



European Network of
Transmission System Operators
for Electricity

COMPLIANCE OVERSIGHT REPORT 2011

25 APRIL 2012

ENTSO-E REGIONAL GROUP
CONTINENTAL EUROPE
COMPLIANCE MONITORING PROGRAM 2011

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1 SUMMARY

The objective of the Compliance Monitoring Process is to encourage TSOs to be compliant with the Operation Handbook standards of the ENTSO-E Regional Group Continental Europe. The aim of these standards is to ensure a high level of security of supply in the RGCE synchronous area. The Compliance Monitoring Program 2011 was put in place after introducing improvements to the methodology, which resulted from the Compliance Monitoring Processes of 2006–2010.

The Compliance Monitoring Program 2011 was approved by the ENTSO-E Regional Group Continental Europe (RGCE) Plenary on February 8, 2011. The program focussed on Transmission System Operator (TSO) self-assessment declarations and Compliance Audits by the RGCE subgroup Compliance Monitoring and Enforcement (SG CME).

This Compliance Oversight Report 2011 contains the results of monitoring the compliance with the RGCE Operation Handbook (OH) Policy 5 with the self assessment method. The self-assessment process was carried out using a questionnaire that was issued in spring 2011.

The report further contains a summary of each of the six on site Compliance Audits performed in 2011. The Compliance Audits were, for the second time, part of the mandatory regular Compliance Monitoring Process. The target was to check the quality of the TSOs' answers in the previous year's self-assessment process and to help TSOs to improve their self assessment process and operational procedures. In 2011 CME Audit Teams checked on-site a selected set of standards from the RGCE OH Policies 1-3. The Compliance Audits were accomplished in cooperation with the audited TSOs: TenneT B.V., Energinet.dk, APG, HTSO, MAVIR and 50 Hertz. The complete audit reports are provided as annexes to this report.

The methodology of the self-assessment process together with the Compliance Audits as applied in 2011 provided valuable feedback for a further improvement of both:

- TSOs' practices in terms of improving their compliance level, thus increasing the reliability of the interconnected system operation.
- the RGCE OH in terms of the development of clear, understandable and measurable standards.

During 2011, the SG CME experienced again a heavy workload. This is due to:

- the number (>50) of standards from Policy 5 that were in the self- assessment questionnaire, plus additional questions asked in relation to this. All the information received in relation to this was analysed and discussed in detail.
- the performance of 6 Compliance Audits for which teams from the SG CME travelled to the audited TSOs' control centre to conduct on-site monitoring of the compliance

levels declared earlier. In practise this resulted that all members of SG CME were part of at least one Compliance Audit but many members contributed to more Compliance Audits. The effort put into a Compliance Audit is typically in total (including preparations and reporting) one full week per Audit Team member.

The described workload could only be dealt with thanks to the high level of commitment of the SG CME members and the ENTSO-E Secretariat.

In this COR 2011 there is also special attention to the effort put in this process by the TSOs of continental Europe, both for the self assessment and the onsite audits.

2 SELF-ASSESSMENT PROCESS 2011 IN GENERAL

The self-assessment process 2011 was managed via a web-based questionnaire. The TSOs had to declare their compliance levels with all the standards in OH Policies 5: fully compliant, sufficiently compliant, non-compliant or not applicable. In the case of a sufficient/non-compliant declaration, the TSO must provide an improvement / mitigation plan with its declaration.

The TSO must declare non-compliance if it doesn't fulfil at least one essential requirement specified in the monitored OH standard.

The TSO may declare sufficient compliance only if it fulfils the monitored RGCE Operation Handbook standards in its essential parts, but not in all details. The choice between Non Compliant and sufficiently compliant also has to be considered with a risk analysis approach, with a particular focus on the impact on the security of the European interconnected network or on the neighbouring TSOs.

The TSO may declare full compliance only if it fulfils the monitored OH standard in all details.

The TSO may declare not applicable when the examined RGCE Operation Handbook standard is not applicable (e.g. it is directed to Control Block while a TSO performs only the role of Control Area).

A brief explanation was asked for each compliance declaration and for the most critical standards additional questions were requested.

The process was steered and coordinated by the SG CME and supported by the ENTSO-E Secretariat. The time schedule for the self-assessment can be found in table 1. All the data used for the analysis were printed out from the compliance database on October 14, 2011.

TABLE 1. TIME SCHEDULE FOR THE SELF-ASSESSMENT PROCESS IN 2011

1	Approval and publication of Compliance monitoring program 2011	February
2	Delivery of the Self-assessment Questionnaire to member TSOs	April
3	Return of self-assessment by member TSOs	June
4	Collecting missing answers from self-assessment	July
5	Analysis of self-assessment results	July – November
6	Draft Compliance Oversight Report 2011	December
7	Presentation of the final Compliance Oversight Report 2011 to the RGCE Plenary	Plenary meeting in 2012

3 SELF-ASSESSMENT COMPLIANCE DECLARATIONS

3.1 Delicate standards

All the RGCE TSOs' compliance declarations were collected in one database from which the analysis data were printed. Table 2 below presents the three standards that are considered the most "difficult" to comply with because they received two or more non-compliance declarations from different TSOs. Below the list the text of the standards concerned is stated.

TABLE 2. POLICY 5 STANDARDS WITH AT LEAST TWO NON-COMPLIANCE DECLARATIONS

Company \ Standard	AT - APG	AT - VKW-Netz	BA - ISO BIH	BE - Elia	BG - ESO EAD	CH - swissgrid	CZ - CEPS	DE - 50Hertz	DE - Amprion	DE - EnBW	DE - TenneT	DK - Energinet.dk	ES - REE	FR - RTE	GR - HTSODESMIE	HR - HEP-OPS	HU - MAVIR	IT - Terna	LU - Cleos	ME - CGES	MK - MEPSO	NL - TenneT	PL - PSE-O	PT - REN	RO - Transselectica	RS - JP EMS	SI - ELES	SK - SEPS	
P5-B-S3.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.7	SC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	

Compliance level:

FC = fully compliant (this implies that no mitigation plan is needed)
 SC = sufficiently compliant (an improvement plan to reach full compliance is necessary)
 NC = non-compliant (a mitigation plan to remove non-compliance is obligatory)
 N/A = The particular standard is not applicable to the TSO

Colour coding:

Green Colour code for FC
 Yellow Colour code for SC
 Red Colour code for NC
 Blue Colour code for N/A

3.2 Description of the delicate standards

P5-B-S3.1. Back-up of control room functions

The control room functions shall be backed up to face any damage to the main installations. This shall be activated within less than three hours and tested for operation at least once a year

P5-C-S2.3 Choice of Load Frequency controller modes or states in case of blackout

In case of blackout, the load frequency secondary control mode switching depends on the re-energisation strategy.

For the bottom-up strategy, it is up to the TSO to choose the load frequency secondary controller in stopped control state (or in frequency control mode) in order to share the contribution to frequency regulation with all the units of the control area. For the top-down strategy, the frequency secondary controller shall be in stopped control state in the area that called for reenergising.

P5-C-S3.7. Reconnection of generators after abnormal frequency excursion

The TSO has to coordinate the reconnection of generators tripped due to abnormal frequency excursion.

In this case of loss of generation, the TSO reconnects generators, based on the instructions of frequency leader, keeping adequate margins of the downward balancing reserve sufficient at least to cope with the next generation power to reconnect. The reconnection of generators is managed step by step in order to minimize the impact on the frequency deviation and the reserve margins. The process of reconnecting generators has to be done stepwise in blocks of maximum power defined by the TSO with respect to the operating reserve of the own TSO's grid.

The TSOs define the criteria for reconnection and disconnection with the constraint to avoid over-frequency conditions. For installation connected to DSOs grids the local and remote reconnection has to be agreed in advance in cooperation between the TSO and DSOs for the main units. Automatic reconnection of all generators has to be forbidden when in accordance with legislation.

3.3 Analysis of the delicate standards

From a qualitative point of view, conclusions can be reached as follows.

For P5-B-S3.1, the reasons for non-compliance are either the fact that a Back-up control room doesn't exist in a separate location or that it is not implemented completely. All TSOs who declared NC have Addendum to an MLA with a valid deadline, except HTSO.

For P5-C-S2.3, only CEPS and Energinet.dk declared non-compliance, the reason being that the internal procedures have to be changed in accordance with the revised standards of Policy 5. The deadline envisaged by CEPS is December 2011, both in the self-assessment questionnaire and in the Addendum to the MLA, while in case of Energinet.dk the deadlines are different: December 2013 according to the self-assessment questionnaire and December 2011 according to the Addendum which exists for whole Chapter C of Policy 5.

