NIAUR –Northern Ireland Electricity (NIE) Transmission & Distribution (T&D) Price Control (RP5)

Confirmation of capitalisation practice materiality

August 2012

FINAL

Prepared by:

Cambridge Economic Policy Associates Ltd

In association with

PKF (UK) LLP and Sinclair Knight Merz

CONTENTS

IMPORTANT NOTICE

1. EXECUTIVE SUMMARY

1.1. RP5 price control

Cambridge Economic and Policy Associates Limited (CEPA) in association with PKF (UK) LLP (PKF) and Sinclair Knight Merz (SKM) has supported the Utility Regulator with the review of Northern Ireland Electricity Limited's (NIE) Transmission and Distribution Business Case for the RP5 price control period (financial years 2012-13 to 2016-17). The RP4 price control period (originally financial years 2007-08 to 2011-12) has been extended by six months but we understand that the extension is now being challenged by NIE.

During the course of the price control review it was apparent that NIE's controllable operating (Opex) costs were significantly lower than their agreed allowance for RP4 and the CEPA Consortium raised issues concerning the consistency of application of the capitalisation accounting practices (relating to investment in network assets – Capex - that appear on NIE's balance sheet from one year to the next rather than operating expenditure charged against revenues within each year) across RP3 (the five years to 31 March 2007) and RP4. The Utility Regulator has commissioned the CEPA Consortium to undertake a review of the consistency of NIE's capitalisation practices and report on the extent of any Opex out-performance (eg surplus against agreed Opex allowance) that can be attributed to a change in capitalisation practices.

This review addresses the question of whether the nature of the determination for the fourth price control (RP4) coupled with evident changes to NIE's capitalisation practice has benefited NIE to the detriment of the consumer. In particular, the report focuses on changes in capitalisation practice that, had they been discussed and agreed with the Utility Regulator, would not have been acceptable or would have required a different accounting treatment and would not therefore have been so beneficial to NIE. The "Rolling Opex" arrangement, that applied throughout RP4, based RP4's first year's controllable Opex allowance on the controllable Opex outturn for the first year of RP3, the second year in RP4 on the second year in RP3 and so on. The Utility Regulator intended that this should be an incentive to further reduce controllable Opex.

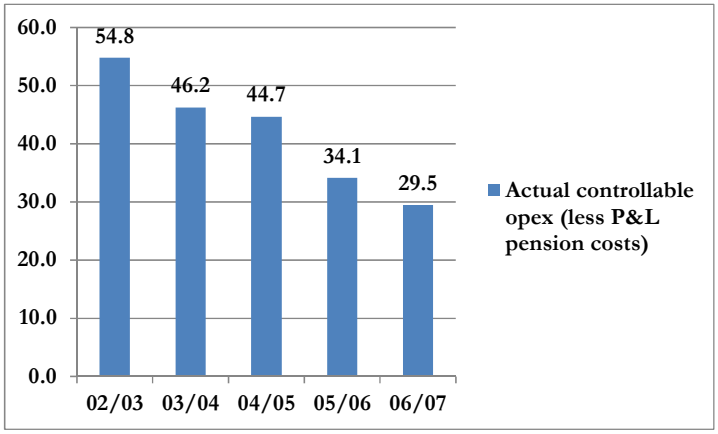
1.2. Background to the RP4 price control

The circumstances leading up to the RP4 price control and regulatory review of the RP3 actuals were unusual.

- The years leading up to the establishment of the Single Electricity market (SEM) in 2007 combining the electricity markets of the Republic of Ireland and Northern Ireland was a particularly busy period for NIE and the Utility Regulator.
- In 2005 NIE submitted a paper to the Utility Regulator on what it called "The Composite Proposal". This proposed the Rolling Opex mechanism as described above and a pass-through mechanism for Capex. The pass-through mechanism for Capex set a budget but no allowance for Capex with NIE submitting an annual report of its actual Capex and its forecast for the remainder of the price control. NIE had been discussing a change to the regulatory framework since 2003.

- In its paper called The Composite Proposal, NIE described the benefits as follows:
    - *"The 5 year rolling approach to setting the opex allowance provides a clear and constant incentive to reduce operating costs all through the regulatory cycle. The figures are audited. Any artificial increase in opex has a direct negative impact on profits for the year in question. The annual efficiency narrative improves transparency as to movements in costs and Ofreg (now the Utility Regulator) can be assured that savings automatically feed into price reductions. The cost of efficiency studies by consultants is avoided.*
    - *Capex efficiency incentives are strengthened. The use of actual capex as opposed to allowed capex in determining revenue entitlement addresses the issue of underspends. The improved incentives together with the introduction of annual capex reporting (with certified figures for annual investment) and the stakeholder approach to non-mandatory capex promotes confidence that capital investments within a regulatory period are made efficiently and in the interests of customers.*
    - *The use of actual expenditure to determine future revenue entitlement removes ambiguity around the allocation of costs as between opex and capex. For regulatory purposes actual expenditure is recovered either via the RAB over 40 years or via the opex allowance but not through both."*
- During RP3 and RP4 it became clear that NIE's controllable Opex costs were significantly lower than their agreed allowance. As part of the RP5 price control review, we identified to the Utility Regulator that there were indications that some of this out-performance was due to changes in some of NIE's accounting practices in relation to capitalisation of costs such that, when compared to the practices in the earlier years of RP3, an increasing proportion of costs was being capitalised.
- Subsequently in its draft determination on the RP5 price control, the Utility Regulator raised concerns that the out-performance could result in the consumer paying twice for certain costs, initially via the Opex allowance and secondly, over a longer period, for the Capex that results in revenues that the network operator receives from its regulatory asset base (RAB). It is therefore important that any out-performance (profit against the allowable Opex for a year) can be attributed to efficiency savings and not to changes in capitalisation practices that result in a higher proportion of operating expenses being capitalised.
- Significant savings in controllable Opex had been achieved in the first three years of RP3. In the final two years of RP3, NIE's controllable Opex was further reduced so that by the beginning of RP4 (2007-08) it had fallen by over a third from the level in mid RP3 (2004-05) as illustrated below (nb the "controllable Opex" shown in the figure below excludes unregulated income and non-network Capex that NIE has included within controllable Opex for RP3 – we have not included unregulated income and non network Capex within this review and have therefore excluded these cost and income areas below).

Figure 1.1 NIE actual controllable Opex during RP3 in 2009-10 prices £m



Source: NIE RP5 BPQ

For the RP4 price control the Utility Regulator appointed engineering consultants to review NIE's Capex submission. However the actual RP3 controllable Opex and the forecast controllable Opex for the remainder of RP3 and for RP4 were not the subject of an efficiency review by financial consultants. When the CEPA Consortium was appointed by the Utility Regulator to support the review of the RP5 price control, NIE's operating expenditure had not been subjected to an external efficiency review for 10 years.

At around the same time that the rolling Opex mechanism was being discussed, NIE provided the Utility Regulator with what it described as a "non" paper dated 28 October 2005 to inform the Utility Regulator's engineering consultant's review of RP4 Capex. NIE explained that an insufficient Capex allowance in RP3 had led to under-investment in the Network. NIE had provided age profiles of the Network assets to illustrate that a large proportion was reaching the end of its expected life and supported the case for an increased Capex allowance. NIE stated in the 28 October 2005 document that in its Capex submission:

- *"We will show that the major driver of RP4 investment is the replacement of worn assets together with an overlay of load related expenditure. We will seek to demonstrate how investment will be delivered efficiently and at least cost to customers through good design, efficient procurement and prudent management of the capital expenditure programme."*

This is relevant to our findings in relation to the nature of the expenditure incurred under the overhead lines capitalisation programme referred to as **targeted asset replacement**. (TAR). NIE has confirmed to us that rather than "replacing assets" this programme has almost exclusively related to cutting-back recent tree growth at an increasing level of activity and capitalisation. The increasing cost of cutting back trees is being added to the value of the physical assets that represent the T&D Network and depreciated over 40 years. Information provided by NIE for the cost of vegetation management capitalised under the overhead lines programme indicates that the average level of capitalised costs per annum was £0.6m for the years 2000-01 to 2004-05 but rose to an average of £3m per annum for the years 2005-06 to 2010-11. The significant increase in capitalised expenditure under this heading is covered in more detail below.

1.3. NIE capitalisation practices – Summary of our findings

In our review of capitalisation practices we have focused on consistency of application, the justification given for change, and the transparency of the information provided to support the change. Importantly, given that this is the first time that this has occurred in over ten years, the review has included consideration of the impact on Opex and Capex both from an engineering and financial accounting perspective. Where there has been an out-performance against the controllable Opex allowance our priority has been to confirm that this was caused by efficiency savings and not by other means.

Material savings in controllable Opex were achieved in the first three years of RP3 (2002-03 to 2004-05) and it is possible to trace these savings through headcount reductions and accommodation costs. These appear to have resulted from operational efficiency changes and are described later in the report.

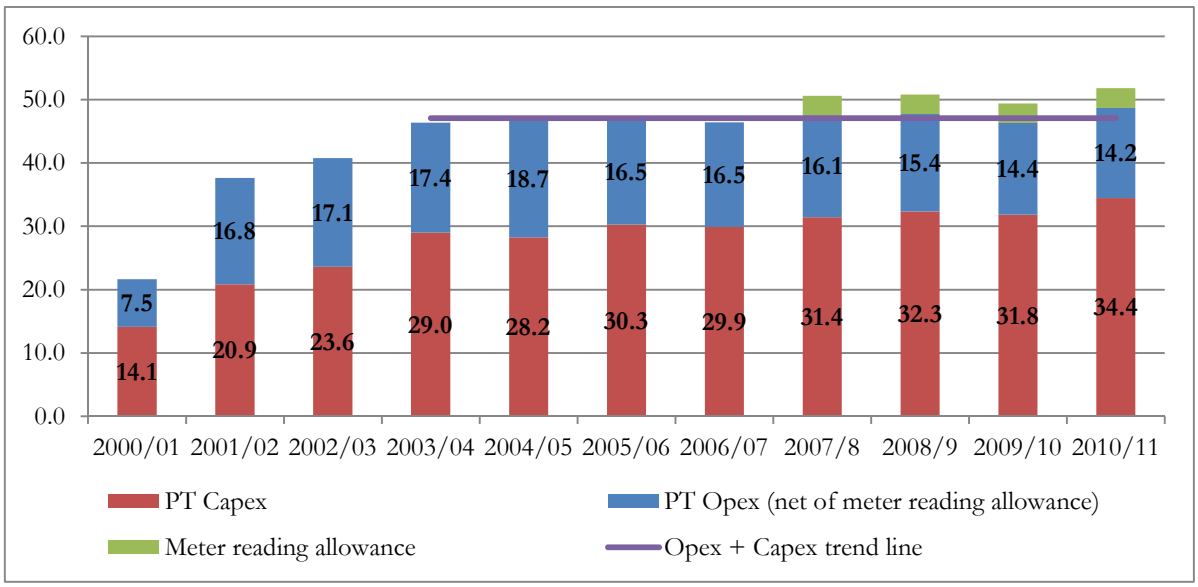
The largest proportional reductions in controllable Opex occurred in Repairs and Maintenance and Managed Services where services are provided by the fellow subsidiary company, NIE Powerteam Limited (Powerteam). The trends in Powerteam costs and how these are accounted for in NIE has been one of the areas of focus of our review.

We summarise below the major areas where we believe there has been a material change in capitalisation practice which we have not been able to attribute to efficiency savings.

Accounting for Powerteam costs in NIE

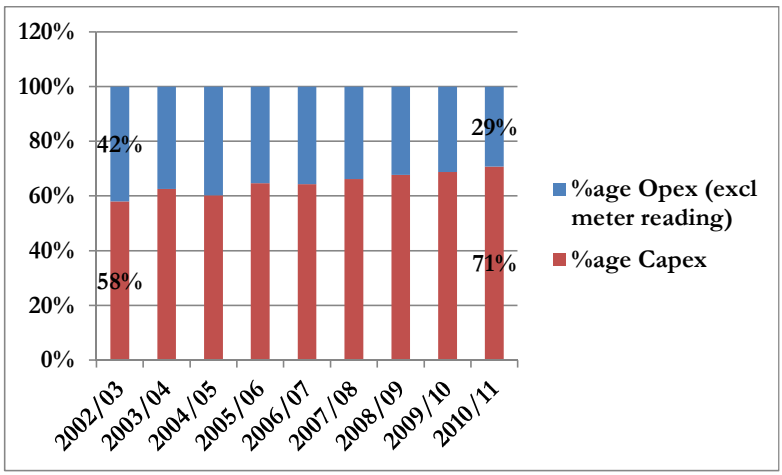
Powerteam is a fellow subsidiary company and, with nearly 1000 staff, its purpose is to provide electrical engineering services to NIE. Work is commissioned by NIE but the cross-charging is facilitated by the two companies sharing the same systems, coding structures and processes. From mid RP3 through RP4 total staff numbers across NIE and Powerteam have remained broadly similar and the work commissioned by NIE has been broadly constant. This is demonstrated by the graph showing Powerteam's costs over the period from 2000-01 to 2010-11 shown below.

Figure 1.2 Analysis of Powerteam Totex (Capex and Opex) charges including trend line in 2009-10 prices £m



Total Powerteam costs have remained reasonably stable over the period from 2003-04 to 2010-11, after adjusting for metering costs. However, there has been a gradual shift in the accounting treatment of these costs by NIE with a trend towards increased capitalisation as demonstrated below.

Figure 1.3 Proportion of Powerteam charges to NIE charged to Opex and Capex in RP3 and RP4

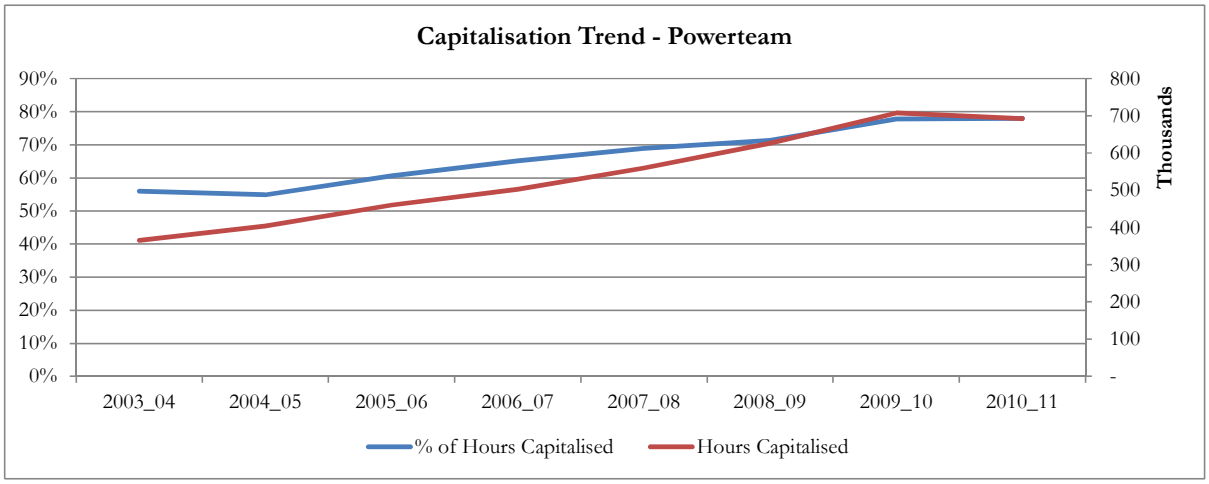


Source: Derived from NIE Powerteam RP5 BPQ and further information provided

We note, based on the forecasts provided by NIE, that the NIE Capex programme increased in RP4 over RP3 and the actual Capex expenditure is expected to be about 15% higher (£40m higher in 2009-10 prices) in RP4 over RP3. After excluding Powerteam's meter reading services (for which NIE received a separate allowance) Powerteam's total charges remain fairly constant over RP3 and RP4 but with a significant shift in the proportion of Capex to the total Powerteam service charges. The majority of the increased Capex is the result of the significant increase in the scale of capitalised tree-cutting activity that is referred to below. We consider that the increase in capitalised Powerteam charges is related to the adjustments described below and the overall reduction in Powerteam charges treated as Opex by NIE.

Our analysis of Powerteam time recorded within the JIC time recording system which forms the basis of the charges to NIE T&D over the period 2003-04 to 2010-11 also shows an increasing trend of capitalisation when accounted for within NIE T&D as shown by the figure below:

Figure 1.4 Powerteam Capex Hours, in absolute terms (right hand scale) and as a percentage of total hours (left hand scale)



Source: Derived from NIE Information Responses 22 June 2012

Figure 3.2 demonstrates the clear upward trend in capitalisation over the period, both in terms of absolute hours and in terms of the percentage of recorded Powerteam hours per annum.

Repairs and Maintenance

We have undertaken a review of the capitalisation of *Repairs and Maintenance* (R&M) activities. The primary findings are based upon data provided by NIE on 29th March 2012. Additional information to provide further insight into the findings has been taken from other sources, also provided by NIE over the period up to July 2012.

