

Independent Market Operator

Compliance of System Management with the Market Rules and Market Procedures

20 September 2011



PA Regional Office:

PA Consulting Group Level 13, Allied Finance Tower, 142 Lambton Quay, PO Box 1659, Wellington 6140 New Zealand

Tel: +64 4 496 5616 Fax: +64 4 473 1630 www.paconsulting.com

Prepared by: PA Team

Version no: 1.3

Document reference:

Executive summary

This report sets out the results of the market audit by PA Consulting Group assessing System Management's compliance with the Market Rules and Market Procedures.

This market audit has been carried out under Market Rule 2.14.6 (b) which requires that:

In accordance with the Monitoring Protocol, the IMO must at least annually, and may more frequently where it reasonably considers that System Management may not be complying with the Market Rules and Market Procedures:

- (a) require System Management to demonstrate compliance with the Market Rules and Market Procedures by providing such records as are required to be kept under these Market Rules or any Market Procedure; or
- (b) subject System Management to an audit by the Market Auditor to verify compliance with the Market Rules and Market Procedures.

On the basis of the evidence available to us, PA has found that, with limited exceptions, System Management has complied with its obligations under the Market Rules. We have found three material breaches as follows:

- Market Rule 3.16, where SM excludes curtailable load, intermittent generation, and recently commissioned generation from the calculation of the MT PASA
- Market Rule 3.17, where SM excludes curtailable load, intermittent generation, and recently commissioned generation from the calculation of the ST PASA
- Market Rule 7.2.2(a), where SM has not subtracted forecast wind generation from the load forecast provided to IMO twice daily

We note that remedial steps have been taken. In the first two cases, System Management and the IMO have discussed a method to define a reasonable and prudent non-zero amount for the excluded capacity, but agreement has not been reached. In the third case, System Management has recently implemented changes to this calculation so that the forecast now matches the Market Rules.

We are conscious that the Market Rules, Power System Operation Procedures, and System Management's internal procedures are continually changing, as Rule Changes are put in place or improved operating practices become codified. In particular, it typically takes some time for Rule Changes to be cascaded down through the Power System Operation Procedures and ultimately the internal procedures. System Management's procedures are no exception in this regard.

We noted last year that there had been no new entries in System Management's compliance log recorded since the previous audit. System Management has since begun the process of embedding compliance monitoring and reporting into operational processes, and we are pleased to note an increased awareness of the reporting of compliance breaches, and as a result, a more reasonable number of relevant entries in the compliance log.

i

Contents

Exec	cutive summary	i
1	Introduction	1
1.1	Scope of the market audit	1
1.2	Market audit process	1
1.3	Structure of this report	3
1.4	Acknowledgements	3
2	Status of the procedures	4
2.1	Power System Operation Procedures	4
2.2	System Management internal procedures	4
2.3	Recent developments	5
3	Market Rule Chapter 1 – Introduction	7
3.1	SM's processes and procedures	7
3.2	Compliance with Chapter 1	7
3.3	Opinion	7
4	Market Rule Chapter 2 – Administration	8
4.1	SM's processes and procedures	8
4.2	Compliance with Chapter 2	9
4.3	Opinion	9
4.4	Details of procedure changes and non-compliance	10
5	Market Rule Chapter 3 – Power system security and reliability	14
5.1	SM's processes and procedures	14
5.2	Compliance with Chapter 3	15
5.3	Opinion	15
5.4	Details of procedure changes and non-compliance	16
6	Market Rule Chapter 4 – Reserve capacity	20
6.1	SM's processes and procedures	20

6.2	Compliance with Chapter 4	21
6.3	Opinion	21
6.4	Details of procedure changes and non-compliance	22
7	Market Rule Chapter 5 – Network control service procurement	24
7.1	SM's processes and procedures	24
7.2	Compliance with Chapter 5	24
7.3	Opinion	25
7.4	Details of non-compliance	26
8	Market Rule Chapter 6 – Energy market	27
8.1	SM's processes and procedures	27
8.2	Compliance with Chapter 6	27
8.3	Opinion	28
9	Market Rule Chapter 7 – Dispatch	29
9.1	SM's processes and procedures	29
9.2	Compliance with Chapter 7	30
9.3	Opinion	30
9.4	Details of procedure changes and non-compliance	31
10	Market Rule Chapter 8 – Wholesale market metering	37
10.1	Opinion	37
11	Market Rule Chapter 9 – Settlement	38
11.1	SM's processes and procedures	38
11.2	Compliance with Chapter 9	38
11.3	Opinion	39
12	Market Rule Chapter 10 – Market information	40
12.1	SM's processes and procedures	40
12.2	Compliance with Chapter 10	41
12.3	Opinion	41
12.4	Details of non-compliance	42
Appe	endix A: Status of issues identified in last year's annual audit	43

Index of tables

Tables

Table 1:	Development of the Power System Operation Procedures	5
Table 2:	Relationship between Rule changes to Chapter 2 and procedure updates	10
Table 3:	Incidents of non-compliance with Chapter 2	11
Table 4:	Relationship between Rule changes to Chapter 3 and procedure updates	16
Table 5:	Incidents of non-compliance with Chapter 3	17
Table 6:	Relationship between Rule changes to Chapter 4 and procedure updates	22
Table 7:	Incident of non-compliance with Chapter 4	23
Table 8:	Incident of non-compliance with Chapter 5	26
Table 9:	Relationship between Rule changes to Chapter 7 and procedure updates	31
Table 10	: Incidents of non-compliance with Chapter 7	32
Table 11	: Incident of non-compliance with Chapter 10	42
Table 12	: Status of outstanding issues	43

1 Introduction

This document sets out the results of the market audit by PA Consulting Group in carrying out its assessment of System Management's compliance with the Market Rules and Market Procedures.

1.1 Scope of the market audit

This market audit has been carried out under Market Rule 2.14.6, which requires that:

In accordance with the Monitoring Protocol, the IMO must at least annually, and may more frequently where it reasonably considers that System Management may not be complying with the Market Rules and Market Procedures:

- require System Management to demonstrate compliance with the Market Rules and Market Procedures by providing such records as are required to be kept under these Market Rules or any Market Procedure; or
- b. subject System Management to an audit by the Market Auditor to verify compliance with the Market Rules and Market Procedures.

1.2 Market audit process

This year's market audit of System Management (SM) has included three components.

- 1. An "incremental" audit;
- 2. An obligation mapping; and
- 3. More detailed focus in selected areas.

We have looked in detail at the clauses in the Market Rules and System Management's Power System Operation Procedures (PSOPs) and its internal procedures where:

- The clauses in the Market Rules are new or amended since last year's annual audit;
- The Power System Operation Procedures and internal procedures are new or updated since last year's annual audit;
- The internal procedures are related to areas of non-compliance identified in last year's annual audit; and
- The internal procedures are related to areas of alleged breaches of the Market Rules by System Management between last year's annual audit and 16 August.

That is, we have looked at areas that have changed (or should have changed) since last year's annual audit.

1

1. Introduction. . .

We have bolstered this incremental analysis with a clause-by-clause mapping of System Management's obligations in the Market Rules to both the Power System Operation Procedures and System Management's internal procedures. From this, we have identified additional areas of focus to ensure System Management's operational practices comply with the Market Rules.

