Quality of Service Incentive Scheme – Exceptional Events

Appointed Examiner's Report	
Reporting year	2010/11
DNO	Western Power Distribution – South West Licensed Area
Cause	Windborne material damaging 33kV Switchgear
Date of event	30 July 2010

Submitted to:
Ofgem

Submitted by:

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July 2011

Document Status

Title: Exceptional Events Report – WPD South West – Lockleaze BSP – Damaged 33kV switchgear – 30 July 2010

Reference: EE 2010/11 – WPD South West

Issue: Final Version 1.0

Date: 28 July 2011

Electronic Doc Ref: M:\BPIUSER\Projects\Current\UK Ofgem - EE one-offs for 2010-11/WPD - 30 Jul '10/ Reports/final report v1.0.doc

Authorisation

Name	Position	Signed	Date
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History

Issue	Date	Originator	Checker	Description
1.0	28 July 2010	Geoff Stott	John Rimell	Final version incorporating comments from Ofgem and WPD
0.1	14 July 2010	Geoff Stott	Evelyne Lefevre-Farcy and Ron Webb	Draft for circulation to Ofgem and WPD
0.0	06 July 2010	Geoff Stott	Ron Webb	Document created from template

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AE	Appointed Examiner
BPI	British Power International
BSP	Bulk Supply Point
CB	Circuit-breaker
CEGB	Central Electricity Generating Board
CI	Customer Interruptions per 100 connected customers
CML	Customer Minutes Lost per connected customer
DNO	Distribution Network Operator
EHV	Extra High Voltage – all voltages above 20kV up to but excluding 132kV
HV	High Voltage – all voltages above 1kV up to and including 20kV
QoS	Quality of Service
RIGs	Regulatory Instructions and Guidance
SCADA	System Control and Data Acquisition
SI	Short Interruption
SoF	Statement of Facts
ToR	Terms of Reference
WPD	Western Power Distribution

Notes:

Within this document:

1. The term “higher voltage” is used to indicate all voltages greater than 1kV.
2. The calculations of CI and CML within this document are adapted from the annual calculations contained in the RIGs to reflect the CI and CML generated by the actual incidents being audited. They are as follows:

CI: the number of interruptions to supply – the number of customers interrupted per 100 connected customers generated by the incidents being audited. 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: the duration of interruptions to supply – the number of customers interrupted per connected customer generated by the incidents being audited. It is calculated as:

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

In both the formulae above, the total number of connected customers is as declared as at 30 September during the relevant reporting year. Any claims that occur and are audited prior to 30 September in the reporting year during which they occur will be audited using the total number of customers declared at 30 September in the previous reporting year.

Summary

Ofgem has appointed British Power International Limited (the Appointed Examiner) to audit the submission made by Western Power Distribution (WPD) under the "one-off" exceptional event mechanism that damage caused to 33kV switchgear at WPD's Lockleaze Bulk Supply Point (BSP) at 07:08 on Friday, 30 July 2010 adversely affected the reported performance for its South West (WPD Sth West) distribution licensed area for the reporting year 2010/11.

The Appointed Examiner (AE) has visited WPD to audit the claim against part 1 of the "one-off" exceptional event process and finds that it passes the exceptionality threshold in terms of CI but not CML.

The AE concludes that the event falls within the category of an "other event" as defined in paragraph 8.57 of Special Licence Condition CRC 8, including meeting the exceptionality requirements set out in Appendix 3 thereof.

The AE therefore proceeded to part 2 of the "one-off" exceptional event process, assessing WPD's performance in mitigating the impact of the event upon its customers.

The AE concludes that WPD had taken all practicable steps to safeguard its 33kV outdoor switchgear at Lockleaze BSP from third party interference and windborne materials.

The AE is pleased to note that WPD has completed the initial programme of providing busbar protection at its outdoor sites and that it is in the process of assessing the more complex sites, such as Lockleaze BSP.

The AE concludes that WPD restored its customers' supplies without delay.

The AE concludes that WPD had met the criteria of Appendix 4 to paragraph 8.58 of Special Licence Condition CRC 8 and that the incident is therefore deemed to be eligible for adjustment in the DNO's reported performance.

The AE therefore recommends that an adjustment to WPD Sth West's 2010/11 reported distribution system performance is made, in line with the part 1 audited CI figures as shown in the following table:

	Audited number	Number above the threshold	Recommended adjustment
CI	4.93	3.33	3.33
CML	0.25	0	0

1. Audit part 1

Summary of main facts

1.1 The AE's headline information log for this event is set out in Table A-1 at Appendix A. In addition, the following paragraphs summarise the main facts of the event.

