Quality of Service Incentive Scheme
Audit of Interruptions Reporting 2009/10
Final Report

January 2011

Quality of Service Incentive Scheme

Audit of Interruptions Reporting 2009/10

Final Report

Submitted to:

Ofgem

Submitted by:

British Power International Limited and Mott MacDonald Limited

British Power International Limited
The Octagon
Middleborough
Colchester CO1 1TG
United Kingdom

Mott MacDonald Limited
South Victory House
Trafalgar Place
Brighton BN1 4FY
United Kingdom

Document Status

Title: Quality of Service Incentive Scheme - Audit of Interruptions Reporting 2009/10

Reference: Overall Report

Issue: Final Version 1.0

Date: 31 January 2011

Electronic Doc Ref: M:\BPIUSER\Projects\Current\UK\Ofgem B67 – IIS Audits for reporting year 2009/10/Overall report 2009 – v1.0

Authorisation

Name	Position	Signed	Date
Bill Slegg and Isabel Boira Segarra	Consortium Project Directors		
David Holding	QA Checker		

History

Issue	Date	Originator	Checker	Description
1.0	31 January 2011	Geoff Stott and Tania Tang	Karl Hurley	Final version
0.5	20 January 2011	Karl Hurley	Geoff Stott and Tania Tang	Fifth draft incorporating DNO comments
0.4	9 November 2010	Karl Hurley	Mark Hogan	Fourth draft incorporating Ofgem updates for circulation to the DNOs
0.3	24 October 2010	David Holding and Tania Tang	Geoff Stott	Third draft incorporating updates to Sections 4 and 5 circulated to Ofgem for final proof reading
0.2	22 September 2010	David Holding and Tania Tang	Geoff Stott	Second draft incorporating updated appendices and tables plus Section 5
0.1	07 July 2010	Geoff Stott	David Holding and Tania Tang	First draft raised from template

Table of Contents

Appendices

List of Tables

List of Figures

Glossary

BPI	British Power International
CE	CE (UK) Ltd. incorporating the NEDL and YEDL licensed areas
CI	Customer Interruptions – calculated as per the formula below
CML	Customer Minutes Lost – calculated as per the formula below
CN	Central Networks incorporating CN - East (formerly East Midlands Electricity) and CN - West (formerly Midlands Electricity and Aquila) licensed areas
Consortium	The consortium of BPI and MM
DNO	Distribution Network Operator
DPCR3	Distribution Price Control Review for Period 1 April 2000 to 31 March 2005
DPCR4	Distribution Price Control Review for Period 1 April 2005 to 31 March 2010
DPCR5	Distribution Price Control Review for Period 1 April 2010 to 31 March 2015
EDFE	EDF Energy Group incorporating EPN, LPN and SPN licensed areas
EHV	Extra High Voltage – all voltages above 20kV up to but excluding 132kV
ENMAC	The GE Harris proprietary Energy Network Management and Control System
ENW	Electricity North West
HV	High Voltage – all voltages above 1kV up to and including 20kV
IIP	Information and Incentives Project
IIS	Information and Incentives Scheme
LV	Low Voltage – voltages of less than 1kV
MM	Mott MacDonald
MPAN	Meter Point Administration Number
MPAS	Meter Point Administration Service
MPRS	Meter Point Registration System
NaFIRS	National Fault and Interruptions Reporting Scheme
NEDL	Northern Electricity Distribution Limited
Ofgem	Office of Gas and Electricity Markets
PC-NaFIRS	Langhorne Computers' proprietary software used by DNOs for NaFIRS data capture and reporting to Ofgem
QA	Quality Assurance checking of incident-auditing workbooks carried out as a follow-up to the audit visits
QoS	Quality of Service
RIGs	QoS Regulatory Instructions and Guidance version 5, Ofgem, March 2005
SCADA	Supervisory Control and Data Acquisition

SI	Short interruption – an incident in which the loss of supply is less than 3 minutes in duration
SP	Scottish Power - SP Transmission and Distribution incorporating the SPD and SPM licensed areas
SPD	SP Distribution licensed area
SPM	SP Manweb licensed area
SEPD	Southern Electric Power Distribution
SHEPD	Scottish Hydro-Electric Power Distribution
SSE	Scottish and Southern Electricity incorporating the SEPD and SHEPD licensed areas
UUES	United Utilities Electricity Services
WPD	Western Power Distribution incorporating the South Wales and South Western licensed areas
YEDL	Yorkshire Electricity Distribution Limited

Note:

Within this document:

The term “higher voltage” is used to indicate all voltages greater than 1kV.

The term “licensed area” is used, where necessary, to indicate the geographical area under consideration and to differentiate between areas in those situations where a parent company holds more than one distribution licence.

The calculations of Customers Interrupted (CI) and Customer Minutes Lost (CML) within this document are adapted from the formulae contained in the RIGs to reflect the CI and CML generated by each stage of the incidents being audited.

CI is the number of customers interrupted in the relevant restoration stage per 100 connected customers. It is calculated as:

$$CI = \frac{\text{The sum of the number of customers interrupted for incidents being audited} * 100}{\text{The total number of connected customers}}$$

CML is the duration of interruption to supply expressed as the number of customer minutes lost in the relevant restoration stage per connected customer. It is calculated as:

$$CML = \frac{\text{The sum of the customer minutes lost for all restoration stages for incidents being audited}}{\text{The total number of connected customers}}$$

The total number of connected customers is as declared at 30 September 2009.

Summary

Overview

British Power International (BPI) and Mott MacDonald (MM) (the Consortium) has been awarded the contract to assist Ofgem with the Quality of Service (QoS) Interruptions Incentive Scheme audits of DNO interruptions reporting for the reporting years 2007/08, 2008/09 and 2009/10.

This report describes the work carried out and results obtained for the audit of interruptions reporting for the reporting year 01 April 2009 to 31 March 2010. The minimum levels of accuracy that DNOs are required to meet under Distribution Price Control Review 4 (DPCR4) are set out in the Quality of Service Regulatory Instructions and Guidance version 5 (RIGs). These minimum levels of accuracy are shown in the following table.

	Overall		LV	
Required Level of Accuracy	**Stage 2 – Subset Incident Sample**	**Stage 3 – Full Incident Sample**	**Stage 2 – Subset Incident Sample**	**Stage 3 – Full Incident Sample**
Customer Interruptions (CI)	97%	95%	92%	90%
Customer Minutes Lost (CML)	97%	95%	92%	90%

Audit Process

Only Stages 1, 2 and 4 of the four-stage IIS audit process were used to determine the final DNO interruptions reporting accuracies because all DNOs passed the Stage 2 levels of accuracy, thus making Stage 3 unnecessary. Stage 1 involved calculating the MPAN accuracy for the relevant licensed area. Stage 2 covered the audit of reporting for the reduced sample of incidents selected by Ofgem and in Stage 4 the MPAN and incident reporting accuracies were combined to give the final reporting accuracies for CI and CML at both the Overall and LV levels. Stage 4 was carried out automatically within Ofgem's incident-auditing workbook. In addition, a questionnaire was used to evaluate progress on the relevant connectivity model although connectivity model accuracy was not used in the calculation of final reporting accuracy.

With the exception of the pilot visit, where the whole audit was unannounced, Ofgem circulated the incident samples to DNOs prior to the audit visits. The circulated samples contained only the pre-selected subset of incidents for use in Stage 2 of the audit process, thus continuing a recommendation from previous IIS audits. Feedback during the visits confirmed that this had again saved DNOs a substantial amount of preparation time.

Other recommendations carried forward from previous audits were to repeat the exclusion of ten incidents from the pre-announced sample at 11kV and the exclusion of ten incidents from the pre-announced sample at LV. The DNOs were asked to extract the audit trails for these twenty incidents 'live' during the audit visits. Ofgem disaggregated the incidents selected for audit proportionately across the various voltage levels. Spare incidents were again provided, but these were only audited if it was necessary to substitute them for incidents in the sample that could not be audited.

A further recommendation carried forward from the last two year's audits was the repeat of an audit of a sample of those 'incidents' determined by the DNOs to be non-reportable. Generally the sample size was one hundred incidents per DNO but, for three DNOs where inconsistencies were found in last year's audit, this year's sample size was increased to two hundred.

The telephone numbers associated with three HV and two LV incidents were again cross-checked for each DNOs return to Ofgem's consultants for potential follow-up under the quality of telephone response survey.

This year, the visiting audit team comprised of one or two people from the Consortium (BPI) and one or two people from Ofgem.

Following recommendations from the DNOs, the core team of experienced visiting auditors was augmented this year by a small number of new auditors; they were from both the Consortium and Ofgem so as to provide wider expertise for future eventualities.

The Consortium team member(s) concentrated on the audit of the higher voltage incidents and drafting of the DNO-specific reports. The Ofgem team member(s) focused on the audit of the LV incidents and also managed the inputting of audit data into the incident-auditing workbook.

The scrutiny of the sample of non-reported 'incidents' and the audit of the sample of telephone numbers was a role shared between the visiting auditors.

Audit Results

All DNOs passed the audit of the Stage 2 sample by exceeding the minimum requirements for CI and CML accuracy at both the Overall and LV levels. Most DNOs have continued to either maintain or to improve the accuracy of their measurement systems. In addition, there is evidence that DNOs are implementing recommendations made during the 2008/09 audit, and are actively training an increasing number of their employees to the requirements of RIGs version 5 guidelines.

The quality-assured checked QoS Incentive Scheme, Combined Stage 1 and Stage 2 audit results are summarised in the following table.

Licensed Area	Overall CI (Minimum Requirement 97%)	Overall CML (Minimum Requirement 97%)	LV CI (Minimum Requirement 92%)	LV CML (Minimum Requirement 92%)
CE – NEDL	100.00%	99.80%	100.00%	98.68%
CE – YEDL	100.00%	100.01%	100.21%	100.10%
CN – East	99.99%	99.98%	99.31%	99.29%
CN – West	100.00%	99.98%	99.90%	99.69%
EDFE – EPN	99.82%	99.32%	96.57%	96.29%
EDFE – LPN	100.06%	99.99%	102.68%	99.21%
EDFE – SPN	100.04%	99.78%	101.29%	98.25%
ENW (UUES)	100.03%	99.94%	100.52%	99.57%
SPD	99.97%	99.98%	100.00%	99.16%
SPM	99.99%	100.15%	98.36%	102.29%
SSE – SEPD	100.00%	100.02%	101.44%	101.90%
SSE – SHEPD	100.00%	100.08%	100.57%	100.86%
WPD – Sth Wales	99.99%	99.96%	99.70%	94.47%
WPD – Sth West	100.06%	100.03%	101.47%	99.99%

No changes to DNO's measurement systems were found that materially affected reporting accuracy. All calculations presented by the DNOs to support the accuracy of their measurement systems were reviewed and accepted by the visiting auditors.

All DNOs have measurement systems that 'freeze' the record of the number of customers involved in an incident at the higher voltage levels thus providing a robust audit trail. At the lower voltage level DNOs elected to explain variances in customer numbers where relatively easy to do so, or where they considered the variance to be significant. A number of DNOs are in a position to record LV customer numbers on feeders at the time of incidents and these DNOs again suggested that in future years such locked records be accepted in a similar way to those at the higher voltages.

Generally, DNOs have maintained the improvements in their recording of pre-arranged interruptions since the audits of previous reporting years; most are recording the notified interruption times in their incident reports and all DNOs could provide information regarding the interruption times notified to customers.

Although DNOs have trained their field staff to provide more definitive information on interruption and restoration times, the information provided to support the audit trail for LV incidents was occasionally variable where it was derived from non-system sources. Whilst the visiting auditors accept that DNOs do not have full phase connectivity, and as such in certain circumstances have to rely on estimates from site, they again noted the different lengths to which DNOs go to validate the information provided. The visiting auditors would expect to see evidence of how LV site estimates had been derived and, where possible, DNOs carrying out post incident checks to ensure that the site estimate is accurate when compared with system information. A number of DNOs were again able to provide excellent notes to pinpoint the location of open-circuit faults and this greatly aided the audit process. Such practice is welcomed and encouraged.

There appeared to be no reduction in reporting accuracy associated with the twenty incidents that were not advised to the DNOs in advance of the audit visits. In general, the time taken to produce the necessary audit information and audit the incidents was no greater than the time taken to audit the announced incidents. For the ten unannounced HV incidents, times again varied between twenty-five minutes and two hours to complete the audit of these incidents, the time being dependant upon the degree of automation contained within the individual DNO's measurement and recording systems. The visiting auditors readily acknowledge that the complexity of an unannounced incident and the number of stages within it have a bearing on the ease with which it can be audited.

The visiting auditors were pleased to see that several DNOs had again involved different people in this year's audit process, thereby spreading experience within their organisations. The visiting auditors were also pleased to note that some DNOs are enhancing their internal auditing regime, by involving more of their personnel in the process.

Non-reported 'Incidents'

A sample of those 'incidents' that had not been submitted to Ofgem as contributing to CI or CML was examined for each licensed area. Where possible, the sample was stratified according to the percentages that each different 'category' of non-reported incident was submitted to Ofgem by each DNO.

Three hundred non-reported incidents were examined for each of the two licensed areas where issues had been found in the previous two year's audits. Two hundred non-reported incidents were examined for the licensed area where issues had been found in last year's audit. The sample size for the other DNOs was one hundred per licensed area.

Quality of Telephone Response

In addition to the audit of incidents, the visiting auditors sampled each DNO's measurement systems for the records of customers who had telephoned the DNOs associated with three HV and two LV incidents selected at random from the Stage 2 audit sample.

The details of callers captured in the DNOs' measurement systems were compared with the details of callers submitted to Ofgem's telephony consultants for sampling in connection with the quality and speed of telephone response incentive scheme.

'Clock-stopping'

As a continuation of last year's audits, a sample of up to twenty randomly selected incidents was examined for each licensed area where the DNO had used 'clock-stopping' as an element of its reporting. Where available, up to fifteen incidents were chosen at LV and up to five at HV.

For each incident, the DNO's measurement and recording systems were examined for evidence to justify the 'clock-stopping'. In particular, the visiting auditors were keen to see the precise wording of the entries in DNOs' trouble-call logs and to compare this with the wording contained within the RIGs.