The total costs attributed to R&M are typically defined as Operating Cost (Opex), although some elements that are originally recorded as R&M expenditure are later transferred into capital programmes (Capex). The transferred costs will appear as a negative adjustment in the R&M records leaving the net total as exclusively Opex. NIE has provided the capitalised R&M costs in an additional data set, which has allowed a comparison of the total R&M Opex against the associated Capex transfers. Performing this comparison demonstrates whether any reduction in Opex is attributable to corresponding increases in R&M capitalisation. Given the broadly consistent total R&M expenditure over the period then we would expect comparable R&M capitalisation values period to period. However if the capitalisation practice has changed or the R&M work as driven by NIE practice has changed the work content, such that existing capitalisation practices mean that more R&M activities are capitalised, then this would be demonstrated by an increase in capitalisation. In both these cases the underlying R&M activity or the driver for it that was used in setting the Opex allowance will not have changed.

Transferring R&M expenditure into capital programmes at a later date is not the only means of capitalising the R&M expenditure. Different types of work and the associated costs can be substituted directly into a capital programme, thus never appearing in the R&M records. NIE has identified the equivalent capital programmes into which capitalised R&M is transferred. A comparison of any reduction in R&M expenditure against a corresponding increase in the relevant capital programmes demonstrates where expenditure has been substituted into Capex.

This review has been undertaken by assessing the Capex and Opex values in each year compared to the relevant base year. In RP3 NIE had a fixed Opex allowance. The Rolling Opex regulatory model that applied in RP4 was being discussed in mid RP3 and significantly the final two years of RP3 show a marked reduction in Opex expenditure. We have therefore assessed the final two years of RP3 against a base using the average first three years of RP3 i.e. 2005-06 and 2006-07 are individually compared against the average expenditure between 2002-03 – 2004-05. This comparison assumes that the expenditure trend for the first three years should be comparable with the final two years and our analysis has sought to understand why the reductions in the final two years took place.

In RP4 a different Opex allowance mechanism was applied (namely the Rolling Opex mechanism) and the NIE allowance was determined by the outturn in the corresponding RP3 year. Thus, for the RP4 period we have compared expenditure against the corresponding year in RP3 i.e. 2009-10 compared to 2004-5.

The review specifically compares the Opex reduction against Capex increases. Thus, increased capitalisation identified that is greater than the Opex reduction is omitted from the figures.

We have considered each type of R&M project separately in our assessment and consider that when taken over a 12 month period projects of the same type should result in similar levels of capitalisation, period to period. Continuing trends of significant changes in the capitalisation are taken as evidence of changes in policy or practice.

Our analysis has looked for changes resulting from:

- Direct capitalisation – where we see a significantly higher proportion of the same tasks being transferred to capital through R&M;
- Capital substitution – where we see reductions in R&M tasks that are replaced by capital projects that deliver the same output;
- Need Reductions – where specific tasks required in RP3 were not required in RP4, and
- Output reductions – where NIE has changed practices that resulted in reduced unit costs or volumes being delivered. These may be the result of efficiency improvements if the reductions resulted in reasonable asset risk profile. In the summary tables the output reductions are identified as the difference between any yearly increases in expenditure and the remaining reductions not identified as capitalisation.

It is important to note that for the two different methods of capitalisation (direct capitalisation and capital substitution) the capitalised expenditure is grouped into two different pools. One identifies expenditure that we have demonstrated to be capitalised and another where capitalisation is probable based upon the evidence. The "probable" classification can be interpreted as follows:

- Probable direct capitalisation – these are Opex reductions that are attributable to increasing R&M capitalisation, but where the capitalisation is a one-off rather than a continuing trend.
- Probable capital substitution – in specific cases there is clear evidence that Opex reduction is due to capitalisation, based upon the overall trend and policy change

commentary from NIE. However, the reductions cannot be accounted for based upon the corresponding increases in capital programmes identified by NIE.

Finally, it should be highlighted that this review is investigating changes in capitalisation practices rather than assessing the legitimacy of expenditure that NIE considers as Capex. Therefore, any policy change that has the effect of transferring Opex into Capex is considered as part of this review.

The structure of the analysis is as follows:

Primary source data

- The R&M "Total expenditure" source data is taken from "RM by PG AMI IO.xlsx" provided by NIE on 29/03/2012.
- The R&M "Capitalisation" source data is taken from "1 - Cap R&M IOs (Revised 23 July for Non-Rec Alts under GL 665010).xlsx" provided by NIE on 23/07/2012.

Analysis

The primary source data has been used directly as the foundation for the analysis. The analysis is comprised of the following three spreadsheets:

- RM by PG AMI IO_AH_v2-2.xlsx
- RM by PG AMI IO_AH_Category analysis_v0-2.xlsx
- CAPEX substitution_AH.XLSX

Summary

The findings from the three analysis spreadsheets are summarised in the linked spreadsheet "Summary table V9-2.xlsx" provided to NIE for their review.

In summary we have identified £13.2m of costs charged to Capex that arise from changes in the application of capitalisation practices and are not the result of efficiency gains. The costs include £7.1m attributed to direct R&M capitalisation and £6.1m attributed to capital substitution. The amount combines the total identified and probable capitalisation. The adjustment comprises the following annual adjustments given in Table 1.1.

Table 1.1 Summary of capitalisation practices adjustment – values comprise identified and probable capitalisation in 2009-10 prices £m

	RP3			RP4					Total
	2005-06	2006-07	RP3 Total	2007-08	2008-09	2009-10	2010-11	RP4 Total	
Direct Capitalisation	1.1	1.0	**2.1**	2.2	1.3	0.7	0.8	**5.0**	**7.1**
Capital substitution	0.5	0.6	**1.1**	1.0	1.1	1.9	1.0	**5.0**	**6.1**
Total reduction due to capitalisation	1.6	1.6	**3.2**	3.2	2.4	2.6	1.8	**10.0**	**13.2**

Source CEPA Consortium

Table 1.2, overleaf, shows that £10.96m (A+C) of the total has been identified and accounted for as direct R&M capitalisation and capital programme substitution whilst £2.22m (B+D) is considered as "probable" capitalisation.

The findings given in Table 1.1 are broken down into the identified and probable capitalisation portions in Table 1.2 below.

Table 1.2 Summary of capitalisation practices adjustment – values comprise identified and probable capitalisation in 2009-10 prices £k (see overleaf for explanation of A to G)

	Description	Base	Expenditure	Difference	(A) Reduction due to direct R&M capitalisation (identified)	(B) Reduction due to direct R&M capitalisation (probable)	(C) Reduction due to capital programme substitution (identified)	(D) Reduction due to capital programme substitution (probable)	(E) Reduction due to one-off expenditure in RP3	(F) Remaining reductions	(G) Increased expenditure
R&M total		**£83,661 k**	**£63,182 k**	**-£20,478 k**	**£6,847 k**	**£194 k**	**£4,116 k**	**£2,022 k**	**£2,521 k**	**£8,332 k**	£3,553 k
Total	Routine Maintenance (PG0 & PG1)	£35,532 k	£23,259 k	-£12,272 k	£1,404 k	£194 k	£3,506 k	£1,040 k	£2,521 k	£6,959 k	£3,351 k
	Non Recoverable Alterations (PG3)	£4,221 k	£2,226 k	-£1,995 k	£1,995 k	£0	£0	£0	£0	£0	£0
	Faults & Emergency (PG4)	£35,812 k	£31,502 k	-£4,310 k	£3,176 k	£0	£151 k	£982 k	£0	£0	£0
	Customer Driven (PG5 & PG7)	£6,434 k	£4,891 k	-£1,544 k	£272 k	£0	£459 k	£0	£0	£939 k	£126 k
	Metering (PG6)	£1,662 k	£1,304 k	-£358 k	£0	£0	£0	£0	£0	£434 k	£76 k
RP3 total		**£27,764 k**	**£22,702 k**	**-£5,063 k**	**£1,990 k**	**£121 k**	**£700 k**	**£401 k**	**£0**	**£3,185 k**	£1,333 k
RP3 total	Routine Maintenance (PG0 & PG1)	£11,395 k	£8,317 k	-£3,077 k	£447 k	£121 k	£678 k	£401 k	£0	£2,638 k	£1,207 k
	Non Recoverable Alterations (PG3)	£1,439 k	£1,005 k	-£434 k	£434 k	£0	£0	£0	£0	£0	£0
	Faults & Emergency (PG4)	£12,161 k	£11,100 k	-£1,061 k	£1,038 k	£0	£22 k	£0	£0	£0	£0
	Customer Driven (PG5 & PG7)	£2,168 k	£1,889 k	-£280 k	£70 k	£0	£0	£0	£0	£335 k	£126 k
	Metering (PG6)	£602 k	£391 k	-£211 k	£0	£0	£0	£0	£0	£211 k	£0
RP4 total		**£55,896 k**	**£40,481 k**	**-£15,416 k**	**£4,857 k**	**£73 k**	**£3,416 k**	**£1,621 k**	**£2,521 k**	**£5,147 k**	£2,220 k
RP4 total	Routine Maintenance (PG0 & PG1)	£24,137 k	£14,942 k	-£9,195 k	£957 k	£73 k	£2,828 k	£639 k	£2,521 k	£4,320 k	£2,144 k
	Non Recoverable Alterations (PG3)	£2,782 k	£1,221 k	-£1,561 k	£1,561 k	£0	£0	£0	£0	£0	£0
	Faults & Emergency (PG4)	£23,651 k	£20,401 k	-£3,249 k	£2,138 k	£0	£129 k	£982 k	£0	£0	£0
	Customer Driven (PG5 & PG7)	£4,266 k	£3,002 k	-£1,264 k	£201 k	£0	£459 k	£0	£0	£604 k	£0
	Metering (PG6)	£1,060 k	£914 k	-£146 k	£0	£0	£0	£0	£0	£223 k	£76 k

Source CEPA Consortium

Table 1.2, can be interpreted as follows:

- Columns (A)-(D) show capitalised reductions where:
  - (A) + (B) gives the total direct capitalisation
  - (C) + (D) gives the total capital substitution
  - A & C are identified capitalisation
  - B & D are "probable" capitalisation.
- Column E shows large one-off expenditures in RP3 that were not required in RP4.
- Column F shows the remaining reductions after capitalisation and one-off reductions.
- Column G shows the sum of yearly expenditure increases.
- Columns (F) minus (G) give the output reduction.

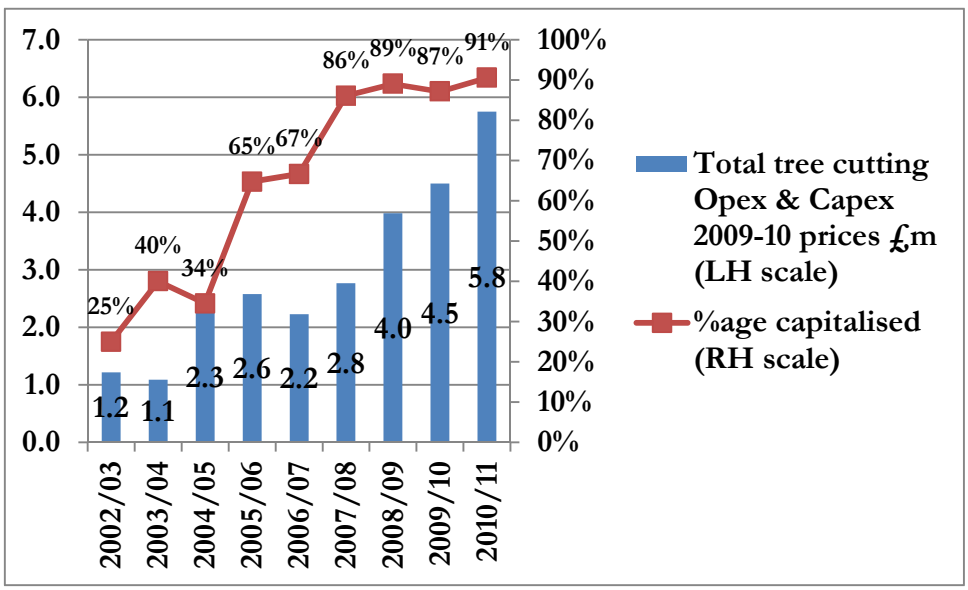
Tree cutting

Towards the end of RP3 NIE expanded what it called "rolling programmes" as part of its capital programme for overhead lines. These programmes were referred to as (a) 5 year targeted asset replacement (TAR), (b) 15 year refurbishment, and (c) 45 year re-engineering. Each of these programmes included significant levels of tree-cutting, particularly the 5 year TAR. In its information provided for the RP5 price control and updated for the capitalisation review NIE stated "*The specification for TAR is primarily tree cutting with some defect rectification (decayed poles). It is not possible to separate defect and tree cutting costs - the assumption is that the costs are all attributable to tree cutting*". At the time of the RP4 price control, the consultants that reviewed NIE's RP4 Capex submission described the TAR in the following terms:

"Targeted Asset Replacement (TAR): *This category focuses on storm resilience and shortterm performance improvement. TAR focuses on decayed poles and all defects. In addition, TAR includes tree cutting on circuits that have not been prioritised for refurbishment. NIE notes that the key difference between TAR and refurbishment is that refurbishment replaces all assets worn to the extent that failure may occur before the next refurbishment, whereas TAR only replaces assets that are worn and in need of replacement now."*

The following illustrates (a) the increasing scale of tree cutting over RP3 and RP4 and the increasing proportion that has been capitalised.

Figure 1.5 Total tree-cutting (Opex and Capex) and percentage capitalised RP3 and RP4



Source: Derived from NIE Rolling Programmes submitted with RP5 BPQ and updated for this review

In its RP4 submission showing historic costs in RP3 and earlier years, NIE had typically capitalised one third of tree-cutting. For the RP5 price control NIE has provided information on the Rolling Programmes that confirms a material increase in the combined Opex/Capex tree-cutting and has also confirmed the increasing proportion that is capitalised, justifying the increased expenditure on the basis that it has reduced the risk of storm damage and therefore enhanced the value of the Overhead-lines Network.

In its response to issues raised by the Regulator in relation to the nature of capitalisation policies and practices, NIE responded on 30 September 2011 as follows:

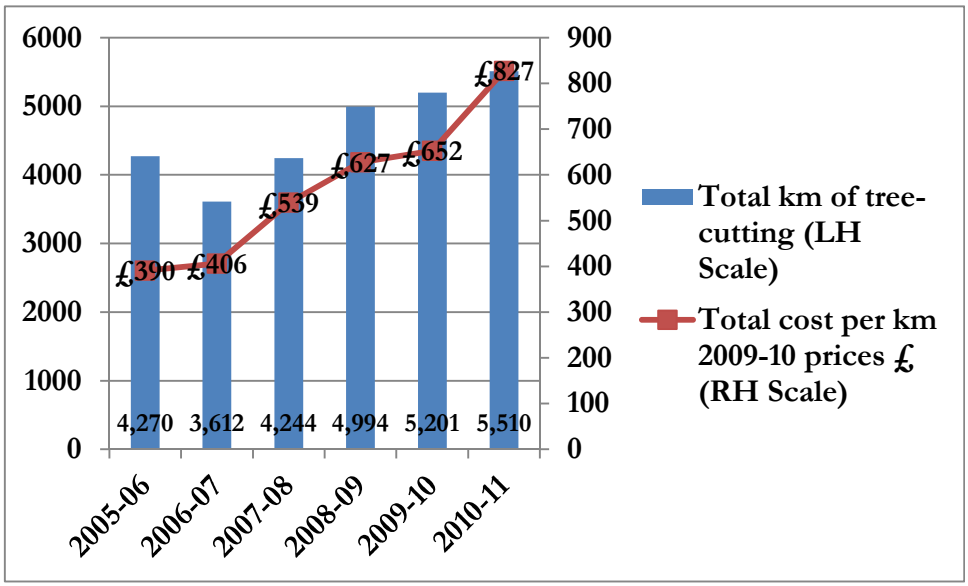
"During 2000/01 and 2001/02 (RP2), tree cutting which was carried out alongside the 33kV and 11kV overhead line refurbishment programmes was capitalised. Other tree cutting carried out on the 33kV and 11kV lines was assigned to R&M. There was additional hotspot tree cutting carried out under R&M as per current practice.

During RP3 and RP4, tree cutting continued to be carried out alongside our overhead line capital programmes. As such the treatment of tree cutting has not altered from RP3 to RP4. In the first 2 years of RP3, there was a higher element of R&M tree cutting than during the later half of the period which reflects a revised overhead line strategy. From 2004 onwards the capital work specifications changed to those of reengineering, refurbishment and targeted asset replacement (TAR). In order to address the quantity of tree cutting required on the network, tree cutting became fully aligned with these three strategies of targeted asset replacement (5 yr), refurbishment (15 yr) and reengineering (45 yr). Throughout the period, R&M tree cutting associated with 'hotspot' or 'customer reactive' progressed alongside the capital programme. This strategy continued for the remainder of RP3 and remained unchanged throughout RP4 and forms the basis of the RP5 submission."

However in its RP4 Capex submission, NIE emphasised the cost of pole replacement and pole pinning under its LV TAR programme and across the three Rolling Programmes, tree cutting was referred to as secondary to asset replacement, refurbishment and re-engineering. The Overhead Lines Capital Programmes reviewed by the engineering consultants give no indication that capitalised tree cutting would increase from £4.5m in RP3 (after a steep increase in the final two years of RP3) to over £20m in RP4.

