

## **Electricity Distribution Price Control Review**

### **Appendix – The losses incentive and quality of service**

June 2004 145e/04

## Summary

Revised price controls for electricity distribution network operators (DNOs) are due to come into effect from 1 April 2005. This document provides further details on two aspects of the price control review:

- ◆ setting targets for electrical losses and operation of the incentive mechanism; and
- ◆ setting targets and incentives rates for quality of service and storm arrangements.

The overall approach in both these areas is set out in the June 2004 initial proposals for the price control review which has been published alongside this document.<sup>1</sup>

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Unless marked as confidential all responses will be published by placing them in Ofgem's library or on the website. It would be helpful if responses could be submitted both electronically and in writing.

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<sup>1</sup> Electricity Distribution Price Control Review, Initial proposals, Ofgem, June 2004.

## **Table of contents**

<b>1. Setting losses targets and operation of the incentive mechanism .....</b>	<b>1</b>
<b>2. Targets and incentive rates for interruptions and further details on storm arrangements .....</b>	<b>8</b>

# 1. Setting losses targets and operation of the incentive mechanism

## *Introduction*

- 1.1. This Chapter provides further details on the operation of the losses incentive mechanism and builds on the overall arrangements published in the June initial proposals document.

## *The losses incentive mechanism*

- 1.2. The March 2004 document set out Ofgem's proposal that the target level of losses would be based on a proportion of units distributed that would be fixed for five years. The document also proposed that the fixed target would be based on the historic performance of the DNO, as measured by the average proportion of electricity lost between 1994/95 and 2003/04.
- 1.3. DNOs have expressed broad support to the approach set out by Ofgem, but have identified a number of concerns regarding the detailed calculation of their targets. In addition to general concerns regarding the quality of consumption data over the period since 1998, most issues identified by DNOs are company specific in nature. These include distortions in consumption and losses data arising due to:
- ◆ ex post adjustments made over the period 1994/5 to 1996/97 to correct for errors made during the immediate post privatisation period (1990/91 – 1994/95);
  - ◆ the significant decline in EHV volumes during the early 1990's, which impact on the incentive under the revised method of calculation;
  - ◆ agreements to establish all line loss factors for distribution connected generation of unity or greater; and
  - ◆ the potential impact of Ofgem's review of revenue protection obligations.

- 1.4. In principle, the proposed approach is intended to provide targets on a consistent and comparable basis. On the whole, the method set out in March provides consistent targets. Nevertheless, there is some merit in the points raised by some DNOs and Ofgem will be discussing potential ways forward with individual companies in due course.
- 1.5. Respondents to the March policy document indicated broad support for the high level proposals but requested clarification on several detailed points. These included:
- ◆ further clarification on how the losses incentive would operate over the next price control period;
  - ◆ a clearer explanation of the adjustments under the rolling retention mechanism to be applied during the subsequent price control period;
  - ◆ details of the eligibility test that Ofgem intends to adopt to determine whether loss reducing capital expenditure would enter the regulatory asset base; and
  - ◆ an explanation of the approach Ofgem intends to adopt in setting revised losses targets for future price controls.

#### **Operation of the losses incentive mechanism 2005/06 to 2009/10**

- 1.6. The operation of the losses incentive mechanism over the next price control period is relatively simple and not unlike the present mechanism. In particular, DNOs will incur rewards or penalties for the difference between actual losses and the target level of losses valued by the incentive rate. Therefore, for every MWh of loss reduction (increase) DNOs will be rewarded (penalised) at the proposed rate of £48/MWh.
- 1.7. Where the incentive mechanism differs is that includes an additional rolling mechanism for determining the level of incentive payments to apply from 1 April 2010 to ensure that the impact of DNO performance against the incentive is retained for 5 years.

