Annex Explanation of Authority's reasons for directions and determination under Special Licence Condition G - Yorkshire Electricity Distribution plc

1. Introduction

1.1 This document sets out the reasons for the directions and determination under Special Licence condition G ("the Condition") of a licence ("the Licence") treated as granted to Yorkshire Electricity Distribution plc ("YEDL") under section 6(1)(c) of the Electricity Act 1989. The directions are intended to adjust YEDL's 2001/2 performance for the number and duration of interruptions, its 2004/5 targets, associated incentive rates and its interim targets.

1.2 The structure of the rest of this document is as follows:

- Section 2 sets out the reasons for the direction under paragraph 8 of the Condition to adjust YEDL's 2001/2 reported performance for inaccuracy;
- Section 3 sets out an explanation of the determination under paragraph 7 of the Condition to define YEDL's interim targets;
- Section 4 sets out the reasons for the direction under paragraph 7C of the Condition to adjust YEDL's 2004/5 targets for further information on the impact of definitions and measurement systems on its reported performance. It also explains the consequential adjustments to YEDL's incentive rates;
- Section 5 sets out an explanation of the direction under paragraph 7D of the Condition to adjust YEDL's interim targets for 2002/3 and 2003/4 in line with the changes under paragraph 7C of the Condition; and
- the Appendix includes further detailed tables used in calculating some of the adjustments and the revised version of Annex A of the Condition incorporating all of the adjustments.

2. Reasons for direction under paragraph 8 of the Condition – Adjusting 2001/2 performance data for inaccuracy

Examiners report

2.1 The Authority appointed Mott MacDonald and British Power International (together known as "the Examiner") to provide an audit opinion on the rebasing of IIP targets for certain electricity distribution companies. The examiner's[1] audit report (which is attached) shows that YEDL's data for the number of interruptions is below the minimum overall and LV levels of accuracy specified

[1] "Information and Incentives Project – Audit of incident reporting for 2001/2 - Appendix O Yorkshire Electricity Distribution (YEDL)", Mott-MacDonald and British Power International, February 2003

in the Regulatory Instructions and Guidance ("the RIGS") due to under-reporting at HV and under-reporting at LV. Under paragraph 8 of the Condition the Authority may therefore, in accordance with the provisions of that paragraph, make adjustments to this data to mitigate against the effects of this inaccuracy.

Additional information submitted by YEDL

2.2 YEDL did not submit any additional information to the Authority regarding the accuracy of its 2001/2 reported performance.

Authority's draft direction

2.3 The Authority has considered the evidence contained in the examiner's report and other relevant circumstances. In the light of these and of its principle objective and general duties the Authority considers that it is appropriate to exercise its powers under paragraph 8 of the Condition to adjust YEDL's 2001/2 data for the number and duration of interruptions.

2.4 The Authority therefore proposes that the adjustments to YEDL's data for the number and duration of interruptions should be based on the accuracy figures set out in Table A-1 of the examiner's report.

2.5 Based on this analysis, the Authority proposes that $CIIS_t$ for 2001/2 should be adjusted upwards by 7.71% from 58.16 to 62.64. The calculation is set out in Table 2.1 below:

Table 2.1: Adjustments to 2001/2 performance data for inaccuracy

	Disaggregated reported performance figures for 2001/02		Estimated % change due to inaccuracy		Adjusted disaggregated performance figures for 2001/02	
	CI	CML	CI	CML	CI	CML
HV & above	48.96	38.19	8.80%		53.27	38.19
LV	9.19	16.39	1.91%		9.37	16.39
NGC or other transmission co	0.54	0.20	8.80%		0.59	0.20
Embedded generators	0.00	0.00			0.00	0.00
Other connected systems	0.00	0.00	8.80%		0.00	0.00
Total unweighted CI/CML	58.70	54.78	7.72%		63.23	54.78
Total weighted CIIS/CMLIS	58.16	54.60	7.71%		62.64	54.60

Note: No adjustment has been proposed to the CML data as the examiner found that this met the minimum LV and overall levels of accuracy.

2.6 In reaching its decision the Authority took into account the fact that YEDL's 2001/2 reporting was partially based on old measurement systems and therefore that special considerations applied. In future years with the new measurement systems in place, it may be appropriate to use an alternative approach to calculating adjustments for inaccuracy. The new measurement systems provide connectivity down to the LV feeder level and therefore provide much more robust information on the number of customers affected by faults at each voltage level.