Over the period 2005-06 to 2010-11 there has also been a significant increase in the cost per kilometre of tree-cutting. Both the increase in the amount and the cost per kilometre of tree cutting is shown in the graph below and confirm a significant change in capitalisation practices.

Figure 1.6 Total tree-cutting in kms and cost per km in 2009-10 prices £, (nb while cost information has been provided from 2002-03, the number of kilometres covered each year is available from 2005-06 only)



Source: Derived from NIE Rolling Programmes submitted with RP5 BPQ and updated for this review

To achieve consistent accounting treatment in terms of capitalisation practices relating to tree cutting across the review period, we have based our adjustment on the historic ratios of Capex and Opex costs for tree cutting in relation to total tree cutting costs (one third Capex and two thirds Opex). The calculation is explained further in Section 7 and Annex B and in total amounts to £10.9m for the years 2005-06 to 2010-11. In Section 6 we have derived our adjustment for changes in capitalisation practices relating to Repairs and Maintenance (R&M). This includes an adjustment for the reduction in tree cutting below the historic levels of operating expenditure amounting to £2.3m over the years 2005-06 to 20010-11. This represents the Capex that we believe should be transferred back to Opex based on applying consistent historic levels of operational tree-cutting over the review period. The remaining adjustment of £8.6m relates to the step up in the level of vegetation management costs that occurred over the period 2005-06 to 2010-11 and is the proportion historically that would have been charged to Opex.

We have not considered whether the historic trend is reasonable based on the overhead lines work undertaken but have focused on ensuring consistency through the Rolling Opex period. We believe that this cost should be transferred out of Capex and treated as Opex. This remains an issue into 2011-12 (where we have made no adjustment) and into NIE's RP5 forecasts which we believe should be revised. We understand that the future treatment of tree-cutting within Rolling Programmes is to be considered further by the Utility Regulator.

In its draft determination relating to the review of capitalisation practices, the Regulator has extended this adjustment to include 2011-12 where an adjustment of £4m is proposed.

Capitalised overheads

NIE charges indirect (support) costs associated with the network to Opex and then an adjustment is made on a monthly basis to transfer a proportion of those costs to Capex. This is based on the proportion of direct Capex activity to total activity (Capex and Opex), the argument

being that a proportion of indirect costs are justifiably Capex as well. However, our review has confirmed that capitalisation practices have not been consistent across RP3 and RP4 and have resulted in a higher proportion of total costs being capitalised. Over the course of RP3 and RP4 NIE has increased the percentage that it has applied to derive the Capitalised Overhead adjustment. This increase of Capex over Opex is the subject of this review and has reduced Opex and increased Capex without an associated efficiency gain. This change has resulted in a windfall gain under the Rolling Opex mechanism and was not discussed with the Utility Regulator before being made.

NIE, in considering the factual accuracy of this report in draft, commented that capitalised overheads in RP4 in total were less than they were in total in RP3 (forecasted to be £45.7m in RP4 compared with £46.7m in RP3 in2009-10 prices). NIE commented that this was a material omission from the report and we now acknowledge that this reduction was forecasted to occur. However, we believe the modest reduction is the result of efficiency savings in the early part of RP3 resulting in reduced indirect costs used as the basis of the calculation. In its response NIE reiterated that it believes its significant increase in Capex activity in RP4 is justification for increasing the proportion of total expenditure that is capitalised. However we maintain that the doubts we express in this report over changes in capitalisation practices are sufficient justification to support this adjustment.

Our adjustment has taken the percentages applied by NIE for 2002-03 to 2004-05 (the first three years of RP3) and applied them to each year to 2010-11. Our conclusion is that a capitalisation adjustment of £8.3m over the six years to 2010-11 is required.

In its draft determination relating to the review of capitalisation practices, the Regulator has extended this adjustment to include 2011-12 where an adjustment of £1.5m is proposed.

1.4. Other matters

In addition, to the capitalisation adjustments identified above during the course of our review we have also identified a number of other areas which have had a beneficial impact on NIE's out-performance which may have not been as a result of efficiency gains. Given the emphasis by NIE on efficiency in its Composite Proposals (see paragraph 1.2), the Utility Regulator may consider these findings to be relevant. These are discussed below.

One-off costs included in RP3 that did not recur in RP4

As already explained, the Rolling Opex allowance for each year of RP4 was based on the equivalent year's controllable Opex for RP3. However no adjustment was made for exceptional non-recurring costs in RP3 that resulted in a windfall for NIE in RP4.

Our review has focused on significant changes in capitalisation practice comparing RP3 and RP4. We have identified a one-off cost in 2004-05 relating to a project to install earthing mats following a fatality in GB. The cost of the project was £633k and was included in the Rolling Opex allowance given to NIE for 2009-10. As this cost was not incurred in any of the RP4 years this represents a profit (out-performance) for NIE that is not associated with an efficiency gain and we have drawn this to the attention of the Utility Regulator for consideration. Other less significant one-off costs may have been incurred in RP3 and resulted in similar windfalls that are

not associated with efficiency gains. The scope of our work has not identified less significant one-off costs and we have not proposed any adjustment for this.

Reduced Opex activity in RP4 compared with RP3 referred to here as "Negative" Dt items

The RP4 settlement allowed NIE to make claims for "additional" costs which had not been incurred in RP3, eg relating to legal settlements, changes in market regulation, increased spend on renewables. NIE made a number of these claims throughout RP4 described as Dt claims which is how they are referred to in the revenue calculation. Our review has indicated that NIE may have benefited in certain areas where it has reduced Opex as a result of carrying out less work in certain areas or deferring activities.

Where eliminated or reduced operational activities are not the result of improved efficiency, the impact of these changes is that NIE profits from the out-performance against the controllable Opex allowance (there is no Capex implication). This gives rise to a potential adjustment because of the lack of transparency over what could be classified as negative Dt claims. These are referred to in this report as "**negative Dt counter-claims changes**" and we have drawn them to the attention of the Utility Regulator for consideration.

1.5. Conclusion

In summary we have identified £30.1m of costs charged to Capex that arise from changes in the application of capitalisation practices and are not the result of efficiency gains. The adjustment comprises the following annual adjustments.

Table 1.3 summary of capitalisation practices adjustment

2009-10 prices £m	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Total
Repairs and Maintenance	1.6	1.6	3.2	2.4	2.6	1.8	13.2
Tree cutting	0.6	0.4	0.8	1.5	2.3	3.0	8.6
Capitalised overheads	1.0	1.6	1.5	1.4	1.4	1.4	8.3
	3.2	3.6	5.5	5.3	6.3	6.2	30.1

Source: CEPA consortium

The changes in the application of capitalisation practices during the period leading up to RP4 and during RP4, the period in which the Rolling Opex mechanism was in operation, has resulted in additional profit for NIE. The Northern Ireland consumer has borne the cost of this profit within the tariffs that applied for RP4. The assets that arose from these changes in the application of capitalisation practices have been added to the RAB and, unless they are adjusted, will give rise to further revenues for NIE in the form of the return on the RAB plus depreciation over a period of 40 years both of which are included within the tariffs. These further revenues would mean that the Northern Ireland consumer would pay twice for the same cost.

In its draft determination relating to the review of capitalisation practices, the Regulator has included a further £5.5m adjustment for 2011-12 which comprises £4m relating to tree-cutting and £1.5m relating to capitalised overheads. When added to the £30.1m adjustment for 2005-06

to 2010-11 the adjustment increases to £35.6m. No adjustment has been made for R&M in 2011-12 as the required adjustment fell outside the scope of our review.

2. INTRODUCTION

Cambridge Economic and Policy Associates Limited (CEPA) supported by PKF (UK) LLP (PKF) and Sinclair Knight Merz (SKM) has supported the Utility Regulator with the review of Northern Ireland Electricity Limited's (NIE) Transmission and Distribution Business Case for the RP5 price control period (financial years 2012-13 to 2016-17). The review has not yet concluded and the RP4 price control period (originally financial years 2007-08 to 2011-12) has been extended.

During the course of the price control review it was apparent that NIE had significantly out-performed or under-spent against their controllable Opex allowance for RP4 and the CEPA Consortium raised issues concerning the consistency of application of the capitalisation accounting policies across RP3 (the five years to 31 March 2007) and RP4 (originally the five years to 31 March 2012, now extended by six months). The Utility Regulator has commissioned the CEPA Consortium to undertake a review of capitalisation practice materiality. The background to the review is explained in the following extracts from the terms of reference for the review:

- *For RP4 the allowance for controllable Opex was based on a 'rolling mechanism' where the allowance in each year of RP4 would effectively be the actual comparable costs incurred in the same year of RP3, increased with inflation.*
- *In its RP4 proposals paper (December 2005), the Utility Regulator describes the rolling approach as simplifying 'the Opex calculation process while still incentivising the company to reduce costs with the savings automatically being passed back to customers in due course'. The proposals paper reasons that: "… under the 'traditional' approach the incentive to reduce costs diminishes as the regulatory period progresses. This is because any efficiency measures implemented towards the end of the period will signal to the regulator that a reduction in allowed Opex is required for the next period. The company would therefore be incentivised to hold back from making efficiency improvements until after the next price control is negotiated. For RP4 it is proposed that a simpler and more mechanistic approach be adopted - one that strengthens the efficiency incentive by maintaining it constant throughout the period and ensuring that savings are automatically passed to customers through lower prices."*
- *In 2005/06 (year 4 of RP3), NIE T&D changed its capitalisation practice, resulting in a significant reduction in Opex.*
- *The outcome of this was that:*
    - *NIE T&D retained a considerable element of its Opex allowance in excess of their actual spend, and*
    - *NIE T&D increased the size of its regulatory asset base (RAB) which the company claimed a return and depreciation on, without delivering additional assets.*
- *Therefore, NIE T&D have received the benefit of:*
    - *a surplus Opex allowance due to the change in capitalisation practice in addition to a surplus obtained from any genuine efficiencies), and*
    - *payments of depreciation and regulated rate of return from an inflated RAB.*

This means that Consumers have effectively 'paid twice' for certain services provided by NIE T&D.

The Utility Regulator requires that its consultants will extract relevant information from relevant systems for the relevant time periods. Information to be reliable and factual, preferably taken independently and directly from the IT logs of the relevant systems (SAP accounting system and Troubleman system). The consultants should confirm or otherwise the findings of the Utility Regulator analysis – that capitalisation practice had changed and that this made a significant impact on the accounting figures.

The consultants should provide a bottom up analysis of what the results of the accounting figures would have been, if the capitalisation practice/procedures/policies had not been changed. This will include revised figures for annual capex, "controllable operating costs" and depreciation. Full Accounting results (P&L, Cashflow & Balance sheet) will be provided which cover 6 financial years, namely year ending Mar 2006 – Mar 2011. These are to be provided in excel format. Further clarification of the terms of reference has confirmed that the P&L, Cashflow Statement and Balance Sheet plus supporting notes within the Regulatory Accounts should be the focus of the restatement. The restatement of the Regulatory Accounts is dependent on the finalisation of Opex adjustment and will be completed for the final determination but is not included within this report.

The terms of reference state that a report will be provided to the Utility Regulator at the end of the analysis and should capture the following:

- A summary of the investigation around capitalisation practice change.
- A section on internal auditing within NIE explaining how good corporate governance has been implemented and exercised.
- A section on external auditing and the significance in this case of the actions taken in this regard.
- Document any further actions which need to be taken and the proposed significance/importance of these actions.
- Other items/issues identified within this investigation in addition to the focus on capitalisation practice change.

This report documents our findings. It has not been reviewed by NIE and may contain findings that are not accepted by NIE due to our interpretation of the information provided by NIE.

The report is structured as follows:

- Section 3 summarises the information requested from NIE and the methodology adopted.
- Section 4 summarises the potential categories of adjustment which form the basis of the further sections below.
- Section 5 analyses the efficiency changes that NIE has reported as being delivered in RP3.
- Section 6 is our analysis of potential capitalisation practice changes.

- Section 7 is our analysis of rolling programme changes.
- Section 8 is our analysis of operating costs that have been reduced or eliminated when RP4 is compared with RP3.
- Section 9 is our analysis of adjustments to Capex where an additional Opex allowance may be required.
- Section 10 covers NIE's governance arrangements relating to internal and external audit.
- Annex A is the detailed calculation for the adjustment to capitalised overheads.
- Annex B is the detailed calculation for the adjustment that relates to capitalised tree cutting.
- Annex C is a list of the information requested from NIE for the purpose of the review.
- Annex D is an extract from NIE's licence that explains what costs may be claimed under the Dt clause referred to in sections 4 and 8 of the report.

3. INFORMATION REQUESTED AND METHODOLOGY

3.1. Information request

Representatives from the CEPA Consortium and the Utility Regulator met with representatives from NIE on 29th February 2012 to discuss the review and confirm the information required. Further meetings took place on 27th and 28th March 2012 to discuss queries arising from the information provided. Further transactional information was requested on 21 May 2012. NIE responded to the request throughout June and the bulk of the transactional information was provided on 25 June 2012. Further information requests and clarification questions were made throughout June and into early July 2012. NIE provided further analysis following discussion of our report in July 2012. Annex C is a summary of the information requested from and provided by NIE to allow the review to be carried out.

3.2. Methodology

Our approach to the review has revolved around the information provided by NIE. A number of work strands were carried out as follows:

- The review has included consideration of Opex over the review with the objective of identifying those areas that have contributed to the out-performance against the allowance. We confirmed the prime areas where we should focus on more detailed analysis recognising the known areas of efficiency gain such as the centralisation of control centres and the in-sourcing from Northgate of the emergency incident handling. Our focus included individual activities that were accounted for as Opex but where expenditure has reduced significantly or is no longer classified in separate expenditure groups.
- A high-level analysis of Totex (Capex and Opex expenditure) Labour, Material and Bought-in-services to (a) confirm the trend year by year and (b) provide an indication of whether the shift in expenditure relates primarily to Labour or whether Materials and Bought-in-services are similarly impacted. This has used the SAP Report 70 information summed to these three categories.

  The separate Capex and Opex information was compared with the Regulatory Accounts. The Capex information was reconciled but the Opex information related solely to Repairs and Maintenance (R&M). We established that this was because SAP Report 70 related only to costs where R&M internal orders had been created. While our analysis of R&M has provided useful information, there was a lack of detail in certain areas and further analysis was provided by NIE in the form of processing groups. We based our total Opex analysis on the trial balance data provided by NIE which has been reconciled to the Regulatory Accounts and the RP5 price control information provided by NIE.
- We reviewed the allocation of faults between Capex and Opex using the spreadsheet information that summarised the journals that effected these accounting adjustments. We reviewed the fault handling system "Troubleman" capitalisation forms, which enabled us to identify the relative faults capitalisation year on year and trends in

capitalisation. Based on our analysis we have quantified the impact of the changes in storm capitalisation practice.

- A proportion of R&M by processing group could not be analysed and further information was requested towards the end of the review and enabled us to reach conclusions on the changes in maintenance management planning implemented by NIE.
- We reviewed the Rolling Programme spreadsheets to confirm trends in spend in the five year targeted asset replacement (TAR), 15 year refurbishment and 45 year re-engineering programmes.
- We have reviewed the Powerteam charge out rate spreadsheets to consider trends in charge out rates and any changes in treatment of unproductive time and in the charging of time across Capex and Opex work commissioned by NIE.
- We have reviewed the shift in capitalised overheads using the Report 55 (Capitalisation Report) spreadsheets requested and quantified the adjustment required.
- The management accounts for T&D and Powerteam were received from NIE. However these have not been the focus of our review.
- We have reviewed the accounting of Powerteam costs between Opex and Capex over RP3 and RP4. Further transactional work using timesheet data was also carried out.
- Our review of IT costs between Capex and Opex has focused on the detailed information provided at the time of the price control covering the period 2002-03 to 2010-11.
- We have reviewed the external auditors letters to the board of NIE over the period March 2000 to December 2007 (to capture the post 31 March 2007 audit letter) to identify whether the auditors have highlighted any change in capitalisation practice.
- We reviewed the NIE board papers provided at the outset of the review for references to changes in capitalisation practice. These had been provided to the Utility Regulator prior to commencement of the review.
- We have reviewed all documentation made available by the Utility Regulator including the documents submitted by NIE for the RP4 Capex review and the discussions leading to the Rolling Opex agreement.
- Any restatement of the Regulatory Accounts will take place when the capitalisation adjustments have been finalised.

4. POTENTIAL CATEGORIES OF ADJUSTMENT

The review covered the financial years 2000-01 to 2010-11 so that trends and practices leading up to the period of Rolling Opex could be understood. However, the key operational year is 2004-05, as this was the last full year prior to the discussions that led to the Rolling Opex mechanism being agreed for RP4 and the rapid reduction in controllable Opex in the final two years of RP3. Our findings therefore focus on changes that occurred after the operational year 2004-05. We have analysed movements in controllable operating expenditure into a number of categories from this financial year forward as follows:

- Operational changes such as improved efficiency that would have led to a reduction in controllable Opex. The impact of these changes is that NIE profits from the out-performance against the controllable Opex allowance. This represents a justifiable out-performance that is aligned with the Utility Regulator's intention of giving NIE an incentive to reduce its operational costs. These are referred to in this report as "**efficiency changes**".