In conducting the market audit on the compliance of System Management with the Market Rules, PA has:

- Ensured that it is up to date with its understanding of the West Australia Electricity Market Rules:
- Identified all obligations placed on System Management by the Market Rules, including all new or amended obligations arising from changes to the Market Rules that came into force before 1 August 2011;
- 3. Reviewed the Power System Operation Procedures, and identified which Market Rule obligations are addressed therein;
- 4. Reviewed System Management internal procedure documentation, and identified which Market Rule obligations are addressed therein;
- 5. Identified areas of risk highlighted by the mapping, where market-related System Management business functions are not set out in detail in Power System Operation Procedures and System Management internal procedures, and the operations of those business functions could have significant impact on the operation of the Electricity Market;
- Identified System Management business functions affected by Power System Operation
 Procedures and System Management internal procedures that are new or have been updated since the previous market audit;
- 7. Identified System Management business functions that relate to areas of non-compliance identified in the previous market audit;
- 8. Sought evidence that System Management is performing those business functions so as to comply with the Market Rules;
- 9. Had discussions with System Management managers and staff to clarify issues identified; and then
- 10. Prepared a draft report setting out our findings followed by a final report.

As in previous years, we note that there are limitations to any external audit. Audits are not an absolute guarantee of the truth or reliability of agency information or the effectiveness of internal controls. They may not identify all matters of significance. This is because external audit techniques involve:

- Professional judgement as to "good industry and market operational practice";
- · The use of sample testing;
- An assessment of the effectiveness of internal control structures; and

- 1. Introduction. . .
- · An assessment of risk.

A market audit does not guarantee every procedure and action carried out in the operation of the electricity market in the audit report, nor does it examine all evidence and every transaction. However, our audit procedures should identify errors or omissions significant enough to adversely affect the decisions of users of the market audit report.

We also note that there is a high degree of compliance monitoring built into the market design. Should System Management not carry out a requirement of the Market Rules, those cases that are material will have affected Market Participants and are likely to have been raised.

Where non-compliant procedures or actions are identified, these are classified as being:

- Material, in that they may affect decisions made by Market Participants, affect the outcome of the market or otherwise affect the financial position of one or more Rule Participants; or
- Non-material, in that
 - they do not comply with the wording or the Market Rules but do comply with the intention of the Market Rules; or
 - they do not comply with the Market Rules but they are not likely to affect decisions made by market participants or otherwise affect the outcome of the market.

We understand that there are a number of areas under internal investigation within System Management to ensure compliance. Any areas of non-compliance identified will be addressed in the next audit.

1.3 Structure of this report

The report begins with an overview of recent developments made to the Power System Operation Procedures and the consequential actions taken with respect to System Management's internal procedures.

The remainder of the report is structured around the various chapters of the Market Rules. The chapters of this report summarise the incremental changes to the Market Rules that have occurred since the time of the last audit, the changes to System Management's internal and external procedures that are relevant to that chapter of the Market Rules, the areas of risk identified by the mapping exercise and any recorded instances of non-compliance.

Appendix A contains a summary table which updates the status of the issues raised in last year's audit report.

1.4 Acknowledgements

PA would like to thank the managers and staff of System Management who willingly provided information and shared in discussions with while we carried out this market audit. We particularly appreciated the efforts to make staff available at short notice for detailed discussions during our three days on site, including several hours in the control room.

2 Status of the procedures

2.1 Power System Operation Procedures

The intent of the Market Rules is for the PSOPs to set out processes, methodologies, algorithms and calculations for operational use by industry participants. We found that while the PSOPs mostly reference the relevant Rules and thus technically meet the obligations, there is generally limited additional information provided. Including this information in the PSOPs would be of additional value to the market, improving clarity by giving insight into how critical market functions are performed.

In later chapters, we have identified several specific areas for improvement, where the Rules mandate the setting out of a particular procedure for which detail is missing in the PSOPs.

2.2 System Management internal procedures

This year we have specifically reviewed SM's obligations with regard to its internal procedures. We found that System Management's business processes tend to fall into three categories:

- Those documented in internal procedures clearly used in operational activities, which include detailed activity steps and process flow diagrams or worked examples for use by operational staff;
- Those documented in internal procedures apparently created to capture Rule obligations, which largely restate the Market Rules without adding information, and without weaving the obligations into an operational process flow; and
- 3. Those not captured in documentation sighted by us as part of the audit.

Those in the second category are unlikely to be used operationally, and will create administrative overhead which could be put to more valuable use in the creation and maintenance of truly operational procedures.

While the absence of internal documentation of particular processes does not necessarily indicate non-compliance with Market Rule obligations, its existence is a strong signal that compliance is built-in to operational activities.

We understand that in the past, much of the process administration has been centrally managed through the Market Strategic Development group, and that SM has recently begun a programme to give active ownership of Rule compliance and maintenance of operational procedures to the teams who actually perform those business functions.

2.3 Recent developments

Key developments since the last audit are summarised in the table below. Some of the changes are marked for further amendment.

Table 1: Development of the Power System Operation Procedures

Name	Summary of change	Consequential changes to Internal Processes
Ancillary services	No change	Not applicable
Cleansing of Generation Facility MWh Data	No change	Not applicable
Commissioning and Testing	Updated for RC_2009_37 to include references to Equipment Tests	• Implemented
Communication and Control Systems	No change	Not applicable
Dispatch	Updated to clarify dispatch monitoring methods, and for RC_2009_22 to include reference to tolerances.	Will not be implemented until actual tolerances have been set
Facility Outages	Updated to include formulae used in calculating Planned Outage Rates, Forced Outage Rates and Equipment Test Rates.	No changes made
Medium Term Projected Assessment of System Adequacy (MT PASA)	No change	Not applicable
Monitoring and Reporting Protocol	Updated for RC_2009_22 to include consultation processes for setting facility tolerances	Will not be implemented until actual tolerances have been set
Operational Data Points for Generation Plant	No change	Not applicable
Operational Data Points for Non- Western Power Networks and Substations	No change	Not applicable
Power System Security	No change	Not applicable
Short Term Projected	No change	Not applicable

2. Status of the procedures. . .

Name	Summary of change	Consequential changes to Internal Processes
Assessment of System Adequacy (ST PASA)		
System Restart Overview	No change	Not applicable

3 Market Rule Chapter 1 – Introduction

Market Rule Chapter 1 sets out the Introduction to the Market Rules and covers areas such as the objectives of the market, conventions and transitional arrangements.

3.1 SM's processes and procedures

3.1.1 Rule amendments

There have been no amendments to Chapter 1 of the Market Rules since the time of the last audit.

3.1.2 Procedures

There are neither Power System Operation Procedures nor internal procedures relevant to Chapter 1.

3.2 Compliance with Chapter 1

The obligations placed on System Management under Chapter 1 relate to transitional matters or matters that expired at the Energy Market Commencement.

3.3 Opinion

System Management has no current obligations under Chapter 1 of the Market Rules.