### **The rolling retention mechanism**

- 1.8. The purpose of the rolling retention mechanism is to ensure that DNOs receive the full benefit of incremental improvements in performance for a period of 5 years. In Appendix 2 of the March policy document, Ofgem set out how the mechanism would operate in principle. The proposed mechanism allows the incremental change in actual losses, adjusted for growth effects, to be retained for a period of 5 years regardless of when the change occurs.
- 1.9. The mechanism set out in March envisaged that the benefit would be reflected in adjustment to the target level of losses in the subsequent period. However, some DNOs have expressed concern that it was not clear that the benefits of any incremental change would be valued at a consistent incentive rate to that which applied when the incremental change occurred. To address these concerns, Ofgem proposes to modify the approach slightly to make incentive payments, based on the proposed incentive rate for this period, rather than adjustments to the target level of losses. This is shown in Table 1.

**Table 1: Rolling incentive payments for losses**

	DPCR 4					DPCR 5				
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Units distributed	100	100	100	100	100					
Target loss percentage	5%	5%	5%	5%	5%					
Allowed losses (AL)	$(100 \times 0.05) = 5$	5	5	5	5					
Recorded losses (L)	4	10	6	2	4					
Out performance <sup>2</sup>	$(5 - 4) = 1$	-5	-1	3	1					
<b>DPCR 4 Incentive payment</b>	<b><math>(1 \times 4.8) = 4.8</math></b>	<b>-24</b>	<b>-4.8</b>	<b>14.4</b>	<b>4.8</b>					
Incremental change (05/06) <sup>3</sup>	-1	-1	-1	-1	-1					
Incremental change (06/07)	-	6	6	6	6	6				
Incremental change (07/08)	-	-	-4	-4	-4	-4	-4			
Incremental change (08/09)	-	-	-	-4	-4	-4	-4	-4		
Incremental change (09/10)	-	-	-	-	2	2	2	2	2	
Sum of changes	-1	5	1	-3	-1	0	-6	-2	2	0
<b>Incentive adjustment</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>28.8</b>	<b>9.6</b>	<b>-9.6</b>	<b>0</b>
Adjusted incentive payment <sup>4</sup>	<b>4.8</b>	<b>-24</b>	<b>-4.8</b>	<b>14.4</b>	<b>4.8</b>	<b>0</b>	<b>28.8</b>	<b>9.6</b>	<b>-9.6</b>	<b>0</b>

1.10. For illustrative purposes, Table 1 assumes that there is no incremental change in performance between 2010 and 2015. As a consequence, the adjusted incentive payment wholly reflects rewards and penalties due to performance during the previous period. Where a DNO receives incentive payments in respect of performance for 2010 onwards, these will be in addition to the adjustments identified.

### Capital expenditure eligibility test

1.11. Several DNOs have commented that Ofgem should set out the eligibility test for allowing the additional costs of losses related capital expenditure to enter the regulatory assets base. Ofgem has indicated that where expenditure is efficient, it will be allowed in the regulatory asset base after five years. Nevertheless,

<sup>2</sup> Out performance is assumed to be zero from 2010 onwards.

<sup>3</sup> It is assumed that in 2004/05, units distributed were 100 and losses were 5, therefore incremental change is  $(4-5) = -1$

<sup>4</sup> No incentive adjustment applies for the period 2005/06 to 2009/10.

expenditure may ultimately influence more than one output. In light of this, Ofgem proposes that where a DNO is able to satisfy the traditional criteria for delivering efficient and timely capital expenditure (as assessed at each price control review) then the capital expenditure will be allowed to enter the RAV. The five year rolling capex adjustment will apply as for other capital expenditure.

### **Resetting the target level of losses for 1 April 2010**

1.12. Several DNOs have requested that Ofgem clarify how it intends to revise the target level of losses for the price control period commencing 1 April 2010. Ofgem recognises the benefits of removing uncertainty, where it is possible and appropriate to do so. Nevertheless, there are a number of methods for establishing revised targets including:

- ◆ benchmarks derived from reference models of each distribution system;
- ◆ targets based on actual performance over the coming price control period; or
- ◆ values for the actual performance of the DNO in the final year of the price control.