- Changes in capitalisation practice that have increased Capex and reduced Opex where they represent a clear lack of consistent accounting treatment from the period prior to 2005-06 compared with the last two years of RP3 and the whole of the RP4 control period. The impact of these changes is (a) NIE receives revenue for depreciation on these assets and a return on the Regulatory Asset Base (RAB), and (b) NIE profits from the out-performance against the controllable Opex allowance. These are referred to in this report as "**capitalisation practice changes**".

  Also under this heading are changes in the cost allocation methodologies that result in a proportion of indirect operating costs being capitalised via NIE's Overheads Capitalisation process. NIE increased the proportion of these costs towards the end of RP3 and still further in RP4. Under the Rolling Opex mechanism, these increased capitalised overheads result in a windfall for NIE and increase the out-performance against the controllable Opex allowance.

  Two circumstances where capitalisation practice changes arise are:

  i. **Pre-Rolling Opex mechanism (2005-6 to 2006-07)** - The implementation of changes in practice in the last two years of RP3 has significantly reduced T&D's Opex in those years and thus contributed to an outperformance against its Opex allowance. These two years pre-date the Rolling Opex mechanism so any potential adjustment depends on there being a significant out-performance against the controllable Opex allowance in these years. We have confirmed that NIE out-performed against its allowance in these two years by at least the amount of the proposed adjustment and that we believe the scale of out-performance was influenced by the change in capitalisation practice.

  ii. **Rolling Opex mechanism (2007-08 to 20010-11)** - The implementation or continuation of changes in practice during the operation of the Rolling Opex

mechanism where the impact would be as for capitalisation practice changes described above.

- Towards the end of RP3 NIE significantly expanded what it called "rolling programmes" as part of its capital programme for overhead lines. These programmes were referred to as (a) 5 year targeted asset replacement (TAR), (b) 15 year refurbishment, and (c) 45 year re-engineering. Each of these programmes included significant levels of tree-cutting (particularly the 5 year TAR) and in its RP4 Capex submission NIE suggested that effective management of vegetation (and defective poles) would reduce storm damage as a justification for treating the cost as Capex. In our opinion, routine tree cutting is an operational activity and should not be capitalised. The increasing scale and unit cost per km of tree-cutting is also an issue and we have made an adjustment for the excess capitalisation that has occurred. This is referred to in this report as **"Tree cutting"** or "**Rolling Programmes changes**".

- Operational changes that involve reducing or eliminating operational activities and therefore operational costs. These could represent a simple deferment of expenditure to a later price control period or a risk-based rescheduling of maintenance plans. A mechanism that operated throughout RP4 was Dt claims where NIE was entitled to claim additional allowances for any costs incurred in relation to activities that did not apply during RP3. NIE has made a number of claims for Dt costs throughout RP4 totalling over £35m which has included the cost of existing staff being utilised on these additional activities. We have considered whether there is a case for counter-claim or negative Dt claim where reductions in Opex are not the result of efficiency gains. This is particularly difficult to judge and we are not proposing any adjustment where activity has been reduced or eliminated.

  Also under this heading are exceptional non-recurring items of expenditure which were not excluded from the RP3 controllable Opex annual outturns that were used as the basis for the controllable Opex allowance in the corresponding year in RP4. When these costs did not recur in RP4, NIE experienced a windfall and we believe an adjustment to the Rolling Opex allowance is appropriate. Adjustments under this heading are referred to in this report as "**negative Dt counter-claims changes**".

- Finally we have identified the category of capitalisation practice changes that have not given rise to an out-performance against the controllable Opex allowance. This occurs towards the end of the Rolling Opex Mechanism where, for example, in 2011-12 there is no out-performance and where the Opex allowance is based on costs where the majority, if not all of the changes in capitalisation practice had already been implemented. This is because the controllable Opex in the fifth year of RP3 had been reduced to what NIE claimed was its most efficient level and this remained relatively constant throughout RP4. When RP4 actuals for this year are compared with RP3 actuals for the related year under the mechanism, the two are broadly the same and no out-performance has occurred. Any Capex adjustment proposed for 2011-12 will require consideration by the Utility Regulator to assess the impact on the Opex allowance for RP4. These are referred to in this report as "**Capex to Opex allowance changes where there is no out-performance**". The question of whether such an adjustment is required depends on the

Utility Regulator's acceptance of current capitalisation practice changes for future price controls (ie those relating to tree-cutting). The Utility Regulator may decide to provide guidance to NIE on the future accounting treatment of Capex and Opex.

5. NIE'S CLAIMED EFFICIENCY CHANGES

5.1. Rolling annual reconciliation of Controllable Opex

During the RP5 price control NIE was asked to provide a rolling annual reconciliation of controllable Opex covering RP3 and RP4. The information request was for the controllable Opex at the end of RP2 to be reconciled each year to any significant changes (savings made or additional costs incurred) with an explanation of the nature of the change. The reconciliation was provided for the five years of RP3 but not for RP4 as NIE argued that it had achieved a level of absolute efficiency through its RP3 cost reductions and the costs in RP4 were largely flat year on year. This section of the report analyses these claimed efficiency gains in the light of any potential capitalisation practice changes.

The following is a summary table of the reduction in controllable Opex by category of expense for RP3 compared to the preceding year (the annual change).

Table 5.1 Annual and total change in controllable Opex in 2009-10 prices £m

Annual change in controllable Opex	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**RP3 Total**	**2005/06 and 2006/07**
Payroll	-3.0	-3.2	-1.5	-1.2	0.1	-8.8	-1.1
Repairs & Maintenance	-2.5	-0.1	0.5	-3.2	-1.2	-6.5	-4.4
IT & Telecom	0.0	-1.4	-0.6	-2.0	-0.3	-4.3	-2.3
Managed Services	-0.1	0.1	-1.5	-0.4	-0.3	-2.2	-0.7
Insurance	-0.1	-0.2	-0.4	-0.5	-0.3	-1.5	-0.8
Property	-0.1	-0.8	-0.3	0.1	-0.2	-1.3	-0.1
Other	-1.8	-1.4	0.6	-1.9	-0.9	-5.4	-2.8
Total	**-7.6**	**-7.0**	**-3.2**	**-9.1**	**-3.1**	**-30.0**	**-12.2**

Source NIE's annual reconciliation of change in controllable Opex RP3

Over the course of RP3 (2006-07 compared with 2001-2) annual controllable Opex has fallen by £30m with the largest reductions occurring in Payroll, Repairs and Maintenance, IT & Telecom and Powerteam Managed Services cost areas. These are considered in turn below:

- The bulk of the claimed payroll efficiency reductions occurred in the early part of RP3 and is associated with reductions in staff numbers of over 150. We are informed that the reductions resulted from changes in the customer service functions, distribution control centres, planning, and the transfer of staff to Powerteam Electrical Services to carry out external work.
- Early in RP3 NIE claims to have achieved significant savings in R&M from the introduction of the TroubleMan and service order scheduling and appointments systems, the centralisation of meter scheduling and the cost of apparatus operational restrictions. These are analysed in Section 6 below.

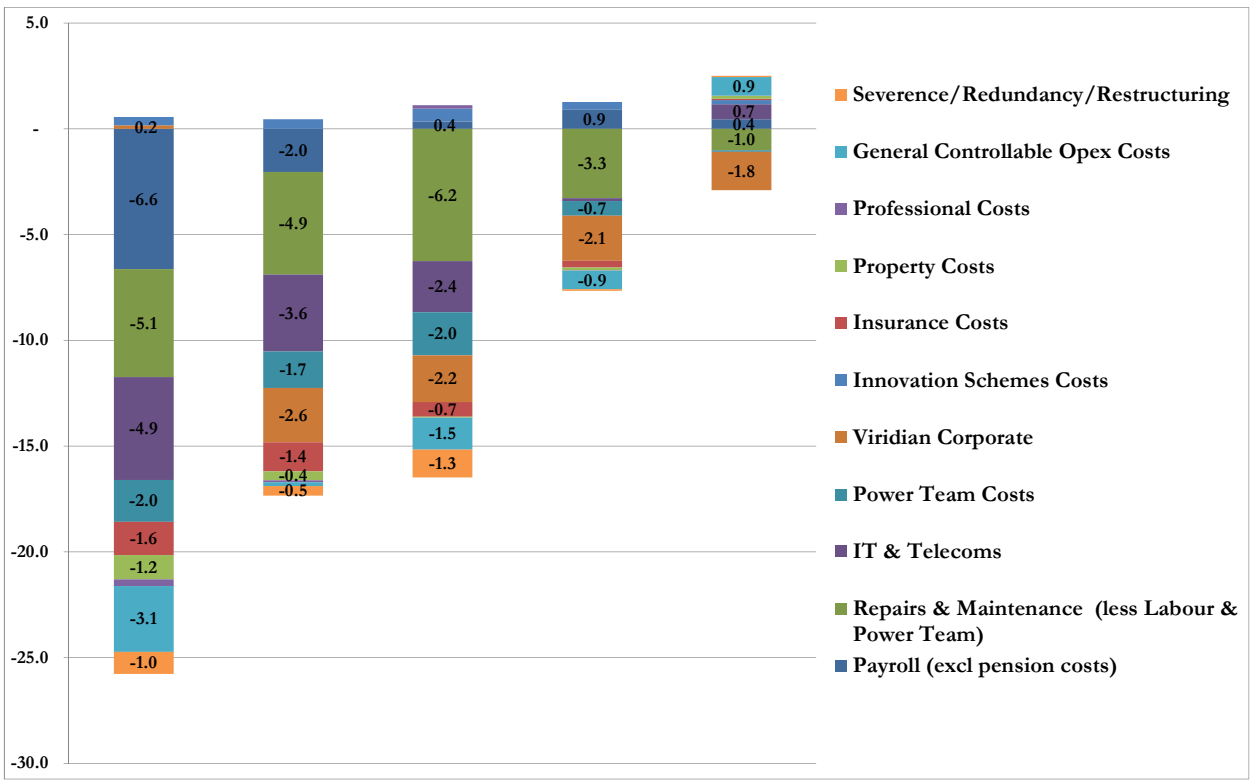
  The remainder of the claimed savings occurred in the final two years of RP3 and are the subject of the adjustments described below.

- The savings in IT and Telecom costs arise from renegotiated outsourced service contracts, the implementation of hot-desking and a standardised Citrix desktop environment plus the in-sourcing of major incident handling.
- The principal savings in Powerteam Managed Service costs occurred in 2004-05 when NIE claimed that the services were rationalised resulting in a £1.5m pa reduction.

The following diagram for Controllable Opex illustrates the annual reduction by category of expense when year one of RP3 is compared with year one of RP4, and then years two, three, four and five, as directed by the Rolling Opex determination. The diagram therefore shows the scale of the outperformance each year by category of expense. The fifth column is a comparison of year five of RP3 with the forecast for RP4. This figure confirms that the key areas for analysis are as follows:

- Payroll (excluding pension) costs;
- Repairs and maintenance (covered in Section 6 below);
- Information Technology and Telecommunications;
- Powerteam Managed Services;
- General Controllable Opex;
- And to a lesser extent, other cost areas such as property and insurance costs.

Figure 5.1 Annual change in Controllable Opex Year^{n} RP4 minus Year^{n} RP3 in 2009-10 prices £m



Source: Derived from NIE BPQ after adjustment for capitalised overheads allocated based on the analysis in NIE's Report 55 capitalisation adjustment reports.

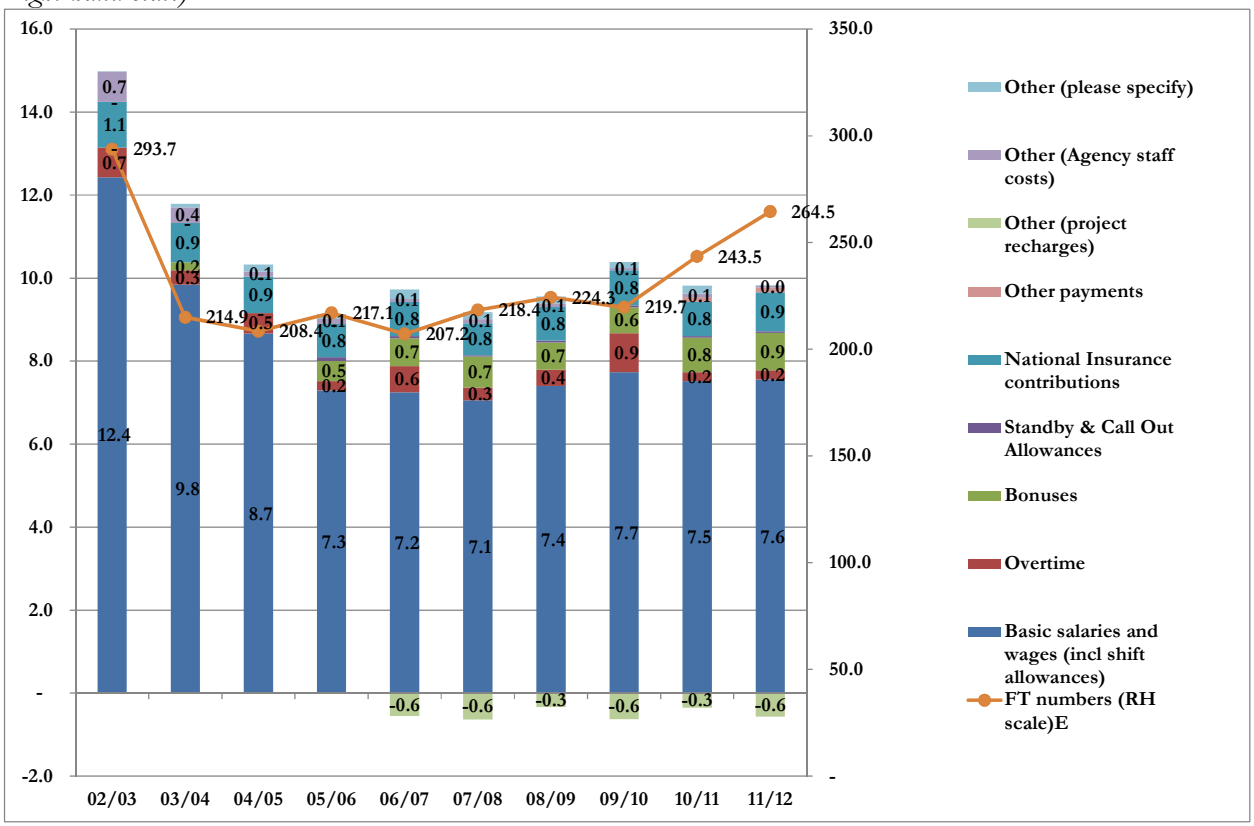
The annual changes shown in above figure are stated after capitalised overheads. We analysed capitalised overheads by type of expense based on the Report 55. In deriving the adjustment we assumed that the capitalised overheads relating to bought in services (approximately £0.5 to £1.3m per annum) should be applied to Repairs and Maintenance. NIE has said that this is incorrect but have not provided the correct analysis so we have left the above figure unchanged.

Our work as part of the price control and this capitalisation review indicates that there is clear evidence of efficiency savings implemented in the first three years of RP3. However, there is evidence that part of the reason for the reduction in costs in the last two years of RP3 is due to changes in capitalisation practices in Repairs and Maintenance and capitalised overheads, the impact of which is explained in Section 6 below. Further adjustments are required for tree-cutting and one-off costs incurred in RP3 that do not recur in RP4.

5.2. Payroll

The following figure shows the elements of payroll costs for combined NIE T&D as submitted in the BPQ under the heading Controllable Opex. These costs are before deducting capitalised overheads. The right-hand scale shows the FTE as a line graph and highlights the forecasted increase of nearly 10% in the year 2010-11 and again in the year 2011-12. NIE has since confirmed that the increase for 2010-11 has not materialised and the actual FTE at 31 March 2011 was 220.7, an increase of one FTE.

Figure 5.2 Analysis of staff costs excluding pension costs in 9-10 prices (£millions Left-hand scale – FTE units Right-hand scale)



Source: NIE BPQ payroll information – graph of pay elements of staff costs excluding pension costs and associated staff numbers

We asked NIE to provide a year on year reconciliation of controllable costs over RP3 and RP4 and have been provided with a reconciliation covering NIE T&D but not Powerteam. The following is a summary of the RP3 initiatives covering payroll costs.