For P5-C-S3.7, the reason for non-compliance of the German TSOs is that photo voltaic systems can disturb or endanger the system operation because they cannot be controlled by the TSOs (especially when installed in the low voltage system). According to current connection rules, photovoltaic systems disconnect automatically from the grid at 50.2 Hz. The Reconnection occurs automatically if the frequency is below 50.2 Hz. The addenda of Amprion, 50 HzT, EnBW TNG and TenneT GmbH related to standard P5-C-S3.7 were not approved by the Plenary as its violation jeopardizes the security of interconnected system operation. Discussions between the four involved TSOs and their legislator and standardization committees have already been started and the deadline for reaching full compliance is envisaged for December 2013. Terna is facing the same situation like the German TSOs and in order to achieve the full compliance level till December 2015, will start discussions with the Distributors, the Italian Electro technical Commission and the Regulator.

Terna has not sent an addendum to the MLA related to this standard, but it has provided a mitigation plan and a deadline during the self assessment process.

On the other hand, Swissgrid and Energinet.dk answered FC in the SAQ, but they have an Addendum to the MLA related either to this standard, or to the whole chapter C of Policy 5, like in case of Energinet.dk. The explanation provided by Swissgrid for the declared level of compliance suggests that TSO has reached full compliance in the meantime, but in case of Energinet.dk this it is not possible to assess, based only on the explanation. In fact, Energinet.dk has a particular situation. Even if an Addendum exists for whole Chapter C of Policy 5, the declared compliance for the standards belonging to this chapter is: FC (sixteen standards), SC (one standard), NC (only four standards) and N/A (three standards).

3.4 Statistic analysis of self-assessment data

The statistical analysis chapter contains five figures which present the collected self-assessment data from various perspectives for RGCE OH Policy 5 standards. Some of the standards from Policy 5 are omitted due to their measurability problems, e.g. the standard is only a title or statement.

The figures 1, 2 and 3 present the compliance level declarations to each standard of RGCE OH Policy 5 in form a matrix, and two figures. They all share same colour coding legend: green, yellow and red. Green represents excellent situation to which all TSOs should strive for. Yellow colour tells that the TSO is faring quite well but there is room for improvement. Red colour indicates an alarm that something is seriously wrong and might even endanger the system security.

The figure 4 is a comparison of valid Multilateral Agreement addenda and non-compliance declaration from self-assessment questionnaire 2011 per TSO. Green colour indicates that TSO has upgraded itself from non-compliance to sufficiently or even fully compliant before the deadline of the addendum. Yellow colour shows that the TSO is non compliant and has valid addendum for it. Red highlights a non-compliance to which a TSO does not have a valid addendum.

The figure is a result of SG CME detailed analysis of each compliance level declaration explanation which TSOs have given in the self-assessment process. The green colour shows that a TSO has given clear and precise explanation for the declared compliance level and to possible additional questions. It allows SG CME to support the declared compliance level. Yellow colour indicates that explanation was not complete, it might have been slightly off topic or other way insufficient to reach green grade. Red colour highlights SG CME has serious doubt about the declared compliance level; it may also mean that explanation was missing. Detailed analysis of each explanation can be found from Annex 1. The assessment on credibility of compliance level declaration explanations.

Company Standard	Company																												
	AT - APG	AT - VKW-Netz	BA - ISO BIH	BE - Elia	BG - ESO EAD	CH - swissgrid	CZ - CEPS	DE - 50Hertz	DE - Amprion	DE - EnBW	DE - Tennet	DK - Energinet.dk	ES - REE	FR - RTE	GR - HTSO/DESMIE	HR - HEP-OPS	HU - MAVIR	IT - Terna	LU - Creos	ME - CGES	MK - MEPSO	NL - Tennet	PL - PSE-O	PT - REN	RO - Transselectra	RS - JP EMS	SI - ELES	SK - SEPS	
P5-A-S1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	
P5-A-S2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S3.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S3.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S3.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S5.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S5.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4.1.1	FC	FC	SC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4.1.2	FC	FC	SC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4.1.3	SC	FC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2.1.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2.1.3	FC	FC	SC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.2.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.2.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.5	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.5.1	FC	FC	SC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.6	FC	FC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.7	SC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S4.1	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S4.2	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S4.3	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S5.1	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC

FIGURE 1. COMPLIANCE DECLARATION MATRIX ON POLICY 5 STANDARDS PER TSO

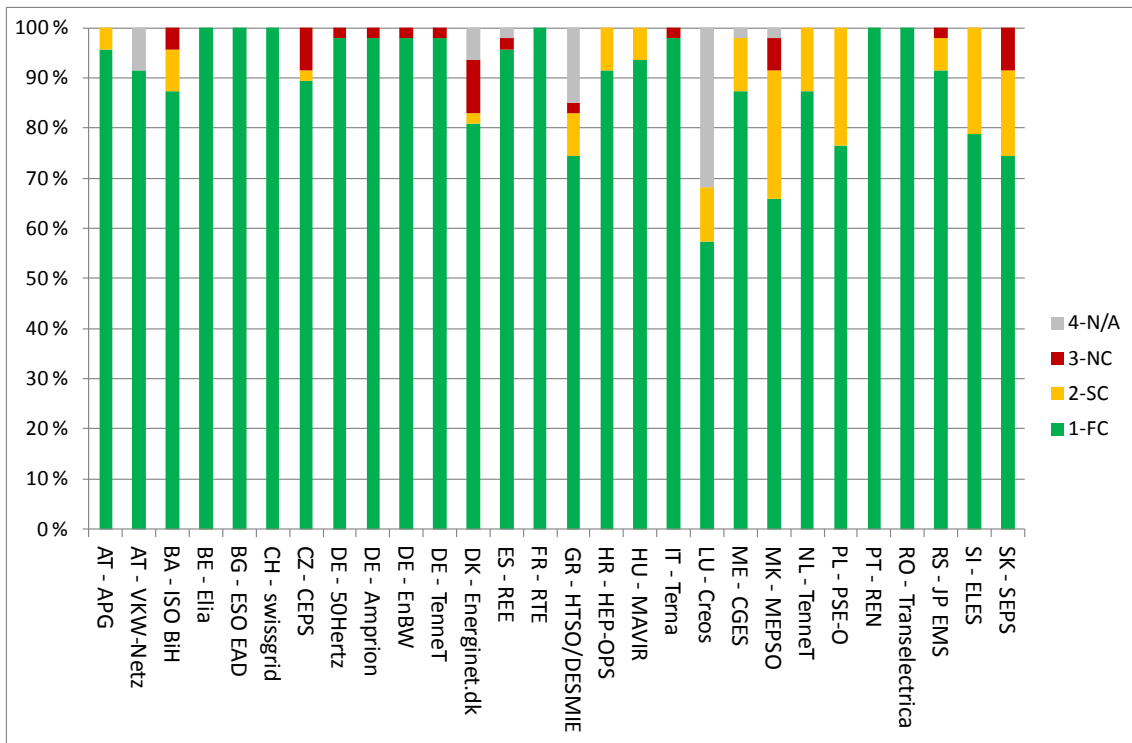


FIGURE 2. COMPLIANCE DECLARATION LEVEL DISTRIBUTION PER TSO IN POLICY 5

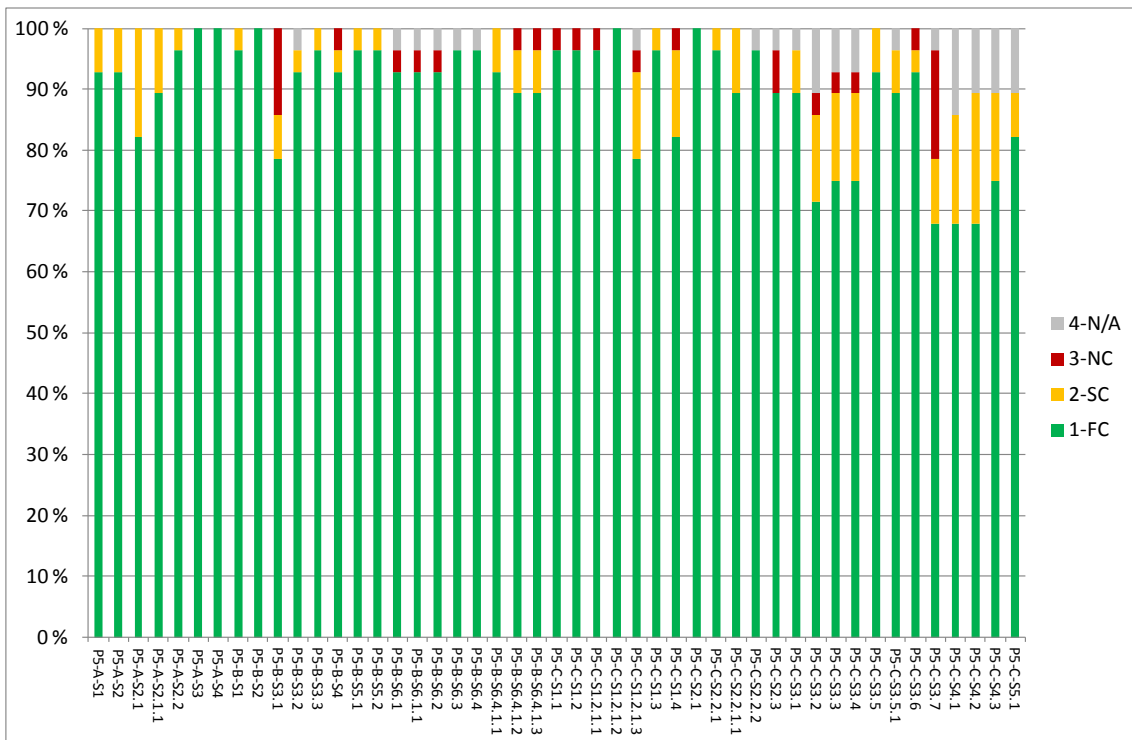


FIGURE 3. COMPLIANCE DECLARATION LEVEL DISTRIBUTION PER STANDARD IN POLICY 5

Company Standard	Company																											
	AT - APG	AT - VKW-Netz AG	BA - ISO-BIH	BE - Eia	BG - ESO EAD	CH - swissgrid	CZ - CEPS	DE - EnBW TNG	DE - Tennet	DE - Amprion	DE - 50Hertz	DK - Energinet.dk	ES - REE	FR - RTE	GR - HTSO/DESMIE	HR - HEP-OPS	HU - MAVIR ZRt.	IT - Terna S.p.A.	LU - Creos	ME - CGES	MK - MEPSO	NL - Tennet	PL - PSE-Operator SA	PT - REN	RO - Transselectrica	RS - JP EMS	SI - ELES	SK - SEPS
P5-A-S1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S3.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S3.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S3.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S5.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S5.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4.1.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4.1.3	SC	FC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2.1.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2.1.3	FC	FC	SC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.2.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.2.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.5	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.5.1	FC	FC	SC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.6	FC	FC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.7	SC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S4.1	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S4.2	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S4.3	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S5.1	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC

Compliance level:
 FC = fully compliant (this implies that no mitigation plan is needed)
 SC = sufficiently compliant (an improvement plan to reach full compliance is necessary)
 NC = non-compliant (a mitigation plan to remove non-compliance is obligatory)

Colour coding:
 Green indicates TSO has upgraded from non compliance to SC or FC
 Yellow indicates that TSO is non compliant and a valid addendum in force
 Red indicates that TSO is non compliant without valid addendum in force

FIGURE 4. NON-COMPLIANCE AND ADDENDUM DECLARATION COMPARISON

Company Standard	Company																												
	AT - APG	AT - VKW-Netz AG	BA - ISO-BIH	BE - Elia	BG - ESO EAD	CH - swissgrid	CZ - CEPS	DE - EnBW TNG	DE - Tennet	DE - Amprion	DE - 50Hertz	DK - Energinet.dk	ES - REE	FR - RTE	GR - HTSO/DESMIE	HR - HEP-OPS	HU - MAVIR ZRT.	IT - Terna S.p.A.	LU - Creos	ME - CGES	MK - MEPSO	NL - TenneT	PL - PSE-Operator SA	PT - REN	RO - Transselectra	RS - JP EMS	SI - ELES	SK - SEPS	
P5-A-S1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	
P5-A-S2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S2.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-A-S4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S3.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S3.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S3.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S5.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S5.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4.1.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-B-S6.4.1.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2.1.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.2.1.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S1.4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.2.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.2.1.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.2.2	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S2.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.2	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
P5-C-S3.3	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.4	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.5	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.5.1	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.6	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S3.7	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S4.1	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
P5-C-S4.2	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S4.3	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
P5-C-S5.1	FC	N/A	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC

Compliance level:

FC = fully compliant (this implies that no mitigation plan is needed)
 SC = sufficiently compliant (an improvement plan to reach full compliance is necessary)
 NC = non-compliant (a mitigation plan to remove non-compliance is obligatory)
 None = Not assessable, The standard is more of guideline than requirement

Colour coding:

FC Credible: good and precise answer
 SC Some doubts: answer is a little bit off topic
 NC Not credible: missing answer or completely off topic
 None Colour code for None

FIGURE 5. SG CME ASSESSMENT ON CREDIBILITY OF COMPLIANCE LEVEL DECLARATION EXPLANATIONS

4 COMPLIANCE AUDITS 2011

4.1 General approach

The CME group selects six TSOs annually using two principles. TSOs that have returned improper or insufficiently completed self-questionnaires in the previous year are selected first for the following year audits. The remaining auditable TSOs are chosen at random to attain six audits annually. In 2011 the following TSOs were selected for Compliance Audits: TenneT B.V, Energinet.dk, APG, HTSO, MAVIR and 50 Hertz. CME Audit Teams audited selected set of standards from RGCE Operation Handbook Policies 1-3. The set of standards were the same for each audited TSO.

The target of the Compliance Audits was to check the quality of the TSOs' answers in the previous year's self-assessment process and to help TSOs to improve their self assessment process and operational procedures. In practice an Audit Team visits the audited TSO on-site at its control room and checks hard evidence that backs up the TSO's compliance declaration. Table 3 defines the generic audit schedule that was followed in 2011's on-site audit process.

TABLE 3. GENERAL TIME SCHEDULE FOR COMPLIANCE AUDITS IN 2011

Audit questionnaire(s) sent to the TSO involved in the audit by the ENTSO-E Secretariat	7 weeks prior to audit
Audit questionnaire(s) returned to the ENTSO-E Secretariat by the TSO	3 weeks prior to audit
Initial draft of the audit report sent to the TSO with a preliminary review of its answers	2 working days prior to audit
Audit report draft sent to the TSO review by ENTSO-E Secretariat	2 weeks after audit
Audit report draft returned to the ENTSO-E Secretariat by the TSO	4 weeks after audit
Final audit report sent to the TSO	6 weeks after audit

4.2 TenneT B.V. audit

The Compliance Audit conducted on 21-22 June 2011 at TenneT B.V. in Arnhem clearly demonstrated that the onsite checking of the TSO's compliance with the OH standards is one of the best methods for receiving clear and precise information of the audited TSO and to revise its list of evidences.

The Audit Team has a much better opportunity to outline its main intentions at asking questions than within the scope of the self-assessment process. If the audited TSO actively participates in the audit (as TenneT B.V.), the Audit Team always receives high quality explanations. This is also true for the list of evidences, because its quality is not measured by its completeness and the number of details it contains, but by the readiness of the audited TSO to show the evidence, to discuss its content or to simply admit that there is no evidence.

The Compliance Audit requires a very good preparation of both the Audit Team and the representatives of the audited TSO. The audit itself absorbs a lot of time, patience and full concentration of the participants. Two days audits seem acceptable from the practical point of view, but duration of the audit depends mostly of how OH standards are evaluated and discussed. In case of investigated OH standards from Policy 1,2 and 3 all standards were checked in depth in very efficient cooperation with staff of audited TSO.

The onsite compliance assessment detected 1 NC level (P1-A-S1.1) and 3 SC level (P2-A-S5, P2-A-S5.5 and P3-A1-S2), being the remaining 17 standards FC. With regards to the compliance level declared in the audit questionnaire 2011, The Audit Team proposed to upgrade 3 standards from SC to FC level (P2-A-S4, P2-A-S5.4 and P3-D-S2) while 1 standard proposed to downgrade from FC to SC level (P3-A1-S2).