DNO response to paragraph 10A consultation

2.7 In its 11 March letter to the Authority, YEDL argued that the use of the IIP audit inaccuracy results for adjusting 2001/2 performance would lead to an inaccurate reflection of true performance for that year. It suggested that the changes to 2001/2 HV and LV performance should be based on the same form of CUSUM analysis as had been used to rebase its 2004/5 targets. YEDL had a meeting with Ofgem regarding the adjustments on the 17 March. It also made further submissions on 19 March, and 28 March. In the light of these the key points of YEDL's response are summarised below.

HV 2001/2 analysis

Customers per fault

2.8 YEDL has used Cusum analysis to show that there was a step change in performance during 2001/2. It has calculated average (or seed) values for the number of customers affected per HV fault for the periods April to May 2001 and June to March 2002. These averages were then multiplied by the number of months for which they applied and summed. The result was then compared with the average number of customers per fault for the latest period (July 2002 to December 2002) multiplied by twelve. YEDL made an adjustment for the effects of Foot and Mouth during 2001/2 by applying a 2.3% reduction to the correction factor for the number of interruptions and a 4.55% reduction to correction factor for the duration of interruptions. This resulted in correction factors of 36% and 33% for the number and duration of interruptions respectively.

LV 2001/2 analysis

Customers per fault

2.9 YEDL used Cusum analysis to show that there was a step change in performance during 2001/2. It has calculated average (or seed) values for the number of customers per LV fault for the periods April to August 2001, September to February 2002 and March 2002. These averages were then multiplied by the number of months for which they applied and summed. The result was then compared with the average customers per fault for the final period used in the rebasing analysis (paragraphs 4.8 and 4.15) multiplied by twelve. YEDL's calculation resulted in a correction factor of 36% which it believed should be applied together with the faults per day correction factor discussed below.

Faults per day

2.10 YEDL used Cusum analysis to show that there was a step change in performance during 2001/2. It has calculated average (or seed) values for the number of faults per day for the periods April to December 2001 and January to March 2002. These averages were then multiplied by the number of months for which they applied and summed. The result was then compared with the average faults per day for the final period used in the rebasing analysis (paragraph 4.6 below) multiplied by twelve. YEDL's calculation resulted in a correction factor of 9%.

Overall LV correction factor

2.11 YEDL multiplied the customers per fault correction factor and the faults per day correction factor to derive an overall LV correction factor of 49% for the number and duration of interruptions.

Effect on 2001/2 reported performance

2.12 Applying the changes outlined above YEDL calculated revised 2001/2 performance figures of 78.39 and 74.94 for the number and duration of interruptions respectively.

Authority's Final Direction

2.13 In the light of the additional information and subsequent discussions regarding changes to reported 2001/2 performance the Authority is making the following changes.

HV customers per fault

2.14 The Authority carried out Cusum analysis for the periods suggested by YEDL (paragraph 2.8 above) and calculated correction factors of 32.39% and 34.61% for the number and duration of HV interruptions respectively as shown in Table 4 in the appendix. The correction factor for the number of interruptions takes into account the effects of Foot and Mouth on reported performance in 2001/2. The Authority considers that it is inappropriate to make an adjustment to correction factor for the duration of interruptions for the effects of Foot and Mouth, as analysis of the information presented by NEDL suggests that the effects on duration worked in broadly equal and opposite directions.

LV customers per fault

2.15 The Authority carried out Cusum analysis for the period suggested by YEDL (identified in paragraph 2.9 above) and calculated a correction factor of 35.37% for the number and duration of LV interruptions.

LV faults per day

2.16 The Authority received supporting information on spending levels and work volumes for LV repairs for 2001 and 2002 from YEDL which indicated that actual faults per day were remaining constant while reported performance had increased. This suggested that faults per day should be taken into account in calculating the overall correction factor at LV. The Authority carried out Cusum analysis of the periods suggested by YEDL (identified in paragraph 2.10 above), and found that the correction factor to apply to LV faults per day was 6.47%.

Overall LV correction factors

2.17 The Authority has calculated adjustments of 44.14% and 40.30% to LV CIs and CMLs respectively for the observed changes in customers per fault and faults per day as shown in Table 5 in the appendix. The correction factor for the duration

of interruptions includes a reduction of 3.84% to reflect over-reporting of the duration of incidents that was identified as part of the IIP audit.