1.2 WPD has furnished photographic evidence to support its claim that windborne material in the form of a Chinese 'flying' lantern fitted with a metal ring at its base came into contact with WPD's 33kV equipment at Lockleaze BSP.

1.3 The ensuing flashover irreparably damaged 33kV normally open, busbar selector isolator 1T4, and caused a busbar fault that affected both inner and outer busbars, resulting in the loss of 33kV infeeds to 11 of WPD's 33/11kV Primary Substations.

1.4 WPD has recovered the remains of the Chinese 'flying' lantern which was found at the base of isolator 1T4. The remains show signs of electric arc damage.

1.5 WPD has obtained a new lantern of the same type for comparison purposes.

1.6 WPD's protection operated to clear the incident from its distribution network.

1.7 As a result of the incident, 80,699 of WPD's customers suffered a supply interruption. 4,767 of these customers were restored by automated switching in less than one minute, a Short Interruption (SI)

1.8 The supplies to the other 75,932 interrupted customers were restored in five minutes via tele-controlled switching by WPD's control engineer.

1.9 A simplified view of the section of WPD's 132/33kV network affected by this event is shown in Figure 1.

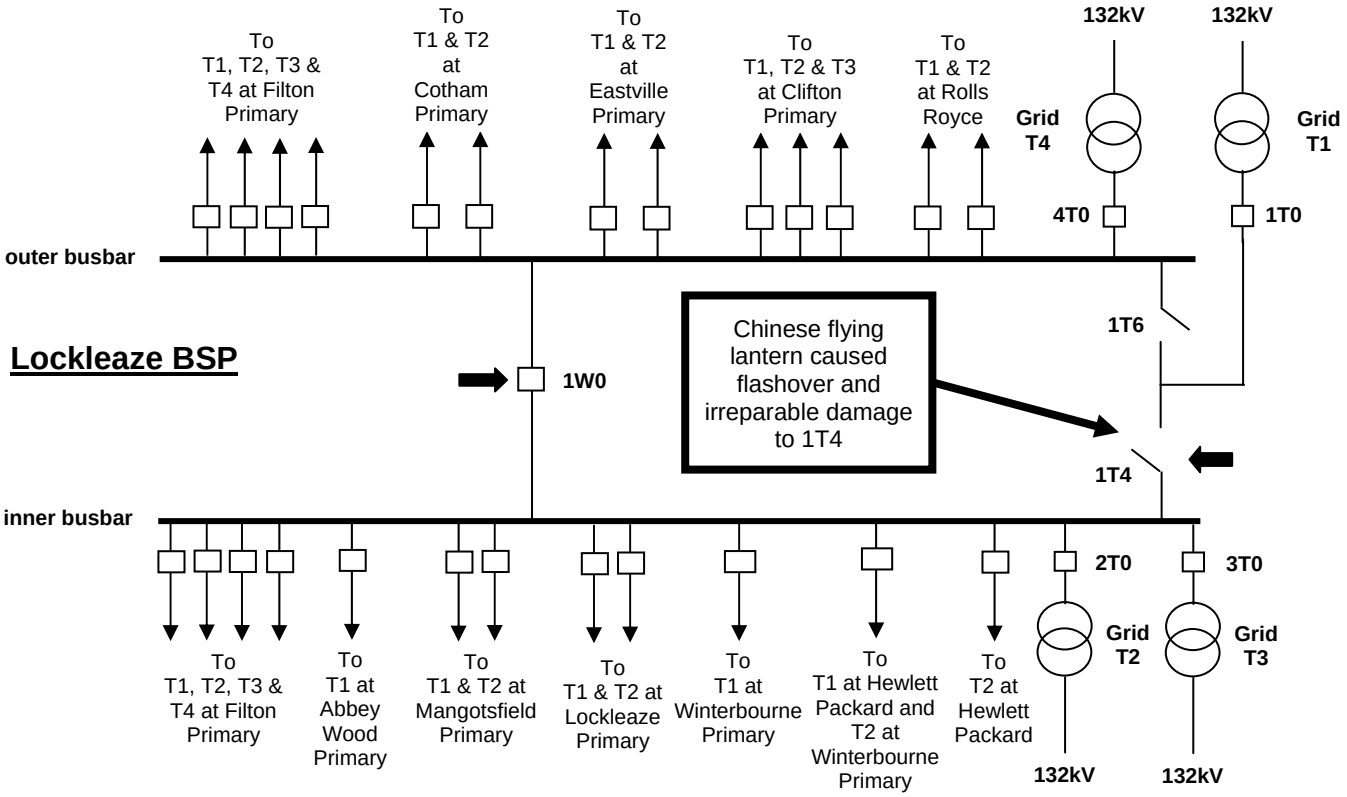

Figure 1 – Simplified Network Diagram of WPD's 132/33kV distribution network affected by the incident

Notes:

1. WPD's network was running normally at the time of the incident.
2. Only the normal feeding arrangements are shown. All infeeds and outfeeds can be selected to either busbar via busbar selector isolators such as the damaged 1T4.
3. WPD's protection operated correctly to trip CBs 1T0, 2T0, 3T0 and 4T0.
4. Supplies to WPD's customers fed from Filton and Merton Road Primary Substations were restored by automated switching in less than one minute (an SI).
5. WPD's control engineer restored the other customers' supplies in five minutes using tele-controlled switching by closing circuit-breakers 2T0 (inner busbar) and 1T0 (outer busbar).

Exceptionality requirements

Does the event qualify for exclusion?

1.10 The AE considers that the event falls within the category of an "other event" as defined in paragraph 8.57 of Special Licence Condition CRC 8, and meets the exceptionality requirements set out in Appendix 3 thereof.

1.11 The AE therefore considers that, subject to satisfying the requirements of Appendix 4 to CRC 8, the event qualifies for possible exclusion under the "one-off" exceptional events process.

Exceptionality test results

1.12 The number of incidents attributed to the event is shown in Table 1-1.

Table 1-1: Number of incidents attributed to the event