As a result of the audit process it's pointed out as follow:

- Standard P1-A-S1.1 (NC) - no change of the compliance level declared in AQ 2011: the current Dutch regulation concerning actions and rights for dispatching and monitoring the primary reserves performed by third parties providers must be changed to cover requirements and obligations for primary control
- Standard P2-A-S5 and P2-A-S5.5 (SC) - no change of the compliance level declared in AQ 2011: the implementation and run of the matching process is not in line with the "Implementation Guide for the ESS (ETSO Scheduling System); the full implementation of ESS is envisaged by the end of 2012
- Standard P2-A-S4 (FC) - upgrade of the compliance level declared in AQ 2011: the ESS is not mandatory part of this standard (it is only recommendation in the guidelines P2-A-G1)
- Standard P2-A-S5.4 (FC) - upgrade of the compliance level declared in AQ 2011: the implicit market structure in the Netherlands eliminates the need for having mismatch settlement process with market parties. For this reason, TenneT B.V. does not need any specific rules to solve mismatches at cut-off-time as they are already solved within previous matching of programs
- Standard P3-A1-S2 (SC) – downgrade of the compliance level declared in AQ 2011: on the basis of the likelihood of occurrence and respective risk assessment, a list of the exceptional type of contingencies for security calculation shall be formally agreed with the German neighbouring TSOs

- Standard P3-D-S2C (FC) – upgrade of the compliance level declared in AQ 2011: TenneT B.V. uses an external contractor for transient angle stability calculations; even though self reliance in dynamic analysis is not mandatory part of this standard, the process of training internal personnel is already well in progress

Moreover the Audit Team points two further issues:

- The list of the normal type of contingencies was out of the scope of the audit. Nevertheless, it's recommend to develop such a list with all the German neighbouring TSOs
- The Audit Team well appreciated the added value provided by the Security Service Centre to improve the security of the interconnected system. The centre provides daily high level results in terms of DACF and 2DAF calculations, coordinated remedial actions and quality check of NTC values and coordination with CORESO

TenneT B.V. well demonstrated transparent and clever approach. The TSOs readiness, organization and preparation to the audit saved a lot of time during the investigations.

The Audit Team recognized a lot of efforts in the preparation and good explanation of all evidences needed.

The Audit Team also appreciated the continuous aim to learn from this experience, taking the chance to improve current process and procedures.

In case of the TenneT B.V. Compliance Audit, all preconditions for an excellent and successful audit were fulfilled, and the Audit Team wishes to express its gratitude for that to the TenneT B.V. company management.

4.3 Energinet.dk audit

The audit of Energinet.dk was conducted on September 22–23, 2011 at the national control centre in Fredericia.

The onsite compliance assessment detected 2 NC level (P3-A1-S2 and P3-A3-S2) and 1 SC level (P3-A2-S1), being the remaining 18 standards FC.

The grid of Energinet.dk is divided into two parts: DK1 – the western part synchronously connected with the Region Continental Europe system, and DK2 – the eastern part synchronously connected with the Region Nordic system. The compliance audit focused only on DK1.

Energinet.dk was treated as a control area in terms of Policies 1 and 2, although Energninet.dk is not officially recognized as such by the RG CE Plenary.

On the basis of evidences provided during the Audit phase, all standards concerning Policies 1 and 2 were assessed as “fully compliant”.

The Audit Team found that standards from Policy 3 are the most critical. In detail:

- the standard P3-A1-S2 “Coordination for exceptional type of contingency” was downgraded from sufficiently compliant to non-compliant
- the standard P3-A3-S2 “Overloads in N-1 situation (simulation)” was downgraded from fully compliant to non-compliant

For the first two standards (P3-A1-S2 and P3-A2-S1) there is a valid addendum. Moreover, cascading effects are avoided by adequate protection system on the tie-lines whose setting is commonly agreed with TenneT Germany. However, the Audit Team proposed to Energinet.dk to perform a study to show whether there are exceptional contingencies in the Danish system which may impact the interconnection, and to share with TenneT Germany the results of the study.

Documentation to improve the compliance level of the standard P3-A3-S2 was submitted by Energinet.dk after the Audit, including basic principles and general remedial actions for day-ahead and real time operation. The Audit Team acknowledged the additional evidences and understands it as a part of fulfilling the mitigation plan to this standard. The instructions provide specific (and not general) remedial actions for the most relevant constraints. Energinet.dk will update and improve the general system operation instructions to manage situations of temporary overload in N-1 situations in order to standardize best practice of its Power System Operators and to enhance the exchange of knowledge.

Energinet.dk reported that it spent 300 working hours for preparing itself for the compliance audit.

4.4 APG audit

The audit was conducted on October 4-5, 2011 at the National Control Centre of APG in Vienna.

The audit process was very complicated in case of APG. The reason for that is the connection to 9 neighbouring TSOs which makes APG the TSO with the highest number of borders in ENTSO-E RGCE. A significant amount of documentation had to be checked during the audit. Therefore, it was agreed between APG and the Audit Team the duration of the audit for 2 full days. APG staff was excellently prepared for the audit and this fact made the audit process easier. All necessary documentation was easily available and the APG representatives answered all questions in a competent way and gave detailed explanations.

The Audit Team made the experience that APG is an excellently organized TSO with a very high level of expertise and wants to stress its full satisfaction with the approach of APG to the compliance audit.

APG estimates that its staff needed about 200 hours for the preparation of the compliance audit.

The Audit Team confirmed that APG is fully compliant with the following standards: P1-A-S1.1, P1-B-S4, P2-A-S4, P2-A-S5.1, P2-A-S5.4, P2-A-S5.5, P3-A1-S2, P3-A2-S1, P3-A2-S2, P3-A2-S5.2, P3-A2-S6, P3-A3-S2, P3-A3-S4.1, P3-A4-S3, P3-A4-S4.1 and P3-B-S2.1.2.

The Audit Team upgraded APG in case of 5 standards from the level of sufficiently compliant (SC) to the level of fully compliant (FC): P2-A-S5, P2-A-S5.2, P2-A-S5.3, P3-B-S1.2.2 and P3-D-S2, with the following explanations:

P2-A-S5: APG provided proof that it is fully compliant with all sub-standards of P2-A-S5

P2-A-S5.2 and P2-A-S5.3: APG declared sufficient compliance, because it believed that separately signed annexes to the operational agreements with detailed description of the processes are necessary. APG has not signed such documents with all its neighbouring TSOs. However, the standard doesn't require that. It is enough to have defined agreements. Their publication in Internet is the proof that the agreements exist. Therefore, the Audit Team upgraded APG to the level of full compliance.

P3-B-S1.2.2: APG switches-off transmission lines in case of too high voltages (by respecting the n-1 security criterion). The installation of additional coils is foreseen only for the purpose to avoid switching-off transmission lines too often. APG is however always capable to manage the voltage control. Therefore the Audit Team finds that APG is fully compliant.

P3-D-S2: The Audit Team finds that the studies performed by external consultants and the model presented by APG justifies the full compliance level.

The conclusion of the Audit Team is that APG is fully compliant with all audited standards.

4.5 HTSO audit

The audit of HTSO was conducted on October 24-25, 2011 at the national control centre in Athens.

HTSO was excellently prepared for the audit. All necessary documentation was easily available. This has significantly eased the audit process. The HTSO representatives answered all questions in a competent way and gave detailed explanations. The Audit Team wants to stress its full satisfaction with the approach of HTSO to the compliance audit.

The Audit Team detected 3 NC level (P3-A2-S2, P3-A2-S6 and P3-A4-S3) and 1 SC level (P3-A4-S4.1), being the remaining 17 standards FC.

P2-A-S5: The Audit Team upgraded HTSO from the level of sufficient compliance (SC) to the level of full compliance (FC).

The Audit Team did not see a reason to evaluate the compliance level of HTSO with this standard with a lower grade than full compliance, but it recommends to HTSO to improve the cooperation with MEPSO.

P3-A4-S3: The Audit Team downgraded HTSO from the level of full compliance (FC) to the level of non compliance (NC) during the audit. Due to partially fulfilment of the mitigation plan during the commenting phase of the Compliance Audit Report the Audit Team states that the current compliance level for this standard has changed to sufficient compliant (SC) in the meanwhile.

The location of the HTSO system (being a peninsula) is specific. It is very improbable that disturbances originating from the HTSO system may endanger neighbouring systems. In a certain sense, the standard is not applicable to HTSO. Nevertheless, the standard requires cooperation between neighbouring TSOs and common identification of possible remedial actions.