2.18 As explained for the draft directions, the examiner's audit report shows that YEDL's data for the number of interruptions is below the minimum overall and LV levels of accuracy. Under paragraph 8 of the Condition the Authority may therefore make adjustments to this data. Taking into account the issues discussed above, the Authority is satisfied that the adjustments set out in Table 2.2 below are appropriate.

2.19 Based on this analysis, the Authority directs that that CIISt for 2001/2 is adjusted upwards by 34.25% from 58.16 to 78.08.

Table 2.2: Adjustments to 2001/2 performance data for inaccuracy

	Disaggregated reported performance figures for 2001/02		Estimated % change due to inaccuracy		Adjusted disaggregated performance figures for 2001/02	
	CI	CML	CI	CML	CI	CML
HV & above	48.96	38.19	32.39%		64.82	38.19
LV	9.19	16.39	44.14%		13.25	16.39
NGC or other transmission co	0.54	0.20	32.39%		0.72	0.20
Embedded generators	0.00	0.00	32.39%		0.00	0.00
Other connected systems	0.00	0.00	32.39%		0.00	0.00
Total unweighted CI/CML	58.70	54.78	34.23%		78.79	54.78
Total weighted CIIS/CMLIS	58.16	54.60	34.25%		78.08	54.60

Note: No adjustment has been made here to the CML data as the examiner found that this met the minimum LV and overall levels of accuracy. The evidence of inaccuracy in 2001/2 CMLs is considered further in relation to the adjustment to the interim targets in section 5 below.

3. Explanation of determination under paragraph 7 of the Condition

3.1 Under the mechanism set out in paragraph 7 of the Condition the (interim) targets TA_t and TB_t for the years 2002/3 and 2003/4 will be the higher of:

- $CIIS_t$ and $CMLIS_t$ respectively for the year 2001/2 adjusted for inaccuracy; and
- TA_t and TB_t respectively for 2004/5 set out in Annex A of the Condition.

3.2 Given the direction under paragraph 8 of the Condition:

- TA_t for the 2002/3 and 2003/4 are determined as being 78.08.
- TB_t for 2002/3 and 2003/4 are determined as being 56.44.

4. Reasons for direction under paragraph 7C of the Condition – Rebasing 2004/5 targets

4.1 YEDL gave notice to the Authority on 9 September 2002 under paragraph 7A of the Condition, that it considered its existing targets TA_t and TB_t for the number and duration of interruptions to supply respectively for the year 2004/5 to be inappropriate. The Authority therefore needs to direct the appropriate targets for that year prior to 1 April 2003 so as to ensure that such targets will have effect for the purposes of the Condition after that date.

YEDL's submission

4.2 YEDL is requesting further changes to its 2004/5 targets to reflect additional evidence of the impact of definitions on its reported performance. It has asked for the Authority's original adjustment for definitions to be revised to take into account:

- the actual level of re-interruptions recorded over the period 1 April 2002 to 13 December 2002; and
- changes to short interruptions estimates based on 5 year averages of National Fault and Interruption Reporting Scheme ("Nafirs") data.

4.3 YEDL has also requested additional changes to its 2004/5 targets to reflect further information of the impact of new measurement systems. The main cause of the change in reporting being claimed by YEDL is the progressive use by field engineers of the Geographic Information System ("GIS") system to inform their estimates of the number of customers, which began in May 2001 and was consolidated into the reporting system in April 2002 with all customer number estimates being informed by a connectivity trace of the LV network in GIS. It was not possible for YEDL to report incidents using both the old and new systems in parallel since that time so the effect of the system changes could not be directly measured. YEDL therefore based its approach on cumulative sum (cusum) analysis, which indicates step changes in time series data.

4.4 The outstanding issues regarding new measurement systems from the previous rebasing in April 2002 were the number of customers per fault and the number of faults per day at Low Voltage. YEDL applied cusum analysis to its data on the number of LV underground customers per fault per day and LV underground incidents per day for the period 1 April 1990 to 30 November 2002.

Customers per fault per day

4.5 The cusum analysis generated an average (or seed) value of 14.45 customers per fault prior to the introduction of and familiarisation with the fully IIP compliant measurement systems, and a seed value of 22.75 customers per fault for the period after the new measurement systems had bedded down. The cusum analysis clearly illustrated that there was a significant increase in the number of customers per fault following the introduction of the new measurement systems.