Learning Points

The visiting auditors have noted the following learning points:

- Setting and confirming the timetable well in advance again considerably aided the smooth running of the process;
- The modified and automated incident-auditing workbook continues to be well received as it provides the DNOs with an 'instant' interim indication of the accuracy results;
- The IIS process has become well established and DNOs have generally introduced internal audit regimes that are based upon it. Generally, the results of the IIS audits for reporting year 2009/10 suggest that these internal audits are having a positive effect on DNOs' accuracy of reporting, but a number of the Stage 2 results suggest that more still needs to be done in some DNOs;
- The information contained within most DNOs' measurement systems enabled the unannounced incidents to be audited without the DNOs having spent time in either producing the documents or recreating the incident in advance of the audit visit;
- Whilst the number used was again small, spare incidents should continue to be included in the sampling regime to provide for those instances where it is not possible to audit one of the sample incidents;
- To save DNOs' potentially unnecessary preparation time, spares could be unannounced ahead of the audit visit and the information for them would only be gathered and audited if they are needed to substitute for a sampled incident;
- All DNOs' measurement systems contained incidents that were deemed to be non-reportable. Auditable evidence was available to determine why the DNO reached this conclusion;
- DNOs continue to use differing classifications to categorise the non-reported incidents and a more 'standard' set of criteria would facilitate better sampling, inter-DNO comparisons and further assurance that this aspect of DNOs' measurement and reporting systems is being managed:
- The approach to the sampling of telephone call details that was adopted for the 2008 and 2009 annual IIS audit was again used this year;
- The inclusion of a sample of clock-stopping incidents again added a further dimension to this year's annual audit and highlighted differences of approach between the DNOs;
- DNOs should continue to consider periodic rotation of staff responsible for QoS IIS reporting so as to spread experience and provide for 'strength in depth' within their teams;
- Some DNOs included new personnel in their audit teams this year and this approach is encouraged as it enhances a DNO's expertise in this area;
- It is recommended that, where DNOs have more than one control centre, then audits continue to rotate between them, to ensure that as many staff as possible have exposure to, and visibility of, the audit process; and
- The visiting auditors again found it useful to spend time with DNOs reviewing a number of IIS related questions and general Quality of Service issues once the

main section of the audits were complete. Such dialogue is welcomed and encouraged; as such the audit timetable should be structured to facilitate this, where DNOs wish to take advantage of the visiting auditors' presence.

General Recommendations

Based on the above comments and observations, the following general recommendations are made:

- The reduced number of people working as visiting auditors should be continued as this enables them to make direct comparisons between DNOs on such matters as acceptable forms of evidence and consistency of reporting;
- Some DNOs are still using the time of reports of 'low-voltage' or the time of an HV system alarm as the incident start time, when no report has been received that supplies have been lost. The Consortium confirms its previous recommendation that a DNO should not consider an incident to have started until it receives a report that supplies have been lost;
- Similarly, where a DNO believes it has restored supplies, evidence of best endeavours to confirm that supplies have in fact been successfully restored is required in order to support subsequent re-interruption stages or new incidents, otherwise the visiting auditors should consider that earlier restoration attempts have been partly or wholly unsuccessful;
- The audit of a sample of incidents where clock-stopping had been used should be retained;
- The visiting auditors were again disappointed that, on a number of occasions of clock-stopping, the information as to the nature of the customer's request for restoration work to be suspended and the agreed restart time did not form a robust audit trail. In cases where the customer does not specify a restart time, some DNOs use their standard work start time, generally 08:00. Other DNOs use the Guaranteed Standard (GS10 – 'Distributor's Fuse') time of 07:00 to avoid confusion amongst its personnel. In future it is again suggested that a standard restart time should be employed except where DNOs have fully auditable information to support the use of a different restart time;
- The phraseology contained in some DNOs' 'trouble-call' logs regarding the use of clock-stopping could again be interpreted as non-RIG compliant by the use of words such as "it was agreed with the customer" as opposed to the "customer requested" … (to delay restoration work). The use of this phraseology is understandable in noting the results of a telephone conversation but it is recommended that its use should be stopped in recording the reason for clock-stopping in DNOs' measurement systems as it could render the underlying use of clock-stopping to be non-rig compliant. The use of this phraseology was brought to the attention of the DNOs concerned during the audit of the clock-stopping incidents and its use was not taken as being non-rig compliant this year;
- A sample of updates to connectivity models should be retained as part of the audit to encourage DNOs to maintain accuracy;
- Despite the request of some DNOs, it is still too early for the visiting auditors to accept time-stamped "feeder numbers", as auditable evidence of the number of customers on an LV feeder at the time of an incident. The visiting auditor's

maintain that the processes are not yet robust throughout all DNOs and it would therefore introduce an unacceptable degree of audit inconsistency between DNOs;

- Continue to audit non-reported incidents as sampled by the mix of reasons for not reporting. It is recommended that this is done in conjunction with the introduction of a more standard set of reasons for categorising non-reported incidents across the DNOs. This will ensure that better comparisons can be made and the auditors can focus on sampling those reasons deemed most likely to give rise to potential errors;
- Retain the total number of non-reported 'incidents' to 100 per DNO, but increase this number to 200 in the year following an audit where evidence of misreporting is found;
- Continue to sample from the full population of reported incidents for the reporting year, irrespective of whether they are related to exceptional events;
- Further consideration will be given to including a table showing absolute accuracy at the overall and LV level as part of the annual IIS audit report;
- As all DNOs passed the Stage 2 levels of accuracy, Ofgem should continue to only issue the Stage 2 incidents ahead of the audit visits. Ofgem would then only issue the Stage 3 incidents to any DNO that failed the Stage 2 levels of accuracy. If necessary, the Stage 3 incidents would be audited during a follow-up audit visit, or, if practical, by extending the initial audit visit;
- Following the experience of this year's audit visits it is still not possible to recommend an increase in the number of unannounced incidents for all DNOs due to the varying nature of their measurement and reporting systems. However, it is recommended that Ofgem retains the present numbers of unannounced incidents at both the LV and the 11kV levels in future audits to add to the additional level of audit rigour;
- Continue to include an examination of all those incidents reported as being due to the failure of an in-feed from an adjacent DNO or from NG in future audits; and
- Continue to include an element of cross-checking of customer details between DNOs' measurement systems with the details of callers submitted to Ofgem's quality of telephone response consultants.

1 Introduction

Background

1.1 The Office of Gas and Electricity Markets (Ofgem) is committed to an ongoing programme of work to strengthen incentives on Distribution Network Operators (DNOs) to deliver an appropriate quality of service to customers. This involves the definition and ongoing review of appropriate output measures. In addition, reporting and audit arrangements have been put in place to help maintain the consistency and accuracy of DNOs' reporting. Amongst the output measures on which DNOs are required to report are the number and duration of interruptions to supply each year.

1.2 Ofgem introduced standard definitions, guidance and minimum levels of accuracy that DNOs must meet for reporting quality of service data. These are set out in Ofgem's Regulatory Instructions and Guidance (RIGs)[1].

Audit of DNOs' Measurements Systems and Reporting

1.3 In 2001 Ofgem commissioned BPI and MM (the Consortium) to develop a framework for the annual auditing of incident reporting systems used by DNOs under the Information and Incentives Project (IIP). The initial contract ran for three years during which time DNOs undertook a significant amount of development work on their measurement systems. Development of the incident reporting process has taken place through a collaborative approach between Ofgem and the DNOs with the Consortium providing technical and analytical support on Ofgem's behalf as required. Under the initial contract an interim review was carried out in 2001 and IIP audits of measurement systems followed in 2002 and 2003. The contracts to carry out the IIP/IIS audits for the reporting years 2003/04, 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 were also awarded to the Consortium. Full details of all audits carried out to date are available on the Ofgem website[2].

1.4 On 1 April 2005 Ofgem introduced a revised incentive scheme which provides financial incentives to DNOs with respect to the average quality of service they provide in three main areas:

- The number of interruptions to supply;
- The duration of interruptions to supply; and
- The quality of telephone response.

1.5 DNOs may be rewarded or penalised by up to three per cent of revenue, depending on performance relative to their interruption targets in each year of the scheme. The IIS includes a mechanism for adjusting DNOs' reported performance for the number and duration of interruptions due to inaccuracy to help ensure that DNOs are not unfairly rewarded or penalised due to measurement issues.

[1] Quality of Service Regulatory Instructions and Guidance version 5, Ofgem, March 2005.

[2] Separate final reports by Mott MacDonald/British Power International - Information and Incentives Project, Audit of Incident Reporting for the years 2001/02, 2002/03, 2003/04 2004/05 and 2005/06.

Aims of the Audit

1.6 The aims for the audit of the DNOs' interruptions for the reporting year 01 April 2009 to 31 March 2010 are to:

- Identify any significant changes in a DNO's measurement systems and their impact (if any) on the accuracy of reported information;
- Identify whether there are any significant weaknesses in the systems that DNOs have in place to report incidents, CI and CML and to provide recommendations for improvement(s) to these systems;
- Determine whether the DNOs complied with the requirements of RIGs version 5 for reporting;
- Provide an indication of the time taken to audit unannounced incidents;
- Explore the audit trail for a sample of incidents that DNOs had deemed to be non-reportable;
- Determine the overall accuracy of reported information;
- Sample DNOs' accuracy of submitting callers' details to Ofgem's telephony consultants for sampling in connection with the quality and speed of the telephone response incentive scheme; and
- Provide an opinion on the appropriate numerical adjustments to DNOs' reported information so that they are not unfairly rewarded or penalised in the incentive scheme due to any problem in their measurement systems.

The Audit Approach

1.7 Following discussions with Ofgem and the DNOs the changes in approach to the audits and calculation of accuracy introduced for the audit of reporting years 2005/06 to 2008/09 have been maintained. These include the use of:

- Stage 2 audit of the subset of selected incidents to a higher accuracy requirement with the Stage 3 audit of the full incident sample only being required if the Stage 2 accuracy is not met;
- A consolidated questionnaire, an issues list, and a sign-off document;
- A reduction in the number of core people working as visiting auditors over that of previous reporting years;
- One of the principal two-person visiting audit team being from Ofgem; and
- A streamlined audit reporting process with sign-off of key documents at a more formal meeting at the conclusion of each visit.

Report Structure

The main body of this report sets out the audit findings and accuracy of interruptions reporting for the reporting year 2009/10. The report is structured as follows:

- Section 2 of this report gives a description of the four stage audit process for 2009/10;

- Section 3 sets out the key results of the audit together with any differences in interpretation of the RIGs found across DNOs;
- Section 4 gives details of key lessons learnt as a result of this year's audit and comments on areas of best practice;
- Section 5 provides an indication of the Stage 2 results for reporting year 2009/10 as recalculated for the fifth Distribution Price Control Review that started on 01 April 2010.
- Appendix A gives a schedule of key information from the automated incident-auditing workbooks; and
- Appendices B to O contain the individual audit reports for each licensed area.

2 Audit Processes

Overview

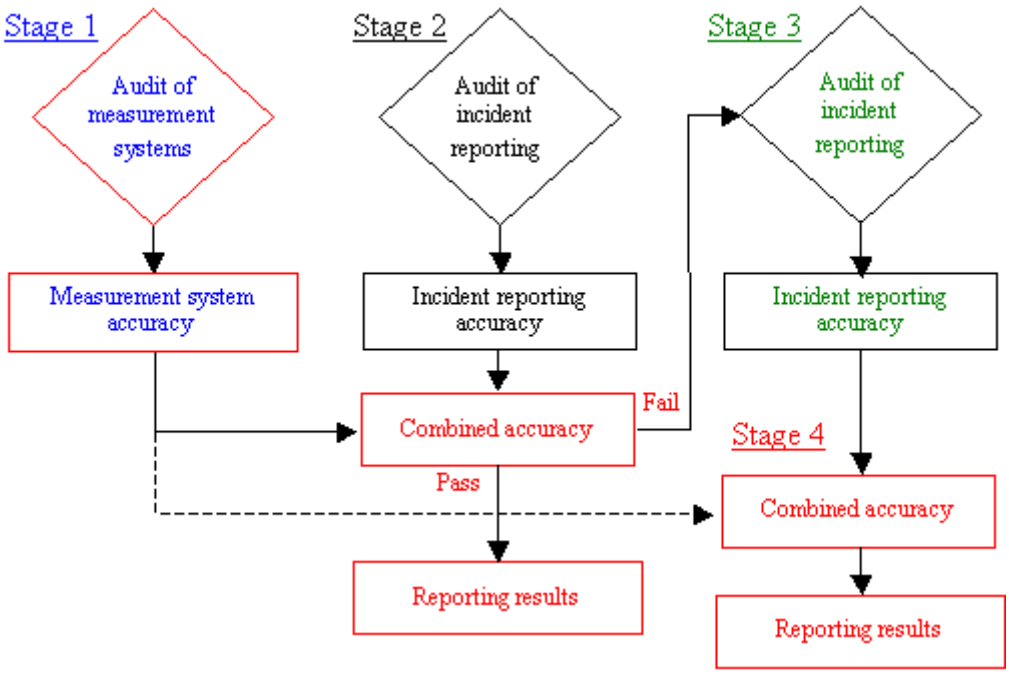
2.1 As in previous years the central component of the audit process was an audit visit to each licensed area. Two, three or four visiting auditors carried out the audit visits, one or two from the Consortium and one or two from Ofgem, working together with the DNO audit team. The aim was to foster a collaborative approach to achieve agreement during the visit wherever possible.

2.2 For the audit of reporting year 2009/10 the visiting auditors used Ofgem's incident-auditing workbook. This enabled the calculation and statistical work to be done in parallel with the collection of information on the audit visit. The visiting auditors were therefore again able to give an immediate and robust interim estimate of the results during the audit visit. In addition, a streamlined DNO audit report template was used to enable agreement of report content without the subsequent need for circulation and comment on draft reports. A more formal meeting at the conclusion of the audit visit enabled sign-off of the interim results and report subject to a quality assurance check of the results.