4 Market Rule Chapter 2 – Administration

Chapter 2 of the Market Rules sets out the Functions and Governance Rules which affect both the Market Operations and System Operations functions of System Management.

4.1 SM's processes and procedures

4.1.1 Rule amendments

The following clauses of Chapter 2 of the Market Rules have been amended since last year's annual audit:

- 2.8.1, 2.8.2, 2.11.1, 2.11.2, 2.13.17, 2.13.18, 2.13.22, 2.13.23, 2.13.24, 2.13.26, 2.13.28, 2.15.3(f), 2.16.9G, 2.16.9H, 2.17.3, 2.31.13(e), 2.32.1, 2.32.5, 2.32.6, 2.32.7
- 2.3.5, 2.3.5A (new) and 2.3.13.
- 2.10.7, 2.13.6, 2.13.6A (new), 2.13.6B (new), 2.13.6C (new), 2.13.6D (new), 2.13.6E (new),
 2.13.6F (new), 2.13.6G (new), 2.13.6H (new), 2.13.6I (new), 2.13.6J (new), 2.13.6K (new),
 2.13.7, 2.13.8, 2.34.2A, 2.34.10, 2.37.5
- 2.30.6, 2.30.7, 2.30.7A (new), 2.38.7 (new), 2.38.8 (new), 2.38.9 (new),
- 2.23.9, 2.23.11, 2.24.2, 2.24.2(a) (new), 2.24.2(b) (new), 2.24.2(c) (new), 2.24.2A (new),
 2.24.2A(a) (new), 2.24.2A(b) (new), 2.24.2A(c) (new), 2.24.2B (new), 2.34.1, 2.34.12
- 2.1.2, 2.8.13, 2.17.1, 2.22.1, 2.29.5N (new), 2.29.5O (new), 2.31.23A (new), 2.37.6, 2.37.7,
 2.37.8, 2.38.1, 2.38.2, 2.38.3, 2.38.4, 2.38.5
- 2.24.1, 2.24.2

4.1.2 Procedures

The following Power System Operation Procedures relating to Chapter 2 of the Market Rules have been updated since last year's market audit:

Power System Operation Procedure: Monitoring and Reporting Protocol

The following internal procedures relating to Chapter 2 of the Market Rules have been updated since last year's market audit:

None

4.1.3 Relationship between Rule updates and procedures

The extent to which the Rule changes have been reflected in updates to the SM's processes and procedures is set out in Table 2 below.

8

Independent Market Operator

4. Market Rule Chapter 2 - Administration. . .

Not all Rule changes require a consequential amendment to written procedures.

4.1.4 Additional risk areas

In addition to the incremental review above, we also specifically reviewed SM's performance of its obligations to monitor participants under the PSOP: Reporting and Monitoring Protocol.

4.2 Compliance with Chapter 2

4.2.1 Incidents

We found three incidents of non-material non-compliance with Chapter 2.

Incidents associated with SM's obligations under Chapter 2 are set out in Table 3 below.

4.2.2 Comment

None of the breaches to this section of the Rules are deemed to be material; that is the breaches do not compromise the intention of the Market Rules, and/or the decisions made by market participants or otherwise affect the outcome of the market.

4.3 Opinion

As far as we have been able to determine, there have been no material breaches of SM's obligations pursuant to Chapter 2 of the Market Rules.

4.4 Details of procedure changes and non-compliance

4.4.1 Rule changes and procedure updates

Table 2: Relationship between Rule changes to Chapter 2 and procedure updates

Amended clauses	Description	Procedure updated?
• 2.8.1, 2.8.2, 2.11.1, 2.11.2, 2.13.17, 2.13.18, 2.13.22, 2.13.23, 2.13.24, 2.13.26, 2.13.28, 2.15.3(f), 2.16.9G, 2.16.9H, 2.17.3, 2.31.13(e), 2.32.1, 2.32.5, 2.32.6, 2.32.7	Change to review board name	Not applicable
• 2.3.5, 2.3.5A (new) and 2.3.13.	Updated requirements with respect to the composition of the Market Advisory Committee	Not applicable
 2.10.7, 2.13.6, 2.13.6A (new), 2.13.6B(new), 2.13.6C (new), 2.13.6D (new), 2.13.6E (new), 2.13.6F (new), 2.13.6G (new), 2.13.6H (new), 2.13.6I (new), 2.13.6J (new), 2.13.6K (new), 2.13.7, 2.13.8, 2.34.2A, 2.34.10, 2.37.5 	 Updated requirements with respect to System Management monitoring of Market Participants introducing tolerances. Introduces obligations on SM with respect to specifying, consulting on, and maintaining facility tolerance levels. 	No Requires the creation of a new internal procedure within SM, and the update of a number of existing internal procedures
• 2.30.6, 2.30.7, 2.30.7A (new), 2.38.7 (new), 2.38.8 (new), 2.38.9 (new),	 Updated Rules relating to facility aggregation and introduces changes with respect to the determination of Reserve Share values Changes are only to IMO pricing calculations, no impact on SM procedures 	Not applicable
• 2.23.9, 2.23.11, 2.24.2, 2.24.2(a) (new), 2.24.2(b) (new), 2.24.2(c) (new), 2.24.2A (new), 2.24.2A(a) (new), 2.24.2A(b) (new), 2.24.2A(c) (new), 2.24.2B	 Updated Rules relating to budgeting and fees for the IMO and System Management Changes are to IMO activities only, no impact on SM 	Not applicable



Amended clauses	Description	Procedure updated?
(new), 2.34.1, 2.34.12	procedures	
• 2.1.2, 2.8.13, 2.17.1, 2.22.1, 2.29.5N (new), 2.29.5O (new), 2.31.23A (new), 2.37.6, 2.37.7, 2.37.8, 2.38.1, 2.38.2, 2.38.3, 2.38.4, 2.38.5	Removes Network Control Services from the functions of the IMO and introduces changes with respect to Demand Side Programmes and Curtailable Loads	Not applicable
• 2.24.1, 2.24.2	Introduces a new reassessment fee in relation to Certified Reserve Capacity	Not applicable
• 2.29.8B	Removes redundant wording	Not applicable

4.4.2 Incidents of non-compliance

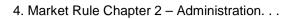
Table 3: Incidents of non-compliance with Chapter 2

Rule	The Issue	Material?	Comment
2.13.6K	On 1 December 2010, RC_2009_22 came into effect. This required SM to set out in the PSOP: Monitoring and Reporting Protocol the procedure for determining and reviewing the Tolerance Ranges, and any Tolerance Ranges. SM submitted a revised PSOP on 3 March 2011, and it came into effect on 1 August 2011.	No	While the revisions cover the consultation process they do not include the method of calculation, or the tolerances themselves. We understand those have not been included on the basis that the calculation is the subject of current consultation with participants. The proposal under consultation uses a percentage of nameplate capacity rather than an absolute tolerance as currently embedded in SM internal procedures. Several internal procedures will require updating once the new tolerances are confirmed. Given that the issue has now been under discussion for several years, we are surprised that the tolerance calculations were not consulted on with the PSOP