Table 5.2 Summarised claimed payroll efficiency and cost reduction initiatives

Costs in 9-10 prices	Cost for year 2001/2 £Ms	Saved During 2002/3 £Ms	Saved During 2003/4 £Ms	Saved During 2004/5 £Ms	Saved During 2005/6 £Ms	Saved During 2006/7 £Ms	Cost for year 2006/7 £Ms	Total savings £Ms
Initial payroll costs and annual changes (excl pension contributions)	18.0	-3.0	-3.2	-1.5	-1.2	0.1	9.2	
Reductions in staff numbers (31) plus the transfer of (46) staff to Powerteam to carry out external work. The reductions in staff numbers were achieved through the following initiatives: Customer service centre change programme (14), restructuring of connections (4), centralisation of DCC (10) and other initiatives (3)		-3.0						-3.0
Staff reductions relating to Centralisation of DCC / Restructuring of Customer Service functions / Centralisation of Planning function			-2.4	-1.2	-1.2			-4.8
Agency / subcontractor reductions			-0.3	-0.3				-0.6
Other salary movements incl timing of leavers in 2001/02			-0.5					-0.5
Other						0.1		0.1
								0.0
Payroll cost savings over RP3 (incl pension changes)		-3.0	-3.2	-1.5	-1.2	0.1		-8.8
Total payroll costs for each year of RP3 per BPQ	18.0	15.0	11.8	10.3	9.1	9.2	9.2	

Source: summarised from NIE's reconciliation of change in controllable costs in RP3

The table above shows that nearly £8 million (approximately £6 million after adjusting for 46 NIE staff transferred to Powerteam) of savings are claimed by NIE via staff reductions relating to centralisation of the three original Distribution Control Rooms in one location at Craigavon in 2003 resulting in substantial savings, the replacement of a centralised training facility with three on-site facilities, and the restructuring of the Customer Service function. We understand that other changes impacting both T&D and the element of Powerteam costs charged to Opex were as follows:

- The engineering function was restructured and aligned with customer processes.
- Apprenticeships were restructured and reduced from 4 years to 3 years with on-site working beginning after 3 months rather than 2 years.
- Demarcation between different functions carried out by industrial staff was removed to facilitate multi-skilling between the different skills i.e. metering, jointing, overhead lines and plant maintenance electricians saving costs by reducing the number of skilled employees required to visit site to complete a job.
- A programme of up-skilling industrial staff to undertake work previously carried out by engineers was introduced creating the roles of senior authorised industrial staff (SAIS) and technician. This less expensive resource undertakes many tasks previously performed by engineers resulting in reduced cost and more efficient use of resources.
- Supervisors who worked 37 hours and earned overtime were replaced by Team Managers on personal contracts with no overtime and flexible working hours.
- A substantial part of the tree cutting operations was in-sourced on the basis that this could be managed cost-effectively. A number of tree cutters were up-skilled to undertake the work of linesmen and to ensure they are self-sufficient when working on the network.
- 37 hour working weeks were replaced by 42.5 hour weeks for skilled craftsperson roles.
- Craftspersons and engineers travel direct from home to the current site/work location (saving time and increasing productivity).
- All staff recruited since 1998 join a defined contribution pension scheme and the final salary scheme was closed to new entrants from that date.

- All new staff recruited since 2003 have 5 days less holiday entitlement e.g. Apprentices now start with 20 days annual leave.

While there have undoubtedly been real reductions in staff numbers in FTE within NIE, it is important to understand that a large proportion of the reduction results from a transfer of staff to fellow subsidiary NIE Powerteam which provides engineering services to NIE T&D.

Table 5.3 Summary of change in T&D and Powerteam headcount reported in the Statutory Accounts

Staff numbers	----------31/03/2002----------			----------31/03/2007----------			----------31/03/2010----------		
	NIE	PT	Combined	NIE	PT	Combined	NIE	PT	Combined
Northern Ireland Electricity									
T&D	410		410	214		214	227		227
NIE Supply	45		45	43		43			0
PPB/ SONI	44		44	56		56			0
Other	34		34	36		36	29		29
NIE Powerteam									
Management and administrative		44	44		108	108		122	122
Sales		5	5			0			0
Electrical Services		728	728		814	814		818	818
	533	777	1310	349	922	1271	256	940	1196
Less discontinued businesses	-89		-89	-99		-99	0		
Continuing businesses	444	777	1221	250	922	1172	256	940	1196

Source: Statutory Accounts for Northern Ireland Electricity plc/ Limited and NIE Powerteam Limited.

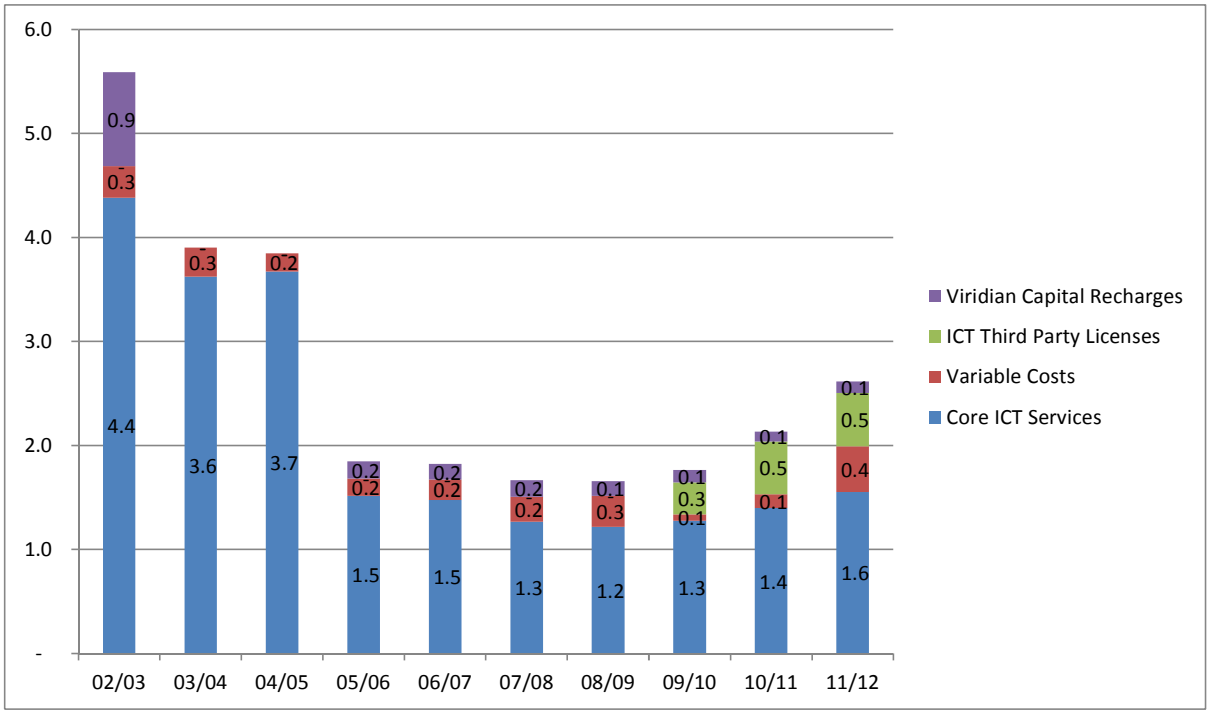
31 March 2002 is the end of RP2 and 31 March 2007 is the end of RP3. The 2002 staff numbers include Powerteam Electrical Services staff transferred to this new limited company in mid RP3 and are therefore excluded from the 2007 numbers. This indicates little change in staff numbers over these price control periods.

We have sought further information from NIE to verify the quantum of the claimed savings. Further information has been provided supporting the savings and while we have not been able to confirm the scale of the savings we have seen no evidence that any change in capitalisation practices has been applied to staff costs other than the capitalisation of overheads as in Section 6 detailed below.

5.3. IT and Telecoms costs

The following figure from the RP5 price control illustrates the elements of change in IT expenditure over RP3 and RP4.

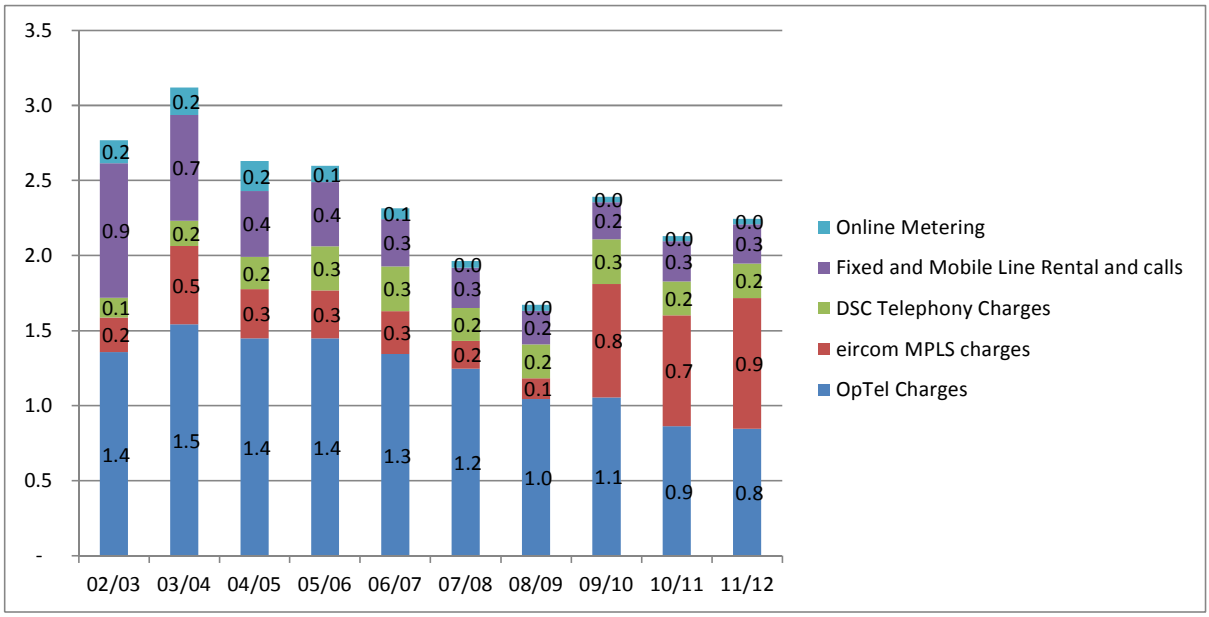
Figure 5.3 T&D IT costs stated in 2009-10 prices over RP3 and RP4 (£m)



Source: NIE combined T&D submission RP3/4

The following figure from the RP5 price control illustrates the elements of change in Telecoms expenditure over RP3 and RP4.

Figure 5.4 T&D Telecom costs stated in 2009-10 prices over RP3 and RP4 (£m)



Source: NIE combined T&D submission RP3/4

NIE provided a year on year reconciliation of controllable costs over RP3 and the following is extracted covering IT and telecom costs:

Table 5.4 Summarised IT & Telecoms claimed efficiency and cost reduction initiatives

Costs in 9-10 prices	Cost for year 2001/2	Saved During 2002/3	Saved During 2003/4	Saved During 2004/5	Saved During 2005/6	Saved During 2006/7	Cost for year 2006/7	Total savings
	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms
Initial IT & Telecom costs and annual savings	9.0	0.0	-1.4	-0.6	-2.0	-0.3	4.7	
New desktop managed service contract negotiated with Sx3			-1.4					-1.4
OTN and IT WAN reduction due to one off costs incurred in 02/03				-0.3				-0.3
Tight control of Variable fixed line and mobile telephony costs				-0.3		-0.1		-0.4
Insourcing of the Call Handling service resulting in a significant reduction in General Application costs from Northgate					-2.0			-2.0
Reduction in OTN and IT WAN costs due to cancelling obsolete private circuits						-0.2		-0.2
IT & Telecom cost savings over RP3			-1.4	-0.6	-2.0	-0.3		-4.3
Total IT & Telecom costs for each year of RP3 per BPQ	9.0	9.0	7.6	7.0	5.0	4.7	4.7	

Source: summarised from NIE's reconciliation of change in controllable costs in RP3

NIE floated its in-house IT function as Sx3 and this was acquired by Northgate in 2004. Northgate continues to employ a large team of former NIE staff. NIE has stated that the following efficiency initiatives achieved the savings in RP3 as indicated below:

- NIE negotiated a daily rate for all IT services achieved savings of £1.4 million in desktop managed services.
- In-sourcing of Call Handling services resulted in a £2 million reduction in general applications costs from Northgate.
- Tighter control of variable fixed line and mobile telephony costs saved a further £400k.
- The remainder of the claimed savings are from renegotiation and cancellation of local and wide area network telecoms contracts to meet business needs.

The significant savings in call handling were the result of re-engineering the customer-facing and back office activities. NIE stated that benchmarking confirmed that a single service centre dealing with all customer calls and related back office would deliver efficiencies. NIE stated that centralising the service reduced staff numbers from 69 to 24. The Northgate out-sourced service required capacity to be capable of handling peak demands such as major storms and in-sourcing this activity with 120 part-time volunteers resulted in the £2 million saving in Northgate costs.

As part of the capitalisation review we asked NIE to provide further evidence of the £2m annual savings in call and major incident handling. NIE provided an incomplete business case (an annex was missing) and this supported part of the claimed savings. Although not fully explained, we do not believe this is a priority for further investigation and accept that this change will have led to significant savings but we have not been able to confirm that savings as large as £2m have been realised.

While there is evidence of significant cost savings, particularly in RP3, costs have been rising in RP4 and NIE has claimed that these costs are unavoidable or that they are offset by savings elsewhere in the business. However we have not seen evidence of these savings. Furthermore the Capex and running costs associated with the Enduring Solution are high with variable

certainty over their estimates. This is the subject of a separate review by the Utility Regulator and has not been investigated.

From our analysis we have not identified a need for any capitalisation adjustment relating to IT and Telecoms charges.

5.4. Powerteam managed services

The majority of the Powerteam charges to NIE T&D are made directly to internal orders via timesheets completed by Powerteam engineering staff. Powerteam also provides managed services and supply chain services to T&D which we understand are charged at cost to operating expenditure. A proportion of these Powerteam managed services are capitalised through the overheads capitalisation process depending on the overall level of capitalisation to total Powerteam charges. The adjustment to overheads capitalisation is covered in sub-section 6.6 below and here we consider whether any further adjustment is required in relation to the way Powerteam managed services have been accounted for.

As part of the RP5 price control, NIE provided a rolling annual reconciliation of operating costs by type of expense over the five years of RP3. The following table shows a summary of NIE's explanation for annual changes in managed service charges:

Table 5.5 Summarised Managed Service charge efficiency and cost reduction initiatives

Costs in 9-10 prices	Cost for year 2001/2	Saved During 2002/3	Saved During 2003/4	Saved During 2004/5	Saved During 2005/6	Saved During 2006/7	Cost for year 2006/7	Total savings
	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms
Initial Managed Service charges and annual savings	8.5	-0.1	0.1	-1.5	-0.4	-0.3	6.3	
Rationalisation of the services provided by Powerteam				-1.5				-1.5
Closure of Culcavey Stores & ongoing rationalisation of district stores					-0.4	-0.3		-0.7
Other		-0.1	0.1					0.0
Managed Service charge savings over RP3		-0.1	0.1	-1.5	-0.4	-0.3		-2.2
Total Managed Service charges for each year of RP3 per BPQ	8.5	8.4	8.5	7.0	6.6	6.3	6.3	

Source: summarised from NIE's reconciliation of change in controllable costs in RP3

We requested further details and explanation for the claimed savings in the final three years of RP3.

In relation to the rationalisation of services provided by Powerteam, NIE provided the following comparison of 2003-04 and 2005-06 costs:

Table 5.6 NIE's explanation for the £1.5m claimed savings for rationalised Powerteam managed services 2009-10 prices £k

Managed service charges	03/04 Actual £k	04/05 Actual £k	Movement £k
Outage Managers	2,027	1,723	(304)
Tech Engineers	1,488	1,197	(291)
Project Mgt	457	0	(457)
Equip Engineers	119	0	(119)
GNIS	1,055	0	(1,055)
HR Director	(128)	0	128
Safety	532	173	(359)
Metering	0	1,046	1,046
Personal Mobile radio	71	0	(71)
	5621	**4138**	**(1,484)**

Source NIE

NIE provided explanations for the claimed savings from the closure of the Culcavey stores and the rationalisation of district stores covering savings in rent, facilities management and security costs. We have accepted these explanations.

We are not aware of any requirement for a capitalisation adjustment relating to Powerteam managed service charges other than the capitalised overheads adjustment shown elsewhere in this report.

5.5. General Controllable Opex

NIE provided a year on year reconciliation of controllable costs over RP3 and the following is extracted covering other costs:

Table 5.7 Summarised claimed Other efficiency and cost reduction initiatives

Costs in 9-10 prices	Cost for year 2001/2 £Ms	Saved During 2002/3 £Ms	Saved During 2003/4 £Ms	Saved During 2004/5 £Ms	Saved During 2005/6 £Ms	Saved During 2006/7 £Ms	Cost for year 2006/7 £Ms	Total savings £Ms
Initial Other costs and annual savings	14.0	-1.8	-1.4	0.6	-1.9	-0.9	8.6	
One off Disaster Recovery costs incurred in 02/03			-1.7					-1.7
Increase (release) in restructuring provision offset in following year				0.9	-1.5			-0.6
Reduction in billing charges from NIE Energy Supply		-1.0						-1.0
Reduction in Corporate costs		-0.4				-0.4		-0.8
Other		-0.4	0.3	-0.3	-0.4	-0.5		-1.3
Other cost savings over RP3		-1.8	-1.4	0.6	-1.9	-0.9		-5.4
Other costs for each year of RP3 per BPQ	14.0	12.2	10.8	11.4	9.5	8.6	8.6	

Source: summarised from NIE's reconciliation of change in controllable costs in RP3

We requested further details and explanation for the larger claimed savings during RP3:

- An analysis of the £1.7m one-off disaster recovery costs incurred in 2002-03 was provided by NIE. Under the Rolling Opex mechanism, this one-off cost in RP3 would have resulted in a windfall profit for NIE.