1.13. These are some of the options that have been put forward by DNOs and interested parties. In the light of this, Ofgem intends to explore these and other options while keeping the operation of the proposed incentive arrangements under review. Where possible, Ofgem will seek to set out proposals for setting revised incentive targets at an early stage of the next price control review.

### ***Calculation of distribution losses***

1.14. The March policy document set out Ofgem's proposed method for deriving reported losses. Several DNOs have commented on the potential adverse impact of incorporating EHV volumes within the calculation of system losses. One of the main concerns raised is the potential volatility of future EHV volumes and the potential disproportionate impact that this might have on the calculation of losses. While Ofgem recognise that DNOs might be exposed to a volume risk, the pattern of EHV volumes over the period of the current price control



does not lend strong support to this view. In light of this, Ofgem intends to adopt the general method set out in the March document.

- 1.15. Several DNOs have expressed concerns about the potential impact of large or multiple generation schemes locating or clustering in remote locations. In light of these concerns, Ofgem set out proposals for a mechanism that provides limited protection from schemes that adversely affect the level of losses. The mechanism sets a floor on the loss adjustment factor that DNOs would be exposed to at 0.99. This means that schemes with a loss adjustment factor of less than 0.99 would be adjusted to ensure that the exposure of the DNO is capped at the level where the loss adjustment factor is equal to 0.99.
- 1.16. Respondents to the March document have welcomed Ofgem's proposal to introduce a mechanism to afford some limited protection against the potential adverse impacts of distributed generation. Nevertheless, several respondents have challenged the approach that Ofgem has adopted in deriving the appropriate loss adjustment floor. It has been suggested that the incentive rate proposed under the distributed generation scheme, on which the floor is based, also captures 20% of capital costs relating to the connection of distributed generation. DNOs argue, therefore, that the approach set out by Ofgem does not fulfil the objective of balancing the incentive arrangements. DNOs suggest that the distributed generation incentive allows DNOs an additional £0.35/kW of capacity connected. Correspondingly, the proposed floor should be set at 0.997.
- 1.17. Two DNOs have queried whether the intention to balance the scheme is consistent with the principal of connection and utilisation of distributed generation. They have expressed concern that the distributed generation incentive scheme provides an incentive to connect and utilise generation, but does not adequately recognise the financial exposure of increased losses related to the operation of distributed generation. They suggest that DNOs should be allowed 100 per cent protection against the adverse affects of distributed generation upon losses.
- 1.18. Ofgem supports the principal of encouraging efficient connection and utilisation of distributed generation but does not consider the proposal to only provide limited protection against increased losses as being inconsistent with this

principal. Ofgem considers that it is wholly appropriate that DNOs retain a limited incentive to manage the effects of distributed generation upon losses in an efficient manner. Therefore, Ofgem reaffirms the intention to only allow partial protection against the impacts of distributed generation.

- 1.19. Ofgem has considered the comments regarding the level of protection provided and accepts that there is merit in the arguments put forward by the DNOs.

**Ofgem proposes that the minimum level of the loss adjustment factor to 0.997.**

## 2. Targets and incentive rates for interruptions and further details on storm arrangements

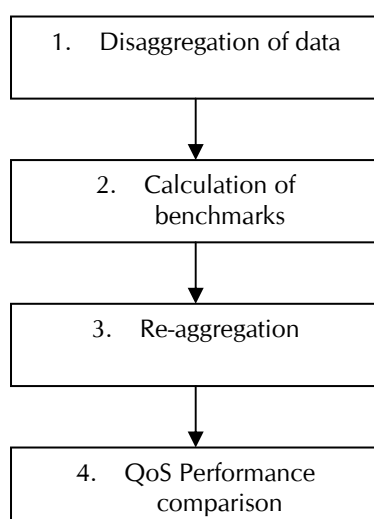
### *Introduction*

- 2.1. This Chapter sets out more detailed information on the process for setting targets for the number and duration of interruptions to supply and the full profile of targets and incentive rates for the next price control period.
- 2.2. It also sets out the revised gates for the storm arrangements and additional information on how the exceptional event allowances have been calculated.