Audit Process

2.3 Figure 1 shows the four-stage audit process on which this report is based.

Figure 1 Audit Process Flow Chart



2.4 The approach to Stages 1, 2 and 3 was to circulate an audit questionnaire and the Stage 2 audit sample of incidents (except the ten unannounced 11kV and the ten unannounced LV incidents) in advance of carrying out the audit visit to each DNO.

2.5 The pilot audit visit to WPD was carried out completely unannounced.

2.6 Updated accuracies of each DNO's measurement systems and the accuracies of each DNO's reporting using these systems were then calculated based upon the information gained during the audit visit. The accuracies of Stages 1 and 2 were then combined automatically in Ofgem's incident-auditing workbook to give the reduced sample Stage 4 Overall reporting accuracy for each licensed area. This process built directly upon the lessons acquired from previous audits.

2.7 All DNOs passed the Stage 2 level of accuracy and Stage 3 was therefore not required.

Audit Process Stage 1

2.8 This relates to the calculation of HV and LV MPAN accuracy. The calculation of MPAN accuracy is the same as for the audit of reporting years 2005/06 to 2008/09, which reflects the number of primary traded MPANs active in a DNO's connectivity model relative to its total number of customers from MPRS. Taking MPAN count in MPRS as 100% accurate, the MPAN accuracy for HV and LV is then taken as the number of MPANs in the connectivity model capable of attracting CI and CML at the relevant voltage level expressed as a percentage of MPANs in MPRS. It is calculated as follows:

- HV/LV MPAN Accuracy = (Total number of primary traded MPANs assigned to true feeders at HV and above or LV as appropriate) / (Total number of primary traded MPANs).

2.9 MPAN accuracy can be greater than 100% if there is a delay in removing disconnected MPANs in the connectivity model relative to MPRS.

2.10 At LV, MPANs attached to true feeders (as opposed to dummy feeders or other temporary holding arrangements) in the DNO's connectivity model will be registered as losing supply when the feeder or substation to which they are attached becomes disconnected from the distribution system. These are therefore capable of attracting CI and CML even though they may not be correctly connected within the DNO's connectivity model. By comparison, LV MPANs not connected to true feeders (e.g. connected to dummy feeders or postcodes that never lose supply) are not capable of attracting CI and CML. At the higher voltage levels, MPANs attached to dummy LV feeders will lose supply when the substation becomes disconnected and, in this case, would attract CI and CML.

2.11 MPANs attached to true feeders may not be attached to the correct feeder or substation for a variety of reasons and this would give rise to incorrect reporting of CI and CML for a proportion of individual incidents. However, audit work in previous years supports the view that the number of MPANs connected to incorrect feeders or substations is low, randomly distributed and continues to diminish in all licensed areas.

2.12 An audit questionnaire was prepared to enable visiting auditors to check the on-going accuracy of the connectivity model in each licensed area and to ensure that DNOs are retaining the focus on its continual improvement. The questionnaire circulated to DNOs prior to the audit visits examined the following:

- Any changes that DNOs have made to the way that they interpret the definition and guidance contained in the RIGs version 5 since their introduction on 01 April, 2005;

- Any changes that DNOs have made to the way in which they identify primary traded MPANs;
- Outputs from quality control and monitoring of primary traded MPAN systems and connectivity models;
- Any future changes that DNOs have planned for their measurement systems; and
- Follow-up to any recommendations that had been made as a result of the audit for the 2008/09 reporting year.

2.13 In their answers to the questionnaire the DNOs were asked to identify the effects of their methodologies on connectivity model accuracy together with supporting calculations.

2.14 In order to determine the finalised Stage 1 MPAN accuracy for the overall sample used in the combined accuracy calculation, Ofgem's automated incident-auditing workbook calculated a weighted average of the higher voltage MPAN accuracy and LV MPAN accuracy based on the contribution to overall annual higher voltage and LV CI.

Audit Process Stages 2 and 3

2.15 Stage 2 of the 2009/10 audit consisted of the audit of incidents and the combination of results into the incident reporting accuracies by means of Ofgem's automated incident-auditing workbook.

2.16 Ofgem selected a sample of 150 incidents from each licensed area, split between HV and above and LV according to the respective contribution to CI and CML (with a minimum of 50 LV incidents). The samples were split into two parts, Stage 2 and Stage 3 such that:

- The Stage 2 Overall samples consisted of 50 HV and above incidents and 30 LV incidents (i.e. a total of 80 incidents). The 30 LV incidents also made up the Stage 2 LV samples; and
- The Stage 3 Overall samples consisted of all 150 HV and above and LV incidents. All the LV incidents (minimum 50) made up the Stage 3 LV samples.

2.17 Following the recommendation from the previous years' audits, Ofgem did not circulate the Stage 3 audit samples to the DNOs ahead of the audit visits as this saved abortive preparation time for the DNOs.

2.18 Spare incidents were included to substitute for incidents that might prove impossible to audit.

2.19 The ten unannounced 11kV incidents and the ten unannounced LV incidents were audited directly from the DNOs' measurement systems without the DNOs having had to pre-prepare documented audit trail information.

2.20 The audit team audited each of the incidents in the Stage 2 sample initially and then used the incident-auditing workbook to calculate the Stage 2 accuracy figures. All the calculated Stage 2 Overall and Stage 2 LV accuracies met the requisite threshold levels and the audit of incidents was concluded at this Stage.

2.21 The audit process took the following factors into account:

- The number of customers affected by each restoration stage of each incident as reported to Ofgem;
- How this number related to both the audit trail (information generated at the time of the incident recorded in field records, switching logs or other measurement systems) and the number of customers shown on the DNO's connectivity model;
- The reported duration of each stage of each incident and how this compared with the audit trail for the incident that occurred (e.g. the time of the first customer call registered in the call logs and restoration times recorded in field records, switching logs or other measurement systems);
- Whether each incident had been captured by the measurement systems by comparing customer and incident reports and whether logged network events related to relevant incident reports; and
- Comparing the location of each incident within the distribution networks with the representation in the measurement systems.

2.22 The audit team determined an "audited" value for the number and duration of interruptions for each restoration stage for each incident. This value was then compared against the original reported results to measure the level of accuracy/inaccuracy. The audit team recorded the source of any inaccuracies for later analysis.

2.23 Throughout the process the visiting auditors took care to ensure that any lack of information did not lead to bias in the audit results.

2.24 The Consortium auditor(s) worked on the higher voltage incident sample and the Ofgem auditor(s) on the LV sample. Whilst the visiting auditors worked in parallel this did not prevent discussions between them where questions of understanding or interpretation arose.

2.25 The audit of incidents examined the consistency and accuracy of the following processes:

- Data capture by telephone operators;
- Network control room data capture;
- Capture of field data within DNOs' measurement systems; and
- Data links to the fault reporting system (e.g. PC-NaFIRS).

2.26 Each sample incident was checked for consistency and accuracy of the following information from relevant DNO measurement systems:

- Identification of restoration stages within the incident;
- Time stamping of the start and finish of each restoration stage within the incident;
- Location of the incident; and
- Identification of the number of customers affected by each restoration stage within the incident.

2.27 Information was extracted through live online access to current DNO systems or through examination and verification of time stamped system printouts taken at the time of the incident together with time stamped reports from field staff.

2.28 In the event of particular incidents being too complex or impossible to audit, spare incidents were substituted in a pre-determined sequence provided by Ofgem.

2.29 DNOs also had the opportunity to record their views in the DNO figure columns and the comments columns of the incident-auditing workbook but no DNO opted to use this facility.

Audit Process Stage 4

2.30 The Stage 4 Overall and LV reporting accuracies were calculated in the automated incident-auditing workbook. Relevant details of the calculation procedure and output from the workbook are set out in Appendix A.

2.31 Each audit visit concluded with a review session where the main points arising from the visit were discussed with the DNO team and any learning points relevant to the conduct of future audit visits were shared. Both the visiting auditors and the DNO audit team retained the following audit visit documentation:

- A date stamped and signed hard copy of the consolidated questionnaire, issues list and sign-off document;
- A date stamped and signed hard copy of the audit visit report and interim results;
- An electronic copy of the completed audit questionnaire; and
- An electronic copy of the completed incident-auditing workbook that would be subject to a QA check before the interim results could be confirmed.

3 Audit Results

Overview

3.1 The QoS IIS audit visits to DNOs for the 2009/10 reporting year took place between April and May 2010. A summary of the visit programme is set out in Table 1.

Table 1 Audit Visit Programme

Licensed Area	Dates	Location
WPD – Sth Wales and Sth West	12 and 13 April	Cardiff
CN – East and West	10 and 11 May	Castle Donington
EDFE – EPN, LPN and SPN	12 and 13 May	Ipswich
SPD	18 May	Kirkintilloch
SSE – SEPD and SHEPD	19 and 20 May	Perth
CE – NEDL and YEDL	24 and 25 May	Leeds
ENW (UUES)	26 May	Manchester
SPM	27 May	Prenton

3.2 The visiting auditors were well supported by the DNO audit teams and the pre-visit preparation by each DNO team was of a high standard. It was the visiting auditors' responsibility to retain the master consolidated incident-auditing workbook at the end of each day's work.

MPAN Accuracy

Summary of Findings

3.3 Table 2 summarises the results of the incident-auditing workbook calculation used to determine the Overall MPAN accuracy from the higher voltage and LV MPAN accuracy results. This is the average of the higher voltage MPAN accuracy and LV MPAN accuracy weighted by their annual respective contributions to total CI.

Table 2 Higher voltage, LV and Overall MPAN Accuracies

Licensed Area	Higher voltage MPAN Accuracy	LV MPAN Accuracy	Higher voltage Weighting	LV Weighting	Overall MPAN Accuracy
CE – NEDL	99.61%	99.58%	75.35%	24.65%	99.61%
CE – YEDL	99.91%	99.94%	79.66%	20.34%	99.92%
CN – East	99.94%	99.94%	87.02%	12.98%	99.94%
CN – West	99.77%	99.77%	89.09%	10.91%	99.77%
EDFE – EPN	100.00%	99.68%	89.90%	10.10%	99.97%
EDFE – LPN	100.00%	99.59%	52.31%	47.69%	99.81%
EDFE – SPN	100.00%	99.63%	91.96%	8.04%	99.97%
ENW (UUES)	99.55%	99.59%	79.72%	20.28%	99.55%
SPD	98.72%	98.73%	83.30%	16.70%	98.72%
SPM	99.32%	99.33%	85.27%	14.73%	99.32%
SSE – SEPD	100.00%	99.99%	81.88%	18.12%	100.00%
SSE – SHEPD	100.00%	100.00%	90.11%	9.89%	100.00%
WPD – Sth Wales	99.97%	100.00%	86.90%	13.10%	99.97%
WPD – Sth West	99.99%	99.99%	79.88%	20.12%	99.99%

DNO Changes since the audit of reporting year 2008/09

3.4 The key points on DNO's measurement systems and reporting procedure changes since the audit of reporting year 2008/09 are set out in Table 3. Full details for each licensed area are set out in Appendices B to O of this report.

Table 3 Changes to DNO Systems and Procedures

Change Area	Comment
Interpretation of RIGs version 5	Rigs version 5 came into effect on 01 April 2005 and no DNO has changed its interpretation of them since that time.
MPAN accuracy	DNOs generally have not made changes to the processes they use for new connections and disconnections of MPANs. Links between MPRS and connectivity models have not generally changed. All DNOs consider they have reached the stage at which the accuracy of MPAN count is very near to 100%, and in view of the daily processing of MPANs connected and disconnected they believe it is not practicable to achieve further improvements. DNOs generally have well-developed data quality processes and they have used these throughout the reporting year to maintain the high standards of accuracy achieved, with on-going data cleansing taking place on a routine basis.
Connectivity model	The calculation required to complete the "Connectivity Model" accuracy is the same as that used during the audits of previous reporting years' QoS Incentive Scheme information and therefore provides for consistency across successive audit visits. Most DNOs have not made significant changes to their connectivity models but in many cases have made incremental improvements to accuracy by moving MPANs to the correct feeder where new information is collected from customer no-supply calls, fault restoration work, planned interruptions and construction and maintenance work. The visiting auditors are pleased to note that DNOs have processes in place to update and refine connectivity models and that these processes generally appear to be working well. SP has begun to introduce a replacement GIS system that will have an LV feeder tracing system similar to that already available in its higher voltage measurement systems.
Processes	Several DNOs included new people on their IIS audit this year, thus increasing the knowledge base within their companies.
Potential sources of error remaining	Most DNOs still consider that the remaining sources of error in measurement systems are minor and from known sources, such as the difficulty of attaching MPANs to the correct feeder in urban areas and near feeder boundaries, and a combination of inaccurate supplier information, unrecorded disconnected MPANs and address errors. DNOs adopt various day-to-day incremental improvement strategies to refine accuracy and some consider that they have reached the trade-off balance between accuracy and cost in measurement systems.
Future changes planned	EDFE (EPN and LPN) is working towards the auto-population of its incident reports. SP is working towards the replacement of its current ICOND and Troublecall systems to provide for improved interfaces, one attribute of which will be to auto-populate its incident reports. WPD is planning to migrate to ENMAC version 4 during the reporting year 2010/11, cutting over from version 3 using a fully auditable approach.

Accuracy of Incident Reporting

Summary of Findings

3.5 Table 4 summarises the findings across the licensed areas on Overall and LV reporting accuracies.

3.6 All fourteen licensed areas passed the levels of accuracy required of the reduced sample of incidents and the results in Table 4 are therefore the combination of Stages 1 and 2 of the audit process.

Table 4 Incident Reporting Accuracies

Licensed Area	Overall CI	Overall CML	LV CI	LV CML
CE – NEDL	99.61%	99.40%	99.58%	98.26%
CE – YEDL	99.92%	99.93%	99.85%	99.96%
CN – East	99.92%	99.92%	99.25%	99.23%
CN – West	99.77%	99.75%	99.67%	99.46%
EDFE – EPN	99.79%	99.29%	96.26%	95.98%
EDFE – LPN	99.86%	99.80%	97.74%	98.80%
EDFE – SPN	99.99%	99.75%	99.08%	97.89%
ENW (UUES)	99.59%	99.50%	99.89%	99.16%
SPD	98.69%	98.70%	98.73%	97.89%
SPM	99.32%	99.47%	97.70%	98.39%
SSE – SEPD	100.00%	99.98%	98.57%	98.11%
SSE – SHEPD	100.00%	99.92%	99.43%	99.14%
WPD – Sth Wales	99.96%	99.93%	99.69%	94.46%
WPD – Sth West	99.96%	99.98%	98.54%	99.98%

3.7 It is the Consortium's opinion that all reporting under the QoS Incentive Scheme for the reporting year 2009/10 meets the required level of accuracy at Stage 2 of the audit process.