4. Market Rule Chapter 2 – Administration. . .



Rule	The Issue	Material?	Comment
			change, and included with a PSOP update along with, or very soon after, the Rule change.
			SM will remain in breach of this issue until the new tolerances are formally published and used in operation.
2.13.9(j)	SM has obligation to monitor participants' compliance with resource plans and dispatch instructions. In the absence of tolerances specified in the PSOP, SM continues to use a 10MW tolerance when reporting deviations from plan.	No	In the past we have noted that System Management applies a 10 MW tolerance when reporting deviations from participants' resource plans. System Management continue to apply this tolerance and to that extent may be deemed not to comply with 7.10.1, and with 2.13.9(j). We also note that the process of monitoring to these tolerances occurs after the fact. In our view, the intent of the Market Rules is that this activity be monitored in real time. While there is automated real time tolerance monitoring implemented within SM's IT systems, it is not used by the system controllers, and does not trigger any automatic notification to the participant or the IMO. If departures of material consequence for power system security and reliability are to be dealt with in real time, they must be manually observed by the controller. We found that manual operational practices should ensure this occurs. SM's ex-post compliance monitoring is comprehensive, and should ensure that any departures outside the tolerance are captured and dealt with within a few





Rule	The Issue	Material?	Comment
			days.
2.23.9	SM is required to submit a copy of their annual budget proposal to IMO by 30 April each year. The budget proposal for the 2011-12 year was submitted on 3 May 2011.	No	The delay in submission did not result in any impact on the market.

5 Market Rule Chapter 3 – Power system security and reliability

Chapter 3 of the Market Rules sets out the Power System Security and Reliability Rules which affect the Market Development, Market Operations, System Planning and System Operations functions of System Management.

5.1 SM's processes and procedures

5.1.1 Rule amendments

The following clauses of Chapter 3 have been amended since last year's annual audit:

- 3.21A.7A
- 3.4.5, 3.5.6, 3.17.1, 3.17.6, 3.21.4, 3.21.7
- 3.21A.16 (new)
- 3.21AA (new)
- 3.9.2
- 3.21.2, 3.21.6(c)(ii), 3.21.6(d)(ii), 3.21.8 (new), 3.21.9 (new), 3.21.10 (new), 3.21.11 (new), 3.21.12 (new),

5.1.2 Procedures

The following Power System Operation Procedures relating to Chapter 3 have been updated since last year's market audit:

- Power System Operation Procedure: Commissioning and Testing
- Power System Operation Procedure: Facility Outages

The following internal procedures relating to Chapter 3 have been created or updated since last year's market audit:

- Submission of a Equipment Test Plan By Participant (new)
- Submission Of Commissioning Plan Data By Participant

5.1.3 Relationship between Rule updates and procedures

The extent to which the Rule changes have been reflected in updates to SM's processes and procedures is set out in Table 4.

Not all Rule changes require a consequential amendment to written procedures.

5.1.4 Additional risk areas

In addition to the incremental review above, we also specifically reviewed SM's performance of:

- Outage assessment obligations under the PSOP: Facility Outages;
- Preparation of the ST and MT PASA under the relevant PSOPs; and
- System restart under the PSOP: System Restart

5.2 Compliance with Chapter 3

5.2.1 Incidents

We found two material and two non-material incidents of non-compliance with Chapter 3.

Incidents associated with SM's obligations under Chapter 3 are set out in Table 5 below.

5.2.2 Comment

We deem two of the breaches to this section of the Rules to be material; that is the breaches may compromise the intention of the Market Rules, and/or the decisions made by market participants, or otherwise may affect the outcome of the market.

5.3 Opinion

As far as we have been able to determine, other than the breaches described above SM has complied with its obligations under Chapter 3 of the Market Rules.

5.4 Details of procedure changes and non-compliance

5.4.1 Rule changes and procedure updates

Table 4: Relationship between Rule changes to Chapter 3 and procedure updates

Amended clauses	Description	Procedure updated?
• 3.21A.7A	Deletes certain obligations on System Management with respect to commissioning tests	No Several internal procedures exist, one still refers to this deleted obligation.
• 3.4.5, 3.5.6, 3.17.1, 3.17.6, 3.21	Minor amendments	Not applicable
• 3.21A.16 (new)	Introduces new obligations on System Management to supply information to the IMO	• Yes
• 3.21AA (new)	Describes equipment tests and associated obligations on System Management	 Yes PSOP: Facility Outages includes calculations of Equipment Test Outage rate PSOP: Commissioning and Testing includes references to Equipment Testing, and a proforma equipment test plan. A new internal procedure has been created
• 3.9.2	Minor amendment	Not Applicable
• 3.21.2, 3.21.6(c)(ii), 3.21.6(d)(ii), 3.21.8 (new), 3.21.9 (new), 3.21.10 (new), 3.21.11 (new), 3.21.12 (new),	Introduces new provisions and obligations on System management with respect to Consequential Outages and Forced Outages	 Partially Notification is covered by Internal Procedure: How to Determine Whether A Forced Outage Should Be Notified To System Management



Amended clauses	Description	Procedure updated?
		There appears to be no internal procedure on calculation of outage rates for this to be included in

5.4.2 Incidents of non-compliance

Table 5: Incidents of non-compliance with Chapter 3

Rule	The Issue	Material?	Comment
3.11.14	SM is obliged to document the procedure for determining Ancillary service requirements in the PSOP. The PSOP: Ancillary Services includes information about some data that goes into the assessment, and how the contracting process works, but does not set out the actual process for determining the requirements.	No	Since SM publishes the results of its determinations, and since they have a significant amount of discretion in operating the power system, it is unlikely that the market is currently affected by the absence of this methodology. Over time, the importance of having this information available is likely to increase.
3.17	Short Term PASA Each week, SM prepares a Short Term Projected Assessment of System Adequacy (ST PASA), comparing available capacity to projected load. 3.17.4 sets out that SM is to use the ST PASA results to assist it in:	Yes	SM has calculated the PASA this way for several years, with the method known to market participants. While it does not appear to have caused problems for market participants, it does

5. Market Rule Chapter 3 – Power system security and reliability. . .



Rule	The Issue	Material?	Comment
	setting Ancillary Service Requirements for the next three weeks		mean that the reserve margin is in
	 assessing final approval of planned outages 		practice several hundred MW larger than
	 assessing the availability of capacity holding capacity credits 		that calculated and published by SM. It
	3.17.9 obligates SM to publish forecast total available generation capacity and total available demand side management capacity to the IMO.		also means that while curtailable load and intermittent generation facilities are allocated capacity credits, the capacity
	SM's calculations of the reserve margin explicitly exclude intermittent generators, newly commissioned generators and curtailable load.		they provide is not used in some important market activities.
	This appears to be a breach of the intent of 3.17, and specifically the information to be provided under 3.17.9.		We recognise that these facilities have different operational characteristics to standard generation capacity, and that it
	While SM has the option to use their own information in place of that		would not be prudent to include their full
	provided by market participants (3.17.8), consistent replacement of that		capacity in assessing the likely reserve
	information with zero does not seem in line with the intent of the Rule.		margin., Equally, excluding them
	3.17.10 obligates SM to publish the method they use in calculating the ST PASA in a PSOP.		altogether is not a realistic assessment of their contribution, and conflicts with the market objectives, around discrimination
	The calculations referred to above do not appear in the ST PASA PSOP, which appears to breach 3.17.10. This is an example of where the general lack of methodology in the PSOPs causes a problem.		against particular energy options and technologies, and minimising the long term cost of electricity from the SWIS.
	The exclusions <i>are</i> noted in the ST PASA report, as required under 3.17.9, so market participants are made aware of the basis for the outputs		We note that uncertainty around demand is prudently managed by assessing reserve capacity at the second standard

