out ~~all~~ the faulty/wrong measurements (2) Load flow calculation; (3) Static and dynamic stability analysis, when appropriate; (4) Reactive power and voltage analysis in order to be able to identify conditions in which measures should be implemented in order to prevent voltage collapse.
59.	6.4.2.3	The operational/on-line information on the actual outcome of the contingency analysis within the control areas shall be exchanged between the TSOs if affected. ~~Furthermore, TSOs shall cooperate whenever it is required to accomplish the tasks requested by 5.4.2.1.~~	Partly	TSO comment that an exchange between TSOs is necessary only if the other TSO is affected. ERGEG agrees partly and will redraft the text. Reference to right paragraph shall be made in the final GGP (here it should be 6.4.2.1), but this text will not be deleted. Revise the text as: The operational/on-line information on the actual outcome of the contingency analysis within the control areas shall be exchanged between the

				affected TSOs. Furthermore, TSOs shall cooperate whenever it is required to accomplish the tasks requested by 5.4.2.1.
60.	6.4.2.4	1) Each TSO~~s~~ shall establish a system for observing ~~monitoring and control~~ of systems associated with the decision support systems for increased efficiency in disturbance prevention and system defence in cases of disturbed or critical system conditions. or 2) TSOs shall establish a common observing system ~~a system for monitoring and control of systems~~ associated with the decision support systems for increased efficiency in disturbance prevention and system defence in cases of disturbed or critical system conditions. 3) Such a system should ~~shall~~ enable the functions of wide area monitoring and control as well as a range of preventive/remedy measures to be executed in real time.	Partly	TSO comment that a common control system isn't possible because each TSO controls its grid itself. It is possible that each TSO observes other systems (1) or that the TSOs have a common observing system (2). 3) What is meant by "wide area monitoring"? Is it the WAM-System which is used to observe wide area oscillations or it is a system to observe parts of neighbouring grids? ERGEG agrees to redraft the text to be clearer. Revise the text as: Associated with the decision support systems TSOs shall establish a common monitoring system ~~a system for monitoring and control of systems~~ for increased efficiency in disturbance prevention and system defence in cases of disturbed or critical system conditions. Such a system shall enable the execution in real time of the functions of wide area monitoring (e.g. WAM-System and/or information on neighbouring control areas) ~~and control~~ as well as a range of preventative/remedy measures.
61.	6.4.2.5	If a violation of a security criterion is detected, the TSO concerned shall prepare and possibly activate appropriate measures. All the other TSOs concerned shall be informed without delay. ~~Any joint measure shall be agreed in advance.~~	Partly	TSO proposal to delete last sentence because only the most probable measures can be agreed in advance. ERGEG agrees partly, but joint measures shall be co-ordinated. Text will be redrafted.

				Revise the text as: If a violation of a security criterion is detected, the TSO concerned shall prepare and possibly activate appropriate measures. All the other TSOs concerned shall be informed without delay. Any joint measure shall be coordinated between involved TSOs. ~~agreed in advance~~
62.	6.4.2.6 (2), (3)	(2) Provisions for the load-frequency control shall contain the directions and main principles for the market based procurement of balancing ~~and automatically activated~~ reserves, applicable for all TSOs; (3) Provisions for load-frequency control shall also consider the procurement of ~~reserve/ balancing~~ products in an integrated balancing market with more than one control area participating.	Partly	TSO request an explanation of the difference between “automatically activated reserves” and “balancing products”? ERGEG agrees partly and will redraft the text. However, balancing and automatically activated reserves have been defined in the context of ERGEG GGP on EBMI. Revise the text as: (2) Provisions for the load-frequency control shall contain the directions and main principles for the market based procurement of balancing and automatically activated reserves, applicable for all TSOs; (3) Provisions for load-frequency control shall also consider the procurement of balancing and automatically activated reserves ~~reserve/ balancing products~~ in an integrated balancing market with more than one control area participating.
63.	6.5.2.4	In the case of disturbances, the TSO shall execute the remedial actions to restore the system to the normal operating state without	No	TSO proposal to delete the last part, because to define in advance every possible remedial action isn’t possible. Furthermore, every disturbance has

		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.~~		other conditions. To solve a disturbance problem in a predefined timeframe isn't possible. ERGEG disagrees, because TSOs have to decide in what time frame they will be coming back to normal operation in order to withstand further disturbances. This quick recovery is important for the operational security of the system. Procedures for remedial actions should be defined in advance (this does not require that actual remedial action shall be defined. However, to be clearer the text will be somewhat modified. Revise the text as: 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 set by the TSOs within a synchronous area. Procedures for remedial actions, including respective responsibilities, shall be defined by TSOs.
64.	6.5.2.6	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	Partly	TSO question that does it mean real tests and states that this isn't possible. TSO comment that it must be clear that all DSOs (directly connected or subsequently connected) have to implement load shedding systems) – see 4.3. EREG agrees partly with comments but will

		realization shall be in a non discrimination manner. ~~The efficiency of load shedding systems shall be regularly evaluated.~~		redraft the text to be clearer. Revise the text as: The design of automatic load shedding systems shall be harmonised and co-ordinated across synchronous areas. In this respect, the DSOs involved shall cooperate with TSOs. Responsibilities regarding the installation and maintenance of load shedding systems shall be clearly defined in each control area. Load shedding shall be realised in a non-discriminatory manner. The efficiency of load shedding systems shall be regularly evaluated based upon large disturbances that have occurred and upon dedicated studies.
65.	6.5.3.3	Restoration plans must be coordinated among TSOs to allow the organised restoration of the whole synchronous area. ~~and shall be evaluated by regulatory authorities.~~	No	TSO comment that the last point isn't necessary. Today no regulator does it. ERGEG disagrees and states that in the future these plans will be evaluated by the regulatory authorities. No change in the text.
66.	6.5.3.4	TSOs ~~shall~~ do everything in their power to maintain sufficient black start and islanding capability within their control area to ensure the efficient and fast restoration after power system blackouts. The black start capability shall be designed ~~to be reliable and to have real possibilities to generate voltage and power for the collapsed network or to the islanded part of the network.~~ to reenergized	Partly	TSO comment that the TSO can't control where such generators will be built. What happens, if in an area there are not enough black start units? Can the TSO build one itself? Or can it control this only through the prices for this service? Furthermore, second comment is a request for more clarity. ERGEG agrees partly and will redraft the text. However, it is the responsibility of the TSO to

		the grid.		ensure that they have black start capability available (either buying it from the market, having it themselves or agreeing to have it in some control areas for the purpose of a synchronous area) Revise the text as: TSOs shall ensure that they have access to ~~maintain~~ sufficient black start and islanding capability ~~within their control area~~ to ~~ensure~~ allow for the efficient and fast restoration after power system blackouts. The black start capability shall be designed ~~to be reliable and to have real possibilities to generate voltage and power for the collapsed network or to the islanded part of the network.~~ to re-energize the grid reliably and quickly.
67.	6.5.3.5	To this end, the restoration plans are to be maintained by TSOs and their personnel 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.	Partly	TSO comment that a precise description of the envisaged test procedure is needed. A real-time test is not possible. Synthetic testing may not reveal valuable results. ERGEG agrees that real time testing is not possible. However, there exist ways to test plans and these tests shall be developed and applied by the TSOs. The text is revised to take this into account. Revise the text as: To this end, the restoration plans are to be maintained by TSOs and their personnel trained to manage these exceptional incidents. TSOs shall develop procedures to test these restoration

				plans. 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.
68.	6.5.3.6	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 plan. The application of restoration plan shall be coordinated among involved TSO if the help of neighbouring TSO is possible.	Yes	TSO comment that if all neighbouring TSOs have e.g. a blackout too, every TSO will apply the restoration itself. In this case coordination isn't necessary. Coordination is necessary only if a TSO gets help from a neighbouring TSO. Furthermore, there are no means by which to identify all faulty grid elements remotely (e. g. damaged lines will not be visible in any control centre) Revise the text as: 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 plan.~~ The application of the restoration plan shall be coordinated among involved TSOs if it is envisaged that the help of neighbouring TSOs will be required.
69.	6.6.2.5	TSOs having interconnections to other synchronous systems shall ensure that operation of these interconnectors is compatible with interconnectors within a synchronous system and thus the secure	Partly	TSO comment that with a DC-Link it is possible to help with a coordinated power flow without spreading the disturbance. To only allow the disconnection of the DC-Link is too narrow. ERGEG agrees partly and will redraft the text to