Sources of Reporting Variances

3.8 Details of the audit of incident reporting for each licensed area are set out in the relevant Appendix to this report. Comments on the common issues are set out in Table 5.

Table 5 Sources of Reporting Variances

Source	Comment
Manual transcription errors	In general DNOs that had fewer measurement system stages requiring manual intervention to transfer information to fault reporting systems continue to experience fewer transcription errors. In licensed areas where progress on the reduction of transcription errors had been made, visiting auditors again noted that this was achieved by continuing to put on-going effort into: • Staff understanding the importance of capturing information accurately to meet regulatory reporting obligations; • Staff training in the use and capability of measurement systems and the overall fault reporting process; and • Robust internal auditing of incident reporting to reduce problems and to identify and introduce changes to minimise common types of error.
Network reconfiguration	Network reconfiguration can introduce variances when comparing reported numbers of customers interrupted with current system values. These are normally due to a new section of network being added since the date of the incident or abnormal running conditions at the time of the incident. Certain DNOs have systems more capable of producing evidence of the running arrangement at the time of the incident than others. However, in most cases it was possible to get back to the network configuration at the time of the incident. Visiting auditors again noted a continuing improvement in the audit trails associated with this aspect of the DNOs' operations. The visiting auditors were again pleased to note the increasing number of helpful notes embedded within DNOs' measurement systems that indicated where a circuit was running abnormal at the time of the incident.
Customer number changes since the incident	Changes in customer numbers since the incident can be caused by: • Network reconfiguration; • MPAN commissioning/decommissioning; and • Data cleansing. Differences were again noted between the DNOs on the ability to track MPAN changes and the associated network connectivity. DNOs that can accurately track MPANs are better able to explain variances. DNOs generally have no need to determine the former connectivity of decommissioned MPANs and most have no measurement systems in place to do so. Consequently, there were again fewer corresponding variances recorded in the incident-auditing workbooks of those DNOs that were able to provide robust auditable evidence of the number of customers affected at the time of an incident.
Quality of incident reports	Generally, the visiting auditors noted that there is a continuing improvement in the quality of information captured in DNOs' measurement systems but the frequency of transcription errors during the transfer of source data into fault reports is still an area of weakness for some. As reported in previous years, the retention of more information to assist in establishing a clear audit trail (e.g. storing information about abnormal running conditions at the time of the incident) was particularly useful in several instances.

Source	Comment
Incident start time	Several instances were found where DNOs are using the time of reports of 'low-voltage' or are not using the time of the first no-supply call as the incident start time, when no report has been received that one or more customers have lost supply. The Consortium confirms its previous recommendation that a DNO should not consider an interruption to have started until it receives a report that supplies have been lost. Similarly, DNOs should not wait until the time of the second 'no-supply' call before starting the interruption.

Non-reported 'Incidents'

Summary of Findings

3.9 In all cases the visiting auditors found that DNOs' records supported the fact that the non-reported 'incidents' were correctly classified.

Quality of Telephone Response

Summary of Findings

3.10 The visiting auditors found that DNOs' records supported the information that had been submitted to Ofgem's consultants for follow-up in relation to the quality of telephone response survey.

3.11 Where details of callers had not been submitted, DNOs' records again showed that this was due to one of the following reasons:

- a customer not wishing to take part in the survey;
- callers with ex-directory telephone numbers;
- details of the telephone number being unconfirmed; or
- situations where a third party had called on behalf of someone and did not wish to take part in the survey.

3.12 The approach adopted for previous reporting years was again used this year.

'Clock-stopping'

Summary of Findings

3.13 The use of clock-stopping was found to vary between DNOs. Some DNOs use it infrequently and some use it a great deal, particularly at LV.

3.14 In all cases, DNOs were able to justify the use of clock-stopping as provided for in RIGs version 5.

3.15 However, the visiting auditors found the words "agreed with the customer" or "the customer agreed" … (to stay off supply) within trouble-call logs, wording which does not indicate rig compliance, even if the underlying reason for the use of clock-stopping is correct.

3.16 The visiting auditors understand the reasons for the use of these words as they form a natural 'human' conclusion to a telephone conversation between a customer and the DNO but they can easily be misconstrued in an audit setting and DNOs are advised to stop their use.

4 Key Lessons Learnt

Comments on DNO Practice

4.1 Table 6 shows a summary of overall comments from the visiting auditors on DNO audit practice. Detailed comments on each Licensed Area are set out in the relevant Appendix to this report.

Table 6 Summary of Comments on DNO Practice

Subject	Comments
Pre-visit preparation	The visiting auditors again wish to acknowledge the high levels of pre-visit preparation work carried out by DNOs and for their collaborative approach to the audit process. It is essential for the DNO to ensure adequate audit trails are available with supporting documentation to hand from local office files and field logs where appropriate.
Visit logistics	All audit visits progressed very smoothly as DNOs generally provided a small number of experienced and well prepared experts with system operation skills to enable incidents to be re-created on the DNO's measurement system, explain the audit trail, and respond promptly to the visiting auditors' questions. The facilities provided by the DNOs for conduct of future audits should continue to meet the following requirements: • Quiet areas away from the general office environment for the higher voltage and LV audits with space to spread out drawings and other paperwork and close access to power points for laptop PCs; • Facilities to access DNO measurement systems; • Experienced operators fully briefed by managers with overall responsibility for QoS Incentive Scheme and empowered to make decisions on variations on behalf of DNOs; and • Appropriate facilities for a formal sign-off meeting.
Audit trail	Best practice audit trails regarding changes in customer numbers between the date of the incident and the date of the audit visit were again found to include: • Electronic records of those customers affected at the time of the incident as compared with current system values; • Time-stamped measurement system documentation and/or "frozen" information held on a computer database showing the number of customers affected at the time of the incident; and • Scripts showing MPAN creation and deletion dates; both post- and pre-incident.

Points for Ofgem

4.2 Table 7 summarises the points arising from the audit visits for consideration by Ofgem.

Table 7 Summary of Points for Ofgem's Consideration

Subject	Point
Future IIS audits	All DNOs indicated their wish to continue with the annual IIS audits and its current visiting team composition of an Ofgem auditor plus an industry-experienced person. Some DNOs added that they are willing to participate with Ofgem in scoping any format changes that would add additional dimension and rigour to the audit.
Sampling regime	The inclusion in the process of a number of unannounced incidents at both the LV and 11kV levels prior to the audit visit again provided an added degree of audit rigour. The number of unannounced incidents could usefully be increased in future audit visits, subject to the time taken to extract the audit trail information from those licensed areas with partially manual systems. Consider the categories by which DNOs record non-reportable "incidents" with a view to introducing a more uniform system to give the visiting auditors more confidence that this aspect of the DNOs' reporting is being managed. An example of categorisation was included in section 5 of the audit report for reporting year 2008/09.
Stage 2 and Stage 3 samples	The current process whereby Ofgem only issues the Stage 2 audit sample prior to the audit visit saved the DNOs a considerable amount of abortive pre-visit preparation work and should be repeated in future audits. Similarly, Ofgem may wish to consider not issuing the spares before the audit visit.
Non-reported incidents	The inclusion of a sample of non-reported incidents was again found to be a valuable addition to the audit process and it is strongly recommended that this is continued in future audits.
Quality of telephone response	Continue to include a cross-check between DNO records and the returns submitted to Ofgem's quality of telephone response consultants.
'Clock-stopping'	Continue to include a sample of incidents where clock-stopping has been used. Consider publicising the number of incidents where clock-stopping has been used per DNO per rig number. The time needed to correctly identify and to subsequently audit most clock-stopping incidents does not generally appear to be cost effective when viewed from the small impact its removal would have on a DNO's reported performance. Ofgem should continue to review the provision of clock-stopping with a view to restricting its future use to all but the most onerous of circumstances such as that where access is "explicitly prevented"
Regulatory Instructions and Guidance	Table 8 of this report provides a summary of the issues that have arisen during the annual IIS audit of reporting year 2009/10.
Visit sign-off	The adoption of the visit sign-off meeting with the streamlined pro-forma audit report and the inclusion of an Ofgem team member as part of the audit team were again found to be beneficial. This adds weight to the discussions and allows Ofgem to directly witness the discussion of the findings of the audit visits.

Issues Arising

4.3 The visiting auditors are pleased to note that DNOs are taking the opportunity of the annual audit visit to discuss situations where some clarification on incident reporting would be welcome.

4.4 Table 8 lists the key audit issues and their resolution arising from this year's audit visits. Please note that other issues arose but these have been addressed in the latest version of the RIGs.

Table 8 Key audit issues arising during the course of this year's audit visits

N°	Issue	Resolution
1	One DNO's current LV Guidance indicates that 'strapping over' to a healthy phase is not reported as a temporary restoration.	This is not rig-compliant: it should be treated as a temporary restoration. It is clarified in the latest version of the RIGs as a 'temporary supply arrangement' provided via a 'temporary connection'.
2	One DNO discussed a specific incident involving an LV neutral-fault. The discussion widened to querying how to record the start time of any incident affecting the LV neutral conductor, where the voltage at customers' premises can vary from zero through 'low' voltage to 'high' voltage dependant upon the instantaneous loading of the affected feeder.	The incident start time should be recorded as and when the first "no supply" call is received by the DNO, which can include instances where a DNO asks a customer to switch off the main switch and await the attendance of the DNO's personnel. In any event, a DNO's Customer Contact Centre operators should deduce if a true no supply exists or whether a high/low volts situation is present through questioning the customer. If the DNO has not received a call and is aware that customers have been deliberately disconnected then the time of disconnection should be used as the incident start time.
3	What auditable evidence is needed to record customer numbers where a pre-arranged interruption does not affect a whole LV feeder	It is expected that a DNO will be able to demonstrate exactly which part of an LV feeder was affected by a pre-arranged interruption by having recorded the point (or points) where a feeder was disconnected.
4	Contract tree trimming was being carried out along a feeder with separate sections being affected at different times. The DNO had insufficient audit records to show the start and end times of the various pre-arranged interruptions and the DNO had recorded the overall start and end times for each separate section of the feeder.	For accuracy of reporting, DNOs should ensure that the start and end times of each pre-arranged interruption are captured in their measurement and recording systems.
5	During the LV audit at a DNO, an instance was found where the use of the 'predicted number' of customers affected would have resulted in an inaccurate report but for manual intervention before the incident was input into Ofgem's template for the DNO's annual IIS report	Whilst predicted numbers are generally found to be helpful, this instance highlights the potential problem of following the predicted number without question. The visiting auditors have always counselled DNOs to check the number of customers affected by an incident, irrespective of 'predictions' or not.

5 Reported Performance in line with DPCR5

General

5.1 Reporting year 2009/10 was the fifth and final reporting year under Distribution Price Control 4 (DPCR4) and Regulatory Instructions and Guidance version 5 (RIGs v5). A new RIGs document came into effect at the start of DPCR5 on 01 April 2010[3].

5.2 Under DPCR4 DNOs had to meet two separate levels of reporting accuracy:

a. at the overall level; and

b. at the LV Level.

5.3 Under DPCR5, DNOs are required to meet three separate levels of reporting accuracy:

a. at the combined 132kV and EHV levels;

b. at the HV level; and

c. at the LV Level.

5.4 Ofgem has chosen to alter the thresholds for the higher voltage levels being audited, as in the past, a few incidents of larger than the average size could fundamentally alter the accuracy of the auditing process. A significant variance in one of these could swing a DNO's result in either a positive or a negative way.

5.5 To reduce this variability for the DPCR5 reporting period, instead of comparing the entire sample for accuracy, Ofgem has decided to audit the DNO samples at the following levels:

a. 132kV and Extra High Voltage (voltage levels above 20kV, but less than 132kV);

b. High Voltage (voltage levels above 1kV and up to and including 20kV); and

c. Low Voltage (all voltages up to and including 1kV).

5.6 In order to provide an indication of current performance, the audit results for the Stage 2 samples for reporting year 2009/10 have been recalculated as will be required under DPCR 5. It should be noted that this is the first time the new methodology has been used and therefore this report is simply outlining the potential outcome under the DPCR5 approach.

5.7 The results under the new methodology are more varied than under the DPCR4 approach. Whereas previously each DNO passed the threshold, a number have now failed to satisfy the minimum criteria.

5.8 Table 9 shows the results for the combined 132kV and EHV levels under DPCR5, where the required threshold is 99%.

5.9 Table 10 shows the results for the HV level under DPCR5 where the required threshold is 97%.

[3] http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/Electricity%20Distribution%20NADPR%20RIGs.pdf

5.10 Table 10 shows the results for the LV level under DPCR5, where the required threshold is 93%. The only difference under DPCR5 is that the required threshold has been increased by 1%.

5.11 In each case, outliers have been excluded.

Table 9 Stage 2 132kV & EHV 2009/10 reported performance under DPRCR5

Licensed Area	CI (Minimum Requirement 99%)	Result (Pass or Fail)	CML (Minimum Requirement 99%)	Result (Pass or Fail)
CE – NEDL*	-	-	-	-
CE – YEDL	99.91%	Pass	99.91%	Pass
CN – East	99.94%	Pass	99.94%	Pass
CN – West	99.77%	Pass	99.77%	Pass
EDFE – EPN	100.00%	Pass	98.91%	Fail
EDFE – LPN	100.00%	Pass	100.00%	Pass
EDFE – SPN	99.91%	Pass	99.84%	Pass
ENW (UUES)	99.55%	Pass	99.55%	Pass
SPD	98.72%	Fail	98.72%	Fail
SPM	99.32%	Pass	99.32%	Pass
SSE – SEPD	100.00%	Pass	100.00%	Pass
SSE – SHEPD	100.00%	Pass	100.00%	Pass
WPD – Sth Wales*	-	-	-	-
WPD – Sth West	99.99%	Pass	99.99%	Pass

Note

* It was not possible to guage the performance for these DNOs as there was only one incident at this level for each of them.