Number of incidents attributed to the event	Claimed number	Audited number
132kV	0	0
EHV	1	1
HV	0	0
LV	0	0
Total	1	1

1.13 The results calculated by the AE to test this claim against Ofgem's exceptionality criteria are shown in Appendix A. A summary of the results is shown in Table 1-2.

Table 1-2: Summary of exceptionality test results

Test	Threshold	Claimed number	Audited number	Pass / Fail	Amount above threshold
CI exceptionality	1.6	4.93	4.93	Pass	3.33
CML exceptionality	1.3	0.25	0.25	Fail	0

Notes:

1. Ofgem's CI and CML exceptionality criteria are set out in the AE's ToR[1].
2. The audited CI and CML used in the exceptionality test have been determined from the number of incidents attributed to the event.
3. Where the event passes either or both the exceptionality thresholds, the amount(s) above threshold is/are carried forward into the Audit part 2 assessment of DNO performance.
4. In accordance with guidance from Ofgem, the AE's calculations use the threshold values contained in the current Distribution Price Control and the number of customers connected to the DNO's network relevant to the date on which the incident occurred.

[1] Audits of Electricity Distribution Network Operators' One-off Exceptional Events Claims for 2010/11.

WPD's views of its performance

1.14 WPD's distribution system in the north of Bristol is supplied from its Lockleaze 132/33kV BSP.

1.15 Lockleaze BSP is a complex, double busbar (inner and outer), configuration with two grid transformers feeding each busbar. It was commissioned in its present form in about 1952 by the then Central Electricity Generating Board (CEGB).

1.16 The BSP is effectively two co-sited 132/33kV Grid Substations as the two busbars, which have no bus-section circuit-breakers, run independently. The 33kV bus coupling circuit-breaker runs in the 'normal open' position.

1.17 At 07:08 on Friday, 30 July 2010, a Chinese 'flying' lantern with a metal ring at its base came into contact with the normally open busbar selector isolator 1T4. The ensuing flashover irreparably damaged 1T4 and precipitated a busbar fault that shutdown both the inner and outer busbars.

1.18 Supplies from WPD's Filton and Merton Road Primary Substations were restored by automated switching in less than one minute.

1.19 WPD considers that its duty control engineer reacted well in assessing the alarms generated by the event and restoring all supplies via tele-controlled switching in five minutes.

WPD's answers to questions on its performance

1.20 Within the last three years, the AE has reviewed WPD's design standards, construction methods and maintenance procedures during previous visits to audit exceptional event claims and found them fit for purpose.