- The movements in the restructuring provision were influenced by actual retirees and the savings result from the reduction in the programme as the number of early retirees decreased.
- The reductions described as Other were explained further by NIE and relate to a number of smaller savings less increases.

We are not aware of any requirement for a capitalisation adjustment relating to general controllable Opex.

5.6. Insurance

NIE provided a year on year reconciliation of controllable costs over RP3 and the following is extracted covering insurance costs:

Table 5.8 Summarised claimed Insurance charge efficiency and cost reduction initiatives

Costs in 9-10 prices	Cost for year 2001/2	Saved During 2002/3	Saved During 2003/4	Saved During 2004/5	Saved During 2005/6	Saved During 2006/7	Cost for year 2006/7	Total savings
	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms
Initial Insurance cost and annual savings	2.8	-0.1	-0.2	-0.4	-0.5	-0.3	1.3	
Insurance market entered a soft rating cycle which had a positive effect on premiums. Incentives developed with insurers on main premiums to reward loyalty			-0.2	-0.4	-0.5	-0.3		-1.4
Other		-0.1						-0.1
Insurance cost savings over RP3		-0.1	-0.2	-0.4	-0.5	-0.3		-1.5
Total Insurance costs for each year of RP3 per BPQ	2.8	2.7	2.5	2.1	1.6	1.3	1.3	

Source: summarised from NIE's reconciliation of change in controllable costs in RP3

We requested further details and explanation for the larger claimed savings during RP3. At the time of the RP5 price control NIE stated that the insurance market entered a "soft" rating cycle during RP3 and coupled with NIE's claims record (NIE self-insures up to £250k) created a positive effect on premiums. NIE provided copy invoices supporting approximately half the claimed savings and stated that the remainder related to self-insured costs. We are not aware of any requirement for a capitalisation adjustment relating to insurance.

5.7. Property

NIE provided a year on year reconciliation of controllable costs over RP3 and the following is extracted covering property costs:

Table 5.9 Summarised claimed Property efficiency and cost reduction initiatives

Costs in 9-10 prices	Cost for year 2001/2	Saved During 2002/3	Saved During 2003/4	Saved During 2004/5	Saved During 2005/6	Saved During 2006/7	Cost for year 2006/7	Total savings
	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms
Initial Property costs and annual savings	1.9	-0.1	-0.8	-0.3	0.1	-0.2	0.6	
Reduction in rental charges due to reduction & relocation of staff (incl Centralisation of DCC and restructuring of CS functions) and related energy cost reductions			-0.8					-0.8
Further closure of offices as well as reduced Light Heat & Power costs following an internal scheme to conserve energy				-0.3		-0.2		-0.5
Other		-0.1			0.1			0.0
Property cost savings over RP3		-0.1	-0.8	-0.3	0.1	-0.2		-1.3
Total Property costs for each year of RP3 per BPQ	1.9	1.8	1.0	0.7	0.8	0.6	0.6	

Source: summarised from NIE's reconciliation of change in controllable costs in RP3

The figure below illustrates the savings achieved in RP3 following the reduction and relocation of staff early in RP3 as described previously. NIE provided further explanations confirming that the floor area at the Danesfort site was reduced by the removal of the staff canteen and the removal of the Power Networks department. The other savings related to the vacation of the Bangor and Grove Street East offices with staff moved to existing offices. The savings were achieved across rent, administration charges, service charges, cleaning and lighting and heating.

We are not aware of any requirement for a capitalisation adjustment relating to property costs.

5.8. Rolling annual reconciliation of controllable Opex in RP4

As already stated, as part of the RP5 price control, NIE was asked to provide a rolling annual reconciliation of controllable Opex covering RP3 and RP4. The reconciliation was provided for the five years of RP3 but not for RP4 as NIE argued that it had achieved a level of absolute efficiency through its RP3 cost reductions and the costs in RP4 were largely flat year on year. For completeness, we summarise below the annual change in categories of controllable Opex costs across the four years of RP4 that have been the subject of this report. These changes were considered as part of the RP5 price control and our findings are included within our reports to the Utility Regulator. Other than as included within this report, we are not aware of any further issues relating to capitalisation practices that we wish to bring to the attention of the Utility Regulator.

Table 5.10 Annual change in controllable Opex, first four years of RP4 2009-10 prices £m

2009-10 prices £m	2007/08	2008/09	2009/10	2010/11
Payroll	-0.6	0.7	0.5	-0.3
Repairs & Maintenance	-0.5	0.2	-0.6	-0.3
IT & Telecoms	-0.5	-0.1	0.6	0.2
Powerteam	-0.4	-0.3	-0.1	0.2
Corporate	-1.2	-0.7	0.2	0.0
Innovation Schemes	0.4	0.1	0.2	-0.2
Insurance	-0.1	-0.1	0.3	-0.1
Property	0.1	-0.1	0.1	0.0
Professional services	0.0	0.1	0.1	-0.4
General Controllable Opex	0.1	0.3	-1.2	0.5
Severance/Redundancy/Restructuring	0.2	0.1	0.0	-0.3
	-2.6	0.2	0.1	-0.8

Source: summarised from NIE's RP5 BPQ historic costs submission

5.9. Conclusion

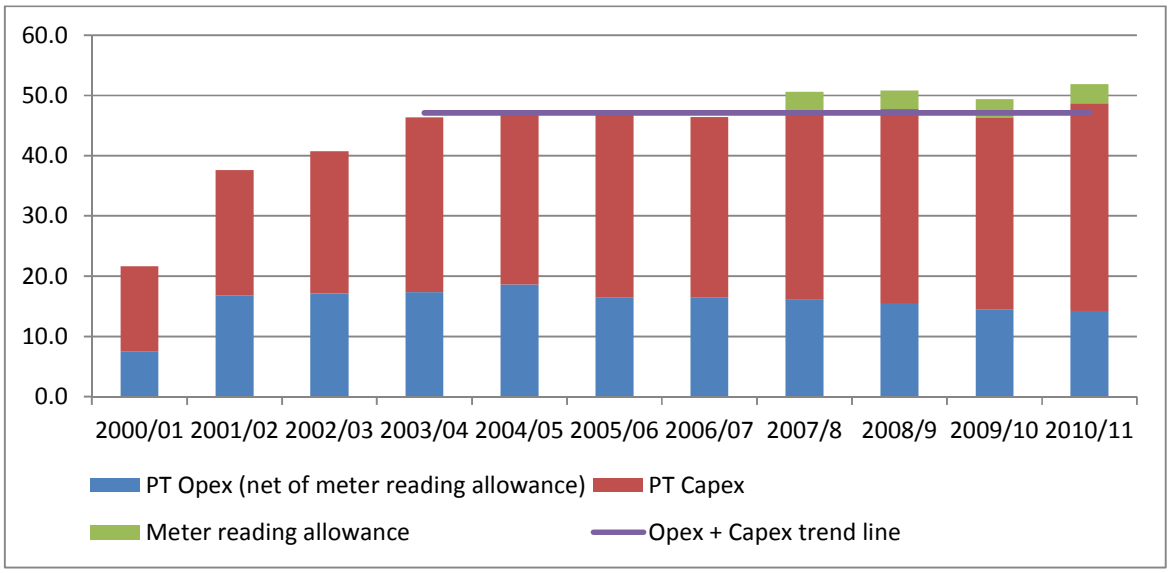
Our analysis of the material savings achieved in RP3 that contributed to NIE's out-performance against its controllable Opex allowance has concluded that Repairs and Maintenance, Powerteam cross-charges, capitalised overheads and the rolling capital programmes for overhead lines require closer examination as detailed below.

6. CAPITALISATION PRACTICE CHANGES

6.1. Powerteam charges to NIE

During the course of the RP5 price control it became apparent that the in-sourcing of electrical engineering services through fellow subsidiary company Powerteam (unregulated) had resulted in common systems, processes and accounts coding structures being used across the two companies. The shift of costs from Opex to Capex is illustrated in the following figure which shows the aggregate of Powerteam services which have been accounted for in T&D as Opex or as Capex i.e. Powerteam Totex. The summary of Powerteam Totex through the review period is shown in constant 2009-10 prices below:

Figure 6.1 Analysis of Powerteam Totex charges including trend line in 2009-10 prices £m



Source: Derived from "Further payroll cost analysis Powerteam v3" Excel spreadsheet provided by NIE

The above analysis shows that Powerteam Totex follows a flat trend in real terms between 2003-04 and 2010-11. Throughout this period, the increasing capitalisation trend in Powerteam charges and decreasing Opex trend resulted in an increase in Capex within NIE.

We note that the NIE Capex programme increased in RP4 over RP3 and the actual Capex expenditure is expected to be 20% higher (in 2009-10 prices) in RP4 over RP3. However, the majority of this increase relates to external bought in services rather than internal charges from Powerteam where there is a more modest increase in the total Capex work commissioned but a significant shift in the proportion of Capex to the total Powerteam service charges. We believe the increase in capitalised Powerteam charges and the overall reduction in Powerteam charges treated as Opex by NIE is related to the adjustments described below and.

6.2. Analysis of Powerteam's time recorded as the basis of charges to NIE T&D

We requested timesheet data from NIE's time recording system (JIC) over the available years of 2003-04 to 2010-11. Our analysis has revealed a clear trend of increasing Capitalisation of hours within Powerteam over the review period, and within the key departments in Powerteam. Both Capital Internal Orders (IOs) and capitalised Repairs and Maintenance (R&M) hours have

increased over the period reviewed. The source of the increased capitalisation varies significantly between the departments:

Overhead Lines

- Overhead lines shows a clear trend of increasing capitalisation (120% increase between 2005 to 2010); and
- Much of this increase appears to relate to the introduction of the Rolling Programmes, the 5, 15 and 45 year overhead lines capital programmes.

Customer Operations

- Customer operations shows a much smaller trend of increasing capitalisation over the review period (6% between 2003-04 and 2010-11); and
- Customer operations shows year on year increases in capitalised R&M from 2006-07 onwards, although it is noted that exceptional storms in 2010-11 contributed significantly to capitalised R&M in that year.

Plant / Technical

- Plant / Technical department capitalisation has shown consistent and significant year on year increases from 2006-07 (71k) to 2009-10 (108k); and
- Fluctuating levels of R&M Opex, and year on year increasing levels of capitalised R&M between 2007 and 2010.

6.2.1. Information Used in Analysis

We were provided with the following information in June 2012 by NIE / Powerteam following the issue of an Information Request in May 2012.

- Full list of capitalised R&M Internal Orders (IOs) for all years 2000-01 to 2010-11;
- JIC time reports (JIC is NIE's time recording system throughout the period under review) analysed by IO number for the following numbers of employees within Powerteam Departments over the period 2003-04 to 2010-11. We specifically requested time recorded for employees who had remained within the same role in each Department through the period, and were provided with the information so far as it was available. The sample sizes were based on 10% of the average numbers of employees within each department over the period.

Table 6.1 Sample Sizes Requested from and Returned by NIE

Department	Sample size requested	Sample size returned
Plant / Technical	13	13
Overhead Lines	23	21
Customer Operations	24	14
Central Support	2	0

Source: CEPA Consortium

- Overall JIC time recording reports analysed by IO number and department, for each year from 2003-04 to 2010-11; and
- Staff numbers by Department within Powerteam.

6.2.2. Methodology

Our approach was to analyse the data on two bases, so far as possible from the information provided. Firstly, to undertake an overall and department by department analysis of time recording trends based on the time recording information provided by NIE /Powerteam. Secondly, to analyse the trends based on employee samples for the departments for which information was provided to us, namely Overhead Lines, Plant Technical and Customer Operations.

In undertaking this analysis, we analysed time recorded against Internal Order numbers in accordance with the following approach:

Table 6.2 Analysis of IOs

IO Type	Time Analysed as
Capital	Capex
R&M	Split between Capex and Opex based on proportion of costs treated as Capex and Opex in NIE financial reports
Other	[1]FECR / PECR / Tort or Troubleman Events

Source: CEPA Consortium

In relation to Capital IOs, all time recorded against these Internal Orders was assumed to relate to Capex.

In relation to R&M, we attempted to match the IO number to the list of capitalised IOs provided by NIE, and subsequently adopted the following approach to apportioning time to either Capitalised R&M or Opex R&M:

- If the IO did not appear on the list of Capitalised R&M IOs provided by NIE, all time recorded against the IO was treated as Opex R&M;
- If the IO did appear on the list of Capitalised R&M IOs, a capitalisation percentage was calculated based on the costs capitalised as a percentage of the sum of the total costs (capitalised plus the costs remaining allocated to R&M after capitalisation). This percentage was applied to the total hours recorded against the IO, with the balance treated as Opex R&M expenditure;
- In a minority of instances the calculation of capitalisation percentage returned a number less than 0% , in which case a capitalisation percentage of 0% was applied; and

[1] FECR/PECR stands for Full Estimated Cost Recoverable / Part Estimated Cost Recoverable and is for alterations where the customer pays for all or part of the costs of the alteration

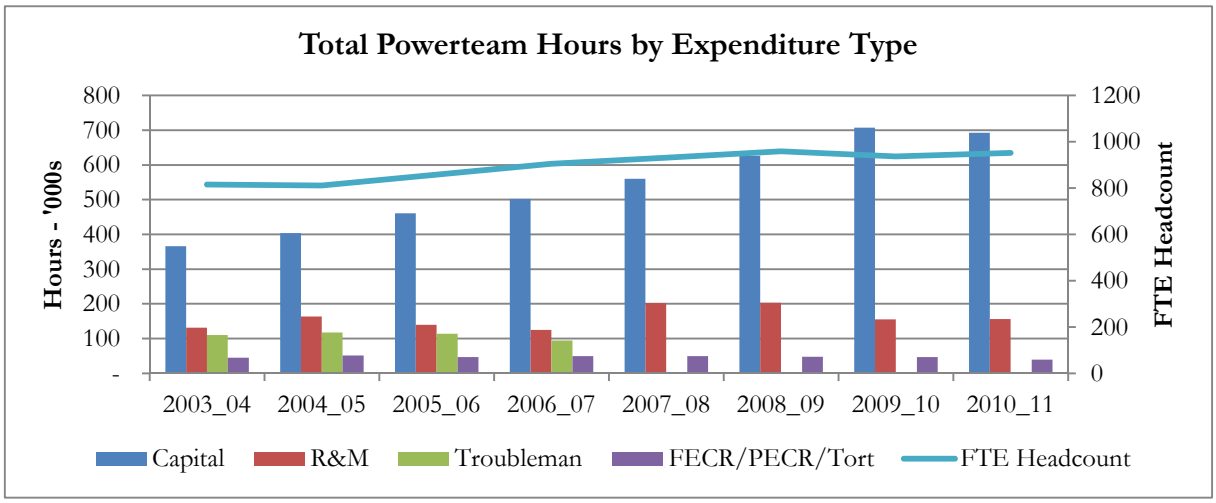
- In a minority of instances the calculation of capitalisation percentage returned a number greater than 100%, in which case a capitalisation percentage of 100% was applied.

The third category of Internal Orders was not associated with Capital or R&M IO types. NIE have confirmed that these IOs relate to Troubleman Events and to FECR/PECR/Tort IO types. We have separately identified these in our analysis. It should be noted that recorded hours associated to Troubleman IOs may be either Opex or Capex, however we do not have sufficient information to enable us to reliably split these IOs and so we have shown them separately in our analysis. As a result, any assessment of increases in capitalisation over the period reviewed will be overstated to the extent that Troubleman Internal Orders have been capitalised in the earlier years of the review period. Our separate detailed analysis of capital works indicates an increased capitalisation of Troubleman IOs.

6.2.3. Analysis of Hours by Expenditure Type

Figure 6.3 shows an analysis of Powerteam activity by four categories over the period 2003-04 to 2010-11, as well as Powerteam FTE headcount over the same period. It should be noted that although only around half Powerteam staff complete timesheets, the charging mechanism (eg the charge out rate applied to hours worked) is based on recovering the costs for the whole workforce and therefore relates to the total FTE for Powerteam.