		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 interconnector joining the systems is allowed.~~		be clearer. Revise the text as: TSOs having interconnections to other synchronous systems shall ensure that operation of these interconnect~~ors~~ions is compatible with interconnect~~ors~~ions within a synchronous system, thus ensuring that secure system operation between synchronous areas is maintained. Effects of disturbances shall not ~~are not allowed to~~ spread from one synchronous system to another. ~~Only disconnection of the interconnector joining the systems is allowed.~~
70.	7.1	IEM?	Yes	TSO requests to know what is the meaning of IEM? IEM is integrated energy market. This will be clarified in the text
71.	7.2.5	The renewal of the certification shall be based on the dispatcher's participation in a continuous training programme and the assessment of the dispatcher's performance in the control room.	Partly	TSO comment that this is a contradiction to 7.2.3. There are regulations that mean that the TSO is authorised to regulate the process of certification. ERGEG disagrees, but clarification will be implemented in 7.2.3 to state that it means 'first' certification. 7.2.5 will deal with renewal of certification.
72.	8.	Alert (disturbed) state, critical state	Yes	TSO comment that inside the definition some definitions are repeated. Furthermore these definitions are based on the current OH Policy 5 definitions which are being reviewed now. ERGEG will consider redrafting of the text in final GGP OPSEC.

2.2.9 ETSO (E08-PC-28-09)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.		Are these GGP intended to be a 'strategic guideline' as proposed by ERGEG/CEER in its reactions to the 3rd Package? If it is, does it not need to cover technical codes that cover all timescales from long-term planning to medium-term planning right up to operational timescales which is the sole area the GGP seem to focus on? In short we are left rather unclear as to what problem these GGP are trying to address.	No	As there are only general statements from ETSO they can not be considered within the document. In a first approach, the legal background for these guidelines is Regulation 1228/2003.
2.	Fig 1 (?)	It also provides a diagrammatic depiction of how technical rules could work at a regional level but interestingly not at a EU level which one might have expected to be the focus of such a document. the real need is to focus at the EU level, in other words how the regional areas interact, as it is technical rules in this regard that are missing at present.	No	The guidelines also deal with the interactions between the synchronous areas.
3.	e.g. 4.4	The focus of the GGP is very much on the role of the TSOs in the last three bullet points above, but without first establishing role clarity on the responsibilities of parties connected to the TSO networks (namely generators, distributors and large customer loads), it will be difficult for TSOs to carry out their roles. This role clarity must be the subject of	No	Connection requirements and rules for access to the grid are not in the scope of these guidelines.

		widespread consultation after which we would expect regulators to advice on whether TSOs as drafters of these codes have reached a conclusion which takes into account, in an equitable manner, the needs of all network connectees. Simply requiring these connectees to comply with TSO instructions (e.g. section 4.4) will be insufficient. TSOs must be sure connectees have the capability to respond to such instructions before permitting their connection to the network.		
4.	6	It is also rather curious that a document drafted for the 'meta' level should get into such detail as the training of TSO staff. Such issues would be typically covered in internal working processes within TSOs such that they can respond and evolve to changing network needs rather than drafted in codes.	No	Training of staff has to be generalized on EU level, too, as ETSO requires for other topics.

2.2.10 IFIEC Europe (E08-PC-28-10)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	general	IFIEC is convinced that the establishment of a European System Operator (ESO) in a position to supervise real-time operation at the interconnection level would be the most effective and simple solution to current needs. An ESO would also be a trustworthy observer able to propose and promote grid reinforcements to better integrate the markets and guarantee system security. However the	N/A	ERGEG believes that many improvements can already be achieved starting from the existing organisation.

		debate still seems to be driven more by political or corporate interests rather than by technical grounds.		
2.	general	To be efficient, ERGEG should preferably orient its efforts to tackle the needs not being sufficiently addressed by TSOs' associations today.	N/A	ERGEG believes that improvements are needed both concerning the implementation of existing rules and the strengthening of TSOs' cooperation through new rules.
3	3. General provisions and Objectives for these guidelines.	As a background to developing the Guidelines, ERGEG mentions provisions of Regulation 1228/2003. ERGEG may also refer here to elements of Directive 2005/89 concerning measures to safeguard security of electricity supply and infrastructure investment, which was supposed to be adopted by every Member States before February 24th 2008.	No	The only legal background for these guidelines is Regulation 1228/2003. ERGEG considers that the requirements of Directive 2005/89 remain very general.
4.	4.5	Responsibilities of different market players should specifically distinguish obligations from voluntary programs. Contrary to what may be asked of generators or distributors, demand side actions should rely upon economics incentives and not upon mandatory principles.	No	Demand side actions can't rely upon economic incentives in critical state and concerning restoration procedures (i.e. need to follow TSOs' and DSOs' instructions). This doesn't apply to services like contribution to the balancing mechanism.
5.	6.2	Under a market environment, transparency and information dissemination appears as a new core task for TSOs while operating the system. Operational Guidelines should therefore address how the system reserve, loads and generation forecasts should be calculated and broadcasted in different time frames. Information on exchange capacity and on transmission congestions should also be made available regularly to market players.	No	The guidelines should remain as high-level rules that can apply to all the European synchronous areas. Accordingly they can not specify every methodology. ERGEG considers that Information and data publication is already addressed in the guidelines.

6.	6.2.2	Transmission capacity calculation methods should require a full exchange of updated information among TSOs. Long term capacity calculations should reflect the experience of daily operation rather than consider worst-case scenario. This information should be of a great value to determine new grid investments.	No	According to the guidelines, long term capacity calculation should not rely on a theoretical worst-case scenario but on a forecasted worst-case scenario. In this sense it should reflect daily operation.

2.2.11 NORDEL (E08-PC-28-11)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	Relevance of the contents	The GGP represents only an extract of the entire complex of rules that is needed to be in place within the responsibility of the TSOs. To cover the full perspective the GGP is too simplified and insufficient. Too narrow view of the wide range of technical and organisational issues.	No	ERGEG sees that TSOs have a lot more responsibilities. But from the regulators' point of view it is not sufficient to include all rules and responsibilities in one GGP. Furthermore these have to be high level rules.
2.	Relevance of the contents	Nordel can not see that the GGP brings up any new substance compared to existing regional rules, recommendations and on – going developments. Perturbed conditions.	N/A	GGP include all different existing rules and therefore are a new framework for these rules.
3.	Relevance of the contents	The GGP do not seem to observe the vulnerability aspect of giving open publicity to sensitive information on critical infrastructure. Technical performance of installations connected to the transmission grid under perturbed conditions. Violation of the interests of protection of	Partly	Part of this issue would be tackled in the GGP on grid connection and access. But NRAs see that the power stations also have to bare responsibilities regarding security of the system. The need, range and design of protection of critical infrastructure should be discussed in more detail.