1.21 Discussions during a previous incident affecting a 33kV outdoor compound indicated that WPD had a programme to install busbar protection so as to minimise the number of customers affected by incidents such as the present one at Lockleaze. As part of the audit of this claim, the AE therefore included a discussion on how far WPD's programme has progressed.

1.22 The AE is pleased to note that WPD's initial programme is complete and that a review of the more complex sites such as Lockleaze BSP is under way.

1.23 The AE confirms that WPD's emergency procedures provide for the type of event being examined here.

1.24 To aid understanding of the background to WPD's SoF, the AE prepared a list of initial questions regarding this incident. These questions were used as the basis for the examination of WPD's claim.

1.25 The initial questions were discussed during the AE's visits to WPD's Avonbank offices and its Lockleaze BSP on 28 June 2011, when the records of WPD's SCADA system, the incident report and other information were made available.

1.26 WPD has provided answers to the AE's initial list of questions. For ease of reference, the AE's questions are printed in bold font with WPD's answers being printed in normal font.

Q1. What changes, if any, has WPD made to its emergency plans and procedures since BPI last visited to audit the exceptional event claim concerning the incident that occurred at WPD's Newton Abbot Substation that occurred on 26 February 2008?

A1. WPD considers that its emergency plans and procedure worked well in restoring supplies to the affected customers without delay. WPD continually reviews its contingency plans but there has not been any material change, only regular updating of names and contact numbers.

Q2. WPD's Statement of Facts (SoF) for the incident at Lockleaze BSP includes a photograph showing damage to the 33 kV equipment. The AE will need to understand the orientation of this photograph in relation to the layout of the Substation and the wind direction on the day of the incident.

A2. Anecdotal information is that lanterns were seen drifting across the sky the previous night from the Filton direction, which is to the north west of Lockleaze BSP. *[**AE's note:** The area to the north west of Lockleaze is primarily urban and includes two recreation grounds. It is impractical, for WPD to determine any accurate information regarding the 'launch site' of the lanterns].*

Q3. An examination of the 33kV system diagram for Lockleaze BSP in WPD's SoF suggests that:

a. the inner busbar is normally fed from GT2 and GT3;
b. the outer busbar is normally fed from GT1 and GT4;
c. the bus coupling circuit-breaker is normally open; and
d. there is no bus-section circuit-breaker in either busbar.

If the last item above is correct, during the audit of an incident that occurred at WPD's Ernesettle BSP on 16 June 2006, WPD indicated that it was in the process of changing bus-section circuit-breakers and installing busbar protection at a number of its substations with exposed conductors. Notwithstanding the discussions and AE's report concerning the incident at Lockleaze BSP that occurred on 03 October 2005; what plans does WPD currently have to either replace the switchgear with indoor equipment or to install bus-section circuit-breakers and busbar protection to minimise customer interruptions due to future faults that affect the outdoor busbars at its Lockleaze BSP?

A3. The substation at Lockleaze was designed in accordance with standard practice at the time of construction, circa 1952. It remains P2/6 compliant.

In the Exceptional Event report into the incident at Ernesettle BSP on 16 June 2006, WPD advised the AE that retrospective installation of busbar protection was being undertaken at a number of sites within the area.

That work has been completed and a review is now taking place of the more complex sites such as Lockleaze BSP. This review will assess the practicality and desirability of retrospectively installing bus bar protection. In some instances, such as Lockleaze, there would be a need to install additional circuit-breakers to enable a viable scheme to be installed.

Q4. What are / were the running conditions of WPD's 33 kV network associated with Lockleaze BSP:

a. in its 'normal' mode;

A4(a). The normal pairings at Lockleaze BSP are GT1 with GT4 and GT2 with GT3.

b. at the time of the incident;

A4(b). The system was running normally at the time of the incident.

c. if it was abnormal at the time of the incident, for what reason(s) and over what period of time has this been the case.

A4(c). Not applicable.

Q5. At Lockleaze BSP, what protection schemes are installed on:

a. the 33 kV busbars?

A5(a). There is no dedicated 33kV busbar protection installed at Lockleaze BSP, the busbars are protected by the protection applied to the 33kV grid transformer circuit-breakers.

b. the 33 kV side of GT1 and GT4?

A5(b). GT1 and GT4 are both equipped with voltage controlled overcurrent on the 33kV side and two stage overcurrent on the HV side.

c. the 33 kV side of GT2 and GT3?