Table 10 Stage 2 HV 2009/10 reported performance under DPRCR5

Licensed Area	HV CI (Minimum Requirement 97%)	Result (Pass or Fail)	HV CML (Minimum Requirement 97%)	Result (Pass or Fail)
CE – NEDL	99.61%	Pass	99.62%	Pass
CE – YEDL	99.91%	Pass	99.91%	Pass
CN – East	99.94%	Pass	99.94%	Pass
CN – West	99.77%	Pass	99.77%	Pass
EDFE – EPN	98.45%	Pass	96.65%	Fail
EDFE – LPN	100.00%	Pass	99.98%	Pass
EDFE – SPN	99.97%	Pass	99.31%	Pass
ENW (UUES)	99.55%	Pass	99.55%	Pass
SPD	98.72%	Pass	98.72%	Pass
SPM	99.32%	Pass	99.32%	Pass
SSE – SEPD	100.00%	Pass	100.00%	Pass
SSE – SHEPD	100.00%	Pass	99.93%	Pass
WPD – Sth Wales	99.97%	Pass	99.97%	Pass
WPD – Sth West	99.99%	Pass	99.97%	Pass

Table 11 Stage 2 LV 2009/10 reported performance under DPRCR5

Licensed Area	LV CI (Minimum Requirement 93%)	Result (Pass or Fail)	LV CML (Minimum Requirement 93%)	Result (Pass or Fail)
CE – NEDL	99.58%	Pass	98.26%	Pass
CE – YEDL	99.85%	Pass	99.96%	Pass
CN – East	99.25%	Pass	99.23%	Pass
CN – West	99.67%	Pass	99.46%	Pass
EDFE – EPN	96.26%	Pass	95.98%	Pass
EDFE – LPN	97.74%	Pass	98.80%	Pass
EDFE – SPN	99.08%	Pass	97.89%	Pass
ENW (UUES)	99.89%	Pass	99.16%	Pass
SPD	98.73%	Pass	97.89%	Pass
SPM	99.85%	Pass	98.90%	Pass
SSE – SEPD	98.57%	Pass	98.11%	Pass
SSE – SHEPD	99.43%	Pass	99.14%	Pass
WPD – Sth Wales	95.10%	Pass	94.43%	Pass
WPD – Sth West	99.10%	Pass	99.91%	Pass

Appendix A. Incident-Auditing Workbook Calculations

Once all the Stage 2 higher voltage and LV incidents had been audited the audit team used the results to estimate the accuracy / inaccuracy of the DNO's reported information. This involved four main steps (all the relevant calculations being embedded within the incident-auditing workbook supplied by Ofgem):

- Excluding any outlying incidents where the difference between audited and reported results is greater than the mean +/- 4 standard deviations;
- Expressing the total accuracy of the sample as a percentage of the total audited numbers;
- Combining the accuracy of reporting from Stage 2 of the audits with the accuracy of MPANs from Stage 1; and
- Summarising final accuracy/inaccuracy figures.

Stage 4 was re-run where either the Stage 3 overall sample or the Stage 3 LV sample was audited.

The following Table summarises the number of incidents substituted for each DNO, the voltages involved, and the key reasons for substitution:

Table 12 Number of Incidents Substituted

Licensed Area	Number of incidents substituted	Voltage levels and key reasons
CE – NEDL	0	N/A
CE – YEDL	3	1 HV – due to the lack of an audit trail for the restoration times of LV feeder-ways 1 LV – due to several customer number changes that could not be re-created. 1 LV PA – due to the non availability of the supporting paperwork
CN – East	0	N/A
CN – West	1	1 LV – due to a potentially spurious no-supply call prevented verification of customer count
EDFE – EPN	1	1 LV – due to an insufficient audit trail to be sure of its details
EDFE – LPN	3	1 HV – due to the switching records being in deep storage 1 LV – due to the network being abnormal at the time of the incident 1 LV – due to insufficient details of a customer to network connection
EDFE – SPN	0	N/A
ENW (UUES)	0	N/A
SPD	0	N/A
SPM	3	1 LV – due to recent network changes 1 LV – due to an incomplete audit trail 1 LV PA - due to an incomplete audit trail

Licensed Area	Number of incidents substituted	Voltage levels and key reasons
SSE – SEPD	1	1 LV – due to a non-confirmable number of customers attached to a section of network
SSE – SHEPD	0	N/A
WPD – Sth Wales	1	1 LV – due to the lack of a verifiable interruption time
WPD – Sth West	1	1 LV – due to the lack of an auditable interruption time

The following Table summarises the number of outlying incidents for each DNO at the relevant voltage levels.

Table 13 Number of Outliers

Licensed Area	Number of outlying incidents	Sample	
		Overall	LV
CE – NEDL	4	1 on CI 2 on CML	1 on CI
CE – YEDL	4	2 on CI 1 on CML	1 on CML
CN – East	3	2 on CML	1 on CML
CN – West	2	1 on both CI and CML	1 on both CI and CML
EDFE – EPN	3	1 on CML 1 on both CI and CML	1 on CI
EDFE – LPN	3	2 on CML 1 on both CI and CML	None
EDFE – SPN	5	1 on CI 1 on CML 1 on both CI and CML	1 on CI 1 on CML
ENW (UUES)	4	2 on CI 1 on CML	1 on CML
SPD	3	1 on CI 1 on CML 1 on both CI and CML	None
SPM	5	2 on CI 1 on CML	1 on CI 1 on CML
SSE – SEPD	3	1 on CI 1 on CML 1 on both CI and CML	None
SSE – SHEPD	5	4 on CI 1 on CML	None
WPD – Sth Wales	4	1 on CML 1 on both CI and CML	1 on CI 1 on CML
WPD – Sth West	3	1 on CML 1 on both CI and CML	1 on CI

The following Table sets out a summary breakdown from the incident-auditing workbooks of the numbers of audited incidents with audit variances. Please note that a variance in CI will generally result in an equivalent variance in CML, whereas the reverse is not the case. The CI and CML figures in the sample rows are therefore not additive.

Table 14 Number of Incidents with Variances

Licensed Area	Number of incidents with variances			
	Overall Sample		LV Sample	
	CI	CML*	CI	CML*
CE – NEDL	6	9	6	6
CE – YEDL	2	5	2	4
CN – East	5	7	5	7
CN – West	3	2	3	2
EDFE – EPN	16	26	8	12
EDFE – LPN	18	20	17	17
EDFE – SPN	14	16	10	11
ENW (UUES)	11	15	11	14
SPD	8	8	8	8
SPM	6	12	6	7
SSE – SEPD	7	10	7	10
SSE – SHEPD	4	7	4	5
WPD – Sth Wales	2	5	2	4
WPD – Sth West	6	8	6	6

Note:

* Figures relate to the total number of incidents with CML variances as a result of either CI or time variances or both.

Appendix B. Audit Report for the CE - NEDL Licensed Area

Introduction

Visit Details	
Date of audit visit:	24 and 25 May 2010
Location of audit visit:	CE Electric's Control Centre at Leeds
Visiting Auditors:	Tom Wood (Ofgem) and Geoff Stott (BPI)
DNO Auditing Team:	Tony Ingham, Mark Johnstone, Jeremy Meara, Danielle Oates, Ian Punshon and Brian Walton

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are currently planned.
Connectivity model	No future changes are currently planned.
Processes	No future changes are currently planned.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents.	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used.	None
	Main sources of reporting error.	Three incidents contained minor errors in start times, two of which related to the non-use of the time of the first no-supply call.
	Issues identified	As above
LV Incidents	Number of unauditable incidents and spares used.	None
	Main sources of reporting error.	Four incidents contained minor errors in customer number count. Another incident had an unverifiable start time.
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	100.00%	99.61%	99.61%	97%	Pass
Overall CML Accuracy	99.80%	99.61%	99.40%	97%	Pass
LV CI Accuracy	100.00%	99.58%	99.58%	92%	Pass
LV CML Accuracy	98.68%	99.58%	98.26%	92%	Pass

CE Electric - NEDL passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Higher Voltages	30	30	0
Low Voltage	50	50	0
Pre-arranged	20	20	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher Voltages	5	5	0
Low Voltage	15	15	0

Audit of telephony details returned to Ofgem

The visiting auditors examined NEDL's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In all cases, NEDL demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional comment from this year's audit
The visiting auditors are pleased to note NEDL's inclusion of a new team member in this year's IIS audit, thus spreading this aspect of its IIS expertise within its team. The visiting auditors are also pleased to note that NEDL's extended internal audit regime includes new people, thereby spreading IIS expertise within its team, including feedback and lessons learned and identifying areas of particular weakness where refresher training may be beneficial.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The visiting auditors acknowledge that NEDL uses good practice in restarting a clock-stopped period at its normal work start time of 08:00 but recommend that best practice is to restart the clock at the Guaranteed Standard time of 07:00.	NEDL acknowledges the visiting auditors recommendation but has opted to use the customer requested time where this differs from 07:00.	The visiting auditors acknowledge NEDL's comments.
The visiting auditors again strongly recommend that NEDL's initiative to deploy dedicated IRIS specialists is rolled out without delay as basic errors are still apparent in NEDL's reporting.	In parallel with the extended internal audit regime, NEDL has increased its quality assurance checks on its incident reports and is considering what further action is needed to embed this initiative.	The visiting auditors are pleased to note NEDL's initiative.

To:	Recommendation from this year's audit
DNO	The visiting auditors recommend that NEDL re-affirms the need to check the time of first no-supply calls in determining an incident start time.
	During the audit of clock-stopping incidents the audit trail notes in NEDL's TMS for the low voltage level were consistently easy to follow. Within NEDL's NMS at the higher voltage levels it was not consistently so. The visiting auditors therefore recommend that NEDL considers using its TMS system for capturing audit trail notes for clock-stopping incidents at all voltage levels.
Ofgem	CE Electric is strongly in favour of continuing with an annual IIS audit and is happy to participate fully in any discussions and suggestions as to the shape that this may take in the future.

Appendix C. Audit Report for the CE - YEDL Licensed Area

Introduction

Visit Details	
Dates of audit visit:	24 and 25 May 2010
Location of audit visit:	CE Electric's Control Centre at Leeds
Visiting Auditors:	Tom Wood (Ofgem) and Geoff Stott (BPI)
DNO Auditing Team:	Alan Harris, Tony Ingham, Jeremy Meara, Danielle Oates, Ian Punshon and Mike Smith

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are currently planned.
Connectivity model	No future changes are currently planned.
Measurement systems	No future changes are currently planned.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents.	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used.	One incident could not be audited due to insufficient audit trail to verify LV feeder-way restoration times: a spare was used in its place.
	Main sources of reporting error.	One incident contained a minor input error in incident start time.
	Issues identified	As above
LV Incidents	Number of unauditable incidents and spares used.	One incident contained several customer number changes that could not be recreated; a spare was used in its place. The paperwork for one pre-arranged incident could not be found, a spare was used in its place.
	Main sources of reporting error.	Several incidents contained minor non-verified changes in customer numbers. One incident used the wrong restoration time. Another incident used the wrong interruption time.
	Issues identified	As above

Reporting Area	Audit Point	Main Findings
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	100.00%	99.92%	99.92%	97%	Pass
Overall CML Accuracy	100.01%	99.92%	99.93%	97%	Pass
LV CI Accuracy	100.21%	99.94%	99.85%	92%	Pass
LV CML Accuracy	100.10%	99.94%	99.96%	92%	Pass

CE Electric - YEDL passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Higher Voltages	30	30	0
Low Voltage	50	50	0
Pre-arranged	20	20	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher Voltages	5	5	0
Low Voltage	15	15	0

Audit of telephony details returned to Ofgem

The visiting auditors examined YEDL's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In all cases, YEDL demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional comment from this year's audit
The visiting auditors are pleased to note that YEDL's extended internal audit regime includes new people, thereby spreading IIS expertise within its team, including feedback and lessons learned and identifying areas of particular weakness where refresher training may be beneficial.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The visiting auditors were disappointed to see the number of higher voltage incidents in this year's sample that contained errors and recommend that the learning points are shared across YEDL's IIS recording and reporting team.	YEDL has extended its internal audit regime both in numbers of incidents audited and in the cross-references between its various measurement and reporting systems.	The visiting auditors are pleased that YEDL has extended its internal audit regime and are delighted to note the virtual absence of input errors in this year's sample of audited incidents.
The visiting auditors acknowledge that YEDL uses good practice in restarting a clock-stopped period at its normal work start time of 08:00 but recommend that best practice is to restart the clock at the Guaranteed Standard time of 07:00.	YEDL acknowledges the visiting auditors recommendation but has opted to use the customer requested time where this differs from 07:00.	The visiting auditors acknowledge YEDL's comments.
The visiting auditors again strongly recommend that YEDL's initiative to deploy dedicated IRIS specialists is rolled out without delay as basic errors are still apparent in YEDL's reporting.	In parallel with the extended internal audit regime, YEDL has increased its quality assurance checks on its incident reports and is considering what further action is needed to embed this initiative.	The visiting auditors are pleased to note YEDL's initiative.

To:	Recommendation from this year's audit
DNO	The visiting auditors recommend that YEDL considers the lessons from the need to substitute a spare incident at the HV level and builds appropriate cross-references into its measurement and reporting systems.
	During the audit of clock-stopping incidents the audit trail notes in YEDL's TMS for the low voltage level were consistently easy to follow. Within YEDL's NMS at the higher voltage levels it was not consistently so. The visiting auditors therefore recommend that YEDL considers using its TMS system for capturing audit trail notes for clock-stopping incidents at all voltage levels.
Ofgem	CE Electric is strongly in favour of continuing with an annual IIS audit and is happy to participate fully in any discussions and suggestions as to the shape that this may take in the future.