5. Market Rule Chapter 3 – Power system security and reliability. . .



Rule	The Issue	Material?	Comment
	determined.		deviation. We would expect that a similar approach could be taken to these facilities, though the method may differ between the classes.
3.16	MT PASA SM's calculation and provision of the MT PASA has the same issues as those for the ST PASA described above.	Yes	As above.
3.21B.8	SM must document in the PSOP the procedure to be followed in granting permission for a generator holding capacity credits to be placed in a state from which it would take more than four hours to resynchronise. The PSOP: Dispatch references the Rule requirement, but does not set out the procedure for dealing with such requests.	No	System Management deals with these situations as part of the general outage process, and their actions appear to be consistent with the Rules. Therefore, the absence of this information in the PSOP should not impact the market.

6 Market Rule Chapter 4 – Reserve capacity

Chapter 4 of the Market Rules sets out the Reserve Capacity Rules which affect the Market Development and System Operations functions of System Management.

6.1 SM's processes and procedures

6.1.1 Rule amendments

The following clauses of Chapter 4 of the Market Rules have been amended since last year's annual audit:

- 4.1.26, 4.26.1A,
- 4.25.1, 4.25.2, 4.25.3B, 4.25.4, 4.25A.1, 4.25A.2, 4.25A.3, 4.25A.4, 4.25A.5, 4.25.9
- 4.8.3
- 4.11.1, 4.24.1
- 4.13.7
- 4.11.3A
- 4.1.8, 4.1.9, 4.1.10, 4.1.12, 4.1.13, 4.1.14, 4.1.15A (new), 4.1.16, 4.1.17, 4.1.18, 4.1.20, 4.1.21, 4.1.21A (new), 4.1.26, 4.2.7, 4.4.1, 4.7.1, 4.9.5, 4.9.9, 4.9.9A (new), 4.10.1, 4.10.2, 4.10.3. 4.10.4 (new), 4.11.1, 4.11.2, 4.11.3A, 4.11.5, 4.11.10 (new), 4.11.11 (new), 4.15.1, 4.20.1, 4.20.5A (new), 4.27.10, 4.27.10A, 4.27.11, 4.27.11A, 4.27.11B, 4.27.11C, 4.27.11D, 4.28C.1, 4.28C.2, 4.29.1

6.1.2 Procedures

The following Power System Operation Procedures relating to Chapter 4 have been updated since last year's market audit:

Facility Outages

The following internal procedures relating to Chapter 4 have been updated since last year's market audit:

Control Room Market Instruction: Reserve Capacity Testing

6.1.3 Relationship between Rule updates and procedures

The extent to which the Rule changes have been reflected in updates to SM's processes and procedures is set out in Table 6.

6. Market Rule Chapter 4 - Reserve capacity. . .

Not all Rule changes require a consequential amendment to written procedures.

6.1.4 Additional risk areas

We did not review any additional risk areas related to SM's obligations under Chapter 4.

6.2 Compliance with Chapter 4

6.2.1 Incidents

We found one incident of non-material non-compliance with Chapter 4, as set out in Table 7 below.

6.2.2 Comment

The breach to this section of the Rules is not deemed to be material; that is, it does not compromise the intention of the Market Rules, and/or the decisions made by market participants or otherwise affect the outcome of the market. As of 1 August, the breach has been remedied.

6.3 Opinion

As far as we have been able to determine, there have been no material breaches of SM's obligations pursuant to Chapter 4 of the Market Rules.



6.4 Details of procedure changes and non-compliance

6.4.1 Rule changes and procedure updates

Table 6: Relationship between Rule changes to Chapter 4 and procedure updates

Amended clauses	Description	Procedure updated?
• 4.1.26, 4.26.1A,	Makes adjustments to the Reserve Capacity Obligations and the associated calculation of the Facility Forced Outage Refund	Not applicable
• 4.25.1, 4.25.2, 4.25.3B, 4.25.4, 4.25A.1, 4.25A.2, 4.25A.3, 4.25A.4, 4.25A.5, 4.25.9	Makes adjustments with respect to curtailable loads in relation to verification tests. Introduces testing for curtailable loads	Partially Is not covered in PSOPs, and should be Control Room Market Instruction for Reserve Capacity Testing covers Curtailable Load testing
• 4.8.3	Minor/typographical amendments	Not applicable
• 4.11.1, 4.24.1	Makes adjustments to the method for setting Certified Reserve Capacity.	Yes As per the non-compliance record below, the PSOP has been updated to include specification of the calculation of Planned and Forced Outage rates and the Equipment Test rate.
• 4.13.7	Minor amendment	Not applicable
• 4.11.3A	Makes adjustments to the calculation of the "Relevant	Not applicable



Amended clauses	Description	Procedure updated?
	Level" for the purposes of setting Certified Reserve Capacity	
• 4.1.8, 4.1.9, 4.1.10, 4.1.12, 4.1.13, 4.1.14, 4.1.15A (new), 4.1.16, 4.1.17, 4.1.18, 4.1.20, 4.1.21, 4.1.21A (new), 4.1.26, 4.2.7, 4.4.1, 4.7.1, 4.9.5, 4.9.9, 4.9.9A (new), 4.10.1, 4.10.2, 4.10.3. 4.10.4 (new), 4.11.1, 4.11.2, 4.11.3A, 4.11.5, 4.11.10 (new), 4.11.11 (new), 4.15.1, 4.20.1, 4.20.5A (new), 4.27.10, 4.27.10A, 4.27.11A, 4.27.11B, 4.27.11C, 4.27.11D, 4.28C.1, 4.28C.2, 4.29.1	Makes adjustments to the process and timetabling associated with the Certified Reserve Capacity process	Not applicable

6.4.2 Incidents of non-compliance

Table 7: Incident of non-compliance with Chapter 4

Rule	The Issue	Material?	Comment
4.11.1	Under 4.11.1(h), the IMO must calculate the Planned Outage rate, the Forced Outage rate and the Equipment Test rate in accordance with the PSOP. Previously the PSOP did not include the methodology for calculating these rates.	No	In past years, IMO has chosen not to exercise its discretion in this regard. An updated Facility Outages PSOP commenced on 1 August, including the method of calculation, thus resolving the issue.

7 Market Rule Chapter 5 – Network control service procurement

Chapter 5 of the Market Rules sets out the Network Control Service Procurement Rules, which affect the System Operations function of System Management.