A5(c). GT2 is equipped with voltage controlled overcurrent on the 33 kV side only.

GT3 has voltage controlled overcurrent on the 33 kV side and two stage overcurrent on the HV side (this is new protection commissioned this year).

All four grid transformers also have two stage standby earth fault protection on their 33 kV neutral connections.

Q6. What settings are applied to the above 33 kV protection schemes?

A6. A full set of protection settings will be available to the AE during the audit visit.

Q7. What protection operated when supply was lost?

A7. GT1:

HV	Y & B Inst O/C (St 2), no trip as St 1 had not operated
LV	Y & B voltage controlled overcurrent.

GT2:

HV	No operation
LV	R, Y & B voltage controlled overcurrent

GT3:

HV	No operation
LV	R, Y & B voltage controlled overcurrent

GT4:

HV	Y Inst O/C (St 2), no trip as St 1 had not operated
LV	R, Y & B voltage controlled overcurrent

On all four transformers the LV trip relay operated and all three phases of the voltage interlock relay flagged.

These are the correct operations expected for this type of fault.

Q8. When were the 33kV busbars and switchgear commissioned at WPD's Lockleaze BSP?

A8. Circa 1952.

Q9. What is the nature of the location of Lockleaze BSP? (i.e. Urban, rural, housing, industrial, etc)

A9. The substation is in an urban area but supplies a mixed urban and rural network.

Q10. What learning points, has WPD incorporated into its procedures as a result of this incident?

A10. WPD continually reviews its operating procedures but no additional measures have been introduced as a result of this incident.

Q11. What further learning points should be considered as a result of the application of the current one-off Exceptional Event Claims process?

A11. WPD considers that the revised process continues to be working well but would prefer to deal with these claims in a timely manner as opposed to nearly twelve months after the event.

That said, in the case of this event, the audit visit by the AE, coupled with the initial questions, WPD's advanced preparation and the site visit again facilitated a comprehensive examination of WPD's claim.

1.27 WPD also provided further information both during and subsequent to the audit visit. This includes:

- sight of the remains of the Chinese flying lantern;
- sight of the similar Chinese lantern that WPD purchased and used to illustrate its SoF;
- photographs of the irreparably damaged equipment additional to those in WPD's SoF;
- a copy of WPD's SCADA alarms received during this incident;
- a copy of the switching log from WPD's SCADA system;
- a representation of the incident on WPD's SCADA system;
- copies of WPD's protection schemes and associated relay settings for its four Grid Transformers at Lockleaze BSP;
- a simplified SLD of the relevant sections of WPD's 33 kV network showing all the Primary Substations affected by the loss of supply during this incident; and
- a copy of WPD's incident report from which it calculated the CI and CML attributed to the event.

2. Audit part 2

WPD's performance in preventing the event

2.1 In viewing WPD's performance in preventing this event, the AE has considered what more WPD could have reasonably done to ensure that its 33kV switchgear at Lockleaze BSP was safeguarded from the effects of third party interference and windborne materials.

2.2 The AE has discussed WPD's policy on its preventative measures and visited site to ascertain if they were applied.

2.3 Photographs taken at the time of the incident show the remains of the Chinese flying lantern and the irreparable damage to isolator 1T4.

2.4 The remains of the Chinese flying lantern are readily visible in WPD's Photograph 1 and the actual remains were shown to the AE during his visit to WPD on 28 June 2010.

2.5 The extensive damage to 1T4 is readily apparent from WPD's Photograph 2. All insulators, both fixed and moving were shattered in the incident.

2.6 A comparison with an undamaged isolator of the same type at Lockleaze BSP can be gauged from Photograph 3.

2.7 An examination of WPD's 33kV outdoor switchgear compound at Lockleaze BSP shows it to be surrounded by a 2.4 metre high 'unclimbable' palisade fence in accordance with accepted UK practice for this type of substation. The fence is in good condition and carries statutory warning notices.

2.8 The general layout of the 33kV outdoor switchgear compound at Lockleaze BSP is shown in Photograph 4. Both busbars are in the form of a 'U', the closed ends of which are to the right of the photograph. The outer busbar is nearest the camera. Both 'arms' of the inner busbar can be seen running parallel to the outer busbar, through the centre of the site.

2.9 Whilst it is practically impossible to insulate all the live exposed conductors in 33kV compounds such as at Lockleaze BSP, the AE is pleased to note that WPD's preventative measures are in accordance with its policy of applying heat-shrink insulation to arcing horns and switchgear bushings where appropriate and practicable.