Figure 6.3 Powerteam Hours by Expenditure Type & FTE Headcount

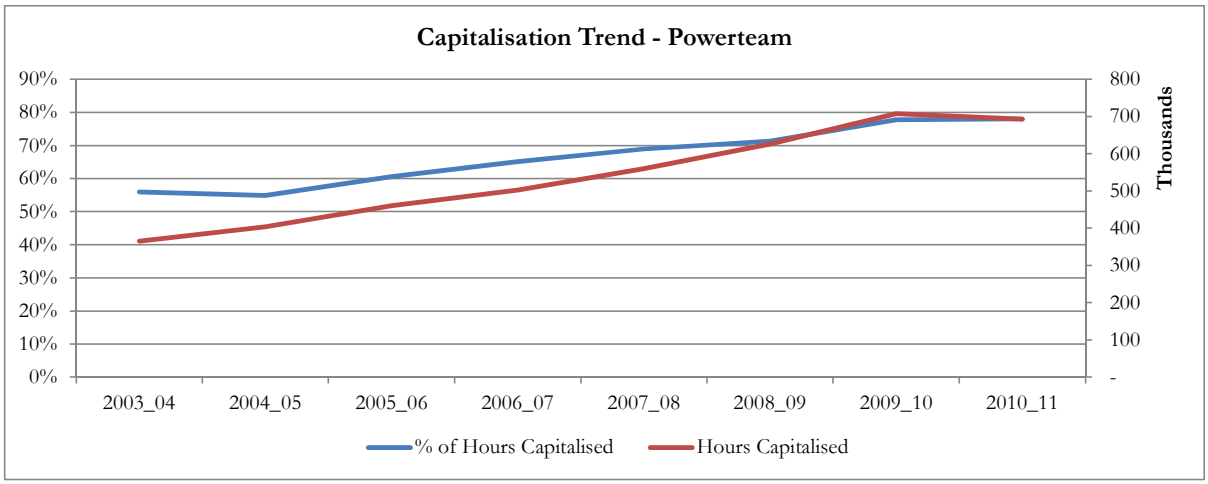


Source: Derived from NIE Information Responses 22 June 2012

The above analysis shows that FTE headcount has increased gradually over the period 2003-04 to 2010-11 from 815 FTEs to 951 FTEs, peaking in 2008-09 at 958 FTEs. Over this period, total hours capitalised have shown a clear upward trend, increasing from 364k hours in 2003-04 to 666k hours in 2010-11 (83% increase in hours compared to 19% increase in FTEs). Hours associated with R&M activity have also increased from 131k in 2003-04 to 156k in 2010-11 (ie by 19% broadly in line with the increase in FTEs), with a peak of 204k in 2008-09. Troubleman hours have reduced from 110k in 2003-04 to nil in 2007-08 as the 6-digit Troubleman IO codes were aligned with 7-digit SAP IO codes from this point onwards. Other IO codes have remained consistent at around 40k-51k hours per annum over the period.

The overall trend in hours capitalised is shown in Figure 6.4 below:

Figure 6.4 Powerteam Capex Hours, in absolute terms and as a percentage of total hours



Source: Derived from NIE Information Responses 22 June 2012

Figure 6.4 demonstrates the clear upward trend in capitalisation over the period, both in terms of absolute hours and in terms of the percentage of recorded Powerteam hours per annum. The figures are represented in Table 6.3 below:

Table 6.3 Powerteam Capex Hours, in absolute terms and as a percentage of total hours

Year	Hours Capitalised	% of Total Hours
2003_04	365,748	56.0%
2004_05	403,836	54.8%
2005_06	460,498	60.6%
2006_07	502,495	65.2%
2007_08	559,659	68.9%
2008_09	626,234	71.4%
2009_10	707,353	77.8%
2010_11	692,780	78.0%

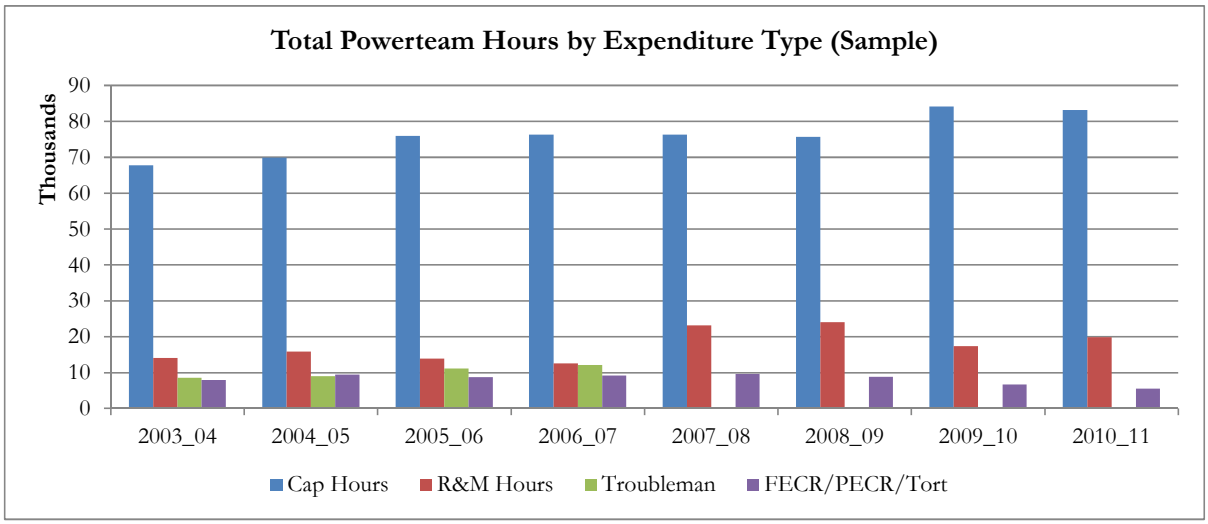
Source: Derived from NIE Information Responses 22 June 2012

NIE, in considering the factual accuracy of this report in draft, commented that our analysis is inaccurate because of difficulties in analysing Troubleman, storm events, and Fault and Emergency time information. We believe other findings in this report support our analysis and in the absence of more precise information from NIE we believe it is valid to include this analysis.

6.2.4. Analysis of Hours by Expenditure Type – Employee Sample

Figure 6.5 below shows the Powerteam hours recorded for the sample of employees referred to in Table 6.1. In preparing the analysis, we have weighted the sample sizes actually received in each department in order to ensure proportional representation of each of the three departments.

Figure 6.5 Powerteam Hours by Expenditure Type – Sample of Employees



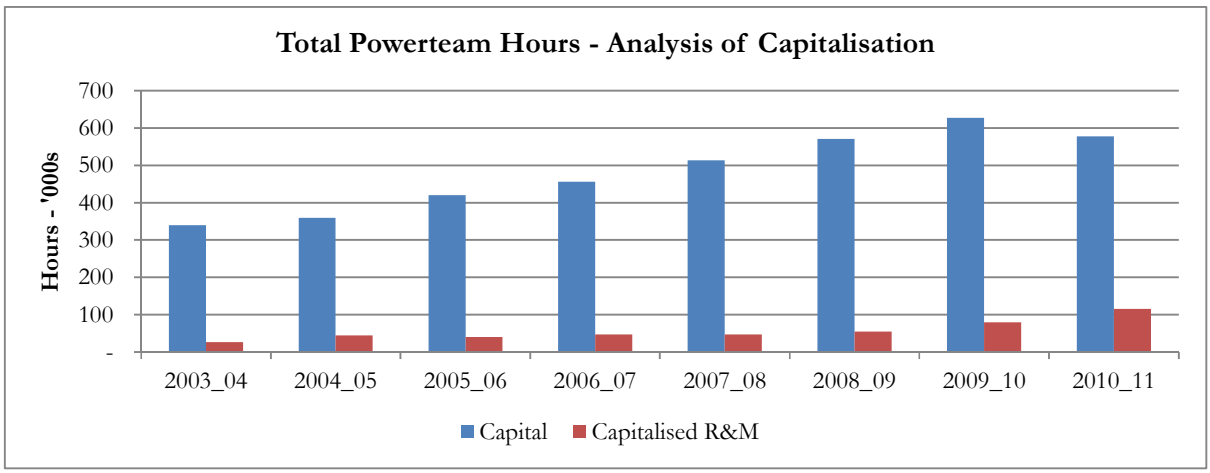
Source: Derived from NIE Information Responses 22 June 2012

Figure 6.5 shows an increase in capitalisation percentage over the period, from 69% in 2003-04 to 77% in 2010-11. Whilst this is less dramatic than the increase for the overall time recording it does provide evidence of an increase in capitalisation of Powerteam work.

6.2.5. Analysis of total Capex Hours

The increase in Powerteam capitalisation derives from two sources - Capital IOs and capitalisation of R&M IOs. Figure 6.6 shows an analysis of time capitalised split between these two sources.

Figure 6.6 Analysis of Capex Hours



Source: Derived from NIE Information Responses 22 June 2012

Both Capital IOs and capitalised R&M have increased over the period reviewed. 73% of the increase in annual Powerteam capitalisation between 2003-04 and 2010-11 relates to Capital Internal Orders, while the remaining 27% relates to increased capitalisation of R&M expenditure.

Table 6.4 below shows a breakdown of Capitalised hours for the 20 most significant Asset Management Instructions (AMIs) used by NIE over the review period, accounting for 55% of capitalised hours over the period 2003-04 to 2010-11.

Table 6.4 Analysis of capitalised time by Top 20 AMIs 2003-04 to 2010-11

Top 20 AMIs	2003_04	2004_05	2005_06	2006_07	2007_08	2008_09	2009_10	2010_11	Grand Total
DIST OH 11KV REFURB	13,119	30,975	24,178	42,509	56,923	44,088	54,027	44,382	310,200
UNDEREAVE WORK	30	1,267	28,652	53,260	42,309	36,803	42,842	39,266	244,429
Not Applicable	6,089	12,506	4,575	15,405	5,037	9,596	40,202	75,907	169,316
New Supp Rural TX Service	12	12,590	22,911	33,993	32,810	26,321	17,742	18,157	164,534
DIST OH 11KV FIXED COST			8	14,164	36,030	40,499	34,379	36,813	161,893
DIST OH 11KV TAR				6,432	26,921	38,624	47,063	40,416	159,458
OVERHEADLINE 11KV	43,657	45,203	47,766	19,135					155,761
New Sup House12-50 Dwellings	23,311	20,750	16,623	16,470	13,838	6,975	7,913	8,642	114,521
New Supp Rural Service Only	4	10,951	20,110	18,973	16,404	13,791	9,835	9,157	99,223
COMMERCIAL						12,108	45,302	41,463	98,873
New Supp Rural Spur TX Service		2,618	9,643	17,520	21,833	18,968	11,799	10,367	92,748
Alt O/h Non Rec 11kv	7,977	8,030	11,077	9,994	11,088	14,655	13,907	15,642	92,369
DIST OH LV REFURB					12,988	20,389	25,742	31,703	90,822
DIST OH 11KV RE-ENGINE		578	1,238	642	16,900	28,976	12,612	13,861	74,807
Overheadline Transmis			456	8,427	11,083	16,343	16,984	12,073	65,366
New Sup Rural Pre 18/2/04	38,660	18,583	3,781	885	129	54			62,091
New Sup Comm LV <70KVA	7,679	7,210	8,251	8,923	8,360	7,180	6,500	6,444	60,546
New Sup House Between 50-100	7,901	10,977	9,666	8,760	7,694	4,024	3,706	3,523	56,252
CUST OPS EXC REINS CONTR MON			5,546	10,186	9,887	11,453	9,494	9,536	56,102
DISTRIBUTION SUBSTATION R	4,004	4,413	6,723	3,496	4,433	7,885	11,892	13,094	55,940
Total hours	**152,440**	**186,648**	**221,203**	**289,173**	**334,666**	**358,733**	**411,943**	**430,444**	**2,385,249**
% of total capex hours	42%	46%	48%	58%	60%	57%	58%	62%	55%

Source: Derived from NIE Information Responses 22 June 2012

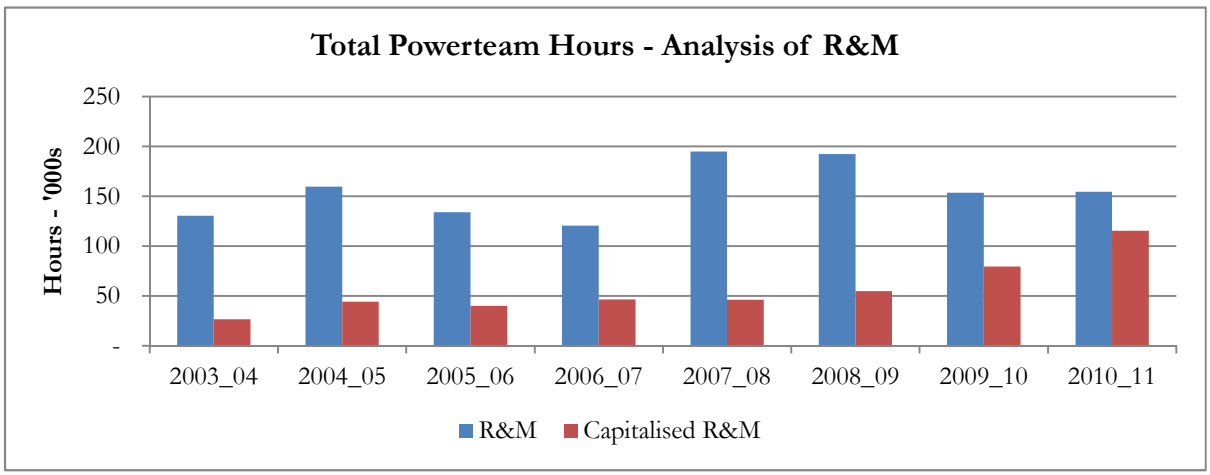
Table 6.4 shows that a significant proportion of the increased capitalisation over the period relates to OH 11kV AMIs, including Targeted Asset Replacement (TAR). In total, 11kV AMIs account for over 25% of the annual increase in Powerteam capitalised hours between the start of the period and the end of the period.

A further significant source of the increase in capitalisation is the "Not Applicable" AMI, contributing 75.9k hours in 2010-11, which we understand relates principally to capitalised F&E associated with Troubleman Events. Prior to 2007-08 these have not been analysed to Capex and are separately shown in our overall analysis of Powerteam recorded hours. This treatment may have the impact of overstating the trend for increased capitalisation based on our analysis.

6.2.6. Analysis of R&M Hours

Figure 6.7 shows an analysis of Powerteam R&M hours, split between Opex R&M and Capitalised R&M

Figure 6.7 Analysis of R&M



Source: Derived from NIE Information Responses 22 June 2012

The analysis shows a fluctuating level of R&M over the period, with capitalised R&M increasing from 2006-07 onwards and Opex R&M peaking in 2007-08 and 2008-09. The most significant increases in capitalised R&M are shown in 2009-10 and 2010-11. A key contributing factor to increased capitalised R&M in 2010-11 was storm costs, accounting for 32k hours.

6.2.7. Conclusion

Our analysis has revealed a clear trend of increasing Capex within Powerteam over the review period. Both Capital IOs and capitalised R&M have increased over the period reviewed. 73% of the increase in total Powerteam capitalisation between 2003-04 and 2010-11 relates to Capital Internal Orders, while the remaining 27% relates to increased capitalisation of R&M expenditure. A significant proportion of the increased capitalisation over the period relates to OH 11kV AMIs, including Targeted Asset Replacement (TAR). In total, 11kV AMIs account for over 25% of the annual increase in Powerteam capitalised hours between the start of the period and the end of the period.

6.3. NIE's Rolling annual reconciliation of R&M in controllable Opex

NIE provided a year on year reconciliation of controllable costs over RP3 and the following is extracted covering repairs and maintenance costs.

Table 6.5 Summarised NIE's R&M efficiency and cost reduction initiatives in RP3

Costs in 9-10 prices	Cost for year 2001/2	Saved During 2002/3	Saved During 2003/4	Saved During 2004/5	Saved During 2005/6	Saved During 2006/7	Cost for year 2006/7	Total savings
	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms	£Ms
Initial R&M costs and annual savings	17.3	-2.5	-0.1	0.5	-3.2	-1.2	10.8	
One off costs due to a requirement to install earth mats at overhead line mast head switches following a fatality in England				0.5	-0.5			0.0
Reductions in Fault & Emergency costs due to the introduction of the TroubleMan system. Efficiencies achieved through the introduction of service order scheduling and appointments system (SOSA). Meter scheduling moved from Districts to one central office. Reduction in costs for apparatus operational restrictions (AOR).		-2.5						-2.5
Costs associated with transmission tree cutting following a network incident				0.4	-0.4			0.0
Other general R&M savings			-0.1	-0.4	-0.7	-0.2		-1.4
Cyclic based unit reductions					-0.7			-0.7
Reduction on previous year storm costs					-0.6			-0.6
Reduction on power station control room services					-0.3			-0.2
Reduction in Apparatus Operational Restrictions provision						-0.6		-0.6
Defect management (better prioritisation of defects)						-0.4		-0.4
R&M cost savings over RP3		-2.5	-0.1	0.5	-3.2	-1.2		-6.4
Total R&M costs for each year of RP3 per BPQ	17.3	14.8	14.7	15.2	12.0	10.8	10.8	

Source: summarised from NIE's reconciliation of change in controllable costs in RP3

The above analysis indicates that the principal efficiency savings have come from a reduction in costs due to the introduction of the TroubleMan system (£2.5 million) and "Other general R&M savings" of £1.4m that have were not further broken down. We requested further explanation from NIE and this is covered below. NIE has stated that significant savings were achieved in RP3 but that in RP4 costs have remained largely flat in 2009-10 prices.