After the Compliance Audit, but during the commenting phase of the Compliance Audit Report, HTSO submitted the document "Remedial actions procedures among TSOs" the Audit Team. The Audit Team highly appreciated the fast reaction of HTSO at implementing its mitigation plan related to standard P3-A4-S3 and of its improvement plan related to standard P3-A4-S4.1. The standard P3-A4-S3 states that "TSOs commonly identify, prepare and implement in a coordinated way all possible operational measures and remedial actions". In this light, the Audit Team is of the opinion that HTSO fulfilled the first part of its mitigation plan: "to perform an analysis in which possible propagation of cascading effects is analysed, and possible remedial actions are proposed; to share the results of this study with neighbouring TSOs". It remains to "reach common understanding on these issues" and to "write down the results in a common document comprising all relevant TSOs of the region". As HTSO has done what is in its power so far, the Audit Team considers that HTSO is sufficiently compliant with the standard P3-A4-S3.

P3-A4-S4.1: The Audit Team downgraded HTSO from the level of full compliance (FC) to the level of sufficient compliance (SC).

HTSO doesn't have a common analysis with its neighbouring TSOs in which possible remedial actions are identified on the basis of a general analysis of probable constraints impacting neighbouring control areas. The standard P3-A4-S4.1 states that "for probable constraints impacting neighbouring control areas TSOs have to agree in advance with their neighbours in the same region on a set of remedial actions and on related procedures of activation". Obviously, in case of HTSO, this requirement is not yet fulfilled. Nevertheless, through the submitted document (as mentioned under P3-A4-S3), HTSO made a significant progress at fulfilling its improvement plan: "preparing a set of principal remedial actions in order to simplify and ease the use of common procedures related to this standard". What remains is the "implementation of the operational agreements with neighbouring TSOs and common procedures". Therefore, the Audit Team appreciates the progress made, but considers that HTSO is still sufficiently compliant with the standard P3-A4-S4.1. HTSO is not compliant with the standards P3-A2-S2 and P3-A2-S6, but is covered by addenda which are valid till end of 2013. Temporary measures are: using of DACF files in combination with on-line measurements for near to real time calculations.

The mitigation plans mentioned in the addenda are not adequate. They foresee the implementation of a new EMS. What is needed, however, are the measurements from other TSOs. The Audit Team recommends to HTSO to present this finding to the RG CE Plenary and to ask it to take the decision that all TSOs of the region should provide necessary measurements to one another.

The Audit Team made the experience that HTSO is an excellently organized TSO with a very high level of expertise. The Audit Team wishes to express its gratitude to the HTSO company management for fulfilling all preconditions for an excellent and successful audit.

4.6 MAVIR audit

The Audit Team found that MAVIR was fully compliant with all audited standards. The audit was conducted on November 8-9, 2011 at the National Control Centre of MAVIR in Budapest.

The Audit Team visited the MAVIR control room at the beginning of the audit. All questions of the Audit Team were answered in a very precise manner. The evidence presented in the control room helped the auditors to better understand the organisation of the work and the processes in MAVIR.

MAVIR was excellently prepared for the audit. All necessary documentation was easily available. The MAVIR's representatives answered all questions in a competent way and gave detailed but comprehensive explanations. The Audit Team wants to stress its satisfaction with the approach of MAVIR to the compliance audit.

In 7 cases the Audit Team upgraded the declared level from the level of sufficient compliance to the level of full compliance in case of 7 standards: P2-A-S4, P2-A-S5, P2-A-S5.2, P2-A-S5.3, P2-A-S5.4, P3-A4-S3, P3-A4-S4.1. The explanations for these decisions are given in the following:

P2-A-S4, P2-A-S5 and P2-A-S5.2:

MAVIR declared sufficient compliance but finally has signed or is in signature process of contracts for common rules "Agreement for scheduling and matching" with Transelectrica, EMS and HEP-OPS after returning the audit questionnaire which makes MAVIR fully compliant for the standard. For other TSOs APG and SEPS had common agreement "Implementation Guide CEE Scheduling" before the audit questionnaire submission. Audit Team reviewed all previously mentioned contracts and approval emails for the ones which were under signature process with the neighbouring ENTSO-E TSOs. Contracts fulfilled all requirements of the respective standard. Therefore, the Audit Team upgraded MAVIR to the level of full compliance.

P2-A-S5.3 and P2-A-S5.4:

MAVIR declared sufficient compliance but finally has signed or is in signature process for contracts for common rules "Agreement for scheduling and matching" with Transelectrica,

EMS and HEP-OPS after returning the audit questionnaire which makes MAVIR fully compliant for the standard. For other TSO's APG and SEPS had common agreement "Implementation Guide CEE Scheduling" before the audit questionnaire submission. Audit Team reviewed all previously mentioned contracts and approval emails for the ones which were under signature process with the neighbouring ENTSO-E TSOs. Contracts fulfilled all requirements of the respective standard. Therefore, the Audit Team upgraded MAVIR to the level of full compliance.

P3-A4-S3 and P3-A4-S4.1:

MAVIR declared sufficient compliance because until the audit questionnaire submission there was no agreement with SEPS about any predefined remedial action but they finally signed the contract "Measures in critical network situation" with SEPS on 4.11.2011 which covers the remedial actions. For other neighbours the "Agreement on Network and System Operation Management" Annex 13 "Measures in critical network situation" covers the requirements of the standard. Therefore, the Audit Team upgraded MAVIR to the level of full compliance.

The Audit Team made the experience that MAVIR is an excellently organized TSO with a very high level of expertise.

The MAVIR representatives reported they had spent 290 working man-hours on audit preparation.

The Audit Team wishes to express its gratitude to the MAVIR company management for fulfilling all preconditions for an excellent and successful audit.

4.7 50 Hertz audit

Main lesson learned is that 50 HzT is fully compliant with almost all standards investigated during the audit except those related with Primary and Secondary Regulation for which the Audit Team assessed the level as non compliant. This problem is not strictly limited to 50 HzT but involves all the German ENTSO-E Members (Primary and Secondary) and other ENTSO-E Members (Secondary) that adjoin the Grid Control Cooperation scheme.

The Audit bears witness to the fact that a part of Continental Europe synchronous zone has a conflict between current regulations of different levels (ENTSO-E RGCE Operation Handbook Policies and national regulation).

Another profitable discovery is related with the current use of the term "neighbour" within the standard statements of the Operation Handbook. It might mislead to a conclusion that the neighbours of a Control Area are only other Control Areas physically connected by tie lines. In fact for the purpose of adequate interoperability every Control Area with reciprocal influence should be accounted among the neighbours of each Control Area. This broad

vision is implemented by 50 HzT and can be seen as best practise. This approach shall enlighten the next revision of the OH Policies.

4.8 Summary of compliance level modifications

The audit process for an audited TSO starts with receiving an Audit Worksheet seven weeks before the audit. The Audit Worksheet contains Compliance Audit Questionnaire (CAQ) and also answers from previous year's Self-Assessment Questionnaire (SAQ) on standards which will be audited. The TSOs fill in the CAQ with updated compliance level information prior to the audit.

During the audit the Audit Team reviews all standards which were part of the Audit Worksheet and gives its suggestion for the new compliance levels. The following figures 6. and 7. contain above mentioned data: SAQ and CAQ columns contain TSO self-assessment and Audit column contains Audit Team assessment. The green colour indicates that the compliance level was upgraded from the previous assessment as red colour points out a downgrade. The blue colour means that the decision on compliance level is moved up to RGCE Plenary.

The Audit Team in 50 Hertz had major difficulties to assess P1-A-S1.1 and P1-B-S4 regarding primary and secondary control due to RGCE Plenary decisions regarding German reserve sharing practice. The Audit Team decided to suggest non compliant level for both standards due to the German regulatory scheme which forces German TSOs to practices which are not in line with the RGCE OH.