Faults per day

4.6 YEDL's cusum analysis generated a seed value of 23.8 incidents per day for the period June 1998 to December 2001 and 29.5 incidents per day for the period January 2002 to November 2002. YEDL has been unable to provide a robust explanation for a number of the step changes in reported incidents observed during the 1990s, however, they have identified a number of major reorganisations that took place over this period. The cusum analysis clearly illustrated that there was a significant increase in faults per day, (from an otherwise stable position).

4.7 YEDL considers that its 2004/5 targets should be adjusted to take into account the step changes between the average number of customers per fault and the average number of incidents per day, which underpinned its original 2004/5 targets, and the average number of customers per fault and the average number of incidents per day after the introduction of the new measurement systems. It therefore repeated the linear trend calculations that Ofgem used to predict the 1999/00 base year performance for the price control targets.

Customers per fault per day

4.8 YEDL's analysis resulted in a predicted number of LV customers per fault of 12.3 for 1999/2000 compared with an average of 22.75 customers per fault post new measurement systems, a step change of 85%, which was then reduced to take into account the effects of an estimated 2.2% increase in connected customers due to a definitional change, resulting in a step change of 82.8%.

Faults per day

4.9 YEDL predicted the number of LV faults per day for 1999/2000 to be 27.6 compared with an average number of incidents per day of 29.5 post new measurement systems, a step change of 6.9%.

Overall change at LV due to new measurement systems

4.10 YEDL multiplied the identified step changes for the number of customers per fault per day and the number of faults per day, resulting in their suggested increase of 95.4% for the number and duration of interruptions at LV.

4.11 Table 1 in the appendix of this document shows the adjustments suggested by YEDL to rebase its 2004/5 targets to take account of the impact of new definitions and measurement systems on its reported performance. In line with this YEDL proposes the following adjustments to its 2004/5 targets:

- TA_t for the year commencing 1 April 2004 should be increased by 9.26% from 75.39 to 82.38
- TB_t for the year commencing 1 April 2004 should be increased by 15.66% from 56.44 to 65.28

Examiner's report

4.12 In section 4 of its report, the examiner indicates that YEDL has adopted a reasonable methodology for identifying step changes in the number of reported incidents and number of customers affected by reported incidents at the LV level. Whilst it is recognised that, by its nature, the cusum analysis requires a degree of judgement and may be subject to inaccuracy, discussions with YEDL have resulted in agreement on the conclusions that can be drawn from this analysis.

4.13 The examiner is of the opinion that the YEDL's submission represents a fair and reasonable statement of the effects that changes to definitions and changes to YEDL's measurement systems have had upon the company's reported performance.

Authority's draft direction

4.14 The Authority has considered the examiner's report, YEDL's submission and other relevant circumstances. In the light of these, and of its principle objective and general duties, the Authority is satisfied that the calculation of the impact of new definitions at higher voltages and lower voltages and the impact of new measurement systems at higher voltages is robust. Whilst the Authority is satisfied that YEDL's underlying data is robust, it is concerned with how this data has been analysed to identify the impact of measurement system changes at LV. The principal concern is with the calculation of "predicted" values for the number of customers per fault per day and the number of faults per day for 1999/2000. The Authority believes that to ensure a consistent approach across DNOs and with the previous rebasing process carried out in April 2002, the calculation of the impact of new measurement systems should be based on step changes in reported performance prior to and after the introduction of the new measurement systems.

4.15 The Authority has applied this methodology, using YEDL's submitted figures on customers per fault and the base data on LV faults per day to re-calculate the average (seed) values for the number of faults per day over the same periods as identified by YEDL. Using the seed values identified by YEDL above for the number of customers per fault of 14.45 and 22.75, the Authority calculated an increase of 55.24%, having taken account of the previously mentioned 2.2% increase due to a definitional change. Having derived average numbers of incidents per day of 24.30 and 29.54 for the periods pre- and post-new measurement systems, the Authority calculated an increase of 21.54% in the number of faults per day. Applying this change to the 55.24% increase in the number of customers per fault, results in an 86.68% increase for both the number and duration of interruptions at LV due to the impact of new measurement systems.