7.1 SM's processes and procedures

7.1.1 Rule amendments

The following clauses of Chapter 5 of the Market Rules have been amended since last year's annual audit:

5.1.1, 5.1.2, 5.1.3, 5.1.4, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.5, 5.2.6, 5.2.7, 5.2A.1 (new), 5.2A.2 (new), 5.3.1, 5.3.2, 5.3.3, 5.3.4, 5.3.5, 5.3.6, 5.3.7, 5.3.8, 5.3.9, 5.3A.1 (new), 5.3A.2 (new), 5.3A.3 (new), 5.3A.4 (new), 5.4.1, 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.6, 5.4.7, 5.4.8, 5.4.9, 5.4.10, 5.4.11, 5.4.12, 5.4.13, 5.4.14, 5.5.1, 5.5.2, 5.5.3, 5.5.4, 5.6.1, 5.6.2, 5.6.3, 5.7.1, 5.7.2, 5.8.1, 5.8.2, 5.8.3, 5.8.4, 5.8.5, 5.8.6, 5.8.7, 5.8.8, 5.9.1, 5.9.2 (new), 5.9.3 (new)

These changes transfer responsibility for the procurement of network control services to the network operator.

7.1.2 Procedures

There have been no updates to PSOPs or internal procedures relating to Chapter 5 since last year's market audit.

7.1.3 Relationship between Rule updates and procedures

The PSOP: Dispatch should be updated to reflect the change in counterparties from the IMO to a Network Operator.

7.1.4 Additional risk areas

We did not review any additional risk areas related to SM's obligations under Chapter 5.

7.2 Compliance with Chapter 5

7.2.1 Incidents

We found one non-material incident of non-compliance with Chapter 5.

7. Market Rule Chapter 5 – Network control service procurement. . .

The incident associated with SM's obligations under Chapter 5 is set out in Table 8 below.

7.2.2 Comment

The breach to this section of the Rules is not deemed to be material; that is the breach does not compromise the intention of the Market Rules, and/or the decisions made by market participants or otherwise affect the outcome of the market.

7.3 Opinion

As far as we have been able to determine, there have been no material breaches of SM's obligations pursuant to Chapter 5 of the Market Rules.

7.4 Details of non-compliance

7.4.1 Incident of non-compliance

Table 8: Incident of non-compliance with Chapter 5

Rule	The Issue	Material?	Comment
5.7.4	System Management must document the procedure it will follow in calling on Registered Facilities to provide services under Network Control Service Contracts in the Power System Operation Procedure. While the PSOP: Dispatch has a section setting out information for discussion when the IMO is seeking to agree such a contract, it does not cover how the services will be called upon. This information is not covered in any of the other Power System Operation Procedures.	No	There are currently no contracts in place for Network Control Service. However, we understand that such services are currently under consideration, and if so the publication of this information will have greater significance.

8 Market Rule Chapter 6 – Energy market

Market Rule Chapter 6 sets out the Energy Market Rules which affect the Market Development, Market Operations, System Planning and System Operations functions of System Management.

8.1 SM's processes and procedures

8.1.1 Rule amendments

The following clauses of Chapter 6 of the Market Rules have been amended since last year's annual audit:

- 6.16.1, 6.4.6,
- 6.2.2, 6.2.2A, 6.2A.2. 6.3A.2, 6.3A.3, 6.3B.1B, 6.3B.3, 6.3C.3, 6.3C.9, 6.4.1, 6.4.3, 6.5.1A, 6.5A.2, 6.5C.2, 6.5.4, 6.5C.6, 6.6.2A, 6.6.5, 6.7.2, 6.14.1, 6.16.1, 6.18.2, 6.19.3, 6.19.4, 6.19.9, 6.20.1, 6.20.9A, 6.21.1, 6.21.2,
- 6.15.1, 6.15.2
- 6.17.6

8.1.2 Procedures

SM has only limited obligations under Chapter 6. There are no Power System Operation Procedures or internal procedures relating to Chapter 6.

8.1.3 Relationship between Rule updates and procedures

None of the changes alter SM's obligations under Chapter 6.

8.1.4 Additional risk areas

We did not review any additional risk areas related to SM's obligations under Chapter 6.

8.2 Compliance with Chapter 6

We have not noted any non-compliance on the part of SM with respect to its obligations under Chapter 6 of the Market Rules.

8. Market Rule Chapter 6 – Energy market. . .

8.3 Opinion

As far as we have been able to determine, SM has complied with its obligations under Chapter 6 of the Market Rules.

9 Market Rule Chapter 7 – Dispatch

Market Rule Chapter 7 of the Market Rules sets out the Dispatch Rules which affect the Market Development, Market Operations, System Planning and System Operations functions of System Management.

9.1 SM's processes and procedures

9.1.1 Rule amendments

The following clauses of Chapter 7 of the Market Rules have been amended since last year's annual audit:

- 7.10.5, 7.10.5B (new), 7.10.7, 7.11.3, 7.11.4, 7.11.6A, 7.11.9
- 7.10.2, 7.10.5A(b), 7.12.1, 7.13.1
- 7.7.4A
- 7.1.1, 7.6.1A (new), 7.6.6, 7.7.5B, 7.7.5E (new), 7.13.1, 7.13.1C (new)

9.1.2 Procedures

The following Power System Operation Procedures relating to Chapter 7 of the Market Rules have been updated since last year's market audit:

- Power System Operation Procedure: Dispatch
- Power System Operation Procedure: Monitoring and Reporting

The following internal procedures relating to Chapter 7 of the Market Rules have been updated since last year's market audit:

How to create the 7.12 Status Report

9.1.3 Relationship between Rule updates and procedures

The extent to which the Rule changes have been reflected in updates to SM's processes and procedures is set out in Table 9.

Not all Rule changes require a consequential amendment to written procedures.

9.1.4 Additional risk areas

In addition to the incremental review above, we also specifically reviewed SM's:

- Use of Merit Orders in operational situations under the PSOP: Dispatch; and
- Load forecast preparation under the PSOP: Dispatch

29

Independent Market Operator

9.2 Compliance with Chapter 7

9.2.1 Incidents

We found one material and five non-material incidents of non-compliance with Chapter 7.

Incidents associated with SM's obligations under Chapter 7 are set out in Table 10 below.

9.2.2 Comment

We deem one of the breaches to this section of the Rules to be material; that is the breach may compromise the intention of the Market Rules, and/or the decisions made by market participants, or otherwise may affect the outcome of the market. We note that it has since been remedied.

9.3 Opinion

As far as we have been able to determine, other than the breaches described above, SM has complied with its obligations under Chapter 7 of the Market Rules.

9.4 Details of procedure changes and non-compliance

9.4.1 Rule changes and procedure updates

Table 9: Relationship between Rule changes to Chapter 7 and procedure updates

Amended clauses	Description	Procedure updated?
• 7.10.5, 7.10.5B (new), 7.10.7, 7.11.3, 7.11.4, 7.11.6A, 7.11.9,	Introduces Tolerance Ranges	 Partially PSOP: Dispatch updated to include a very brief reference to Tolerances, but does not state how they will be used or monitored at dispatch time. Several internal procedures will require updating once the new tolerances are confirmed.
• 7.10.2, 7.10.5A(b), 7.12.1, 7.13.1	Consequential changes relating to new provisions relating to Equipment Tests	Yes Existing reporting procedures have been updated to include equipment tests Some reporting functions are not covered in PSOPs or internal procedures.
• 7.7.4A	Minor amendment	Not applicable
• 7.1.1, 7.6.1A (new), 7.6.6, 7.7.5B, 7.7.5E (new), 7.13.1, 7.13.1C (new)	Minor amendments reflecting System Management's new obligations with respect to Network Control Service Contracts	No The dispatch procedures do not currently operationalise the treatment of Network Control Services. We expect that at such time as a contract for this service is agreed by a Network Operator, SM's procedures will be updated to reflect that.