		critical infrastructure (antagonistic forces) that is subject to proposed regulation on EU-level.		ERGEG agrees for some amendments see 2.2.8.48.
4	Authority relation between ENTSO-E and ACER	Authority relation between ENTSO-E and ACER. 3rd package legislation is not yet finalised Risk of obscure the principal discussion on the appropriate definition of ENTSO-E and ACCER roles. ERGEG/ Regulators/ ACER is not capable in such technically detailed substances. Who carries the responsibility for situations leading to extensive loss of supply to the public society and consumers?	N/A	GGP are based on the existing legal framework and therefore don't need the 3rd package as a legal basis. They do not include the new tasks resulting from the 3rd package.
5	Detailed comments: Responsibility principles	Certainly not the case that rules should stand alone to be a primary responsibility of the body that is authorised and determine them. Rules only one instrument among many other interrelated instruments. Critical question who shall carry the responsibility for situations leading to extensive loss of supply to the public society and customers.	No	NRAs also see GGP as an instrument which includes the basics and should be binding for all involved parties. From the point of view of the regulators the GGP give a framework that should be taken into account regarding Operational Security. Wider responsibilities will be discussed in the codes of the 3rd package. Furthermore there are already some very general requirements like in Directive 2005/89.
6	Requirements on connectees	Power station must be designed and operated with a certain degree of resilience to external incidents on the grid. Lack of control facilities for the vast windpower generation at November 4, 2006. It is vitally important to enforce a satisfactory technical performance (Disconnection) of power stations to achieve a comprehensive	N/A	NRAs see that the power stations also have to bare responsibilities regarding security of the system. There must be very specific rules both for the TSOs and the power stations concerning how they have to act in case of critical situations for the security of the system. This rather concerns grid access and connection rules that may be the object of other dedicated

		security level.		guidelines.
7	Information and data to be published	Publication of extensive and tedailed information on the process of determining the transmission constraints is a process which deals with the most sensitive parts of the grids that are more vulnerable to technical or other failures. This violates the interest of protection of critical infrastructure. Understandable demands from regulators and market participants for increased transparency must be satisfied in other forms.	Partly	NRAs understand the concerns regarding the publication of sensitive data. But they also see the necessity to increase transparency. Therefore NRAs propose to find a solution which will be convenient for both TSOs and market participants. See 2.2.8.48

2.2.12 RWE TRANSPORTNETZ(E08-PC-28-12)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	General 3.	These Guidelines of Good Practice are intended to provide a basis for an EU-wide regulatory and legally binding framework	Partly	See 2.2.8.1
2.	General 3.2	"It is therefore of the utmost importance to provide a regulatory and legally binding framework for the technical rules for interoperability and operational security and that is precisely the intention and key objective of these Guidelines of Good Practice." TSO comment: The operational security of the electricity grid is only possible, if all market participants work together. Therefore it is important that in an unbundled market the rights and obligations are clear regulated. Under this aspect we can	Yes	See 2.2.8.2

		see, that a lot of requirements out of this GPP don't have a clear receiver e.g. TSOs, DSOs, Generators…		
3.	General 3.3	a. These GGP specify at a "meta-level" which issues and in which way they must be defined and implemented within the technical rules and codes for operational security of the EU transmission grids/synchronous areas; furthermore the Guidelines also address the issues of organisation, compatibility and coherence as far as necessary, but b. These GGP do not deal with any actual and detailed technical issue – this must remain an issue for the rules and codes mentioned already above. TSO comment: The problem of this structure is how the technical rules get a legally binding character? In our opinion the ERGEG should authorise TSO associations to design technical rules and ERGEG approves formally the developed technical rules of the associations to bring them in legally binding character.	N/A	See 2.2.8.3.
4.	4.1.1	The regulatory authorities shall enable, enhance and enforce a secure operation of the electricity grids as well as the cooperation and coordination among the TSOs, DSOs and other stakeholders and market participants through adequate regulatory framework.	Yes	See 2.2.8.3.
5.	Add 4.1.2	The regulators have to ensure that in emergency situations the TSOs have full power to give dispatching orders to market	Partly	See 2.2.8.5.

		participants to ensure system operation.		
6.	4.2.1 (1)	(1) ~~coordinate and~~ follow up the actions of market participants and customers in order to achieve adequate operational security and efficient utilisation of the power system;	Yes	See 2.2.8.6.
7.	4.2.1 (2)	(2) prepare and distribute information about power system-related matters that have relevance to the electricity market, as well as matters of significance to the general security of supply;	Partly	See 2.2.8.7.
8.	4.2.1 (4)	(4) inform the regulators about developments in the power system. ~~and the short term balance between supply and demand;~~	Partly	See 2.2.8.8.
9	4.2.1 (6)	(6) have the responsibility to implement appropriate defence and restoration plans and procedures ~~load shedding systems~~ in coordination with other TSOs and;	Yes	See 2.2.8.9.
10.	4.2.1 (7)	(7) ~~have full powers to~~ give dispatching orders to market participants to ensure system operation in emergency situations.	Yes	See 2.2.8.10.
11.	4.3	This section refers only to those DSOs which are directly physically connected to the transmission grid, but not to those which are subsequently connected (e.g. as smaller DSOs) to other DSOs and have no direct connection to transmission grid. TSO comment: This requirement isn't free of discrimination. All DSOs directly connected or subsequently connected must support operational security by their means (such as under frequency load shedding).	Yes	See 2.2.8.11.

		We propose to add point 4.3.4.		
12.	4.3.3	The DSOs shall participate in emergency planning, restoration procedures and exercises planned and carried out by TSOs. In particular, the DSOs shall contribute to operational security by installing and maintaining load shedding systems, designed in coordination with TSOs. The DSO's shall realize the dispatching orders given by the TSO's to ensure system operation in emergency situations	Yes	See 2.2.8.12.
13.	Add 4.3.4	The DSOs which have a direct connection to the TSO grid must ensure that in case they have subsequently connected DSOs the instructions from the TSO are distributed to them.	Yes	See 2.2.8.13.
14.	Add 4.3.5	The DSOs shall (1) accept and fulfil the grid connection agreement (2) ensure the requested data supply to TSO	Yes / Partly	See 2.2.8.14.
15.	4.4.1	~~The~~ All generators (inclusive the renewable) shall:	No	See 2.2.8.15.
16.	Add 4.4.1 (4), (5)	(4) accept and fulfil the grid connection agreement (5) ensure the requested data supply to TSO	Yes / Partly	See 2.2.8.16.
17.	Add 4.6	Trader / Balance-responsible-parties	Yes	See 2.2.8.17.
18.	Add 4.6.1	(1) accept and fulfil the balance-group-agreement (2) ensure the requested data supply to TSO	Yes / Partly	See 2.2.8.18.
19.	5.2.2	Within a synchronous area, associations of the TSOs (e.g. ENTSO) shall jointly define a	Partly	See 2.2.8.19.

		drafting procedure, describing the steps from its initiation to rules implementation.		
20.	5.2.3	The description of the rules shall leave no room for interpretation. In this respect, compliance criteria shall identify precisely what the TSOs, DSOs, generators and balance-responsible parties have to do or which requirements they should meet to comply with these rules.	Yes	See 2.2.8.20
21.	5.2.4	Synchronous area rules shall be published in an organised manner. Even if these rules apply to TSOs, they should be understandable by all affected ~~interested~~ parties.	Yes	See 2.2.8.21.
22.	5.2.6	When such an interface involves third countries, EU TSOs shall try to reach an agreement with the TSOs from these countries providing for a high level of operational security. These agreements shall be made public as far as they concern operational security.	Yes	See 2.2.8.22.
23.	5.3.2	The compliance monitoring process shall rely, at least partly, on on-site audits. The audit shall be executed by experts from the TSO and one supervising member from regulatory authorities. ~~independent auditors e.g. representatives from the Commission and regulatory authorities.~~ The appropriate implementation of self assessment methodology should be one of the aspects under review during these audits.	Partly	See 2.2.8.23.
24.	5.3.4	A comprehensive description of any non-compliance: involved TSO, concerned rule,	Partly	See 2.2.8.24.

		non-compliance level, ~~remedial measures and mitigation plan,~~ consequences of the non-compliance on operational security;		
25.	5.3.5	Any TSO which can no longer comply with an operational rule shall immediately inform any possibly impacted TSOs and the compliance monitoring authority. Remedial measures shall be implemented without any delay to preserve the secure system operation. These measures shall be agreed with the other impacted TSOs. As soon as possible, the affected TSO shall establish a mitigation plan that will allow the TSO to comply with the violated rule(s). This plan shall be agreed ~~by other impacted TSOs~~ and must be formally agreed upon by the compliance monitoring organisation which sets the rules for mitigation plans.	Yes	See 2.2.8.25.
26.	6.1	Security criteria defined at the synchronous area level should be in keeping with the common accepted technological development. ~~are "the lowest common denominator".~~ Each TSO can define stronger criteria if it is necessary for their particular situation.	Yes	See 2.2.8.26.
27.	6.1.1.2	TSOs at the regional level and at the level of the whole synchronous areas shall define and implement security criteria and contingency analysis ~~(for both the dynamic and probabilistic ones)~~ beyond the own control area border, taking into account the following aspects: (1) all interconnection tie lines between control areas;	Partly	See 2.2.8.27.