Appendix D. Audit Report for the CN - East Licensed Area

Introduction

Visit Details	
Date of audit visit:	10 and 11 May 2010
Location of audit visit:	CN's offices at Castle Donington
Visiting Auditors:	James Hope (Ofgem), Karl Hurley (Ofgem), Laurence Elner (BPI) and Geoff Stott (BPI)
DNO Auditing Team:	Laura Cooper, Jim Driscoll, Stephen Hayward, Nigel Hoult, Ian Jacob, Manjit Kandola, Amanda Moore and Sarah Thorpe

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	CN East is currently exploring new systems and processes to improve its customer data and connectivity, including an integrated process for raising new MPANs and purchasing improved data from the Royal Mail.
Connectivity model	

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used.	None
	Main sources of reporting error.	No errors were found in the audit sample.
	Issues identified	None – sample 100% correct.
LV Incidents	Number of unauditable incidents and spares used.	None
	Main sources of reporting error.	Minor errors in customer numbers and time inputs. Three incidents contained rounding errors in count of 2/3 customers on feeder.
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	99.99%	99.94%	99.92%	97%	Pass
Overall CML Accuracy	99.98%	99.94%	99.92%	97%	Pass
LV CI Accuracy	99.31%	99.94%	99.25%	92%	Pass
LV CML Accuracy	99.29%	99.94%	99.23%	92%	Pass

CN East passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Mixed	200	200	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher Voltages	5	5	0
Low Voltage	15	15	0

Audit of telephony details returned to Ofgem

The visiting auditors examined CN East's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In each case, CN East demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional audit activity this year
The visiting auditors were again pleased to note the amount of detailed information from Field Control logs in CN East's measurement systems. The visiting auditors were also pleased to note the recently introduced initiative whereby office-based personnel accompanied field operatives delivering pre-arranged notifications of supply interruptions.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
Continue with the approach of including cross-referencing notes in the IIS measurement and reporting systems as these greatly help the auditing process	CN East has continued with its processes of cross-referencing information between its various measurement systems	The visiting auditors are pleased to note the number of cross-references seen within this year's audited incidents and confirm that this greatly enhances the audit trail for both theirs and CN East's purposes
The visiting auditors recommend that CN East reviews the categories by which non-reported "incidents" are classified to reflect the broad reasons for non-reporting	This recommendation currently forms part of the draft revision of the rigs and CN East will incorporate the reporting requirements once the rigs are confirmed	The visiting auditors are pleased that this recommendation to CN East and to Ofgem is being acted upon

To:	Recommendation from this year's audit
DNO	The visiting auditors are pleased to note the excellent results for CN East and recommend that it continues with its rigorous internal auditing regime, the vindication of which is apparent during this year's audit.
	The visiting auditors recommend that CN East continues to reinforce the message regarding what constitutes a reportable incident and are pleased to note that none of the sample of 200 non-reported incidents was mis-classified.
Ofgem	CN East suggests that Ofgem and its Appointed Examiner continue to include new people in the team of visiting auditors.

Appendix E. Audit Report for the CN - West Licensed Area

Introduction

Visit Details	
Date of audit visit:	10 and 11 May 2010
Location of audit visit:	CN's offices at Castle Donington
Visiting Auditors:	James Hope (Ofgem), Karl Hurley (Ofgem), Laurence Elner (BPI) and Geoff Stott (BPI)
DNO Auditing Team:	Laura Cooper, Richard Ellam, Nigel Hoult, Alex Ingram, Ian Jacob, Manjit Kandola Sarah Thorpe and Scott Walters

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	CN West is currently exploring new systems and processes to improve its customer data and connectivity, including an integrated process for raising new MPANs and purchasing improved data from the Royal Mail.
Connectivity model	
SCADA System	CN West is working towards introducing a replacement SCADA system to harmonise with the system currently in use in CN East. The opportunity will be taken to integrate CN West's Trouble Call System into the new SCADA system.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents.	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used.	None
	Main sources of reporting error.	No errors were found in the audit sample.
	Issues identified	None – sample 100% correct.
LV Incidents	Number of unauditable incidents and spares used.	One incident contained a potentially spurious no-supply call that prevented verification of customer count – a spare incident was used in its place.
	Main sources of reporting error.	Two pre-arranged incidents had incorrect customer counts due to increases in the areas to be shutdown not being reflected in the incident reports.
	Issues identified	As above

Reporting Area	Audit Point	Main Findings
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	100.00%	99.77%	99.77%	97%	Pass
Overall CML Accuracy	99.98%	99.77%	99.75%	97%	Pass
LV CI Accuracy	99.90%	99.77%	99.67%	92%	Pass
LV CML Accuracy	99.69%	99.77%	99.46%	92%	Pass

CN West passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Mixed	100	100	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher Voltages	5	5	0
Low Voltage	15	15	0

Audit of telephony details returned to Ofgem

The visiting auditors examined CN West's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. With the exception of two callers who declined to participate in the survey, CN West demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional comment from this year's audit
The visiting auditors are pleased to note CN West's continuance in developing its IIS reporting expertise by introducing young and enthusiastic people as newer members of its team.
The visiting auditors were also pleased to note the recently introduced initiative whereby office-based personnel accompanied field operatives delivering pre-arranged notifications of supply interruptions.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
Continue with the approach of including cross-referencing notes in the IIS measurement and reporting systems as these greatly help the auditing process.	CN West has continued with its processes of cross-referencing information between its various measurement systems.	The visiting auditors are pleased to note the number of cross-references seen within this year's audited incidents and confirm that this greatly enhances the audit trail for both theirs and CN West's purposes.
The visiting auditors recommend that CN West reviews the categories by which non-reported "incidents" are classified to reflect the broad reasons for non-reporting.	This recommendation currently forms part of the draft revision of the RIGs and CN West will incorporate the reporting requirements once the RIGs are confirmed.	The visiting auditors are pleased that this recommendation to CN West and to Ofgem is being acted upon.

To:	Recommendation from this year's audit
DNO	The visiting auditors are pleased to note the excellent results for CN West and recommend that it continues with its rigorous internal auditing regime, the vindication of which is apparent during this year's audit.
	The visiting auditors recommend that CN West reviews its processes for reporting pre-arranged interruptions to ensure that increases in the original scope of work and the number of customers affected are captured in the associated incident reports.
	For pre-arranged interruptions the visiting auditors recommend that CN West reinforces the message regarding adding audit trail notes in its measurement systems where a reduced number of customers is affected than 'carded'.
Ofgem	CN West suggests that Ofgem and its Appointed Examiner continue to include new people in the team of visiting auditors.

Appendix F. Audit Report for the EDFE - EPN Licensed Area

Introduction

Visit Details	
Dates of audit visit:	12 and 13 May 2009
Location of audit visit:	EDF Energy's Ipswich Control Centre
Visiting Auditors:	James Hope (Ofgem), Karl Hurley (Ofgem) and Geoff Stott (BPI)
DNO Auditing Team:	Bill d'Albertanson, Chris Barker, Adrian Hall, Ken Tew, Martyn Woodhouse, Dave Young and Kevin Yule

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are planned
Connectivity model	No future changes are planned
Control System	Once a system error has been fixed, introduce ENMAC automated fault report generation during 2010 to put EPN in line with EDF Energy's strategy to run a common control platform.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used.	None
	Main sources of reporting error.	As last year, several incidents contained input errors that could not be explained from an examination of the audit trail documentation. Six incidents each had errors in the number or classification (i.e. re-ints) restoration stages.
	Issues identified	As above
LV Incidents	Number of unauditable incidents and spares used.	One incident did not have a sufficient audit trail to be sure of its details; a spare was used in its place.
	Main sources of reporting error.	Several incidents contained errors in customer count or the duration of restoration stages.
	Issues identified	As above

Reporting Area	Audit Point	Main Findings
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	99.82%	99.97%	99.79%	97%	Pass
Overall CML Accuracy	99.32%	99.97%	99.29%	97%	Pass
LV CI Accuracy	96.57%	99.68%	96.26%	92%	Pass
LV CML Accuracy	96.29%	99.68%	95.98%	92%	Pass

EPN passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Mixed	300	300	0

Audit of incidents with clock-stopping restoration stages

A search on EPN's database revealed no incidents where clock-stopping had been used during reporting year 2009 / 2010.

Audit of telephony details returned to Ofgem

The visiting auditors examined EPN's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In all cases, EPN demonstrated that the details of every caller who spoke to an agent and did not decline to have their details forwarded were sent to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional audit activity this year
The visiting auditors are pleased to note EDFEnergy's continuance in developing its IIS reporting expertise by introducing enthusiastic people as newer members of its team.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The audit of HV incidents contained several interruption stages where distribution transformers show zero connected customers. The visiting auditors are pleased to note that EPN continues to investigate this aspect of its connectivity model.	EPN has continued its work to remove the number of transformers showing zero customers.	The visiting auditors are pleased that EPN has continued with its work and are pleased to record the absence of this phenomenon in this year's audited incidents.
The visiting auditors have noted the lack of an automated link between HV MPANs and ENMAC and suggest that EPN continues to pursue the introduction of this link.	EPN is awaiting the outcome of the latest 'patch' that is shortly to be introduced into the SPN SCADA system before installing the automated link into EPN.	The visiting auditors note and agree with EPN's cautious approach.

To:	Recommendation from this year's audit
DNO	The visiting auditors are disappointed to see the number of inexplicable input errors in this year's sample of higher voltage incidents and recommend that EPN redoubles its internal auditing efforts to minimise such errors in the future.
	At low voltage, the visiting auditors recommend that EPN reinforces its drive to ensure that its measurement systems contain a robust audit trail to enable all sampled incidents to be audited.
Ofgem	EDF Energy is not in favour of reducing the frequency or scope of the current IIS audit regime and recommends that Ofgem should continue with its IIS audit regime in DPCR5.

Appendix G. Audit Report for the EDFE - LPN Licensed Area

Introduction

Visit Details	
Dates of audit visit:	12 to 13 May 2010
Location of audit visit:	EDF Energy's Ipswich Control Centre
Visiting Auditors:	James Hope (Ofgem), Karl Hurley (Ofgem) and Geoff Stott (BPI)
DNO Auditing Team:	Bill d'Albertanson, Chris Barker, Steve Johnson, Ian Manning, Ken Tew, and Dave Young

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are planned
Connectivity model	No future changes are planned
Control System	introduce ENMAC automated fault report generation during 2010 to put LPN in line with EDF Energy's strategy to run a common control platform.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used.	The switching records for one incident were in deep storage, a spare was used in its place.
	Main sources of reporting error	Two incidents contained errors in recording restoration stages. Another incident had an incorrect start time – the time of an earth-fault alarm had been used and not the time of the first no-supply call.
	Issues identified	As above
LV Incidents	Number of unauditable incidents and spares used.	Two incidents were replaced by spares: Due to the network being abnormal at the time of the fault, one incident could not be audited. Another incident had insufficient details of a customer to network connection.

Reporting Area	Audit Point	Main Findings
	Main sources of reporting error	Several incidents contained errors in customer count. Two incidents had incorrect start times as 'flickering supply' or 'low volts' reports had been used instead of the time of the first no-supply call.
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	100.06%	99.81%	99.86%	97%	Pass
Overall CML Accuracy	99.99%	99.81%	99.80%	97%	Pass
LV CI Accuracy	102.68%	99.59%	97.74%	92%	Pass
LV CML Accuracy	99.21%	99.59%	98.80%	92%	Pass

LPN passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Mixed	100	100	0

Audit of incidents with clock-stopping restoration stages

A search on LPN's database revealed no incidents where clock-stopping had been used during reporting year 2009 / 2010.

Audit of telephony details returned to Ofgem

The visiting auditors examined LPN's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In all cases, LPN demonstrated that the details of every caller who spoke to an agent and did not decline to have their details forwarded were sent to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional audit activity this year
The visiting auditors are pleased to note EDF Energy's continuance in developing its IIS reporting expertise by introducing enthusiastic people as newer members of its team.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The visiting auditors recommend that LPN continues to work to reduce the number of errors still evident within its LV fault reports, through a redoubling of its internal auditing regime.	LPN has continued in its efforts to reduce the number of errors in its LV fault reports.	The visiting auditors are pleased that LPN has continued with its efforts to reduce these errors.
The visiting auditors recommend that LPN reviews the categories by which non-reported "incidents" are classified to reflect the broad reasons for non-reporting.	This recommendation currently forms part of the draft revision of the RIGs and LPN will incorporate the reporting requirements once the RIGs are confirmed.	The visiting auditors are pleased that this recommendation to LPN and to Ofgem is being acted upon.

To:	Recommendation from this year's audit
DNO	The visiting auditors recommend that LPN continues to work to reduce the number of errors still evident within its LV fault reports.
	The visiting auditors recommend that LPN reinforces the message regarding the determination of incident start times.
Ofgem	EDF Energy is not in favour of reducing the frequency or scope of the current IIS audit regime and recommends that Ofgem should continue with its IIS audit regime in DPCR5.

Appendix H. Audit Report for the EDFE - SPN Licensed Area

Introduction

Visit Details	
Dates of audit visit:	12 to 13 May 2010
Location of audit visit:	EDF Energy's Ipswich Control Centre
Visiting Auditors:	James Hope (Ofgem), Karl Hurley (Ofgem), Stuart Banks (BPI) and Geoff Stott (BPI)
DNO Auditing Team:	Bill d'Albertanson, Chris Barker, Simon Mulcahy, Dave Partington, Ken Tew and Dave Young

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are planned.
Connectivity model	No future changes are planned.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used.	None
	Main sources of reporting error.	Several incidents contained errors generated within the measurement system (ENMAC glitches).
	Issues identified	As above
LV Incidents	Number of unauditable incidents and spares used.	None
	Main sources of reporting error.	Several incidents contained errors in customer numbers.
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	100.04%	99.97%	99.99%	97%	Pass
Overall CML Accuracy	99.78%	99.97%	99.75%	97%	Pass
LV CI Accuracy	101.29%	99.63%	99.08%	92%	Pass
LV CML Accuracy	98.25%	99.63%	97.89%	92%	Pass

SPN passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Mixed	300	300	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Low Voltage	6	6	0
Services	3	3	0

Audit of telephony details returned to Ofgem

The visiting auditors examined SPN's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In all cases, SPN demonstrated that the details of every caller who spoke to an agent and did not decline to have their details forwarded were sent to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional audit activity this year
The visiting auditors are pleased to note EDFEnergy's continuance in developing its IIS reporting expertise by introducing enthusiastic people as newer members of its team.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
Given the experience with its automated ENMAC to fault report link, SPN may wish to reduce the amount of preparation it does ahead of the audit visit.	SPN introduced the automated fault-reporting link during the final quarter of reporting year 2008/09. Efforts have therefore been concentrated on cross-checking the audit sample against the SCADA system.	The visiting auditors recognise that SPN's system was 'new' last year and agree that cross-checking is helpful at this early stage of SPN's initiative.
SPN may wish to review its convention of ignoring the two-thirds / one-third rule where only one phase of an HV system is lost.	SPN notes the visiting auditors'' comment but re-affirms its approach given the relatively recent introduction of its automated fault reporting system.	Given the number of system-generated errors seen in this year's audited incidents, the visiting auditors agree with SPN's cautious approach.