### *Disaggregation and Benchmarking*

- 2.3. Ofgem has undertaken detailed disaggregation and benchmarking analysis across the distribution companies based on 2002/3 and 2003/4 performance data. This analysis has been used to establish benchmarks and targets for performance for each company. The disaggregation and benchmarking process involves 4 stages, which are illustrated in Figure 1 below.

**Figure 1: Four-stage disaggregation processes**



- 2.4. The first step in disaggregation is to consider the four voltage levels within a distribution network (Low Voltage - LV, High Voltage – HV, Extra High Voltage -

EHV and 132 kV<sup>5</sup>) separately. The disaggregation process and benchmark calculations are specific to each voltage level and are summarised below.

#### Low voltage

- 2.5. As distribution companies have limited ability to influence the number of customers interrupted at LV, the benchmarks are based on their current levels of performance. However, as companies have more influence over the restoration process, the benchmarks for restoration times (CML per CI) are based on average performance across all the companies.

#### High voltage

- 2.6. The HV network has been disaggregated into a number of circuit groups with similar characteristics. The bands are defined so that the differences in key characteristics such as the percentage of overhead line, length and the number of connected customers are minimised and that no group is dominated by a single distribution company.
- 2.7. For each circuit group key physical and performance statistics have been calculated such as:
- ◆ average circuit length;
  - ◆ average customer density (number of customers per circuit);
  - ◆ average faults per km;
  - ◆ average number of customers interrupted per fault; and
  - ◆ average and first quartile CML per CI.
- 2.8. Ofgem has calculated benchmark levels of performance for each circuit group. The benchmark for the number of customers interrupted is based on the company's own value for average circuit length and customer density, but the

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<sup>5</sup> A LV system is a system that operates at a nominal voltage level of 1kV or less. A HV system refers to voltage levels above 1kV up to and including 22 kV and EHV refers to voltages greater than 22 kV but below 132 kV.

national average for fault rates and customers interrupted per fault relative to customer density.

- 2.9. The benchmark for average restoration times (CML per CI) is based on the upper quartile level of performance in each band.

#### Extra High Voltage and 132 kV

- 2.10. For EHV and 132 kV circuits there are relatively few incidents each year, which tends to result in volatile performance. In order to address the volatility, the CI benchmarks are based on each DNO's average performance over the last ten years. The CML/CI benchmarks are based on the last three year's data – a period when more robust duration data was available.

#### Aggregation and Comparison

- 2.11. The benchmarks at each voltage level (or band) for each company have been summed to give an aggregate benchmark for that company. Distribution company performance can then be shown as actual performance relative to the benchmark. As the benchmarks are calculated based on groups of similar circuits and take into account distribution companies' own customer numbers per circuit and average circuit length, this method of disaggregation provides a more robust method for comparing quality of supply performance and identifying the scope for improvement.

### ***Setting targets***

#### **Calculating targets for the unplanned number of customers interrupted**

- 2.12. Ofgem has used the performance benchmarks to calculate targets for the unplanned number of customers interrupted per 100 customers. Ofgem has assumed a 0.5% per annum improvement in the benchmarks for the number of customers interrupted through to 2020 to reflect developments in technology and best practice. Companies have then been grouped into 2 categories:

- ◆ **companies with average performance worse than the 2020 benchmark**  
-Ofgem has assumed that these companies will close 40 per cent of the performance gap by 2010, where such an improvements can be achieved at reasonable cost. Where the costs appear disproportionate,