		(2) cross-effect of contingencies of critical network elements in one control area on the situation in the adjacent control area; (3) Cross-effects of relevant ~~any~~ external impacts (e.g. weather, social events, etc.) own ~~one~~ contingencies/security criteria between the control areas.		
28.	6.1.1.4	Beyond the static approach, each TSO shall assume the obligation to define the dynamic scenarios and possible adaptations to the contingency lists in advance.	Yes	See 2.2.8.28.
29.	6.1.1.5	Any effects from changes in the security criteria shall be ~~clearly~~ explained by the concerned TSO to the concerned regulatory authorities and communicated towards the affected market participants.	Yes	See 2.2.8.29.
30.	6.1.1.7	The implementation of the defined security criteria shall be completed, at the very least, through the regular ~~steady state~~ security assessment, run on a periodical basis within the (n-1 or n-X) contingency analysis in each control area.	Yes	See 2.2.8.30.
31.	6.1.1.9	The actual outcome of the contingency analysis within the control areas concerning cross-border effects of contingencies shall be exchanged between the affected TSOs.	Yes	See 2.2.8.31.
32.	6.1.2.4	At an operational planning stage, each TSO does everything in its power ~~shall ensure~~ that sufficient levels of auxiliary services (e.g. active and reactive power reserves, balancing service) will be available in real time to meet security criteria and the requirements set at	Partly	See 2.2.8.32.

		synchronous area level. Cross-border exchange of active power reserves shall be agreed between TSOs.		
33.	6.1.2.5	Reactive power flows on cross-border lines and voltage at boundary substations shall be jointly studied and agreed at the operational planning stage by the TSOs involved. In principle, reactive power exchanges shall be kept at minimum or zero.	Partly	See 2.2.8.33.
34.	6.2	Transmission Capacity ~~calculation~~ determination	No	See 2.2.8.34.
35.	6.2.1	As stipulated in the CM guidelines (annex to Regulation (EC) 1228/2003), capacity ~~calculation~~ determination methods have to be coordinated within defined regions, including the use of a common transmission model dealing efficiently with interdependent physical loop-flows and having regard to discrepancies between physical and commercial flows. Interconnection capacities may not be limited in order to solve congestions inside national grids without taking into account cost-effectiveness and the minimisation of the impact on the Internal Electricity Market.	No	See 2.2.8.35.
36.	6.2.2	Methodology for Transmission Capacity ~~calculation~~ determination	No	See 2.2.8.34.
37.	6.2.2.1	TSOs must carry out all necessary studies for transmission capacity ~~calculation~~ determination and provide the resulting information on transmission capacity available for commercial purposes to the market players that intend to import or export electricity.	No	See 2.2.8.34.

38.	6.2.2.2	In transmission capacity ~~calculation~~ determination, the TSOs shall apply the security criteria defined in 6~~5~~.1.	Partly	See 2.2.8.38.
39.	6.2.2.4	As stated in article 5(2) of Regulation (EC) 1228/2003, the general scheme for the ~~calculation~~ determination of the total interconnection capacity and necessary margins based upon the electrical and physical features of the network shall be published and subject to the approval of the regulatory authorities.	No	See 2.2.8.39.
40.	6.2.2.5	This ~~calculation~~ determination method shall also be agreed among involved TSOs.	No	See 2.2.8.34.
41.	6.2.2.6	TSOs shall perform a ~~calculation~~ determination of both long-term (including the following year and the following months) and short-term transmission capacities (in particular for each hour of the following day and preferably also for the following week).	No	See 2.2.8.34.
42.	6.2.2.7	For long term capacity ~~calculation~~ determination, transmission capacity shall be based on the definition of forecasted worst-case scenarios. The ~~calculation~~ determination methodology shall include the determination of base case(s) taking into account different generation (including different hydro and wind regimes), load and network topology scenarios and, if necessary, assumptions on loop flows generated by countries external to the region.	No	See 2.2.8.34.
43.	6.2.2.8	For short term capacity, the ~~calculation~~ determination of the technical transmission	No	See 2.2.8.34.

		capacity shall include the determination of a base case indicating the level(s) of pre-existing flows taken as the starting point for the ~~calculation~~ determination process.		
44.	6.2.2.9	Those principles shall be approved by regulatory authorities as part of the general scheme (paragraph 5.2.2.4).	Yes	See 2.2.8.44.
45.	6.2.2.10	The security criteria applied for transmission capacity ~~calculation~~ determination shall be ~~clearly~~ defined and approved by regulatory authorities as part of the general scheme (paragraph 5.2.2.4). Their ~~coordinated and coherent~~ implementation throughout the affected synchronous areas and the integrated electricity market shall be guaranteed by the TSOs through the compliance monitoring process and regularly evaluated by regulatory authorities.	Partly	See 2.2.8.45.
46.	6.2.2.11	For the different time frames; TSOs must exchange all necessary information to ~~calculate~~ determine transmission capacity in a co-ordinated and co-operative manner. In particular, each TSO shall use a common network model for ~~calculation~~ determination.	No	See 2.2.8.34.
47.	6.2.2.12	The principles for ~~calculation~~ determination in the transmission capacity available to the market shall be agreed by the affected TSOs of the interconnected systems and principles for agreement must be published.	Partly	See 2.2.8.47.
48.	6.2.3.1 (2)	(2) The relevant base cases and hypothesis, with assumptions made for generation, load, DC interconnections and loop flows, including	Partly	See 2.2.8.49.

		the flows of electricity through each interconnection, bottleneck or critical branch pre-existing to the allocation process, for the different time frames;		
50.	6.2.3.1 (3)	(3) Maximum physical capacity and adopted reliability margin, duly justified, per all interconnections between adjacent TSOs, in specific cases also per bottleneck or critical branch, for the different time frames.	Yes	See 2.2.8.50.
51.	6.2.4.1	The methods for capacity ~~calculation~~ determination 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).	Yes	See 2.2.8.51.
52.	6.3.1	Moreover, a high degree of coherence and co-ordination is ~~also~~ necessary ~~throughout each~~ inside of a synchronous areas and limited coordination inbetween synchronous areas.	No	See 2.2.8.52.
53.	6.3.2.1	Outage scheduling for the purpose of maintenance of network elements ~~generators and significant consumption units~~ shall be agreed among involved TSOs. In this respect, all scheduled outages that influence two or more TSOs shall be considered. TSOs shall establish a joint scheduling process providing for long-term and short-term planning of outages. This process shall be settled at the level of synchronous areas and agreed between the areas accordingly.	Partly	See 2.2.8.53.
54.	6.3.2.2	(4) Possible preventive and (in case of failures	Yes	See 2.2.8.54.

	(4)	or unplanned disturbances) remedial measures based on the detected congestions of an analysis of probable/expected problem scenarios. These "scenario-based" analyses shall be based on operational experiences and especially on lessons learned from large disturbances that have occurred in the past.		
55.	6.3.2.6	The coordinated maintenance and revision plan for the market relevant elements shall be presented to the regulators for information and published for market participants.	Yes	See 2.2.8.55.
56.	6.3.3.1	TSOs ~~must inform and~~ coordinate any commissioning and entering into operation of any network element~~, generator or significant consumption unit in their grid~~.	Partly	See 2.2.8.56.
57.	6.3.4.4	TSOs shall exchange all the necessary data and information required in order to accomplish the tasks mentioned in 5.3.4.1 and 5.3.4.2. In this respect, TSOs shall in particular agree on data format, protocols, communication infrastructure and media.	Yes	See 2.2.8.57.
58.	6.4.2.1	TSOs shall regularly perform (within a determined and mutually agreed time period): (1) Data collection and storage State estimation, filtering out all the faulty/wrong measurements (2) Load flow calculation; (3) Static and dynamic stability analysis; (4) Reactive power and voltage analysis in order to be able to identify conditions for undertaking measures to prevent voltage collapse.	Partly	See 2.2.8.58.