To:	Recommendation from this year's audit
DNO	Noting that SPN's automated incident reporting system is relatively new and therefore likely to be prone to teething troubles, the various computer-generated 'glitches' seen in this year's audited incidents could be expected. The visiting auditors recommend that SPN thoroughly 'proves' the latest 'patch' to ensure that these glitches are a thing of the past.
	The visiting auditors recommend that SPN redoubles its efforts to reduce the number of occasions where incorrect customer numbers are input into its reporting system at low voltage.
Ofgem	EDF Energy is not in favour of reducing the frequency or scope of the current IIS audit regime and recommends that Ofgem should continue with its IIS audit regime in DPCR5.

Appendix I. Audit Report for the ENW - UUES Licensed Area

Introduction

Visit Details	
Date of audit visit:	26 May 2010
Location of audit visit:	ENW-UUES's Control Centre, Manchester
Visiting Auditors:	James Hope (Ofgem), Karl Hurley (Ofgem) and Geoff Stott (BPI)
DNO Auditing Team:	Neil Adams, Denham Croden, Julie Jackson, Paul Lomax and Paul Turner

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are planned – data cleansing is ongoing.
Connectivity model	No future changes are planned.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used.	One incident had a restoration time that could not be verified; a spare was used in its place.
	Main sources of reporting error.	One pre-arranged interruption had a minor error in start time.
	Issues identified	As above
LV Incidents	Number of unauditable incidents and spares used.	None
	Main sources of reporting error.	Two incidents contained errors in customer count. Several other incidents had rounding errors in customer count.
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	100.03%	99.55%	99.59%	97%	Pass
Overall CML Accuracy	99.94%	99.55%	99.50%	97%	Pass
LV CI Accuracy	100.52%	99.59%	99.89%	92%	Pass
LV CML Accuracy	99.57%	99.59%	99.16%	92%	Pass

ENW-UUES passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Higher voltages	25	25	0
Low Voltage	25	25	0
Short interruptions	25	25	0
Single Premises	25	25	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher Voltages	5	5	0
Low Voltage	15	15	0

Audit of telephony details returned to Ofgem

The visiting auditors examined ENW-UUES's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In all cases, ENW-UUES demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional comment from this year's audit
The visiting auditors are again pleased to note ENW-UUES's inclusion of new team members in this year's IIS audit. The visiting auditors are pleased to note that ENW-UUES's extended internal audit regime includes new people, thereby spreading IIS expertise within its team, including feedback and lessons learned and identifying areas of particular weakness where refresher training may be beneficial.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The visiting auditors recommend that ENW-UUES continues with its enhanced internal auditing regime to further reduce the number of errors in its IIS reporting.	ENW-UUES has extended its internal audit regime at the higher voltage levels, whereby every incident is subjected to audit.	The visiting auditors are pleased to note ENW-UUES's enhanced internal audit and the almost total absence of errors found in this year's audited incidents at the higher voltage levels.
The visiting auditors recommend that, where no customer requests to the contrary, ENW-UUES adopts a clock-restart time of 07:00, which is consistent with the Guaranteed Standard when a customer has been off-supply overnight.	ENW-UUES acknowledges the visiting auditors recommendation but has opted to use the customer requested time where this differs from 07:00.	The visiting auditors acknowledge ENW-UUES's comments.

To:	Recommendation from this year's audit
DNO	The visiting auditors are pleased to see the marked reduction in errors in this year's audited incidents at the higher voltages and recommend that ENW-UUES continues with its enhanced auditing regime.
	The visiting auditors recommend that ENW-UUES re-emphasises the need for accuracy in counting the number of customers affected at the low voltage level.
Ofgem	ENW-UUES is in favour of continuing an annual IIS audit and is receptive to any changes to be discussed in its scope.

Appendix J. Audit Report for the SPD Licensed Area

Introduction

Visit Details	
Dates of audit visit:	18 May 2010
Location of audit visit:	Scottish Power's Control Centre at Kirkintilloch
Visiting Auditors:	James Hope (Ofgem),Thomas Johns (Ofgem), David Scott (BPI) and Geoff Stott (BPI)
DNO Auditing Team:	Graham Baikie, Tommy Berry, Cathie Hill, Graham Laird and Annika Sands

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are planned
Connectivity model	SPD is working to introduce a replacement GIS system that will have an LV feeder tracing system similar to that already available in SPD's higher voltage measurement systems.
Incident reporting	SPD is working towards the replacement of its current ICOND and Troublecall systems to provide for improved interfaces, one attribute of which will be to auto-populate its incident reports.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used	None
	Main sources of reporting error	No errors were found in the audit sample.
	Issues identified	None – sample 100% correct.
LV Incidents	Number of unauditable incidents and spares used	None
	Main sources of reporting error	Several incidents contained minor errors in customer count. In one incident the predicted number of customers had been incorrectly input by manual intervention. One incident did not use the time of first no-supply call as the incident start time.

Reporting Area	Audit Point	Main Findings
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	99.97%	98.72%	98.69%	97%	Pass
Overall CML Accuracy	99.98%	98.72%	98.70%	97%	Pass
LV CI Accuracy	100.00%	98.73%	98.73%	92%	Pass
LV CML Accuracy	99.16%	98.73%	97.89%	92%	Pass

SPD passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Higher Voltages	25	25	0
Low Voltage	75	75	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Low Voltage	15	15	0

Audit of telephony details returned to Ofgem

The visiting auditors examined SPD's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. With the exception of those callers with unconfirmed details, SPD demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional comment from this year's audit
The visiting auditors are again pleased to note SPD's inclusion of new team members in this year's IIS audit, thus spreading this aspect of its IIS expertise within its team.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The visiting auditors acknowledge that SPD uses good practice in restarting a clock-stopped period at its normal work start time of 08:00 but recommend that best practice is to restart the clock at the Guaranteed Standard time of 07:00.	SPD acknowledges the visiting auditors recommendation but has opted to use the customer requested time where this differs from 07:00.	The visiting auditors acknowledge SPD's comments.
The visiting auditors recommend that SPD's initiative to enhance its internal auditing / IIS specialists is given further emphasis to avoid a heavy reliance upon individual members of its team.	SPD introduced an enhanced internal audit regime in June 2009 whereby every incident at the higher voltage levels is scrutinised for accuracy of reporting. If a robust audit trail is not evident then the report is returned to its originator.	The visiting auditors are pleased to note SPD's recent initiative – the results of which are vindicated by this year's audit result.

To:	Recommendation from this year's audit
DNO	During the audit of non-reported incidents, it was noted that a number of incidents due to the severe weather at the end of the reporting year created difficulty within SPD's reporting systems at the beginning of the next reporting year. The visiting auditors recommend that SPD investigates this area of its reporting system and devises a suitable 'fix' to eliminate the problem.
Ofgem	SPD is not in favour of reducing the frequency or scope of the current IIS audit regime and recommends that Ofgem should continue with its IIS audit regime in DPCR5.
	Consider accepting as auditable evidence time stamped "predicted / feeder numbers" of the number of customers on a feeder at the time of the incident.

Appendix K. Audit Report for the SPM Licensed Area

Introduction

Visit Details	
Dates of audit visit:	27 May 2010
Location of audit visit:	ScottishPower's Control Centre at Prenton
Visiting Auditors:	James Hope (Ofgem), Karl Hurley (Ofgem) and Geoff Stott (BPI)
DNO Auditing Team:	Graham Baikie, Andy Dixon, Alyn Jones, Annika Sands, Pete Shawcross, Mark Sobczak and Emyr Williams

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are planned
Connectivity model	SPM has begun to introduce a replacement GIS system that will have an LV feeder tracing system similar to that already available in SPM's higher voltage measurement systems.
Incident reporting	SPM is working towards the replacement of its current ICOND and Troublecall systems to provide for improved interfaces, one attribute of which will be to auto-populate its incident reports. An interim software release has been introduced, the benefits of which are aimed at improving the accuracy of reporting.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used	None
	Main sources of reporting error	Two incidents contained minor errors in start times due to the non-use of the time of the first no-supply call. Two other incidents contained input minor errors.
	Issues identified	As above

Reporting Area	Audit Point	Main Findings
LV Incidents	Number of unauditable incidents and spares used	One incident was un-auditable because of recent network changes. Another incident was due to planned tree cutting work and no accurate record was kept, and one pre-arranged incident had incomplete audit trail. Spares were used in each case.
	Main sources of reporting error	Several incidents contained minor errors in customer count. One incident had the wrong start time due to the non-use of the time of the first no-supply call.
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	99.99%	99.32%	99.32%	97%	Pass
Overall CML Accuracy	100.15%	99.32%	99.47%	97%	Pass
LV CI Accuracy	98.36%	99.33%	97.70%	92%	Pass
LV CML Accuracy	102.29%	99.33%	98.39%	92%	Pass

SEPD passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Higher Voltages	20	20	0
Low Voltage	70	70	0
Single Premise	10	10	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher voltages	1	1	0
Low Voltage	15	15	0

Additional comment from this year's audit
The visiting auditors are again pleased to note SPM's inclusion of new team members in this year's IIS audit, thus spreading this aspect of its IIS expertise within its team.

Audit of telephony details returned to Ofgem

The visiting auditors examined SPM's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. With the exception of those callers with unconfirmed details, SPM demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The visiting auditors acknowledge that SPM uses good practice in restarting a clock-stopped period at its normal work start time of 08:00 but recommend that best practice is to restart the clock at the Guaranteed Standard time of 07:00.	SPM acknowledges the visiting auditors recommendation but has opted to use the customer requested time where this differs from 07:00.	The visiting auditors acknowledge SPM's comments.
The visiting auditors recommend that SPM's initiative to enhance its internal auditing / IIS specialists is given further emphasis to avoid a heavy reliance upon individual members of its team.	SPM has further developed its internal auditing expertise through the cross-checking of all incident reports at the higher voltage level.	The visiting auditors are pleased to note SPM's initiative as exemplified by the number of textual inputs seen within this year's higher voltage sample of audited incidents.

To:	Recommendation from this year's audit
DNO	Whilst the visiting auditors were pleased to note the helpful audit cross-reference notes regarding no-supply calls in the higher voltage switching logs, their use is not consistent. The visiting auditors recommend that SPM reinforces the message regarding the need to be sure that the first call time shown in the TCS log is indeed a no-supply call at each voltage level.
	The visiting auditors recommend that SPM reinforces the message regarding the need to ensure that adequate audit notes are included in LV incident logs.
Ofgem	SPM is not in favour of reducing the frequency or scope of the current IIS audit regime and recommends that Ofgem should continue with its IIS audit regime in DPCR5.
	Consider accepting as auditable evidence time stamped "predicted/feeder numbers" of the number of customers on a feeder at the time of the incident.

Appendix L. Audit Report for the SSE - SEPD Licensed Area

Introduction

Visit Details	
Date of audit visit:	19 to 20 May 2010
Location of audit visit:	SSE's Control Centre, Perth
Visiting Auditors:	James Hope (Ofgem), Thomas Johns(Ofgem), David Scott (BPI) and Geoff Stott (BPI)
DNO Auditing Team:	John Blyth, Alan Broadbent, Arshia Kadhim and Adam O'Hara

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are planned
Connectivity model	No future changes are planned

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the 100 non-reported 'incidents' should have been reported in Ofgem's template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used	None
	Main sources of reporting error	None
	Issues identified	None – sample 100% correct
LV Incidents	Number of unauditable incidents and spares used	One incident had a non-confirmable number of customers attached to a section of network; a spare was used in its place.
	Main sources of reporting error	Two incidents contained unproven changes in customer numbers. Two incidents did not use the time of the first no-supply call as the interruption start time.
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results have been copy/pasted from the agreed final version of the incident auditing workbook and have subsequently been confirmed after checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	100.00%	100.00%	100.00%	97%	Pass
Overall CML Accuracy	100.02%	100.00%	99.98%	97%	Pass
LV CI Accuracy	101.44%	99.99%	98.57%	92%	Pass
LV CML Accuracy	101.90%	99.99%	98.11%	92%	Pass

SEPD passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Higher Voltages	1	1	0
Low Voltage	99	99	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher Voltages	4	4	0
Low Voltage	14	14	0

Audit of telephony details returned to Ofgem

The visiting auditors examined SEPD's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. With the exception of two callers who did not wish to be surveyed, SSE demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional audit activity this year
The visiting auditors are again pleased to note SEPD's inclusion of new team members in this year's IIS audit, thus spreading this aspect of its IIS expertise within its team.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The visiting auditors are pleased to note SEPD's enhanced level of internal auditing and suggest that this continues.	SEPD has continued in its drive for absolute accuracy and has further emphasised the need for full audit trail remarks and cross-referencing in its measurement and reporting systems.	The visiting auditors are pleased to note the clear and helpful audit trail cross-references within this year's sample of audited higher voltage incidents.
The visiting auditors are pleased to note SEPD's enhanced process for checking input errors in the capturing of telephoned details as part of Ofgem's survey requirements and recommend that SEPD continues to develop its expertise in this regard.	SEPD has continued with its regime of checking input errors in its returns to Ofgem's telephony survey.	The visiting auditors are pleased to note the absence of this type of input error in this year's sampled incidents.