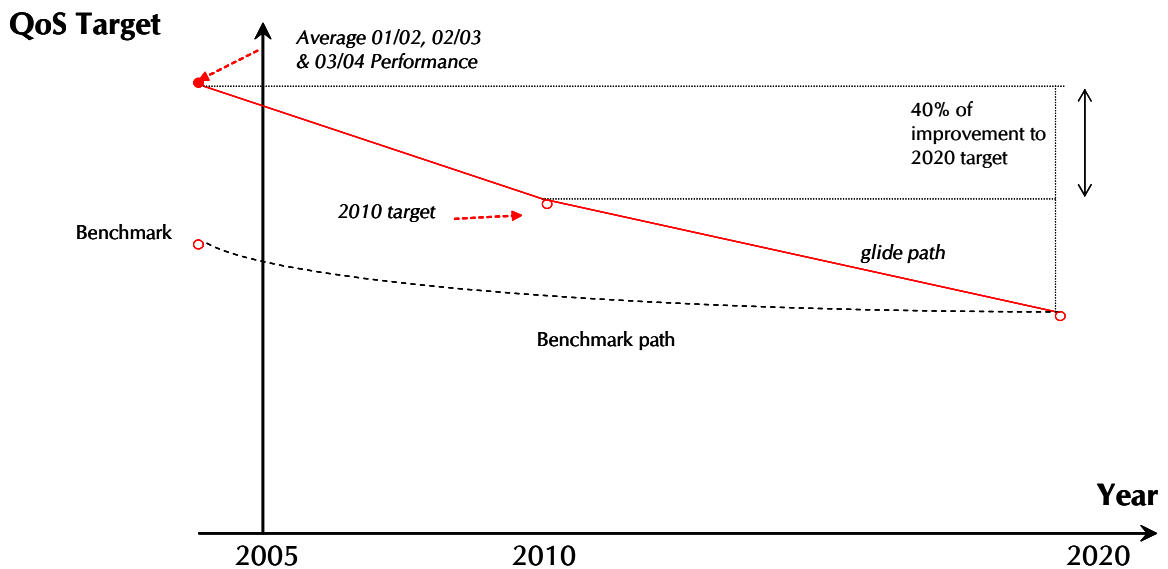
Ofgem has reduced the required level of improvement.<sup>6</sup> All companies that are required to make improvement have been given a quality of supply capital expenditure allowance based on an assessment of the marginal costs of improvement.

Ofgem has based these targets on closing 40 per cent of the performance gap as this can be achieved at a relatively low cost. Ofgem’s analysis suggests that further improvements are associated with significantly greater marginal costs;

- ◆ **companies with average performance better than or equal to the 2020 benchmarks** - These companies’ targets for the number of customers interrupted have been set equal to their current average performance with no associated cost allowance.

2.13. The process for target setting for the number of customers interrupted is illustrated in Figure 2.

**Figure 2: Target setting**



**Calculating targets for the number of unplanned customer minutes lost per customer**

<sup>6</sup> This applies to WPD South-West and Southern, where further improvements are costly relative to other companies.

- 2.14. Ofgem has calculated 2010 targets for the number of customer minutes lost per customer by multiplying the targets for the number of customers interrupted by the benchmarks for average restoration times.<sup>7</sup>

#### **Profile for unplanned interruption targets**

- 2.15. Ofgem has assumed a linear profile for unplanned interruptions and customer minutes lost. ie. that the company will move from their current average performance to the 2009/10 targets in 5 equal steps.

#### **Allowance for planned interruptions**

- 2.16. Ofgem has compared historic levels of planned interruptions with levels of historic capital expenditure and then carried out similar analysis on forecast planned interruptions. For most companies the ratio of planned interruptions to capital expenditure per consumer is forecast to remain constant or decrease, suggesting that they will continue to manage the levels of planned interruptions effectively. These companies have been given the majority of their forecast for planned interruptions. For a number of other companies there is a significant increase in the ratio of planned interruptions to capital expenditure per consumer. Their forecasts of planned interruptions have been scaled back significantly.
- 2.17. A forecast for planned customer minutes lost has been calculated for each company by multiplying the Ofgem forecast for planned interruptions by the better of their own forecast and the average DNO forecast for planned average restoration times (planned CML per CI).