TSO Event Standard	TenneT B.V.			Energinet.dk			APG		
	SAQ 2010	CAQ 2011	Audit 2011	SAQ 2010	CAQ 2011	Audit 2011	SAQ 2010	CAQ 2011	Audit 2011
P1-A-S1.1	FC	NC	NC	FC	FC	FC	SC	FC	FC
P1-B-S4	FC	FC	FC	FC	FC	FC	FC	FC	FC
P2-A-S4	FC	SC	FC	No	FC	FC	FC	FC	FC
P2-A-S5	Not asked	SC	SC	Not asked	FC	FC	Not asked	SC	FC
P2-A-S5.1	FC	FC	FC	FC	FC	FC	SC	FC	FC
P2-A-S5.2	FC	FC	FC	FC	FC	FC	SC	SC	FC
P2-A-S5.3	FC	FC	FC	FC	FC	FC	SC	SC	FC
P2-A-S5.4	N/A	SC	FC	FC	FC	FC	FC	FC	FC
P2-A-S5.5	FC	SC	SC	FC	FC	FC	FC	FC	FC
P3-A1-S2	SC	FC	SC	SC	SC	NC	SC	FC	FC
P3-A2-S1	SC	FC	FC	SC	SC	SC	SC	FC	FC
P3-A2-S2	FC	FC	FC	SC	SC	FC	FC	FC	FC
P3-A2-S5.2	FC	FC	FC	FC	FC	FC	FC	FC	FC
P3-A2-S6	FC	FC	FC	N/A	FC	FC	FC	FC	FC
P3-A3-S2	FC	FC	FC	FC	FC	NC	FC	FC	FC
P3-A3-S4.1	FC	FC	FC	FC	FC	FC	FC	FC	FC
P3-A4-S3	FC	FC	FC	FC	FC	FC	SC	FC	FC
P3-A4-S4.1	FC	FC	FC	FC	FC	FC	FC	FC	FC
P3-B-S1.2.2	SC	FC	FC	FC	FC	FC	SC	SC	FC
P3-B-S2.1.2	SC	FC	FC	FC	FC	FC	FC	FC	FC
P3-D-S2	NC	SC	FC	FC	FC	FC	NC	SC	FC

FIGURE 6. COMPLIANCE LEVEL MODIFICATION DURING SELF-ASSESSMENT AND AUDIT PROCESSES

TSO Event Standard	HTSO			MAVIR			50 Hertz		
	SAQ 2010	CAQ 2011	Audit 2011	SAQ 2010	CAQ 2011	Audit 2011	SAQ 2010	CAQ 2011	Audit 2011
P1-A-S1.1	FC	FC	FC	FC	FC	FC	FC	FC	NC
P1-B-S4	FC	FC	FC	FC	FC	FC	FC	FC	NC
P2-A-S4	FC	FC	FC	FC	SC	FC	FC	FC	FC
P2-A-S5	Not asked	SC	FC	Not asked	SC	FC	Not asked	FC	FC
P2-A-S5.1	SC	FC	FC	FC	FC	FC	FC	FC	FC
P2-A-S5.2	SC	FC	FC	FC	SC	FC	FC	FC	FC
P2-A-S5.3	SC	FC	FC	FC	SC	FC	FC	FC	FC
P2-A-S5.4	SC	FC	FC	FC	SC	FC	FC	FC	FC
P2-A-S5.5	SC	FC	FC	FC	FC	FC	SC	FC	FC
P3-A1-S2	SC	FC	FC	FC	FC	FC	NC	SC	FC
P3-A2-S1	FC	FC	FC	FC	FC	FC	FC	FC	FC
P3-A2-S2	NC	NC	NC	FC	FC	FC	FC	FC	FC
P3-A2-S5.2	FC	FC	FC	FC	FC	FC	FC	FC	FC
P3-A2-S6	SC	NC	NC	SC	FC	FC	FC	FC	FC
P3-A3-S2	FC	FC	FC	FC	FC	FC	FC	FC	FC
P3-A3-S4.1	FC	FC	FC	FC	FC	FC	FC	FC	FC
P3-A4-S3	SC	FC	NC	SC	SC	FC	FC	FC	FC
P3-A4-S4.1	NC	FC	SC	SC	SC	FC	FC	FC	FC
P3-B-S1.2.2	FC	FC	FC	FC	FC	FC	FC	FC	FC
P3-B-S2.1.2	SC	FC	FC	FC	FC	FC	FC	FC	FC
P3-D-S2	FC	FC	FC	FC	FC	FC	FC	FC	FC

FIGURE 7. COMPLIANCE LEVEL MODIFICATION DURING SELF-ASSESSMENT AND AUDIT PROCESSES

5 WORKLOAD EVALUATION

SG CME continues to monitor time consumed to self-assessment questionnaire by the TSOs. On below on figure 8. shows the work put in the self-assessment questionnaire by a RGCE TSO. A new monitoring aspect for this report is the time consumed by a TSO for an onsite audit which is presented on figure 9.

The self-assessment process work load has quite wide spread compared to onsite audit which is explained by different way of measuring the work load. Some TSOs only count time consumed filling in the questionnaire while others also include time used collecting the data. Also some TSOs did not file their time consumption for self-assessment process. For future self-assessment processes the time tracking will be fine tuned to have more uniform data.

TSOs used in average around 250 hours for onsite audit process on 2011. SG CME Audit Teams used approximately one man-month in preparation for the audit. The audit process is takes in general six times more resources from a TSO than a self-assessment process.