4.16 On this basis the Authority proposes that;

- TA_t for the year commencing 1 April 2004 should be increased by 8.69% from 75.39 to 81.95
- TB_t for the year commencing 1 April 2004 should be increased by 14.52% from 56.44 to 64.64

The calculations to derive these adjustments are set out in Table 2 in the Appendix of this document.

4.17 The associated changes to YEDL's incentive rates under paragraph 7E of the Condition are set out below:

- IRA_t for the year commencing 1 April 2002 should be reduced from 0.05 to 0.046;
- IRA_t for the years commencing 1 April 2003 and 2004 should be reduced from 0.09 to 0.083;
- IRB_t for the year commencing 1 April 2002 should be reduced from 0.07 to 0.061;
- IRB_t for the years commencing 1 April 2003 and 2004 should be reduced from 0.18 to to 0.157.

DNO response to paragraph 10A consultation

4.18 In its letter of 11 March, YEDL expressed concern with the use of the starting figure of 24.30 for the number of LV incidents per day for YEDL and requested that the value of 23.8 presented in its January 2003 report be used instead. Repeating the Authority's methodology using this figure together with the final average of 29.5 LV incidents per day as set out in paragraph 4.6 would alter the overall LV measurement system correction to 92.68%.

4.19 At a meeting with the Authority on 17 March and in its letters of 19 and 28 March, YEDL presented additional analysis regarding the appropriate rebasing factors for the higher voltages. The key points are summarised below.

4.20 YEDL noted that in the rebasing case it put forward in January 2003 it had calculated a rebasing factor of 5.9% based on the difference between the average HV customers per fault being reported under its latest measurement systems and the figure it calculated as being inherent in the targets set as part of the price control review. It recognised that the difference between the 5.9% and the interim adjustment of 5% was within the potential errors of the analysis. However, YEDL had now reviewed and applied the methodology used by the Authority to calculate the rebasing factors for YEDL at LV to the higher voltage rebasing as well.

4.21 In its letter of 28 March YEDL used complete data on all non-weather HV faults to calculate an average of 766 customers per fault for the period April 1998 to March 2001 prior to its new measurement systems being introduced and an average of 850 customers per fault after the introduction of the new systems. This step change gave a rebasing factor of 10.9%. Removing the 2.2% increase due to definition changes (see paragraph 4.8) gave a higher voltage rebasing factor of 8.7%

Authority's Final Direction

4.22 The Authority has re-calculated the starting figure for the number of LV incidents per day for YEDL and found this to be 23.77. Combining this with the final average of 29.54 specified in paragraph 4.15 the Authority is satisfied that the appropriate LV rebasing factor is 92.90%.

4.23 The Authority has carried out its own analysis of the YEDL data for non-weather HV faults and the number of customers affected per fault. It is satisfied that, taking into account the effects of Foot and Mouth, as discussed in paragraph 2.14, the appropriate changes to make to the number and duration of HV interruptions are 8.63% and 8.71% respectively.

4.24 On this basis the Authority directs that;

- TA_t for the year commencing 1 April 2004 shall be increased by 12.50% from 75.39 to 84.82
- TB_t for the year commencing 1 April 2004 shall be increased by 18.16% from 56.44 to 66.69

The calculations to derive these adjustments are set out in Table 3 in the Appendix of this document.

4.25 The associated changes to YEDL's incentive rates under paragraph 7E of the Condition are set out below:

- IRA_t for the year commencing 1 April 2002 shall be reduced from 0.05 to 0.044;
- IRA_t for the years commencing 1 April 2003 and 2004 shall be reduced from 0.09 to 0.080;
- IRB_t for the year commencing 1 April 2002 shall be reduced from 0.07 to 0.059;
- IRB_t for the years commencing 1 April 2003 and 2004 shall be reduced from 0.18 to 0.152.

5. Reasons for direction under paragraph 7D of the Condition – Adjustment to interim targets.

5.1 The Authority is proposing a modification under paragraph 7C of the Condition to modify YEDL's targets TAt and TBt for 2004/5. YEDL has also requested that the provisions under paragraph 7D of the Condition be applied. The Authority is therefore satisfied that it is appropriate to make adjustments to the targets TAt and TBt for the years 2002/3 and 2003/4 to ensure that they are consistent with YEDL's adjusted 2001/2 performance, its modified 2004/5 targets and reflect any relevant information relating to the 2001/2 performance figures not captured by the IIP audit.