#### **Overall targets for customer interruptions and customer minutes lost**

- 2.18. The overall targets for the customer interruptions and customer minutes lost have been calculated by adding 50 per cent of Ofgem's forecast for planned customer interruptions and minutes lost to the unplanned targets.

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<sup>7</sup> These benchmarks are based on average performance at low voltage and upper quartile performance at high voltage and an average of the companies' own performance at 132kV and EHV.

**Table 2: Profile of targets for the number of customers interrupted per 100 customers (CI)**

Profile of targets for the number of customers interrupted per 100 customers (CI)					
DNO	05/06	06/07	07/08	08/09	09/10
CN - Midlands	109.1	107.5	106.0	104.4	102.9
CN - East Midlands	80.6	80.0	79.4	78.8	78.2
United Utilities	56.5	56.5	56.4	56.4	56.4
CE – NEDL	74.7	74.6	74.6	74.5	74.5
CE – YEDL	67.8	67.5	67.2	67.0	66.7
WPD – South West	84.7	84.7	84.7	84.7	84.7
WPD - South Wales	99.0	97.7	96.4	95.1	93.7
EDF – LPN	35.1	35.1	35.1	35.1	35.1
EDF – SPN	89.9	87.9	86.0	84.0	82.1
EDF – EPN	92.9	91.2	89.5	87.8	86.1
SP Distribution	60.0	60.0	59.9	59.8	59.8
SP Manweb	45.1	45.1	45.1	45.1	45.1
SSE – Hydro	96.6	96.3	96.0	95.7	95.3
SSE – Southern	90.2	89.3	88.3	87.4	86.5
<b>Average</b>	<b>77.2</b>	<b>76.5</b>	<b>75.8</b>	<b>75.0</b>	<b>74.3</b>

Note: The targets shown here have a 50% weighting on planned interruptions.

**Table 3: Profile of targets for the number of customer minutes lost per customer (CML)**

Profile of targets for the number of customer minutes lost per customer (CML)					
DNO	05/06	06/07	07/08	08/09	09/10
CN - Midlands	101.2	97.7	94.2	90.8	87.3
CN - East Midlands	85.6	81.4	77.2	73.0	68.8
United Utilities	58.8	56.7	54.6	52.5	50.4
CE – NEDL	70.6	69.0	67.4	65.9	64.3
CE – YEDL	67.4	65.6	63.8	61.9	60.1
WPD - South West	62.1	62.1	62.1	62.1	62.1
WPD - South Wales	71.7	71.7	71.7	71.7	71.7
EDF – LPN	39.5	39.3	39.2	39.1	38.9
EDF – SPN	81.1	76.7	72.4	68.1	63.8
EDF – EPN	77.0	75.2	73.3	71.4	69.6
SP Distribution	64.7	61.1	57.4	53.8	50.1
SP Manweb	50.8	48.3	45.8	43.4	40.9
SSE – Hydro	96.7	95.8	95.0	94.1	93.2
SSE – Southern	81.6	79.9	78.3	76.7	75.1
<b>Average</b>	<b>72.2</b>	<b>70.0</b>	<b>67.8</b>	<b>65.6</b>	<b>63.4</b>

Note: The targets shown here have a 50% weighting on planned customer minutes lost

### ***Setting incentive rates***

2.19. Ofgem has calculated incentive rates for the number of customers interrupted and number of customer minutes lost by dividing the amount of revenue exposed to the output measures by the performance band around the target.

Ofgem has assumed 25 per cent bands either side of the target for the number of



customers interrupted and 30 per cent bands either side of the target for customer minutes lost.