59.	6.4.2.3	The operational/on-line information on the actual outcome of the contingency analysis within the control areas shall be exchanged between the TSOs if affected. ~~Furthermore, TSOs shall cooperate whenever it is required to accomplish the tasks requested by 5.4.2.1.~~	Partly	See 2.2.8.59.
60.	6.4.2.4	1) Each TSO~~s~~ shall establish a system for observing ~~monitoring and control~~ of systems associated with the decision support systems for increased efficiency in disturbance prevention and system defence in cases of disturbed or critical system conditions. or 2) TSOs shall establish a common observing system ~~a system for monitoring and control of systems~~ associated with the decision support systems for increased efficiency in disturbance prevention and system defence in cases of disturbed or critical system conditions. 3) Such a system should ~~shall~~ enable the functions of wide area monitoring and control as well as a range of preventive/remedy measures to be executed in real time.	Partly	See 2.2.8.60.
61.	6.4.2.5	If a violation of a security criterion is detected, the TSO concerned shall prepare and possibly activate appropriate measures. All the other TSOs concerned shall be informed without delay. ~~Any joint measure shall be agreed in advance.~~	Partly	See 2.2.8.61.
62.	6.4.2.6 (2), (3)	(2) Provisions for the load-frequency control shall contain the directions and main	Partly	See 2.2.8.62.

		principles for the market based procurement of balancing ~~and automatically activated~~ reserves, applicable for all TSOs; (3) Provisions for load-frequency control shall also consider the procurement of ~~reserve/ balancing~~ products in an integrated balancing market with more than one control area participating.		
63.	6.5.2.4	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.~~	No	See 2.2.8.63.
64.	6.5.2.6	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 realization shall be in a non discrimination manner. ~~The efficiency of load shedding systems shall be regularly evaluated.~~	Partly	See 2.2.8.64.
65.	6.5.3.3	Restoration plans must be coordinated among TSOs to allow the organised restoration of the whole synchronous area. ~~and shall be evaluated by regulatory authorities.~~	No	See 2.2.8.65.
66.	6.5.3.4	TSOs ~~shall~~ do everything in their power to	Partly	See 2.2.8.66.

		maintain sufficient black start and islanding capability within their control area to ensure the efficient and fast restoration after power system blackouts. The black start capability shall be designed ~~to be reliable and to have real possibilities to generate voltage and power for the collapsed network or to the islanded part of the network.~~ to reenergized the grid.		
67.	6.5.3.5	To this end, the restoration plans are to be maintained by TSOs and their personnel 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.	Partly	See 2.2.8.67.
68.	6.5.3.6	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 plan. The application of restoration plan shall be coordinated among involved TSO <u>if the help of neighbouring TSO is possible.</u>	Yes	See 2.2.8.68.
69.	6.6.2.5	TSOs having interconnections to other synchronous systems shall ensure that operation of these interconnectors is compatible with interconnectors within a	Partly	See 2.2.8.69

		synchronous system 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 interconnector joining the systems is allowed.~~		
70.	7.1	IEM?	Yes	See 2.2.8.70
71.	7.2.5	The renewal of the certification shall be based on the dispatcher's participation in a continuous training programme and the assessment of the dispatcher's performance in the control room.	Partly	See 2.2.8.71.
72.	8.	Alert (disturbed) state, critical state	Yes	See 2.2.8.72

2.2.13 Scottish and Southern (E08-PC-28-13)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	General	The guidelines should therefore be clarified to include only large or transmission connected generating stations.	No	ERGEG remark: There are different levels of participation but, as a principle, every single generating unit shall contribute to operational security. Furthermore this distinction may not be always relevant.
2.	Roles and Responsibilities of Different Stakeholders and Market Players	We would therefore propose the following wording: "4.4.1 the operators of large and/or transmission connected generating stations shall:"	No	ERGEG remark: There are different levels of participation but, as a principle, every single generating unit shall contribute to operational security.
3.	Roles and Responsibilities	Similar principles should apply to consumption sites, i.e. "4.5.1 The operators of consumption	No	ERGEG remark: There are different levels of participation but, as a principle, every single

	of Different Stakeholders and Market Players	sites directly connected to a transmission system shall:"		consumption unit shall contribute to operational security.

2.2.14 Svensk Energi (E08-PC-28-14)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	3.4.1 (1)	Within Nordel there is an agreement concerning primary regulation (frequency control) and for what amount that each country should have preparedness. Before actual period the TSO decides the necessary demand up to the agreed level. The TSO purchases in advance (each country have there own method) the amount of frequency control needed chosen through bids from the actors on the market. Actors in the neighbouring countries are allowed to give bids. After the trade is closed the actors have to make plans for the electricity production (preferentially hydropower) so that the agreed amount can be delivered. This trade gives the market actors compensation for the reservation by the TSO of electricity generation that othervise could be bids on the Nordic power exchange Nord Pool.	Yes	The generators shall: comply with all valid provisions for load frequency control *in case of participation* and dispatching during the normal operational states,

2.2.15 SWM (E08-PC-28-15)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	3.3.a	Surely it is advantageous, if the whole rule type, from the present GPP up to the technical rules, will be obligatory by law. It has to made sure, that every affected market player, especially the TSO's, DSO's, generators and end consumers, are included in the developement and determination of the itemized rules.	N/A	Synchronous area rules designed by TSOs (after external consultation) apply to TSOs.
2.	4.3	A control area is defined by the sum of generation, the sum of system load and the sum of all trading transactions overall the control area. Therefore ist is not sufficient to oblige only the DSO's, who are connected directly to the Transport System. The generation, the consumption and the trade of all the DSO's in one control area have effects on the control area of the TSO. It is in the tenor of a "Guideline of Good Practice", if the relation between a downstream system operator and a upstream system operator is described in a informational, contractual und operative cascade.	Yes	As mentioned before, chapter 4.3 should be modified to take into account subsequently connected DSOs that are significant for the operational security of the transmission grids. See 2.2.6.1.
3.	4.3.3	It has to made sure, that the emergency concepts ot the TSO's are only developed after clearing with the DSO's.	N/A	Concepts of operational security of the interconnected grids should be designed by TSOs after external consultation (see 5.2. rule drafting principles). Their implementation should be coordinated with

				concerned DSOs as specified for load shedding.

2.2.16 UCTE

2.2.16.1 (E08-PC-28-16a, cover note)

No	Chapter / section	Comment	Include (Yes/No)	Explanation
1.	General 3.	Main challenge for system operators is to achieve enforceability for the already existing network codes and to achieve the extension of such legally binding codes beyond the sole TSOs to all entities whose actions doubtlessly impacts the overall system reliability. Adapt from original text	Partly	General comment, see detailed contribution from UCTE (E08-PC-28-16b). Nevertheless it is acknowledged that the existing codes and framework need to be taken into account and this will be added in the text accordingly.
2	General 3.	The document goes in essential aspects in line with the UCTE Operation Handbook (OH) an the UCTE Compliance Programs	N/A	General comment, see detailed contribution from UCTE (E08-PC-28-16b)
3.	General 3.	The document is anticipating the “framework Guidelines” (3rd Energy Packet), such documents should be the basis for the development of network related codes by the TSOs.	N/A	General comment, see detailed contribution from UCTE (E08-PC-28-16b)
4.	General 3.	The document moves towards interoperability of all European systems.	N/A	General comment, see detailed contribution from UCTE (E08-PC-28-16b)
5.	General 3.	The operational security of the electricity grid is only possible, if all acting entities (TSOs, DSOs, generators, traders) in a given system work together and coherently interact.	N/A	General comment, see detailed contribution from UCTE (E08-PC-28-16b)
6.	General 3.	Nearly all statement in the document corpus are directed only to the TSO. This is either a shortcoming of the document/presentation or ERGEG presumes that the present legal/regulatory conditions (preventing TSOs)	Partly	General comment, see detailed contribution from UCTE (E08-PC-28-16b). Nevertheless, a clarification will be added in the text to explain that all affected stakeholders are addressed.