9.4.2 Incidents of non-compliance

Table 10: Incidents of non-compliance with Chapter 7

Rule	The Issue	Material?	Comment
7.2.2(a)	SM provides a load forecast to IMO twice a day, the first of which the IMO then publishes to participants to support the Bilateral Submission process. MR 7.2.2(a) requires the forecast to be net of forecast Non-Scheduled generation, that is, wind farms, which cannot be scheduled in advance. In the period since market start, SM has provided the forecast without subtracting this generation.	Yes	While not used directly in any market calculations, the incorrect calculation of this load forecast has potential to affect the commercial decisions of market participants. SM has recently implemented changes to the calculations in this forecast to bring it into compliance with the Rules.
7.2.3B(a), 7.2.3C, 7.13.1	SM and IMO have noted a number of instances where SM was late in providing data required under the Rules. At various times this has included:	No	We are not aware of any specific instance in which the late provision of data impacted the decisions of a market participant, or the outcomes of the market.
	 Operational System Load estimate; Schedules of Dispatch instructions; Schedule of MWh output of generating systems; Load forecasts; and Commissioning test data. 		We note that while SM has automated tracking of when data is sent to IMO, much of the data is sent manually, with associated overhead and opportunity for human error. We understand SM and IMO have been working over time to automate more of the transfers, and we expect to see continuing breaches in this area until that process is complete. The significant changes to be introduced by the Market Evolution Programme provide an opportunity for strategic change in



Rule	The Issue	Material?	Comment
			this area.
7.6.13	The PSOP must include the procedures for scheduling or dispatching under Balancing Support and Ancillary Service Contracts. The documentation of this procedure must be in a form sufficient for audits and investigations, as prescribed under the Market Rules. The current PSOP: Dispatch includes brief reference to the dispatch of Electricity Generation Corporation facilities for ancillary services, but does not give sufficient detail to audit against.	No	Given that the Electricity Generation Corporation currently supply all of the ancillary service requirements of the market, the lack of documented procedure around the scheduling and dispatch of ancillary services is not likely to impact the market. With the introduction of the balancing market, this will no longer be the case, and greater transparency will be required.
7.7.4 and 7.7.4A	The PSOP must specify the process SM uses for selecting curtailable loads from the dispatch merit order, and SM must use that process, only discriminating between curtailable loads based on their size, response time, and availability. The PSOP does not specify this, and in practice, SM does not use curtailable load as specified in the merit order.	No	 We understand that SM face a number of challenges in dispatching curtailable loads: Curtailable loads must be activated some hours in advance, and so their capacity cannot be used to meet immediate needs. Curtailable loads are often small, and dispatching dozens individually by telephone is impractical when controllers must address a situation in seconds or minutes. We understand that one of the drivers behind the aggregation of curtailable loads into demand side programmes is to simplify dispatch of these facilities, however aggregation is not compulsory, and small

9. Market Rule Chapter 7 – Dispatch. . .



Rule	The Issue	Material?	Comment
			capacity facilities are likely to remain for some time.
			 There a large number of zero capacity curtailable loads present in the merit order. We have raised this separately in our audit of IMO software.
			Information on the capabilities of the curtailable load is not readily available to SM. In particular:
			i. The notice period required before the curtailment will take effect;
			ii. The length of time the load can be curtailed for;
			iii. The number of times a year the load can be curtailed, and how many remain; and
			iv. Whether there are restrictions on curtailing the load on consecutive days.
			In particular, iii and iv are not reflected in the calculations which determine the merit order provided to SM. We have raised this separately in our audit of IMO software.
			5. SM may exercise discretion under 7.7.4(c), to allow the load to be available at a later time or date when it would have greater benefit.
			Notwithstanding these considerations, the rate at which curtailable.



Rule	The Issue	Material?	Comment
			loads are called on is reasonable in comparison to their maximum hours of curtailment for the year.
			We understand that a Rule change is in process to align the merit order position of Curtailable loads with liquid fueled facilities, which will more accurately reflect the situations in which they are used operationally.
7.10.4 and 7.10.7	SM is obliged to monitor and report on participants' compliance with resource plans and dispatch instructions. In the absence of formally specified tolerances, SM is in breach of these obligations.	No	See discussion of Tolerances under chapter 2 above.
7.11.6A	SM is obliged to issue a dispatch advisory in certain situations, including where committed generation at minimum loading is expected to exceed forecast demand.	No	SM made this dispatch instruction consistent with obligations under 7.6.1. While it should have declared a High Risk Operating State, and notified the market thereof, the lack of notification is unlikely to have affected participant behaviour at this time of low system load.
	Dispatch Advisories must be issued as soon as practicable, and if issuing instructions to participants under a High Risk or Emergency Operating State before an advisory has been issued to notify market participants, SM must advise them of that operating state as soon as practicable.		SM has since begun issuing Dispatch Advisories for every Dispatch Instruction. Advisories are issued the following day, except for Operating State changes which are sent through on the day. This has not yet flowed through into internal procedure documentation.
	On 31 December, SM curtailed the Walkaway		

9. Market Rule Chapter 7 – Dispatch. . .



Rule	The Issue	Material?	Comment
	Windfarm to ensure that supply did not exceed demand – a situation that constituted a High Risk Operating State. It did not declare a High-Risk Operating State, and did not issue a dispatch advisory.		

10 Market Rule Chapter 8 – Wholesale market metering

Market Rule Chapter 8 sets out the Wholesale Market Metering Rules. These Rules do not apply to System Management.

10.1 Opinion

System Management has no obligations under Chapter 8 of the Market Rules.

11 Market Rule Chapter 9 – Settlement

Chapter 9 of the Market Rules sets out the Settlement Rules which affect the Market Development, Market Operations, System Planning and System Operations functions of System Management.

11.1 SM's processes and procedures

11.1.1 Rule amendments

The following clauses of Chapter 9 of the Market Rules have been amended since last year's annual audit:

- 9.18.3, 9.24.1, 9.24.3, 9.24.3A, 9.24.4, 9.24.5, 9.24.8, 9.24.8A, 9.24.6
- 9.4.5, 9.4.7, 9.17.3, 9.18.3, 9.19.5, 9.20.5, 9.20.7, 9.24.10,
- 9.16.3 and 9.16.3A (new)
- 9.12.1, 9.12.2, 9.14.1, 9.14.2, 9.18.3, 9.24.3A
- 9.3.3, 9.18.3, 9.24.1, 9.24.3, 9.24.3A, 9.24.4, 9.24.5, 9.24.8, 9.24.8A, 9.24.6

11.1.2 Procedures

SM has only limited obligations under Chapter 9. There are no Power System Operation Procedures relating to Chapter 9, and only a small number of internal procedures.