2.20. Table 4 and 5 show the full profile of incentives rates for the number and duration of interruptions to supply for 2005/6 to 2009/10. For the purposes of initial proposals and comparisons with the existing IIP incentive rates the calculations have been carried out using forecast 2004/5 base price control revenues from DPCR3 final proposals.<sup>8</sup>

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<sup>8</sup> Review of Public Electricity Suppliers 1998 to 2000 – Distribution Price Control Review Final Proposals, Ofgem, December 1999.

**Table 4: Incentive rates for the number of customers interrupted per 100 customers**

Incentive rates for the number of customers interrupted per 100 customers (£m/CI)						
DNO	2005/6	2006/7	2007/8	2008/9	2009/10	2004/5 IIP incentive rate
CN - Midlands	0.10	0.10	0.10	0.11	0.11	0.06
CN - East Midlands	0.13	0.14	0.14	0.14	0.14	0.09
United Utilities	0.17	0.17	0.17	0.17	0.17	0.13
CE – NEDL	0.09	0.09	0.09	0.09	0.09	0.06
CE – YEDL	0.14	0.14	0.15	0.15	0.15	0.08
WPD - South West	0.09	0.09	0.09	0.09	0.09	0.07
WPD - South Wales	0.06	0.06	0.06	0.06	0.06	0.03
EDF – LPN	0.29	0.29	0.29	0.29	0.29	0.24
EDF – SPN	0.08	0.08	0.08	0.08	0.09	0.05
EDF – EPN	0.14	0.14	0.15	0.15	0.15	0.10
SP Distribution	0.20	0.20	0.20	0.20	0.20	0.13
SP Manweb	0.16	0.16	0.16	0.16	0.16	0.11
SSE – Hydro	0.07	0.07	0.07	0.07	0.08	0.04
SSE – Southern	0.15	0.15	0.16	0.16	0.16	0.11
<b>Total</b>	<b>1.893</b>	<b>1.904</b>	<b>1.915</b>	<b>1.926</b>	<b>1.937</b>	<b>1.329</b>
<b>Average</b>	<b>0.135</b>	<b>0.136</b>	<b>0.137</b>	<b>0.138</b>	<b>0.138</b>	<b>0.095</b>

Note: The incentive rate is in 2002/03 prices

**Table 5: Incentive rates for the number of customer minutes lost per customer**

Incentive rate for the number of customer minutes lost per customer (£m/CML)						
DNO	2005/6	2006/7	2007/8	2008/9	2009/10	2004/5 IIP incentive rate
CN - Midlands	0.14	0.14	0.15	0.15	0.16	0.10
CN - East Midlands	0.16	0.17	0.18	0.19	0.20	0.17
United Utilities	0.20	0.21	0.22	0.23	0.24	0.16
CE – NEDL	0.12	0.12	0.13	0.13	0.13	0.08
CE – YEDL	0.18	0.19	0.19	0.20	0.20	0.16
WPD - South West	0.16	0.16	0.16	0.16	0.16	0.13
WPD - South Wales	0.10	0.10	0.10	0.10	0.10	0.05
EDF – LPN	0.32	0.32	0.33	0.33	0.33	0.25
EDF – SPN	0.11	0.11	0.12	0.13	0.14	0.09
EDF – EPN	0.21	0.22	0.22	0.23	0.24	0.17
SP Distribution	0.23	0.25	0.26	0.28	0.30	0.14
SP Manweb	0.18	0.19	0.20	0.21	0.22	0.12
SSE – Hydro	0.09	0.09	0.09	0.10	0.10	0.04
SSE – Southern	0.21	0.21	0.22	0.22	0.23	0.15
<b>Total</b>	<b>2.42</b>	<b>2.49</b>	<b>2.57</b>	<b>2.65</b>	<b>2.74</b>	<b>1.82</b>
<b>Average</b>	<b>0.173</b>	<b>0.178</b>	<b>0.183</b>	<b>0.189</b>	<b>0.196</b>	<b>0.130</b>

Note: The incentive rate is in 2002/03 prices

## **Revised gates for the storm arrangements**

2.21. The revised gates for the storm arrangements for each DNO and associated trigger periods for payment are set out in Tables 6 and 7.