		will be released.		
7.	General 3.	Text goes in several issues either too much into details or is even contestable. Some parts of the documents could be simplified and kept at the level of *objectives*.	Yes	General comment, see detailed contribution from UCTE (E08-PC-28-16b). The text will be leveraged as far as possible in the final version.
8.	General 3.	The enforcement of future network codes will imply a firm action by stakeholders (at government level) to provide for extending enforceability outside EU member States.	Partly	General comment, see detailed contribution from UCTE (E08-PC-28-16b). See also explanation in 2.2.16.6 above
9.	General 3.	"Compliance monitoring audits" should not be executed *exclusively* by representatives of EC and regulatory authorities, but also by TSO bodies.	Partly	General comment, see detailed contribution from UCTE (E08-PC-28-16b). See also explanations above in answers to other TSOs
10.	General 3.	"Interoperability within and between systems" should be extended by a number of guidelines concerning the actions of TSO in the context of requested system extensions as well as concerning the assessment if interoperability of the existing system with RES (s. EWIS Study).	Partly	General comment, see detailed contribution from UCTE (E08-PC-28-16b). The GGP-OPSEC text will be amended accordingly; especially any mention of the interoperability across the TSOs.
2.2.16.2 UCTE (E08-PC-28-16b)				
No	**Chapter / section**	**Comment**	**Include (Yes/No)**	**Explanation**
1.	4.1.1	The regulatory authorities shall enable, enhance and enforce a secure operation of the electricity grids as well as the cooperation and coordination among the TSOs, DSOs and other stakeholders and market participants through adequate regulatory framework.	Yes	UCTE: More precisely. See 2.2.8.4.
2.	Add 4.1.2	The regulators have to ensure that in emergency situations the TSOs have full power to give dispatching orders to market	Partly	UCTE: Only the regulator/legislator can guarantee that fact. Emphasize the regulators' (already in some countries in legislation) support for TSOs

		participants to ensure system operation.		being given full power for dispatching orders, but that the regulators cannot implement the necessary legislation (neither in the EU nor in MS). See 2.2.8.5
3.	4.2.1 (1)	(1) ~~coordinate and~~ follow up the actions of market participants and customers in order to achieve adequate operational security and efficient utilisation of the power system;	Yes	UCTE: The TSOs haven't the rights to coordinate the market participants. See 2.2.8.6.
4.	4.2.1 (2)	(2) prepare and distribute information about power system-related matters that have relevance to the electricity market, as well as matters of significance to the general security of supply;	Partly	UCTE: The GGP should define requirements which are necessary for a secure system operation. This requirement has nothing to do with a secure system operation. In our opinion this requirement would regulate the issues of the electricity market. See 2.2.8.7.
5.	4.2.1 (4)	(4) inform the regulators about developments in the power system. ~~and the short term balance between supply and demand;~~	Partly	UCTE: It is TSOs' operational task to keep the frequency at its nominal value resulting in a short term balance. See 2.2.8.8.
6.	4.2.1 (5)	(5) coordinate operation with DSOs, other TSOs, generators and large customers (who are connected to a transmission level) ~~in case of emergencies~~.	Yes	UCTE: This shall be done not only in emergencies but also in normal conditions (to avoid emergencies) See 2.2.3.1
7.	4.2.1 (6)	(6) have the responsibility to implement appropriate <u>defence and restoration plans and procedures</u> ~~load shedding systems~~ in coordination with other TSOs and;	Yes	UCTE: Load shedding is only one of the elements of the "Defence Plan". TSOs are also responsible for the restoration plans, therefore this point should be formulated more generally as "defence and restoration plans and procedures". See 2.2.8.9.
8.	4.2.1 (7)	(7) ~~have full powers to~~ give dispatching orders to market participants to ensure system	Yes	UCTE: Only the legislator can give full power to the TSO – see4.1.2. This shall refer not only to

		operation in emergency situations.		emergencies but also to normal conditions (to avoid emergencies) See 2.2.8.10.
9.	4.3.	This section refers only to those DSOs which are directly physically connected to the transmission grid, but not to those which are subsequently connected (e.g. as smaller DSOs) to other DSOs and have no direct connection to transmission grid.	Yes	UCTE: All DSOs directly connected or subsequently connected must support operational security by their means (such as underfrequency load shedding). See 2.2.8.11.
10.	4.3.3.	The DSOs shall participate in emergency planning, restoration procedures and exercises planned and carried out by TSOs. In particular, the DSOs shall contribute to operational security by installing and maintaining load shedding systems, designed in coordination with TSOs. The DSO's shall realize the dispatching orders given by the TSO's to ensure system operation in emergency situations	Yes	UCTE: This addition is necessary for secure grid operation. See 2.2.8.12.
11.	Add 4.3.4	The DSOs which have a direct connection to the TSO grid must ensure that in case they have subsequently connected DSOs the instructions from the TSO are distributed to them.	Yes	UCTE: We propose to add point 4.3.4. See 2.2.8.13.
12.	Add 4.3.5.	The DSOs shall (1) accept and fulfil the grid connection agreement (2) ensure the requested data supply to TSO	Yes /Partly	UCTE: These requirements are necessary for secure grid operation. Without them we have no ability to ensure secure grid operation. Please add these requirements and make sure that TSOs will legally be entitled to force all market participants to comply with them. See 2.2.8.14.

13.	Add 4.4.1.	(4) accept and fulfil the grid connection agreement (5) ensure the requested data supply to TSO	Yes /Partly	UCTE: These requirements are necessary for secure grid operation. Without them we have no ability to ensure secure grid operation. Please add these requirements and make sure that TSOs will legally be entitled to force all market participants to comply with them. See 2.2.8.16.
14.	4.5.	Consumption units connected to high transmission grid	Yes	UCTE: There is no indication of the size of the consumption. Some criteria should be added in order to limit the applicability to relevant ones. ERGEG agrees that size should be specified somewhere in the GGP. 4.5. can be modified as follows: 4.5. Consumption units significant for the secure operation of the EU electric power transmission grids shall:
15.	Add 4.6.	Traders / Balance-responsible-parties	Yes	UCTE: A further important group of market participants is missing (the Trader/Balance-responsible-parties). Please add this group. See 2.2.8.17.
16.	4.6.1.	(1) accept and fulfil the balance-group-agreement (2) ensure the requested data supply to TSO	Yes / Partly	UCTE: These requirements are necessary for secure grid operation. Please add these requirements. See 2.2.8.18.
17.	5.2.2.	Within a synchronous area, organization of the TSOs (e.g. ENTSO) shall ~~jointly~~ define a drafting procedure, describing the steps from its initiation to rules implementation.	Partly	UCTE: More precise. See 2.2.8.19.
18.	5.2.3.	The description of the rules shall leave no room for interpretation. In this respect, compliance criteria shall identify precisely what the TSOs, DSOs, generators and	Yes	UCTE: TSO aren't the only market participants having an impact on reliability. See 2.2.8.20.

		balance-responsible parties have to do or which requirements they should meet to comply with these rules.		
19.	5.2.4.	Synchronous area rules shall be published in an organised manner. Even if these rules apply to TSOs, they should be understandable by all affected ~~interested~~ parties.	Yes	UCTE: Only for the affected parties must the rules be understandable. See 2.2.8.21. I disagree, I think that these rules must be understandable for consumers (stakeholders), except for technical details etc.
20.	5.2.6.	When such an interface involves third countries, EU TSOs shall try to reach an agreement with the TSOs from these countries providing for a high level of operational security. These agreements shall be made public as far as they concern operational security.	Yes	UCTE: These agreements might contain sensitive information concerning the security of the grid operation. With respect to protection of critical infrastructure it is not helpful to publish such sensitive information. See 2.2.8.22.
21.	5.3.2.	The compliance monitoring process shall rely, at least partly, on on-site audits. The audit shall be executed by experts from the TSOs with participation of independent auditors e.g. representatives from the Commission and regulatory authorities.	Partly	UCTE: “Compliance monitoring audits” should not be executed entirely by representatives of the EC and regulators, but by TSO organization (the future ENTSO-E) with participation of representatives of EC and regulatory authorities. Such a solution will be sufficient for providing transparency of the compliance monitoring process and simplicity and will consider the fact that e.g. some UCTE members are not members of the European Union. See 2.2.8.23.
22.	5.3.5.	Any TSO which can no longer comply with an operational rule shall immediately inform any possibly impacted TSOs and the compliance monitoring authority. Remedial measures shall be implemented without any delay to preserve	Yes	UCTE: It is important that the TSO organisation which monitors the compliance is informed of the compliance problem and of the mitigation plan. This is to constantly have a good overview of the compliance situation in the synchronous system.