5.2 This is best achieved by repeating the mechanism used to set the interim targets in the draft determination under paragraph 7 of the Condition, but substituting in the adjusted 2004/5 targets. The Authority therefore proposes the following adjustments to TA_t and TB_t for 2002/3 and 2003/4 set out in Table 5.1 below.

Table 5.1: Revision to interim targets

	Original interim target	Percentage increase in interim target	Revised interim target
TA_t (years commencing 1 April 2002 & 2003)	75.39	8.69%	81.95
TB_t (years commencing 1 April 2002 & 2003)	56.44	14.52%	64.64

DNO response to paragraph 10A consultation

5.3 The points raised by YEDL in paragraphs 2.7 to 2.12 and 4.18 to 4.21 also apply to the adjustment of the interim targets under paragraph 7D of the Condition.

Authority's Final Direction

5.4 The Authority is satisfied that the adjustments to YEDL's 2004/5 targets, discussed in paragraph 4.22 to 4.24, are appropriate. For the reasons outlined in paragraph 5.1, the Authority is making adjustments to the interim CI and CML targets to reflect these changes and also evidence on the inaccuracy of the 2001/2 data for the duration of interruptions which was identified by the Cusum analysis discussed in paragraphs 2.14 to 2.19 above, but not captured by the audit. This analysis suggested corrections of 40.30% and 34.61% to the duration of LV and higher voltage interruptions respectively.

5.5 In the light of these considerations, the Authority directs that the interim targets for the years 2002/3 and 2003/4 shall be adjusted as shown in Table 5.2 below.

Table 5.2: Revision to interim targets

	Original interim target	Percentage increase in interim target	Revised interim target
TA_t (years commencing 1 April 2002 & 2003)	78.08	8.64%	84.82
TB_t (years commencing 1 April 2002 & 2003)	56.44	31.87%	74.43

Appendix – Further Information

APPENDIX TABLE 1 – YEDL SUBMISSION

Revised 2004/5 targets	A		B		C		D		E		F		G		H		I		J	
Voltage category	Disaggregated forecast performance figures for 1999/00		Estimated % change for historic changes to measurement systems		Estimated performance for 1999/00		Estimated % change from definitions		Estimated % change from measurement systems this price control period		Estimated total % change		Estimated performance for 1999/00		DPCR target		April 2002 licence condition target		Final licence condition target	
	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS
LV UG Networks	6.6	9.7			6.6	9.7	-0.5	0.0	95.4	95.4	94.90	95.40	12.94	19.03						
LV OH Networks	0.4	0.5			0.4	0.5	-0.5	0.0	95.4	95.4	94.90	95.40	0.68	1.06						
HV UG Networks	43.7	27.3			43.7	27.3	-8.40	-0.10	5.0	5.0	-3.40	4.90	42.18	28.61						
HV OH Networks	13.5	13.5			13.5	13.5	-8.40	-0.10	5.0	5.0	-3.40	4.90	13.05	14.19						
EHV UG Networks	0.9	0.5			0.9	0.5	-25.0	-1.70	5.0	5.0	-20.00	3.30	0.74	0.56						
EHV OH Networks	2.9	1.3			2.9	1.3	-25.0	-1.70	5.0	5.0	-20.00	3.30	2.33	1.34						
Subtransmission UG Nets	1.9	0.0			1.9	0.0	0.0		5.0		5.00	0.00	1.95	0.00						
Subtransmission OH Nets	4.9	0.0			4.9	0.0	0.0		5.0		5.00	0.00	5.13	0.00						
Unallocated	10.3	5.1			10.3	5.1	0.0	0.0	5.0	5.0	5.00	5.00	10.76	5.34						
TOTAL	85.0	58.0	0.0	0.0	85.0	58.0	-6.8	-0.1	12.4	21.0	5.6	20.9	89.77	70.13	78.00	54.00	75.39	56.44	82.38	65.28
	Validated TOTAL % change:												5.61%	20.90%					9.26%	15.66%

Footnote:

1. Any adjustments to measurement systems for historic changes were finalised in April 2002, so columns A, B and C are fixed.
2. The updated percentage changes for definitions and measurement systems in columns D and E are added together to give the total percentage change in column F.
3. The total percentage changes in column F are applied to the estimated performance figures for 1999/2000 in column C to derive the revised estimated performance figures for 1999/2000 in column G.
4. The revised total performance figures for CIIS and CMLIS in column G are compared with those in column A to derive the percentage changes which should be applied to the DPCR targets in column H.
5. The percentage changes in column G are applied to the DPCR targets to give the final proposed licence condition targets in column J.
6. The final licence condition targets in column J are compared with the licence condition targets set out in April 2002 in column I to derive the percentage changes as a result of the rebasing.