2.10 The AE has discussed WPD's progress with retrospectively fitting busbar protection to its 33kV outdoor switchgear and is pleased to note that the initial programme is completed with a review of the more complex sites underway.

2.11 WPD's measurement systems clearly show the tripping of all four 33kV grid transformer circuit-breakers at 07:08 on 30 July 2010.

2.12 WPD's measurement systems confirm the SI at Filton and Merton Road Primary Substations, where automated switching restored supplies within one minute.

2.13 WPD's measurement systems also confirm the restoration of all supplies after five minutes via tele-controlled switching at 07:13 on 30 July 2010.

2.14 An examination of WPD's measurement systems confirms that WPD's control engineer acted quickly to assess the alarms generated by the incident and to restore supplies as speedily as possible.

2.15 The 33kV outdoor switchgear compound at WPD's Lockleaze BSP is equipped with an intruder detection system that covers the whole of the perimeter.

2.16 The AE therefore concludes that WPD had done all it could reasonably have been expected to do in considering that its outdoor 33kV equipment at Lockleaze BSP was protected from the effects of third party interference and windborne material in accordance with accepted good practice within the UK electricity supply industry.

WPD's performance in mitigating the effects of the event

2.17 WPD's switching log shows a text entry by the duty shift manager at 08:04 on 30 July 2010 recording the fault information to the damaged isolator 1T4.

2.18 The damage to isolator 1T4 is consistent with the metal ring of the Chinese flying lantern coming into contact with the exposed 33kV conductors. The resultant flashover would have created virtually simultaneous faults on the inner and outer busbars at WPD's Lockleaze BSP.

2.19 The AE has studied the running arrangements of WPD's 33kV distribution network connected to its Lockleaze BSP and concludes that WPD's protection systems worked correctly to clear the incident from WPD's distribution system.

2.20 The AE commends WPD's control engineer for analysing the situation and restoring supplies as rapidly as possible, thereby minimising the duration of the interruption.

2.21 The AE commends WPD for completing its initial programme and for its ongoing review of its 33kV outdoor switchgear with regard to the desirability and practicalities of retrospectively fitting busbar protection so as to minimise customer interruptions as far as possible.

Recommended performance adjustment(s)

2.22 The AE's recommendations to Ofgem are shown in Table 2-1.

Table 2-1: Audit part 2 recommended adjustment(s)

	Amount above threshold	Audit part 2 recommendation
CI	3.33	3.33
CML	0	0

Detailed justification

2.23 In reaching a judgement on a recommendation, the AE has firstly considered whether or not WPD could have reasonably taken any different course of action that would have prevented the Chinese flying lantern from causing a flashover of the 33kV switchgear at Lockleaze BSP.

2.24 In viewing WPD's performance in preventing this event, the AE has taken into account his personal knowledge of distribution switchgear and that of his colleagues who have considerable operational experience of incidents due to many causes.

2.25 The AE considers that the preventative measures employed by WPD on its 33kV outdoor switchgear at Lockleaze BSP are in accordance with the current industry standard and, as far as is reasonably practicable, prevent damage due to third party interference or windborne objects.

2.26 In considering WPD's restoration strategy, the AE is conscious that WPD's duty control engineers acted with commendable skill and speed in analysing the SCADA alarms and indications of this incident.

2.27 The AE is satisfied that WPD has carried out network management / loading studies of its 33kV system radiating from Lockleaze BSP and that it is being run as efficiently as practicable, there being no reasonable alternative given the configuration and lack of busbar protection at Lockleaze BSP.

2.28 The AE is satisfied that WPD's distribution network at Lockleaze BSP complies with the requirements of Security of Supply Standard P2/6.

2.29 The AE has discussed WPD's learning from this incident, including the on-site discussions regarding the physical layout of the switchgear and the possibilities of installing bus-section circuit-breakers and busbar protection. The outcome of WPD's deliberations would be reviewed and taken into account in the event of any subsequent incident of this type.

2.30 The AE is satisfied that WPD has met the criteria for preventative and mitigating actions set out in Appendix 4 to paragraph 8.58 of Special Licence Condition CRC 8.

2.31 The AE therefore concludes that WPD's claim is justified and recommends to Ofgem that the amount of CI above the threshold value should be excluded from its performance for regulatory reporting year 2010/11.