		the secure system operation. These measures shall be agreed with the other impacted TSOs. As soon as possible, the affected TSO shall establish a mitigation plan that will allow the TSO to comply with the violated rule(s). This plan shall be agreed ~~by other impacted TSOs~~ and must be formally agreed upon by the compliance monitoring organisation which sets the rules for mitigation plans.		Furthermore the compliance monitoring organization must agree on the formal correctness of the mitigation plan. See 2.2.8.25.
23.	6.1.	Security criteria defined at the synchronous area level should be in keeping with the common accepted technological development. ~~are "the lowest common denominator".~~ Each TSO can define stronger criteria if it is necessary for their particular situation.	Yes	UCTE: Solution proposed in Draft GGP would result in tendency to lower security of operation of interconnected power system. While "best practice" may be an inappropriately high standard, the "lowest common denominator" approach might be not sufficient to ensure an adequate level of system reliability. Such an attitude to the NERC reliability standards was applied in the USA. See 2.2.8.26.
24.	6.1.1.1.	Each TSO shall have an obligation for the transparent and specific definition and description of the security criteria applied within its own control area that leaves no room for interpretations.	Yes	UCTE: In some countries this is actually the task of the regulator who publishes the grid code. Revise the text as: Each TSO, or the responsible entity when it is not the TSO, shall have an obligation for the transparent and specific definition and description of the security criteria applied within its own control area that leaves no room for interpretation. These criteria shall be known by the regulatory authority and consistent with the rules defined at synchronous area level.
25.	6.1.1.2.	TSOs at the regional level and at the level of the whole synchronous areas shall define and	Yes	UCTE: Dynamic and especially probabilistic analyses are complex and not always necessary

		implement security criteria and load-flow based contingency analysis (including dynamic and probabilistic ones in cases when a specific risk is deemed realistic) beyond the own control area border, taking into account the following aspects:		for a risk free network operation. Besides, there is a lack of consensus among experts on the relevance of specific probabilistic parameters and on how they should be interpreted. Nevertheless, these analyses are part of security criteria and therefore needed. However, the load-flow calculations are the main instrument of the security analyses, whereas the use of other considerations is rather restricted. This should be stressed in the text in an appropriate manner. See 2.2.8.27. And in addition, 6.1.1.2 is modified according to UCTE proposal
26.	6.1.1.2.	(1) all interconnection tie lines between control areas; (2) cross-effect of contingencies of critical network elements in one control area on the situation in the adjacent control area; (3) Cross-effects of relevant ~~any~~ external impacts (e.g. weather, social events, etc.) own ~~one~~ contingencies/security criteria between the control areas.	Yes	UCTE: More clear. See above 2.2.8.27.
27.	6.1.1.4.	It is not clear what is meant by “dynamic scenarios”.	Yes	2.2.8.28
28.	6.1.1.7.	The implementation of the defined security criteria shall be completed, at the very least, through the regular ~~steady state~~ security assessment, run on a periodical basis within the (n-1 or n-X) contingency analysis in each control area.	Yes	UCTE: It is not clear what is meant by “steady state” in this context. See 2.2.8.30.
29.	6.1.1.9.	The actual outcome of the contingency analysis within the control areas concerning	Yes	UCTE: To exchange every result of the n-1 security calculation is not necessary. An

		cross-border effects of contingencies shall be exchanged between the affected TSOs.		exchange is necessary only if there is a cross-border effect on contingencies. See 2.2.8.31.
30.	6.1.2.4.	At an operational planning stage, each TSO does everything in its power ~~shall ensure~~ that sufficient levels of auxiliary services (e.g. active and reactive power reserves, balancing service) will be available in real time to meet security criteria and the requirements set at synchronous area level. Cross-border exchange of active power reserves shall be agreed between TSOs.	Partly	UCTE: TSOs can't ensure enough available power plants. See 2.2.8.32
31.	6.1.2.5.	Reactive power flows on cross-border lines and voltage at boundary substations shall be jointly studied and agreed at the operational planning stage by the TSOs involved. In principle, reactive power exchanges shall be kept at minimum or zero.	Partly	UCTE: Reactive power exchanges are a normal physical phenomenon that can be only barely controlled. The right approach is to fix the voltage level at each side and to control them. See 2.2.8.33.
32.	6.2.1.	The development of load flow based capacity calculation and allocation methods is accompanied by the fact that all grid devices are taken into account regardless whether it is an interconnection or not. In this context we embrace that this rule softens the requirement from the Regulation (EC) No 1228/2003.	N/A	See 2.2.8.35.
33.	6.2.2.2.	It seems that the reference is incorrect.	Yes	Reference is corrected
34.	6.2.2.6.	TSOs shall perform a ~~calculation~~ determination of both long-term (including the following year and the following months) and short-term transmission capacities (in particular for each hour of the following day and preferably also for the following week).	No	UCTE: An exact calculation is not possible, especially for long term horizons. Due to growing uncertainties transmission capacity determination shall be done day ahead and intra day only – assuming the worst case scenario in the longer time horizons might result in zero transmission

				capacity. See 2.2.8.41
35.	6.2.2.7.	For long term capacity ~~calculation~~ determination, transmission capacity shall be based on the definition of forecasted worst-case scenarios. The ~~calculation~~ determination methodology shall include the determination of base case(s) taking into account different generation (including different hydro and wind regimes), load and network topology scenarios and, if necessary, assumptions on loop flows generated by countries external to the region.	No	See above 2.2.17.34.
36.	6.2.2.8.	For short term capacity, the ~~calculation~~ determination of the technical transmission capacity shall include the determination of a base case indicating the level(s) of pre-existing flows taken as the starting point for the ~~calculation~~ determination process.	No	See above 2.2.17.34.
37.	6.2.2.9.	This reference does not exist.	Yes	Reference is corrected
38.	6.2.2.10.	The security criteria applied for transmission capacity calculation shall be ~~clearly~~ defined and approved by regulatory authorities as part of the general scheme (paragraph 5.2.2.4). Their ~~coordinated and coherent~~ implementation throughout the affected synchronous areas and the integrated electricity market shall be guaranteed by the TSOs through the compliance monitoring process and regularly evaluated by regulatory authorities.	Partly	UCTE: 1) This reference does not exist. 2) Such a standardisation is difficult because the security levels and the frameworks are different. For 1) Yes, reference is corrected, and for 2) No, ERGEG think that this has to be done in a coordinated way, see 2.2.8.45.
39.	6.2.2.12.	The principles for ~~calculation~~ determination in	Partly	UCTE: In the near future we will not calculate the

		the transmission capacity available to the market shall be agreed by the affected TSOs of the interconnected systems and principles for agreement must be published.		NTC values any more but we will use the flow based capacity allocation method. Thus we must agree on the principles for calculation. See 2.2.8.47
40.	6.2.3.1. (2)	(2) The relevant base cases and hypothesis, with assumptions made for generation, load, DC interconnections and loop flows, including the flows of electricity through each interconnection, bottleneck or critical branch pre-existing to the allocation process, for the different time frames;	Partly	UCTE: With this requirement we would have to publish sensitive data of our critical infrastructure which could be used by terrorists. See 2.2.8.48
41.	6.2.3.1. (3)	3) Maximum physical capacity and adopted reliability margin, duly justified, per all interconnections between adjacent TSOs, in specific cases also per bottleneck or critical branch, for the different time frames.	Yes	UCTE: The proposed text is inaccurate when speaking about interconnections. It should be clearly stated that this term does not mean single tie lines, but the totality of tie lines connecting the neighbouring TSOs. This is because a misinterpretation would mean that the reliability margin should be calculated and published per single line – a method that is not only impractical, but also impossible in case of complex interconnections encompassing high number of tie lines which can be operated on different voltage levels. See 2.2.8.50
42.	6.2.4.1.	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).	Yes	UCTE: This seems to be a national standard. There are no rules and timeframe for proceedings for use in the event that the regulator does not accept the methods. See 2.2.8.51.
43.	6.3.1.	Moreover, a high degree of coherence and co-	No	UCTE: We think a high degree of coordination