**Table 6: Gates for different categories of event and trigger periods for payment**

Category of severe weather	Lower Gate	Upper Gate	Trigger periods for payment
Normal conditions	N/A	8 times mean daily faults at HV and above	18 hours
Lightning event	> = 8 times mean daily faults at HV and above	50% of exposed consumers	24 hours
Medium-sized snow or wind event	> = 8 times mean daily faults at HV and above	13 times mean daily faults at HV and above	24 hours
Large snow or wind event	> = 13 times mean daily faults at HV and above	50% of exposed customers	48 hours
Very large event	50% of exposed consumers	N/A	Discretionary approach

Note: For cases of severe flooding, ice accretion or snow where the company may be unable to gain access to the network, Ofgem proposes to retain the flexibility in the interim arrangements to set a later starting point for payments to consumers or to scale down the level of payments.

**Table 7: Gates for each DNO**

Proposed "gates" for DPCR4 severe weather arrangements			
DNO	8* mean HV and above	13* mean HV and above	50% of exposed customers
CN - Midlands	63	103	500,000
CN - East Midlands	58	95	590,000
United Utilities	47	77	370,000
CE - NEDL	36	59	310,000
CE - YEDL	35	57	500,000
WPD - South West	54	88	390,000
WPD - South Wales	46	75	300,000
EDF - SPN	46	74	410,000
EDF - EPN	72	117	690,000
SP Distribution	79	129	320,000
SP Manweb	61	99	270,000
SSE - Hydro	61	99	170,000
SSE - Southern	62	101	600,000

Note: numbers of exposed customers have been rounded to the nearest 10,000.

## Calculation of exceptional event allowances

2.22. Ofgem has calculated storm allowances by calculating an allowance per exposed consumer for different types of event and multiplying this by the number of exposed consumers and the frequency of occurrence of these types of event for each DNO. The minimum allowance has been set at £0.5 m. The calculation of the allowances is set out in Table 8.

**Table 8: Calculation of exceptional event allowances**

DNO	Allowance per exposed customer based on size of event			Allowance for major events	Number of exposed customers	Annual allowance for exceptional events (£m)
	Lightning (over 8 times mean daily faults)	8 times to 13 times mean daily faults	13 times to 20 times main daily faults	20 + times mean daily faults		
	£0.09	£0.34	£2.14	£2.6 million		
	Number of events per year					
CN - Midlands	0.6	0.8	0.3	0.4	500,000	£1.5m
CN - East Midlands	1.0	1.0	0.2	0.3	590,000	£1.3m
United Utilities	0.4	0.5	0.1	0.3	370,000	£0.9m
CE – NEDL	2.3	0.7	0.3	0.6	310,000	£1.9m
CE – YEDL	0.6	0.9	0.2	0.0	500,000	£0.5m
WPD - South West	1.9	0.7	0.0	0.4	390,000	£1.2
WPD - South Wales	0.6	0.9	0.2	0.8	300,000	£2.3m
EDF – LPN	na	na	na	na	na	na
EDF – SPN	0.4	0.6	0.1	0.2	410,000	£0.7m
EDF – EPN	0.3	1.5	0.5	0.3	690,000	£1.9m
SP Distribution	0.3	0.7	0.3	0.5	320,000	£1.6m
SP Manweb	1.0	0.9	0.1	0.4	270,000	£1.2m
SSE - Hydro	0.7	1.8	1.2	0.4	170,000	£1.6m
SSE - Southern	0.0	0.6	0.1	0.5	600,000	£1.6m

Note: The thresholds for the calculations are based on the mean daily level of faults at higher voltages.