Appendix A Record of Audit part 1

Table A-1: AE's Information Log

"One-Off" Exceptional Event	Reporting Year 2010/11
Licensed Area	WPD Sth West
Date of event	30 July 2010
Cause	Windborne materials causing irreparable damage to 33kV switchgear at WPD's Lockleaze BSP
Notification to Ofgem	30 July 2010
SoF received	10 August 2010
SoF information	• at Lockleaze BSP, 33kV protection on all four Grid Transformers operated to de-energise both inner and outer busbars at 07:08 on Friday, 30 July 2010. • the cause was found to be a Chinese flying lantern that had precipitated a flashover at busbar selector isolator 1T4, irreparably damaging it. • automated switching restored Filton and Merton Road Primary substations in less than 1 minute (an SI). • WPD's control engineer restored both busbars at 07:13 via tele-controlled switching. • WPD's photographs show the irreparably damaged isolator and the remains of the Chinese lantern, which has an arc-damaged metal ring at its base.
Additional pre-visit information provided	Based on the SoF the AE drew up a list of initial questions. These were discussed during the audit visit. This initial list of questions, together with WPD's response, is contained in paragraph 1.26 of the report.
Location of audit visits	1. WPD's Avonbank Offices; and 2. WPD's Lockleaze BSP
Date of audit visits	28 June 2011
Visiting Auditor	Geoff Stott (BPI)
WPD's Representatives	Steve Cross, Peter Jenkins and Alison Sleightholm
Information provided during and subsequent to the audit visit	Comprehensive documentation / information including: • a discussion of the protection arrangements for the four Grid T/Fs at Lockleaze BSP and their associated CBs; • sight of the remains of the Chinese flying lantern and the similar one purchased by WPD for comparison purposes; • sight of the relevant 132kV and 33kV SLDs; • a copy of WPD's SCADA switching log that shows the alarms generated by the event; • the control engineer's switching schedules covering the event; • the switching log shows the loss of supplies from Portsmouth Grid commenced when the CBs associated with all four Grid T/Fs tripped at 07:08 on 30 July 2010;

	• the normal network running arrangements were demonstrated; • the restoration via the automated switchgear at Filton and Merton Road primary Substations was demonstrated; • the restoration of the majority of the affected customers via tele-controlled switching was also demonstrated; • a copy of WPD's 'PCNaFIRS' incident report that shows: o the number of customers affected by the incident to be 75,932; and o the customer minutes lost to be 379,660. • the AE confirms that these figures agree with those quoted in WPD's SoF; • using WPD South West's total connected customers at 30 September 2010 of 1,541,188 the number of customers affected equates to a CI of 4.93. [75932*100/1541188]; • similarly, the customer minutes lost for this event equate to a CML of 0.25. [379660/1541188]; and • discussion regarding WPD's progress with its programme of retrospectively fitting busbar protection to its outdoor 33kV switchgear. Visited Lockleaze BSP - Discussed practicalities and limitations for installing bus section CBs and busbar protection. Confirmed P2/6 compliant (both busbars 90 MVA firm). A new Grid T/F being installed. The list of initial questions was discussed. WPD provided answers to the initial questions plus additional information both during and subsequent to the audit visit. Ok re compliance with Appendix 4 of Paragraph 8.58 of CRC 8.

Table A-2: Impact on CI and CML

	CI		CML	
	Claimed	**Audited**	**Claimed**	**Audited**
132kV	0	0	0	0
EHV	4.93	4.93	0.25	0.25
HV	0	0	0	0
LV	0	0	0	0
Total	4.93	4.93	0.25	0.25
WPD Sth West Threshold (total)	1.6		1.3	
Part 1 Exceptionality Test	Pass		Fail	
Part 1 Precondition of eligibility (meets App 3 to paragraph 8.57 of CRC 8)	Pass			

WPD's measurement systems are subject to QoS audits for accuracy of reporting and it is not within the AE's ToR to repeat that work as part of the examination of exceptional event claims, although any consequential adjustments to reporting accuracy will be reflected in Ofgem's final adjudication of reported performance for regulatory reporting year 2010/11.

Appendix B Photographs

Photograph 1 – Remains of Chinese flying lantern showing the metal ring

Photograph 2 – The damage to 1T4 with blue phase nearest the camera

Photograph 3 – View of an undamaged isolator of the same type

Photograph 4 – General view of the 33kV outdoor compound at Lockleaze BSP