		ordination is ~~also~~ necessary ~~throughout each~~ inside of a synchronous areas and limited coordination between synchronous areas.		between synchronous areas is not necessary. Not "limited" but emphasis on coherence, … See 2.2.8.52.
44.	6.3.2.1.	Outage scheduling for the purpose of maintenance of network elements ~~generators and significant consumption units~~ shall be agreed among involved TSOs. In this respect, all scheduled outages that influence two or more TSOs shall be considered. TSOs shall establish a joint scheduling process providing for long-term and short-term planning of outages. This process shall be settled at the level of synchronous areas and agreed between the areas accordingly.	Partly	UCTE: In an unbundled market TSOs can't influence maintenance schedules of other market parties. Thus TSOs cannot coordinate maintenance of generators and significant consumption. TSOs can only influence the maintenance, if they pay money for postponement. This fact must be clear for the grid utilisation costs application. See 2.2.8.53
45.	6.3.2.2. (1)	This may not be possible for reasons of confidentiality or depending on the prevailing market rules or national legislation.	Yes	Add at the end of 6.3.2.2: The TSOs shall ensure confidential treatment of the data exchanged.
46.	6.3.2.2. (4)	We can't have remedial measures for each possible situation. We have remedial measures for the most probable situations.	Yes	See 2.2.8.54.
47.	6.3.2.6.	The yearly coordinated maintenance and revision plan shall be presented to the regulators for information and published for market participants.	Yes	UCTE: The maintenance plan is changed by small acts of maintenance every day. It makes no sense to publish this and send it to the regulator. Additionally publishing such information might be risky from the security point of view. See 2.2.8.55, The text is also modified as follows: 6.3.2.6. The yearly coordinated maintenance and revision plan shall be presented to the regulators for information and published for market participants. This plan shall include elements having relevance to the electricity

				markets. It shall be updated during the year to include any new relevant information.(2.2.8.55)
48.	6.3.3.1.	TSOs ~~must inform and~~ coordinate any commissioning and entering into operation of any network element~~, generator or significant consumption unit in their grid~~.	Partly	UCTE: There is confusion in the meaning of "inform and coordinate". TSOs do not have the right to coordinate the commissioning of generators and significant consumption units. See 2.2.8.56.
49.	6.3.4.4.	These references seem not correct.	Yes	Reference is corrected
50.	6.4.2.1.	TSOs shall regularly perform (within a determined and mutually agreed time period): (1) Data collection and storage State estimation, filtering out all the faulty/wrong measurements (2) Load flow calculation; (3) Static and dynamic stability analysis; (4) Reactive power and voltage analysis in order to be able to identify conditions for undertaking measures to prevent voltage collapse.	Partly	UCTE: Dynamic stability analysis is very complex. We can't calculate it in a regular short time frame! In networks with no obvious critical stability problems dynamic studies are only performed on special occasion. Regularly does not have to be every day, but it should be done regularly. See 2.2.8.58.
51.	6.4.2.2.	TSOs shall perform a contingency analysis (…) and before each switching action on any network element during the real time operation (including new network elements entering into operation).	Partly	UCTE: We consider this as an excessive requirement because the announced switching actions are already checked by the program office and the system operator can well assess whether a particular switching action could be critical or not. The mandatory application of SCS would lead to significant delays in planned shutdowns and impede the maintenance work. Security first. No suggestion from UCTE on how to rewrite. Revise the text as: TSOs shall perform a contingency analysis to

				regularly check and identify the necessary preventative actions. They shall perform these checks on a periodical basis (e.g. every 15 minutes) and before ~~each~~ switching actions on ~~any~~ network elements during the real time operation (including new network elements entering into operation) each time it may affect the security of the EU electricity transmission grids.
52.	6.4.2.3.	The operational/on-line information on the actual outcome of the contingency analysis within the control areas shall be exchanged between the TSOs if affected. ~~Furthermore, TSOs shall cooperate whenever it is required to accomplish the tasks requested by 5.4.2.1.~~	Partly	UCTE: 1. An exchange between TSOs is necessary only if the other TSO is affected. 2. The reference 5.4.2.1 does not exist. See 2.2.8.59.)
53.	6.4.2.4.	TSOs shall establish a common observing system a system for monitoring and control of systems associated with the decision support systems for increased efficiency in disturbance prevention and system defence in cases of disturbed or critical system conditions. Such a system should shall enable the functions of wide area monitoring and control as well as a range of preventive/remedy measures to be executed in real time.	Partly	UCTE: A common control system is not possible because each TSO controls its grid itself. It is possible that the TSOs could have a common observing system (UCTE is already working on it). We believe that expert systems assisting decision making are currently not considered state of the art. See 2.2.8.60.
54.	6.4.2.5.	If a violation of a security criterion is detected, the TSO concerned shall prepare and possibly activate appropriate measures. All the other TSOs concerned shall be informed without delay. ~~Any joint measure shall be agreed in advance.~~	Partly	UCTE: Only the most probable measures can be agreed in advance. See 2.2.8.61.
55.	6.5.2.4.	In the case of disturbances, the TSO shall	No	UCTE: To define in advance every possible

		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.~~		remedial action is not possible. Furthermore every disturbance has other conditions. To solve a disturbance problem in a predefined timeframe is not possible. See 2.2.8.63.
56.	6.5.2.6.	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 realization shall be in a non discrimination manner. ~~The efficiency of load shedding systems shall be regularly evaluated.~~	Partly	UCTE: The real tests are not possible. See 2.2.8.64.
57.	6.5.3.3.	Restoration plans must be coordinated among TSOs to allow the organised restoration of the whole synchronous area. ~~and shall be evaluated by regulatory authorities.~~	No	UCTE: A restoration plan for the whole synchronous area does not come under the competency of one regulator. This will be solved by the NRAs (cooperation). See 2.2.8.65.
58.	6.5.3.4.	TSOs ~~shall~~ do everything in their power to maintain sufficient black start and islanding capability within their control area to ensure the efficient and fast restoration after power system blackouts. The black start capability shall be designed ~~to be reliable and to have real possibilities to generate voltage and power for the collapsed network or to the islanded part of the network.~~ to reenergized	Partly	UCTE: The TSO can't control where such generators will be built. See 2.2.8.66.

		the grid.		
59.	6.5.3.5.	To this end, the restoration plans are to be maintained by TSOs and their personnel 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.	Partly	UCTE: A real-time test is not possible. Synthetic testing may not reveal valuable results. See 2.2.8.67.
60.	6.5.3.6.	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 plan. The application of restoration plan shall be coordinated among involved TSO <u>if the help of neighbouring TSO is possible.</u>	Yes	UCTE: 1. If all neighbouring TSOs have e.g. a blackout too, every TSO will apply the restoration itself. In this case coordination is not necessary, and it would only be necessary if a TSO gets help from a neighbouring TSO. 2. There are no means which to identify all faulty grid elements remotely (e.g. damaged lines will not be visible in any control centre) See 2.2.8.68.
61.	6.6.2.5.	TSOs having interconnections to other synchronous systems shall ensure that operation of these interconnectors is compatible with interconnectors within a synchronous system 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 interconnector joining the systems is allowed.~~	Partly	UCTE: With a DC-Link it is possible to help with a coordinated power flow without spreading the disturbance. Allowing only the disconnection of the DC-link is too narrow. See 2.2.8.69.
62.	7.2.5.	The renewal of the certification shall be based on the dispatcher's participation in a	Partly	UCTE: This is a contradiction to 7.2.3. This is regulated so that the TSO is authorised to

		continuous training programme and the assessment of the dispatcher's performance in the control room.		regulate the process of certification. See 2.2.8.71.
63.	8.	These definitions are based on the current OH Policy 5 definitions which are being reviewed now. Other definitions require improvements too.	Yes	See 2.2.8.72.

2.2.17 VE-T (E08-PC-28-17)

(see RWE Transportnetz, Germany)