11.1.3 Relationship between Rule updates and procedures

None of the changes alter SM's obligations under Chapter 9.

11.1.4 Additional risk areas

We did not review any additional risk areas related to SM's obligations under Chapter 9.

11.2 Compliance with Chapter 9

11.2.1 Incidents

We have not noted any non-compliance on the part of SM respect to its obligations under Chapter 9.

11. Market Rule Chapter 9 – Settlement. . .

11.3 Opinion

As far as we have been able to determine, SM has complied with its obligations under Chapter 9 of the Market Rules.

12 Market Rule Chapter 10 – Market information

Market Rule Chapter 10 sets out the Market Information Rules affect the Market Development, Market Operations, System Planning and System Operations functions of System Management.

12.1 SM's processes and procedures

12.1.1 Rule amendments

The following clauses of Chapter 10 have been amended since last year's annual audit:

- 10.2.2, 10.5.1(r)
- 10.5.1, 10.7.1, 10.8.2
- 10.6.1.
- 10.5.1
- 10.2.2, 10.5.1(r)
- 10.5.1, 10.7.1, 10.8.2
- 10.6.1.
- 10.5.1(vD)

12.1.2 Procedures

SM has only limited obligations under Chapter 10. There are no Power System Operation Procedures relating to Chapter 10, and only a small number of internal procedures.

12.1.3 Relationship between Rule updates and procedures

None of the changes alter SM's obligations under Chapter 10.

12.1.4 Additional risk areas

We did not review any additional risk areas related to SM's obligations under Chapter 10.

12.2 Compliance with Chapter 10

12.2.1 Incidents

We found one non-material incident of non-compliance with Chapter 10, as set out in Table 11 below.

12.2.2 Comment

The breach to this section of the Rules is not deemed to be material; that is the breach does not compromise the intention of the Market Rules, and/or the decisions made by market participants or otherwise affect the outcome of the market.

12.3 Opinion

As far as we have been able to determine, there have been no material breaches of SM's obligations pursuant to Chapter 10 of the Market Rules.

12.4 Details of non-compliance

12.4.1 Incident of non-compliance

Table 11: Incident of non-compliance with Chapter 10

Rule	The Issue	Material?	Comment
10.2.6	The IMO holds standing data for Market Participants, and provides a subset of this data to SM under 2.34.1. This data is classified 'Rule Participant Dispatch Restricted', which means that it may only be available to regulatory agencies, SM, and the specific participant to whom it relates. On 10 August 2011, while discussing standing data with participants for an upcoming modelling exercise, SM sent a spreadsheet to Verve, which also contained data for other participants. The staff member involved realised the mistake the same day, provided a replacement file, and asked Verve to delete the original. Verve did so, and reported that the file had not been opened. Even so, this remains a breach of confidentiality provisions.	No	Given the nature of the data involved, this breach would not have had material impact on decisions made by participants. SM has since taken steps internally to reinforce the importance of respecting confidentiality provisions when exchanging information with external parties.

Appendix A: Status of issues identified in last year's annual audit

Below we present a table updating the status of the issues outstanding from previous annual audits. As in previous years the issues are given one of three statuses:

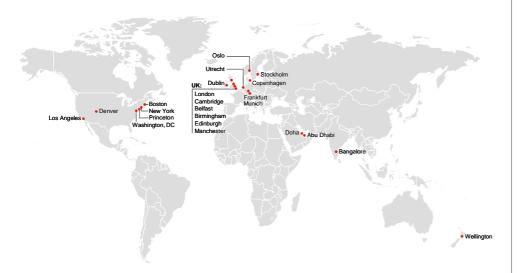
- Clause amended the clause mentioned (or, in some cases, the clause which gives rise to the obligations under the clause mentioned) has been amended or deleted such that there is no longer an issue of non-compliance by System Management.
- **Procedure updated** System Management has updated their procedures so that they are now in compliance with the Market Rules
- **Issue outstanding** the issue identified in last year's annual audit remains. Further discussion on the issue can be found in the corresponding chapter in the main body of this audit report.

Table 12: Status of outstanding issues

Clause	Brief description	Status
2.13, 3.21, 7.10	System Management are obliged to monitor participant compliance with a number of Rule provisions. In practice, SM applies informal tolerances to the reporting of this compliance.	Issue outstanding A Rule change introducing formal tolerances for use in these situations came into effect on 1 December 2010. An updated PSOP specifying a consultation process for setting the tolerances came into effect on 1 August, and a consultation on the calculations to be used is currently underway. SM continues to apply the informal tolerances as before, and will remain in breach of these obligations until the formal tolerances are embedded in their operational procedures.
General	We were somewhat surprised to find no new entries in the compliance log recorded between the 2009 and 2010 audits, as in the normal course of events, we would expect to find at least some instances of non-compliance during any 12 month period.	Procedure updated SM has begun the process of embedding compliance monitoring and reporting into operational processes, and we were pleased to note an increased awareness of the reporting of compliance breaches, and a more

Clause	Brief description	Status
		reasonable number of relevant entries in the compliance log.

PA offices worldwide



At PA Consulting Group, we **transform** the performance of organizations.

We put together teams from many disciplines and backgrounds to tackle the most complex problems facing our clients, working with leaders and their staff to turn around organizations in the private and public sectors. Clients call on us when they want:

an **innovative** solution: counter-intuitive thinking and groundbreaking solutions

a highly **responsive** approach: we listen, and then we act decisively and quickly

delivery of hard results: we get the job done, often trouble-shooting where previous initiatives have failed.

We are an independent, employee-owned firm of talented individuals, operating from offices across the world, in Europe, North America, Middle East, Asia and Oceania We have won numerous awards for delivering complex and highly innovative assignments, run one of the most successful venture programs in our industry, have technology development capability that few firms can match, deep expertise across key industries and government, and a unique breadth of skills from strategy to IT to HR to applied technology.

- defense energy financial services government and public services
- life sciences and healthcare manufacturing postal services retail
- telecommunications transportation
- strategic management innovation and technology IT operational improvement
- human resources complex programme delivery

Delivering business transformation

Corporate headquarters

123 Buckingham Palace Road London SW1W 9SR United Kingdom Tel: +44 20 7730 9000

United States headquarters 4601 N Fairfax Drive Suite 600 Arlington, VA 22203 Tel: +1 571 227 9000

www.paconsulting.com

This document has been prepared by PA on the basis of information supplied by the client and that which is available in the public domain. No representation or warranty is given as to the achievement or reasonableness of future projections or the assumptions underlying them, management targets, valuation, opinions, prospects or returns, if any. Except where otherwise indicated, the document speaks as at the date hereof.

© PA Knowledge Limited 2010. All rights reserved.

This document is confidential to the organisation named herein and may not be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise without the written permission of PA Consulting Group. In the event that you receive this document in error, you should return it to PA Consulting Group, 4601 N Fairfax Drive, Suite 600, Arlington, VA 22203. PA accepts no liability whatsoever should an unauthorised recipient of this document act on its contents.