TABLE 2 – AUTHORITY DRAFT PROPOSAL

Revised 2004/5 targets	A		B		C		D		E		F		G		H		I		J		K	
Voltage category	Disaggregated forecast performance figures for 1999/00		Estimated % change for historic changes to measurement systems		Estimated performance for 1999/00		Estimated % change from definitions		Estimated % change from measurement systems this price control period		Estimated total % change		Estimated performance for 1999/00		DPCR target		April 2002 licence condition target		Final licence condition target		Incentive Rates	
	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS
LV UG Networks	6.6	9.7			6.6	9.7	-0.50	0.00	88.68	88.68	88.18	88.68	12.50	18.38							Old 02/03	
LV OH Networks	0.4	0.5			0.4	0.5	-0.50	0.00	88.68	88.68	88.18	88.68	0.66	1.02							0.05	0.07
HV UG Networks	43.7	27.3			43.7	27.3	-8.40	-0.10	5.00	5.00	-3.40	4.90	42.18	28.61							New 02/03	
HV OH Networks	13.5	13.5			13.5	13.5	-8.40	-0.10	5.00	5.00	-3.40	4.90	13.05	14.19							0.046	0.061
EHV UG Networks	0.9	0.5			0.9	0.5	-25.00	-1.70	5.00	5.00	-20.00	3.30	0.74	0.56								
EHV OH Networks	2.9	1.3			2.9	1.3	-25.00	-1.70	5.00	5.00	-20.00	3.30	2.33	1.34							Old 03/04 & 04/05	
Subtransmission UG Nets	1.9	0.0			1.9	0.0	0.00		5.00		5.00	0.00	1.95	0.00							0.090	0.180
Subtransmission OH Nets	4.9	0.0			4.9	0.0	0.00		5.00		5.00	0.00	5.13	0.00							New 03/04 & 04/05	
Unallocated	10.3	5.1			10.3	5.1	0.00	0.00	5.00	5.00	5.00	5.00	10.76	5.34							0.083	0.157
TOTAL	85.0	58.0	0.0	0.0	85.0	58.0	-6.8	-0.1	11.9	19.8	5.1	19.7	89.30	69.44	78.00	54.00	75.39	56.44	81.95	64.64		
	Validated TOTAL % change:												5.06%	19.71%					8.69%	14.52%		

Footnote:

1. Any adjustments to measurement systems for historic changes were finalised in April 2002, so columns A, B and C are fixed.
2. The updated percentage changes for definitions and measurement systems in columns D and E are added together to give the total percentage change in column F.
3. The total percentage changes in column F are applied to the estimated performance figures for 1999/2000 in column C to derive the revised estimated performance figures for 1999/2000 in column G.
4. The revised total performance figures for CIIS and CMLIS in column G are compared with those in column A to derive the percentage changes which should be applied to the DPCR targets in column H.
5. The percentage changes in column G are applied to the DPCR targets to give the final proposed licence condition targets in column J.
6. The final licence condition targets in column J are compared with the licence condition targets set out in April 2002 in column I to derive the percentage changes as a result of the rebasing.
7. The new incentive rates in column K are derived by dividing the old incentive rate by 1 + the percentage change in column J for CIIS and CMLIS respectively.