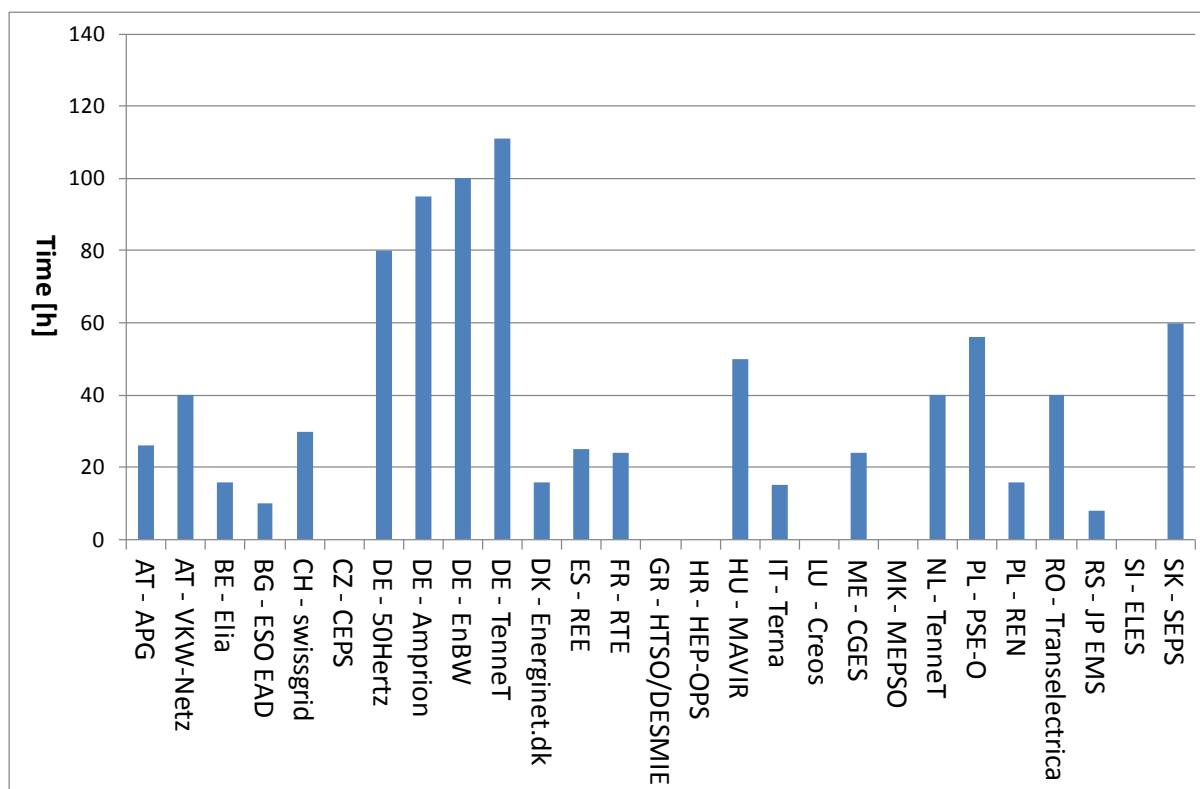


FIGURE 8. TIME CONSUMED TO COMPLETE THE SELF-ASSESSMENT QUESTIONNAIRE 2011

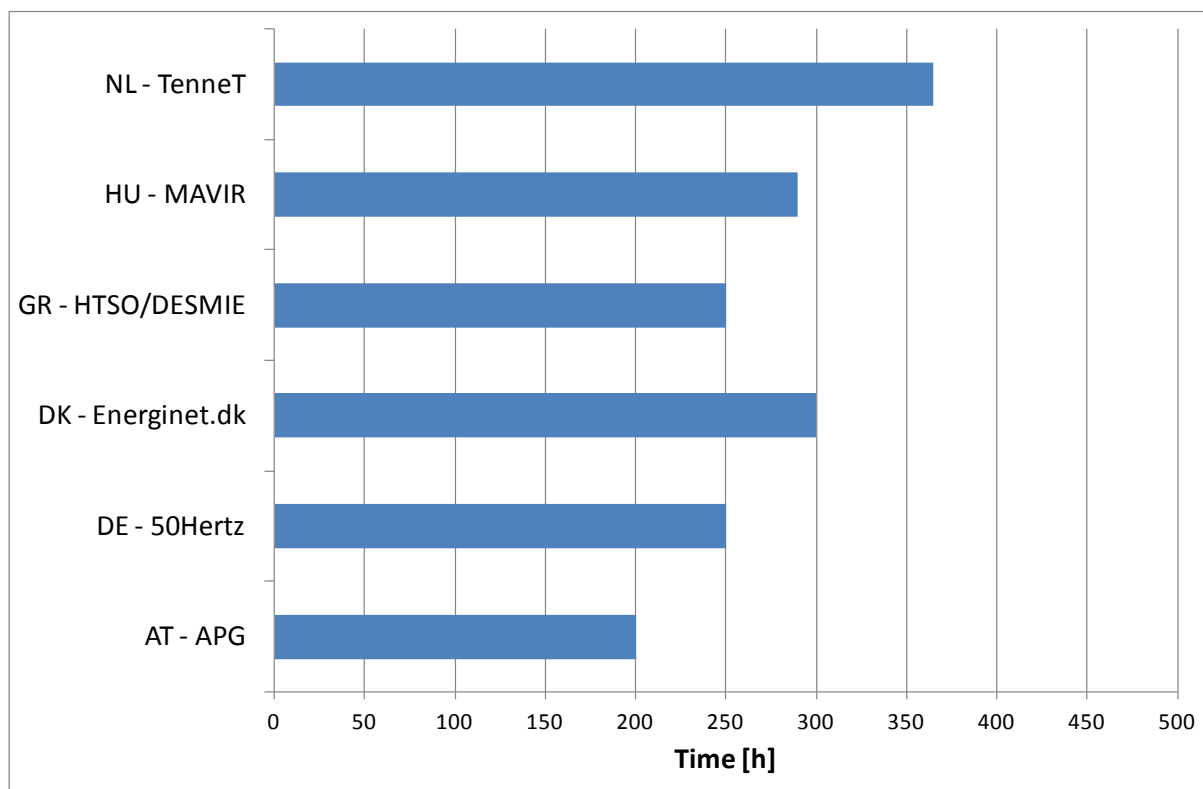


FIGURE 9. TIME CONSUMED TO PREPARE FOR AN ONSITE AUDIT FOR TSO IN 2011

6 MAIN FINDINGS AND CONCLUSIONS

6.1 Self-assessment process

Below are the main conclusions reached by the SG CME from the 2011 self-assessment process:

1. Most difficult standards to comply with

There are only 3 standards where more than 1 TSO reports Non Compliance. The most critical one is for sure P5-C-S3.7 that handles with the reconnection of generators after abnormal frequency excursions. For this standard the 4 German TSO plus Terna have the situation that photo voltaic systems disconnect and connect automatically during frequency excursions without the possibility for the TSO to influence this.

Further there are 4 TSOs reporting Non Compliance with P5-B-S3.1 that is dealing with the back up control rooms which are not in a separate location or are not fully implemented yet, for all this 4 cases there are valid addenda in place.

Finally 2 TSOs reporting Non Compliance with P5-C-S2.3 dealing with the choice of load frequency controller mode in case of black out. Both TSOs have valid addenda in place.

2. TSOs with non-compliances without addendum

Several Non Compliances without valid addenda in place were reported, for P5-C-S3.7 (German TSOs and TERNA), P5-B-S3.1 (HTSO), P5-B-S6.4.1.3 (ISO-BIH) and P5-C-S3.6 (ISO-BIH).

3. Answer harmonization on multilateral standards (mismatches)

There were only a few mismatches detected in comparisons with previous years in the answers of neighbouring TSOs, this is in P5-A-S2, P5-B-S1 and P5-C-S1.4 and involves HTSO, MEPSO and Terna.

4. Value of the additional questions

The additional questions were used together with the standard explanation to better assess the credibility of the compliance declarations done by the TSOs and were very valuable for that purpose. The result is that the vast majority of the compliance declarations were assessed as credible although the level of detail of the answers given is very different and in some cases not enough. For future years it must be better explained by SG CME in the material sent to the TSOs what level of detail is required and what is the exact purpose of the questions.

Besides this the answers on the additional questions gave valuable insight and understanding of the organisation of emergency operations in the Continental Europe synchronous system.

5. Average workload for TSOs

Because of serious remarks received in the past from TSOs on the workload coming with the self assessment the SG CME paid special attention to this while preparing the self assessment material. One of the most important results of this was that there was no second round of questions in 2011. In 2011 there were no remarks on the workload received; therefore one can conclude that the SG CME succeeded in this matter. As a part of the self assessment most TSOs reported the amount of hours spent while filling in the questionnaires. This varies between 20 and 40 hours for most TSOs while the 4 German TSOs spent significantly more time, between 80 and 110 hours per TSO. This might be caused by the fact that the German TSOs need to coordinate their answers before they report to the SG CME.

6. ENTSO-E Secretariat support level

The 2011 Compliance Monitoring Program was executed with the full assistance of the Compliance Monitoring Advisor of the ENTSO-E secretariat. Without this support it would not have been possible to perform the tasks from the program to the required level. Also in 2011 there were some problems with the database but again here the secretariat of ENTSO-E did all effort needed to tackle these as quick as possible.

6.2 Compliance Audit process

1. General

In 2011 a selection of standards from the Policies 1, 2 and 3 were the subject of the Compliance Audits, this was earlier in 2010 the subject of self-assessment. As before 6 TSOs were visited

The Compliance Audits proved again to trigger the TSOs that were visited to organise their evidence and while doing that also improve the processes and procedures to meet the standards set in the RGCE OH. In many cases in the preparations for the Compliance Audit updated the material mentioned and the Audit Teams observed an improved compliance level compared to the one reported in the 2010 self-assessment. As in the years before the Audit Teams in several cases had to downgrade the reported compliance level because the TSO was too optimistic but also the opposite situation occurs where the Audit Team upgrades the compliance level reported. In all cases in the end there is a better understanding what is expected from the TSO in relation to the rules from the RGCE OH.

In two TSOs (Energinet.dk and HTSO) that were found not Fully Compliant on some standards and had their mitigation plans discussed with the Audit Team they started immediately after the visit to work on the improvement. In both cases this resulted in first improvements and additional evidence during the period the report was drafted. In both cases the fast progress on improvement plans was mentioned in the Compliance Audit reports. In case of 50 HzT the Audit Team asked the RGCE Plenary for advise how to assess the standards concerning the primary and secondary control reserve organisation

which is of a special nature due to the German regulatory regime. After discussion with the RGCE Plenary it was decided by the SG CME to assess 50 HzT non compliant with this standards. This issue shows that in some cases the developments in the real world go fast and in directions not foreseen by the rule makers, sometimes it is hard (impossible) for the rules to keep up to speed with the practise.

2. Workload for both the TSO audited and for the Audit Teams

In 2011 the audited TSOs were asked to report the time spent on preparing and executing the Compliance Audits. This shows that there is a variation between 200 and 450 hours spent. This is a serious effort to be done by the TSOs visited and shows that the Compliance Audits must be limited to the number of standards as is used now (15 – 20 standards) in order to keep this in acceptable limits.

For the SG CME Compliance Audit Teams the effort to perform this visit is estimated at one full week per person at least. This consists normally in a three day travel and another 2 days for preparing and completing the reporting. Normally the leader of the Audit Team will spent more time than the ordinary members.

Finally the ENTSO-E secretariat spent also at least one full week per Compliance Audit in organising the audit and supporting during the audits for reporting. From the ENTSO-E secretariat the support was delivered by the Compliance Monitoring Advisor and other members of the System Operations team.

6.3 Recommendations for the RGCE OH

As in previous years some standards were found that are open for interpretation and therefore making the assessment hard. The feedback received in this respect will be used in the future update of the OH standards.