To:	Recommendation from this year's audit
DNO	The visiting auditors recommend that SEPD re-emphasises the need to use the time of its first becoming aware of a no-supply situation as the incident start time.
	The visiting auditors recommend that SEPD puts further effort into providing audit trail cross-reference information in its measurement systems at the low voltage level. E.g. "Jumpers broken at pole number "x".
Ofgem	SEPD is in favour of retaining the frequency and scope of the current IIS audit regime and recommends that Ofgem should continue with its IIS audit regime in DPCR5.

Appendix M. Audit Report for the SSE - SHEPD Licensed Area

Introduction

Visit Details	
Dates of audit visit:	19 to 20 May 2010
Location of audit visit:	SSE's Control Centre, Perth
Visiting Auditors:	James Hope (Ofgem), Thomas Johns (Ofgem), David Scott (BPI) and Geoff Stott (BPI)
DNO Auditing Team:	Alan Broadbent, David Colthart, Brian Morrissey, Neil Sandison and David Telford

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are planned.
Connectivity model	No future changes are planned.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the 100 non-reported 'incidents' should have been reported in Ofgem's template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used	None
	Main sources of reporting error	Two incidents had minor input errors.
	Issues identified	As above
LV Incidents	Number of unauditable incidents and spares used	None
	Main sources of reporting error	Three incidents contained unproven changes in customer numbers. One incident used the time of a 'damaged' cable' as opposed to the time the cable was deliberately disconnected.
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	100.00%	100.00%	100.00%	97%	Pass
Overall CML Accuracy	100.08%	100.00%	99.92%	97%	Pass
LV CI Accuracy	100.57%	100.00%	99.43%	92%	Pass
LV CML Accuracy	100.86%	100.00%	99.14%	92%	Pass

SHEPD passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Higher Voltages	2	2	0
Mixed	98	98	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher Voltages	2	2	0
Low Voltage	15	15	0

Audit of telephony details returned to Ofgem

The visiting auditors examined SHEPD's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In each case, SSE demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response.

Additional audit activity this year
The visiting auditors are again pleased to note SHEPD's inclusion of new team members in this year's IIS audit, thus spreading this aspect of its IIS expertise within its team.
The visiting auditors are pleased to note that SHEPD has increased the number of remote ENMAC terminals and associated staff training whereby operational staff have ready access to the system for the preparation of pre-arranged interruptions.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The visiting auditors are pleased to note SHEPD's enhanced level of internal auditing and suggest that this continues.	SHEPD has continued in its drive for absolute accuracy and has further emphasised the need for full audit trail remarks and cross-referencing in its measurement and reporting systems.	The visiting auditors are pleased to note the clear and helpful audit trail cross-references within this year's sample of audited incidents, particularly the time of the first n/s call with ENMAC switching logs.
The visiting auditors are pleased to note SHEPD's enhanced process for checking input errors in the capturing of telephoned details as part of Ofgem's survey requirements and recommend that SHEPD continues to develop its expertise in this regard.	SHEPD has continued with its regime of checking input errors in its returns to Ofgem's telephony survey	The visiting auditors are pleased to note the absence of this type of input error in this year's sampled incidents

To:	Recommendation from this year's audit
DNO	During the audit of the higher voltage incidents the visiting auditors noted SHEPD's initiative in highlighting restoration stages that contain information valuable to its call centre teams. The visiting auditors recommend that SHEPD considers extending this initiative wherever practicable.
	The visiting auditors recommend that SHEPD re-emphasises the need to use the time of its first becoming aware of a no-supply situation as the incident start time.
Ofgem	SHEPD is in favour of retaining the frequency and scope of the current IIS audit regime and recommends that Ofgem should continue with its IIS audit regime in DPCR5.

Appendix N. Audit Report for the WPD - South Wales Licensed Area

Introduction

Visit Details	
Dates of audit visit:	12 to 14 April 2010
Location of audit visit:	WPD's Control Centre, Lamby Way, Cardiff
Visiting Auditors:	James Hope (Ofgem), Thomas Johns (Ofgem), Thomas Wood (Ofgem) and Geoff Stott (BPI)
DNO Auditing Team:	Lloyd Bridges, Dave Crocker, Carolyn Hinchey and Alison Sleightholm

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit.
MPAN systems	No changes have been made since last year's audit.
Connectivity model	No changes have been made since last year's audit.

Measurement Area	Planned future changes
MPAN systems	No future changes are planned
Connectivity model	No future changes are planned
Control System	WPD is planning to migrate to ENMAC version 5 (Power on Fusion) during the reporting year 2010/11, cutting over from version 3 using a fully auditable approach.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used	None
	Main sources of reporting error	One minor error in one input time.
	Issues identified	As above
LV Incidents	Number of unauditable incidents and spares used	One incident was unauditable due to lack of verifiable interruption times a spare was used instead.
	Main sources of reporting error	Two incidents contained errors in interpretation of restoration / re-interruptions and one incident had a minor error in duration time.
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results were copy/pasted from the agreed final version of the auditing workbook at the end of the audit visit and have subsequently been confirmed after QA checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	99.99%	99.97%	99.96%	97%	Pass
Overall CML Accuracy	99.96%	99.97%	99.93%	97%	Pass
LV CI Accuracy	99.70%	100.00%	99.69%	92%	Pass
LV CML Accuracy	94.47%	100.00%	94.46%	92%	Pass

WPD South Wales passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Higher Voltages	20	20	0
Low Voltage	20	20	0
Pre-arranged	20	20	0
Single Premises	20	20	0
Short Interruptions	20	20	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher Voltages	4	4	0
Low Voltage	16	16	0

Audit of telephony details returned to Ofgem

The visiting auditors examined WPD South Wales' records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In all cases, WPD demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response. Those calls logged in WPD's trouble call system that were not passed to Ofgem's consultant were shown to be ones that had been dealt with by WPD's automated messaging system.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The strengthening of WPD's internal audit regime is bringing obvious benefits to its reported performance at the higher voltage levels and the visiting auditors suggest that WPD considers a similar approach in a pilot office for its reporting at the LV level.	WPD has instigated a scheme of cross-checking PC-NaFIRS reports to minimise the number of errors and focus upon its absolute accuracy of reporting WPD has re-emphasised the monthly internal audit reporting accuracies within its key performance indicators with 'failures' clearly shown by operational units.	The visiting auditors are pleased to note that WPD has introduced this cross-checking initiative and reinforced the associated KPI element.
The visiting auditors note WPD's proposed change to ENMAC version 4 and are pleased to note that the transition will be subject to a fully auditable approach. It is hoped that the change will not adversely affect WPD's accuracy of reporting.	WPD has deferred the introduction of the latest version of ENMAC until it is satisfied as to the robustness of the new product.	The visiting auditors are pleased to note that WPD intends to adopt a fully auditable change-over when it introduces the latest version of ENMAC.
The visiting auditors are pleased to note that WPD has extended the use of its hand-held data capture devices to more of its operational units and suggest that WPD monitors the ongoing need for refresher training so as to eliminate the manual corrections that are evident within the sample of audited incidents.	WPD has continued to extend its use of hand-held devices and is working to improve the consistency of the results being obtained.	The visiting auditors are pleased to note the reduced need for manual corrections in this year's sample of incidents but consider that ongoing training is needed as noted under this year's recommendations below.

To:	Recommendation from this year's audit
DNO	The visiting auditors recommend that WPD provides a clearer audit trail where it has been necessary to use manual intervention to change an incident report.
	The visiting auditors were disappointed to see that several basic inputs errors were present in the audit sample and recommend that WPD provides the appropriate refresher training to its data inputters.
	The visiting auditors were disappointed to note the occasions where a redundant supply had not been notified to WPD and derelict premises had resulted in unauthorised interference with its distribution equipment. They suggest that WPD pursues this with energy suppliers so as to eradicate this problem.
Ofgem	WPD highlighted a number of areas where the rig definition is unclear and suggests that additional wording be inserted in the next version of the RIGs to ensure better consistency of reporting.
	WPD wishes to emphasise the value of the industry experience currently present in the visiting audit team as this greatly reduces the time to conduct the audit and the need for detailed explanation of terminology and knowledge of the DNOs' measurement and reporting systems.

Appendix O. Audit Report for the WPD - South West Licensed Area

Introduction

Visit Details	
Dates of audit visit:	12 to 14 April 2010
Location of audit visit:	WPD's Control Centre, Lamby Way, Cardiff
Visiting Auditors:	James Hope (Ofgem), Thomas Johns (Ofgem), Thomas Wood (Ofgem) and Geoff Stott (BPI)
DNO Auditing Team:	Lloyd Bridges, Dave Crocker, Carolyn Hinchey and Alison Sleightholm

Audit of Measurement Systems

Measurement Area	Significant changes since last year
Interpretation of RIGs v5	No changes have been made since last year's audit
MPAN systems	No changes have been made since last year's audit
Connectivity model	No changes have been made since last year's audit

Measurement Area	Planned future changes
MPAN systems	No future changes are planned
Connectivity model	No future changes are planned
Control System	WPD is planning to migrate to ENMAC version 5 (Power on Fusion) during the reporting year 2010/11, cutting over from version 3 using a fully auditable approach.

Audit of Incident Reporting

Reporting Area	Audit Point	Main Findings
Ofgem's Template	Non reported incidents	None of the non-reported incidents sampled should have been reported in Ofgem's Template.
	Issues identified	None
Higher Voltage Incidents	Number of unauditable incidents and spares used	None
	Main sources of reporting error	Two incidents each contained a minor error in input time.
	Issues identified	As above
LV Incidents	Number of unauditable incidents and spares used	One incident was unauditable due to the lack of an auditable interruption time. A spare was used instead.
	Main sources of reporting error.	Two incidents where a temporary repair was treated as permanent.
	Issues identified	As above
Misclassified Voltage Level	Number of cases of misclassification of voltage level and spares used.	None

Audit Results

These results have been copy/pasted from the agreed final version of the incident auditing workbook and have subsequently been confirmed after checking by the Consortium.

Restricted incident sample	Audit	MPAN accuracy	Combined accuracy	Threshold	Pass/fail
Overall CI Accuracy	100.06%	99.99%	99.96%	97%	Pass
Overall CML Accuracy	100.03%	99.99%	99.98%	97%	Pass
LV CI Accuracy	101.47%	99.99%	98.54%	92%	Pass
LV CML Accuracy	99.99%	99.99%	99.98%	92%	Pass

WPD South West passed the CI and CML overall and LV Stage 2 thresholds; therefore neither of the Stage 3 incident samples was required.

Audit of non-reportable incidents

Category	Number in sample	Number deemed non-reportable	Number deemed reportable
Higher Voltages	20	20	0
Low Voltage	20	20	0
Pre-arranged	20	20	0
Single Premises	20	20	0
Short Interruptions	20	20	0

Audit of incidents with clock-stopping restoration stages

Category	Number in sample	Number deemed correct	Number deemed incorrect
Higher Voltages	8	8	0
Low Voltage	12	12	0

Audit of telephony details returned to Ofgem

The visiting auditors examined WPD South West's records of customer calls made as part of three separate incidents at the higher voltage level and two low voltage incidents. In all cases, WPD demonstrated that the details of every caller who spoke to an agent were forwarded to Ofgem's consultants for potential follow-up as part of the survey of the DNOs' telephone response. Those calls logged in WPD's trouble call system that were not passed to Ofgem's consultant were shown to be ones that had been dealt with by WPD's automated messaging system.

Additional comment from this year's audit
The visiting auditors were pleased to note that WPD is providing for the forthcoming retirement of one of its experienced control engineers by recruiting and training a replacement in advance.

Recommendations for Reporting Improvements

Recommendations from last year's audit	DNO action taken	Audit opinion
The strengthening of WPD's internal audit regime is bringing obvious benefits to its reported performance at the higher voltage levels and the visiting auditors suggest that WPD considers a similar approach in a pilot office for its reporting at the LV level.	WPD has instigated a scheme of cross-checking PC-NaFIRS reports to minimise the number of errors and focus upon its absolute accuracy of reporting WPD has re-emphasised the monthly internal audit reporting accuracies within its key performance indicators with 'failures' clearly shown by operational units.	The visiting auditors are pleased to note that WPD has introduced this cross-checking initiative and reinforced the associated KPI element.
The visiting auditors note WPD's proposed change to ENMAC version 4 and are pleased to note that the transition will be subject to a fully auditable approach. It is hoped that the change will not adversely affect WPD's accuracy of reporting.	WPD has deferred the introduction of the latest version of ENMAC until it is satisfied as to the robustness of the new product.	The visiting auditors are pleased to note that WPD intends to adopt a fully auditable change-over when it introduces the latest version of ENMAC.
The visiting auditors are pleased to note that WPD has extended the use of its hand-held data capture devices to more of its operational units and suggest that WPD monitors the ongoing need for refresher training so as to eliminate the manual corrections that are evident within the sample of audited incidents.	WPD has continued to extend its use of hand-held devices and is working to improve the consistency of the results being obtained.	The visiting auditors are pleased to note the reduced need for manual corrections in this year's sample of incidents but consider that ongoing training is needed as noted under this year's recommendations below.

To:	Recommendation from this year's audit
DNO	The visiting auditors recommend that WPD provides a clearer audit trail where it has been necessary to use manual intervention to change an incident report.
	The visiting auditors were disappointed to see that several basic input errors were present in the audit sample and recommend that WPD provides the appropriate refresher training to its data inputters.
	The visiting auditors were disappointed to note the occasions where a redundant supply had not been notified to WPD and derelict premises had resulted in unauthorised interference with its distribution equipment. They suggest that WPD pursues this with energy suppliers so as to eradicate this problem.
Ofgem	WPD highlighted a number of areas where the rig definition is unclear and suggests that additional wording be inserted in the next version of the RIGs to ensure better consistency of reporting.
	WPD wishes to emphasise the value of the industry experience currently present in the visiting audit team as this greatly reduces the time to conduct the audit and the need for detailed explanation of terminology and knowledge of the DNOs' measurement and reporting systems.
	The visiting auditors recommend that WPD provides a clearer audit trail where it has been necessary to use manual intervention to change an incident report.