TABLE 3 – FINAL AUTHORITY SUBMISSION

YEDL Revised 2004/5 targets	A		B		C		D		E		F		G		H		I		J		K	
Voltage category	Disaggregated forecast performance figures for 1999/00		Estimated % change for historic changes to measurement systems		Estimated performance for 1999/00		Estimated % change from definitions		Estimated % change from measurement systems this price control period		Estimated total % change		Estimated performance for 1999/00		DPCR target		April 2002 licence condition target		Final licence condition target		Incentive Rates	
	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS	CIIS	CMLIS
LV UG Networks	6.6	9.7			6.6	9.7	-0.50	0.00	92.90	92.90	92.40	92.90	12.78	18.79							Old 02/03	
LV OH Networks	0.4	0.5			0.4	0.5	-0.50	0.00	92.90	92.90	92.40	92.90	0.67	1.04							0.05	0.07
HV UG Networks	43.7	27.3			43.7	27.3	-8.40	-0.10	8.63	8.71	0.23	8.61	43.76	29.62							New 02/03	
HV OH Networks	13.5	13.5			13.5	13.5	-8.40	-0.10	8.63	8.71	0.23	8.61	13.54	14.70							0.044	0.059
EHV UG Networks	0.9	0.5			0.9	0.5	-25.00	-1.70	8.63	8.71	-16.37	7.01	0.78	0.58								
EHV OH Networks	2.9	1.3			2.9	1.3	-25.00	-1.70	8.63	8.71	-16.37	7.01	2.43	1.39							Old 03/04 & 04/05	
Subtransmission UG Nets	1.9	0.0			1.9	0.0	0.00		8.63		8.63	0.00	2.02	0.00							0.090	0.180
Subtransmission OH Nets	4.9	0.0			4.9	0.0	0.00		8.63		8.63	0.00	5.31	0.00							New 03/04 & 04/05	
Unallocated	10.3	5.1			10.3	5.1	0.00	0.00	8.63	8.71	8.63	8.71	11.13	5.53							0.080	0.152
TOTAL	85.0	58.0	0.0	0.0	85.0	58.0	-6.8	-0.1	15.6	23.6	8.7	23.5	92.43	71.65	78.00	54.00	75.39	56.44	84.82	66.69		
	Validated TOTAL % change:												8.74%	23.51%					12.50%	18.16%		

Footnote:

1. Any adjustments to measurement systems for historic changes were finalised in April 2002, so columns A, B and C are fixed.
2. The updated percentage changes for definitions and measurement systems in columns D and E are added together to give the total percentage change in column F.
3. The total percentage changes in column F are applied to the estimated performance figures for 1999/2000 in column C to derive the revised estimated performance figures for 1999/2000 in column G.
4. The revised total performance figures for CIIS and CMLIS in column G are compared with those in column A to derive the percentage changes which should be applied to the DPCR targets in column H.
5. The percentage changes in column G are applied to the DPCR targets to give the final licence condition targets in column J.
6. The final licence condition targets in column J are compared with the licence condition targets set out in April 2002 in column I to derive the percentage changes as a result of the rebasing.
7. The new incentive rates in column K are derived by dividing the old incentive rate by 1+the percentage change in column J for CIIS and CMLIS respectively.

Table 4: YEDL Rebasing 2001/2 performance – Calculation of Factors:

Period	Months	At value (CI)	Result (CI)	At value (CML)	Result (CML)
HV correction factor					
Customers per fault					
Apr 01 – May 2001	2	754	1507	737	1474
Jun 01 – Mar 2002	10	559	5594	551	5510
Total old measurements			7101		6984
Present Jul 02 – Dec 02	12	783	9401	783	9401
Correction factor			**1.3239**		**1.3461**

Table 5 – 2001/2 LV correction factors

LV correction factor			
Customers per fault			
Apr 01 – Aug 01	5	14.73	73.63
Sept 01 – Feb 02	6	18.13	108.79
Mar 02	1	19.24	19.24
Total old measurements			201.66
Present	12	22.75	273.00
Correction factor CI			**1.3537**
Correction factor CML			**1.3537**
Faults per day			
Apr 01 – Dec 01	9	26.30	236.72
Jan 02 – Mar 02	3	32.07	96.20
Total old measurements			332.92
Present	12	29.54	354.47
Correction factor CI			**1.0647**
Correction factor CML			**1.0647**
Overall CI correction factor		1.3537*1.0647 =	**1.4414**
Overall CML correction factor		(1.3537*1.0647)-0.0384=	**1.4030**

Revised Annex A

Relevant year Commencing:	**1 April 2002**	**1 April 2003**	**1 April 2004**
TA_t	84.82	84.82	84.82
IRA_t (£ million 2000/01 prices)	0.044	0.080	0.080
RLA_t	0.25	0.5	0.5
RLOPA	[redacted]		0.6
TB_t	74.43	74.43	66.69
IRB_t (£ million 2000/01 prices)	0.059	0.152	0.152
RLB_t	0.5	1.25	1.25
RLOPB	[redacted]		1.4
RLD_t	0.1	0.125	0.125