6.4 Recommendations for the Compliance Monitoring Program 2012

The mix of self assessment and Compliance Audits gives good results and should be continued. During the development of the self assessment questionnaire it must be kept in mind already what can be the subjects for the following years Compliance Audits in order to achieve a more efficient overall process.

The estimation of the workload needed by all parties involved remains of the highest importance.

When sending material to TSOs such as questionnaires it must be accompanied by adequate explanations of the kind of answers needed and the purpose of the questions. Where possible the SG CME must develop examples of evidences and issue this to the TSOs in order to improve audit results and minimise workload.

In order to limit the effort needed for the TSOs, the members of the SG CME and for the ENTSO-E secretariat the number of standards monitored in both the self assessment and the Compliance Audits must be limited as they have been in the past. In cases where new assessments or tasks are implemented it will be necessary to refrain from parts of the existing tasks, this not to increase the work load on any of the involved parties.

In order to better distribute the workload for SG CME over the year half of the onsite audits must be performed before summer and the other half after the summer.

The SG CME is very grateful to the TSOs that deliver members to the SG and give them the opportunity to spent considerable time during the year on the work of SG CME. The SG CME calls for the continued contribution of TSOs in this respect also for the future.

7 TERMS, DEFINITIONS AND ABBREVIATIONS

In the following the most important terms used in this document as well as in the written and verbal communication within the scope of the Compliance Oversight Report are defined:

Assessment	An evaluation that allows a conclusion to be reached or a decision to be made that may or may not involve an analysis or simulation.
Audit Team	An investigating group set up among the SG CME members and, if necessary, other RGCE member TSOs' experts appointed with the task of conducting a Compliance Audit . The members of the group must be free of interest conflicts and must not belong to the investigated TSO and its neighbours. Furthermore, they must comply with the ENTSO-E confidentiality provisions.
Compliance	Conformity with the RGCE Operation Handbook standards .
Compliance Audit	An on-site audit performed on the premises of an RGCE member TSO to verify compliance with the RGCE Operation Handbook standards. It is conducted either as a regular process (on a five-year basis) or as an exceptional process (if deemed necessary by the RGCE Plenary).
Compliance Audit Questionnaire (CAQ)	Compliance Audit Questionnaire contains all standards and COSAQs which will be examined at an onsite audit.
Compliance level	The degree to which a RGCE member TSO complies with a specific RGCE Operation Handbook standard . Three levels (categories) are defined: fully compliant , sufficiently compliant and non-compliant .
Compliance Monitoring Advisor (CMA)	An employee of the ENTSO-E Secretariat whose task is to accompany the Compliance Monitoring Process from the technical and administrative point of view as well as to support the SG CME at its work.
Compliance Monitoring Process	The process of assessing whether the RGCE member TSOs are compliant with the RGCE Operation Handbook standards . It consists of the regular processes of self-assessment and Compliance Audits and the exceptional process of Compliance Audits .
Compliance Monitoring Program (CMP)	The document that delineates the Compliance Monitoring Process and points out the RGCE Operation Handbook standards to be checked and the TSOs to be audited during a period of one calendar year as well as describes the procedures to be followed and the demands to be responded to by each RGCE member TSO.
Compliance Oversight Report (COR)	The annual document in which the current compliance status of the RGCE member TSOs is presented based on self-assessment and Compliance Audits conducted by Audit Teams according to the annual Compliance Monitoring Program . For non-compliant TSOs it details the findings, the mitigation plans and progress reports . It may also contain proposals on how to improve the RGCE Operation Handbook and recommendations concerning the development of

	the Compliance Monitoring Process .
Control Area Manager (CAM)	The person who is officially responsible for the Compliance Monitoring Process on behalf of an RGCE member TSO – a single point of contact of the TSO with respect to the Compliance Monitoring Process . Control Area Managers are appointed in the RGCE Multilateral Agreement.
Compliance Self-Assessment Question (COSAQ)	Compliance Self-Assessment Question is an additional question related a RGCE OH standard to help a TSO to assess its compliance level on a proper way.
Deficiency	Irregularity that may occur within the scope of declarations submitted by a TSO. Its manifestations are: <ul style="list-style-type: none"> • A TSO declared full or sufficient compliance with a specific OH standard, but the SG CME assessed the TSO as non-compliant. • A TSO declared non-compliance, but it did not submit a mitigation plan or the SG CME assessed its mitigation plan as inappropriate (e.g. from the technical point of view) or as incomplete (e.g. without a deadline). • A TSO declared non-compliance and submitted a correct mitigation plan, but that plan is not on schedule (i.e. the TSO has not realized the mitigation actions on time or at all).
Deficiency removal process	A process of determining and removing deficiencies within the scope of the Compliance Monitoring Process .
Fully compliant – full compliance	The TSO may declare full compliance only if it fulfils the monitored OH RGCE standard in all details.
Improvement plan	A set of measures submitted by a “ sufficiently compliant ” RGCE member TSO that will lead it to full compliance with an RGCE Operation Handbook standard . It contains a description of actions and a deadline (schedule) for the accomplishment of these actions.
Mitigation plan	A list of measures submitted by an RGCE member TSO concerning a non-compliance declaration that will lead to compliance with an RGCE Operation Handbook standard . It contains a description of temporary remedial measures (if anything of that kind is feasible), a description of actions that will allow the removal of the non-compliance and a deadline (schedule) for the accomplishment of these actions.
Non-compliance declaration	The formal communication within the scope of the self-assessment of an RGCE member TSO to the SG CME that it is non-compliant with an RGCE OH standard . The non-compliance declaration must be accompanied by a correct mitigation plan .
Non-compliant – non-compliance	A TSO must declare non-compliance if it doesn't fulfil at least one essential requirement specified in the monitored OH RGCE standard.

Not applicable (N/A)	Not applicable applies when a given RGCE OH standard does not concern the TSO, e.g. it is directed to a Control Block while a TSO performs only the role of a Control Area.
Progress reports on a regular basis	A formal communication by a non-compliant RGCE member TSO concerning the implementation of the actions that will lead to the success of a mitigation plan and eventually to compliance with an RGCE Operation Handbook standard .
Regional Group Continental Europe (RGCE)	Regional group of the ENTSO-E System Operation Committee, which takes care of power system operation matters in the Continental European Synchronous System.
RGCE Operation Handbook (OH) standards	Conformity standards resulting from the RGCE Operation Handbook.
Self-assessment	The practice of a TSO to review its compliance with a chosen set of RGCE Operation Handbook standards on a regular basis and to notify the ENTSO-E Compliance Monitoring Advisor and the SG CME of its level of compliance with each Operation Handbook standard.
Self-assessment questionnaire (SAQ)	A list of questions maintained by the ENTSO-E Secretariat concerning the compliance of the RGCE member TSOs with the RGCE Operation Handbook standards . The self-assessment questionnaire consists of two rounds: the first round contains selected standards of the RGCE Operation Handbook and the second round contains additional questions on standards defined by the SG CME. The questions include a description of how the compliance with each RGCE Operation Handbook standard is to be assessed. The compliance questionnaire is a means to perform the self-assessment .
SG Compliance Monitoring & Enforcement (CME)	A RGCE Working Group acting as the Compliance Monitoring Body of the RGCE. Its main task is to define and establish the processes and procedures for monitoring the compliance of the RGCE member TSOs with the Operation Handbook standards , and to propose enforcement and/or remedial measures to the RGCE Plenary, if necessary.
Sufficiently compliant – sufficient compliance	A TSO may declare sufficient compliance only if it fulfils the monitored RGCE Operation Handbook standards in its essential parts, but not in all details. The choice between non-compliant and sufficiently compliant also has to be considered with a risk analysis approach, with a particular focus on the impact on the security of the European interconnected network or on the neighbouring TSOs .
Temporary remedial measures	A list of actions stated in a mitigation plan in order to decrease the risk during the period of non-compliance in which the corresponding mitigation actions will be realized. The temporary measures are not equal to the mitigation actions and do not replace them.
Transmission System	A member of ENTSO-E, regardless of its internal legal structure (e.g. ISO, ITO, TSO).

Operator (TSO)	
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LIST OF ANNEXES

Annex 1. Assessment on credibility of compliance level declaration explanations

Annex 2. Compliance Audit report: TenneT B.V.

Annex 3. Compliance Audit report: Energinet.dk

Annex 4. Compliance Audit report: APG

Annex 5. Compliance Audit report: HTSO

Annex 6. Compliance Audit report: MAVIR

Annex 7. Compliance Audit report: 50 Hertz