NIE's response to our request for further explanation of the £2.5m reductions in 2002-03 attributed to the introduction of the Troubleman fault management system is as follows:

The annual R&M programme has approximately 170 line items (asset management instructions or AMIs) and thousands of internal order numbers. In any year there will be many variations in expenditure due to volume variations from year to year and due to changing priorities - both of which are natural. Variation from year to year is thus natural and inevitable and the table above is the net movement of all these transactions. What has been presented is an analysis of what would be considered significant items which would be different from the previous year. It is not exhaustive. However, the £2.5m variation is not all attributable to Fault and Emergency as indicated and as a more detailed analysis comprises the following:

Table 6.6 NIE's further explanation of the majority of the R&M savings achieved in 2002-03

		£k
Metering	1. Efficiencies gained through introduction of SOSA	500
	2. Centralising the meter scheduling office	
	3. Keypad install was R&M activity in 2001/02	
	4. Reduction in card meter manual programming through introduction of keypads	
Grounds Maintenance	Grounds maintenance brought in house 2002/03 and delivered as out of hours incentive scheme	200
Buildings & Grounds	Sale of District Offices	75
AOR	Primarily 2000/01, including R&D and training	350
Stock Adjustment		200
F&E	1. Creation of Network System Operations and Emergency Response (NSOER) group - dedicated	700
	2. Creation of Trouble Operatives (TO's) to provide out of hours cover thus reducing overtime costs from other staff	
	3. Review of Belfast Shift resources. Several staff re-assigned to other duties	
	4. Belfast Shift moved to Standard monthly charging (SMC)	
Mini pillars	Inspections and repairs carried out as a replacement and refurbishment programme	120
Transmission F&E	Transmission F&E is primarily associated with replacement of assets and is capital	100
		2,245

Source NIE

NIE's response to our request for further detailed analysis of the £1.4m of Other R&M savings is as follows:

Table 6.7 NIE's further explanation of the Other savings in R&M achieved in RP3

	Year	£k
Review of excavation and reinstatement contract monitor timesheet costs and correct allocation to programmes of work	2003/04	100
One off 'Rest Day Off' (RDO) buy-out in 2003/04	2004/05	400
Variation due to project opex cost reductions which were primarily a one-off cost in 2004/05 - see response on project opex	2005/06	700
Non-recoverable alterations became processed through JMS resulting in more accurate classification and categorisation of jobs	2006/07	200
		1400

Source NIE

In its written BPQ submission, NIE identified the following as being the primary reasons for the reduction in R&M costs. However only the first item can be directly attributable to the table in 6.5 above:

- Reduction in cost of unit costs (£700k reduction shown in the analysis above);
- Vegetation management due to a review of policy on the number of visits per year and the adoption of the capital programmes resulting in a reduced requirement for reactive tree cutting;
- Reductions in minor defects costs resulting from a ranking and prioritisation process;
- Reduction in plant workshop costs due to mobile generator costs being attributed directly to the associated work activity rather than being absorbed centrally;
- Savings in connections alterations via tighter reporting and control of costs;

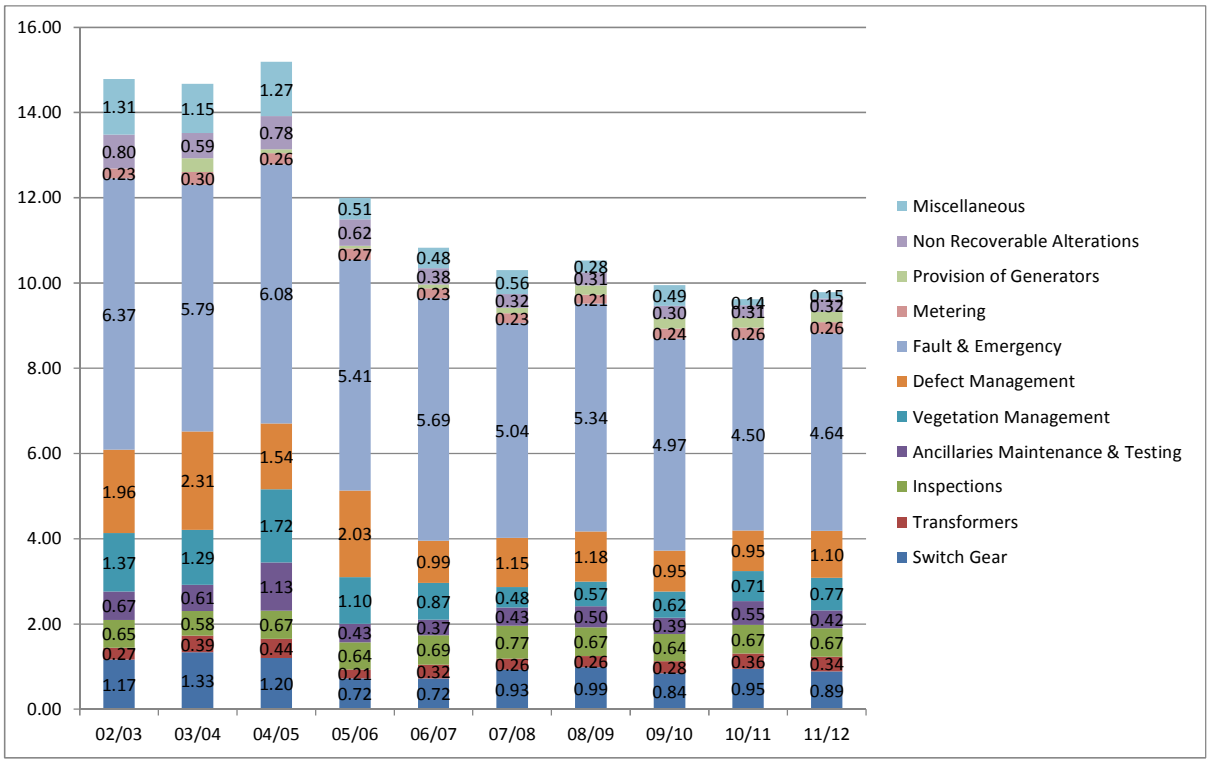
Fault and Emergency (F&E) work including major storm costs is stated to be influenced by the weather although a significant proportion of these costs are capitalised. NIE claims that F&E costs have seen a reduction through tighter management and control of costs by the introduction of a dedicated resource. However the £600k saving in storm costs in 2005-06 is attributed to excess storm costs in 2004-05 but this additional cost is not given as a major reconciling item in 2004-05. This has been queried with NIE but they stand by their original analysis. This could indicate that a greater proportion of storm costs were capitalised from 2005-06 onwards.

The above analysis has been considered by our engineering consultants in their review of R&M costs and the claimed savings in the years 2005-06 and 2006-07 give rise to adjustments below but are not directly attributable to the reconciliation in Table 6.5 above.

6.4. Summary of Repairs and Maintenance cost

The decline in Opex leading to RP4 is further supported by the following figure which is taken from the analysis of historic costs as part of the RP5 price control and shows that certain categories of R&M have reduced significantly over the period. Our detailed analysis shows that a prime driver of this reduction is an increase in capitalisation of costs that in the first part of RP3 were treated as Opex.

Figure 6.8 Analysis of Repairs and Maintenance costs in 2009-10 prices over RP3/4 (£m)



Source NIE combined T&D submission RP3/4

Our engineering consultants have reviewed R&M costs as accounted for in the SAP accounting system. We discovered that the Report 70 information by asset management instruction and internal order number was incomplete in regard to total R&M and NIE provided a further analysis by processing group. None of these analyses and the reconciliation of annual changes in R&M align with the analysis provided at the RP5 price control as shown in Figure 6.2 above but have been agreed in total. Our analysis and associated adjustments are based on our review of the detailed processing group data provided by NIE.

6.5. Analysis of Repairs and Maintenance

We have undertaken a detailed review of the capitalisation of *Repairs and Maintenance* (R&M) activities. The primary findings are based upon data provided by NIE on 29th March 2012. Additional information to provide further insight into the findings has been taken from other sources, also provided by NIE over the period to July 2012 when NIE provided further information following our discussion of our report.

The total costs attributed to R&M are typically defined as Operating Cost (Opex), although some elements that are originally recorded as R&M expenditure are later transferred into capital programmes (Capex). The transferred costs will appear as a negative adjustment in the R&M records leaving the net total as exclusively Opex. NIE has provided the capitalised R&M costs in an additional data set, which has allowed a comparison of the total R&M Opex against the associated Capex transfers. Performing this comparison demonstrates whether any reduction in Opex is attributable to corresponding increases in R&M capitalisation. Given the broadly consistent total R&M expenditure over the period then we would expect comparable R&M

capitalisation values period to period. However if the capitalisation practice has changed or the R&M work as driven by NIE practice has changed the work content, such that existing capitalisation practices mean that more R&M activities are capitalised, then this would be demonstrated by an increase in capitalisation. In both these cases the underlying R&M activity or the driver for it that was used in setting the Opex allowance will not have changed.

Transferring R&M expenditure into capital programmes at a later date is not the only means of capitalising the R&M expenditure. Different types of work and the associated costs can be substituted directly into a capital programme, thus never appearing in the R&M records. NIE have identified the equivalent capital programmes into which capitalised R&M is transferred. A comparison of any reduction in R&M expenditure against a corresponding increase in the relevant capital programmes demonstrates where expenditure has been substituted into Capex.

This review has been undertaken by assessing the Capex and Opex values in each year compared to the relevant base year. In RP3 NIE had a fixed Opex allowance. The Rolling Opex regulatory model that applied in RP4 was being discussed in mid RP3 and significantly the final two years of RP3 show a marked reduction in Opex expenditure. We have therefore assessed the final two years of RP3 against a base using the average first three years of RP3 i.e. 2005-06 and 2006-07 are individually compared against the average expenditure between 2002-03 – 2004-05. This comparison assumes that the expenditure trend for the first three years should be comparable with the final two years of RP3 and our analysis has sought to understand why the reductions in the final two years took place.

In RP4 a different Opex allowance mechanism was applied (namely the Rolling Opex mechanism) and the NIE allowance was determined by the outturn in the corresponding RP3 year. Thus, for the RP4 period we have compared expenditure against the corresponding base year in RP3 i.e. 2009-10 compared to 2004-5.

The review specifically compares the Opex reduction against Capex increases. Thus, increased capitalisation identified that is greater than the Opex reduction is omitted from the figures.

We have considered each type of R&M project separately in our assessment and consider that when taken over a 12 month period projects of the same type should result in similar levels of capitalisation, period to period. Continuing trends of significant changes in the capitalisation are taken as evidence of changes in policy or practice.

Our analysis has looked for changes resulting from:

- Direct capitalisation – where we see a significantly higher proportion of the same tasks being transferred to capital through R&M;
- Capital substitution – where we see reductions in R&M tasks that are replaced by capital projects that deliver the same output;
- Need Reductions – where specific tasks required in RP3 were not required in RP4, and
- Output reductions – where NIE has changed practices that resulted in reduced unit costs or volumes being delivered. These may be the result of efficiency improvements if the reductions resulted in reasonable asset risk profile. In the summary tables the output

reductions are identified as the difference between any yearly increases in expenditure and the remaining reductions not identified as capitalisation.

It is important to note that for the two different methods of capitalisation (direct capitalisation and capital substitution) the capitalised expenditure is grouped into two different pools. One identifies expenditure that we have demonstrated to be capitalised and another where capitalisation is probable based upon the evidence. The "probable" classification can be interpreted as follows:

- Probable direct capitalisation – these are Opex reductions that are attributable to increasing R&M capitalisation, but where the capitalisation is a one-off rather than a continuing trend.
- Probable capital substitution – in specific cases there is clear evidence that Opex reduction is due to capitalisation, based upon the overall trend and policy change commentary from NIE. However, the reductions cannot be accounted for based upon the corresponding increases in capital programmes identified by NIE.

Finally, it should be highlighted that this review is investigating changes in capitalisation practices rather than assessing the legitimacy of expenditure that NIE considers as Capex. Therefore, any policy change that has the effect of transferring Opex into Capex is considered as part of this review.

The structure of the analysis is as follows:

Primary source data

- The R&M "Total expenditure" source data is taken from "RM by PG AMI IO.xlsx" provided by NIE on 29/03/2012.
- The R&M "Capitalisation" source data is taken from "1 - Cap R&M IOs (Revised 23 July for Non-Rec Alts under GL 665010).xlsx" provided by NIE on 23/07/2012.

Analysis

The primary source data has been used directly as the foundation for the analysis. The analysis is comprised of the following three spreadsheets:

- RM by PG AMI IO_AH_v2-2.xlsx – this spreadsheet compares the R&M total expenditure against the R&M capitalisation at the total R&M level and then broken down by processing group.
- RM by PG AMI IO_AH_Category analysis_v0-2.xlsx – in two instances (Routine Maintenance PG0&PG1 and Customer Driven (PG5&PG7) the analysis by processing group did not provide sufficient granularity to draw conclusions. This spreadsheet breaks these processing groups down into categories identified by NIE and again compares R&M total expenditure against the R&M capitalisation.
- CAPEX substitution_AH.XLSX – this spreadsheet compares the Total R&M expenditure against CAPEX expenditure for the capital programmes identified by NIE for each of the R&M processing groups and categories. It assesses the capacity of the capital programmes identified by NIE to consume the corresponding reductions in R&M

expenditure and assumes that the R&M capitalisation is also absorbed by these capital programmes.

Summary

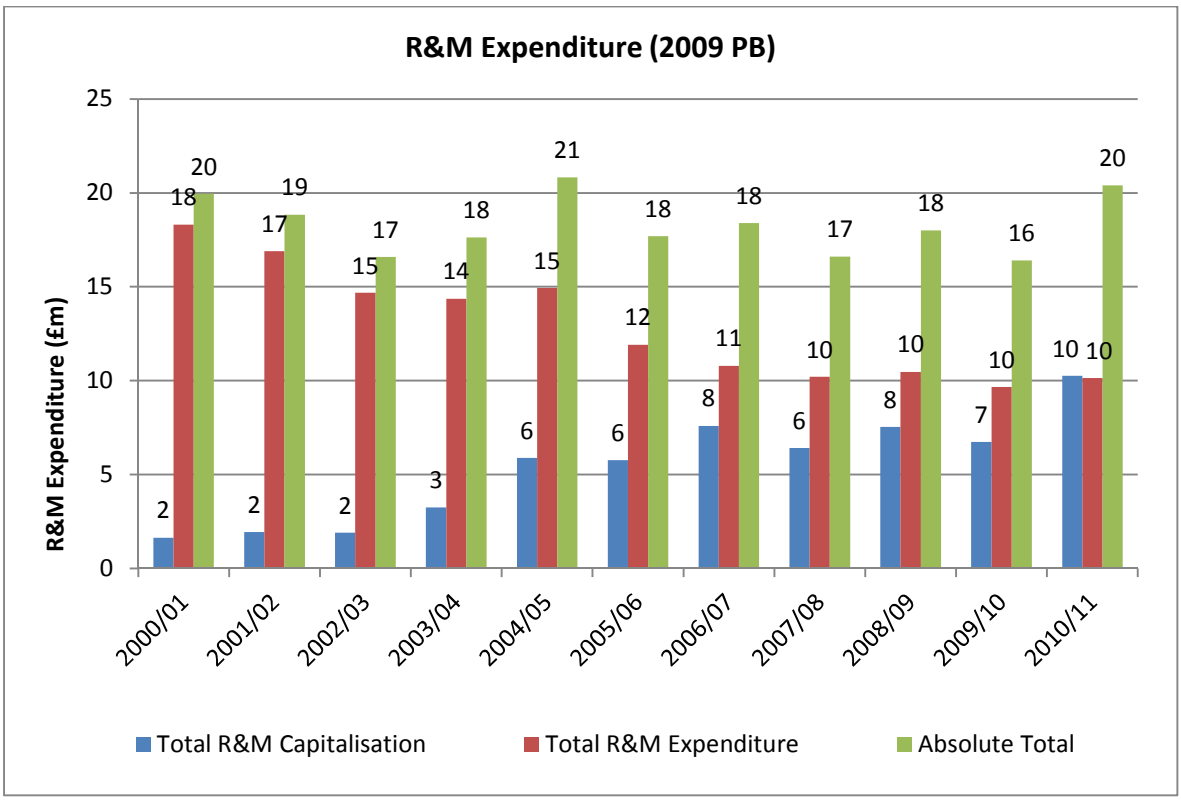
- The findings from the three analysis spreadsheets are summarised in the linked spreadsheet "Summary table V9-2.xlsx". The summary table extracts data from the analysis spreadsheets using the following methodology:
    - Base, expenditure, difference, R&M capitalisation and increased expenditure for processing groups are linked to "RM by PG AMI IO_AH_v2-2.xlsx", where R&M capitalisation is limited to the total reduction for the processing group.
    - Base, expenditure, difference, R&M capitalisation and increased expenditure for categories are linked to "RM by PG AMI IO_AH_Category analysis_v0-2.xlsx", where R&M capitalisation is limited to the total reduction for the parent processing group.
    - CAPEX substitution is linked to "CAPEX substitution_AH.XLSX", where any R&M capitalisation is removed from that total Capex for comparison as it is assumed to be already incorporated into the Capex figure.
- The "PG summaries_v1-2.xlsx" spreadsheet is linked to the summary table spreadsheet and extracts the information into a format for presentation into this report.

The bullet points above describe the general methodology followed in the analysis. However, in specific cases the method may vary and in these instances the reasoning is explained in the report.

In their comments on factual accuracy, NIE questioned whether the R&M analysis was asymmetric in that we have not applied credits where capitalisation has decreased relative to the base year. In our methodology we have assessed the individual R&M task groups in each year and where there has been no out performance, we have not identified capex changes for that task in that year. Clearly when tasks are aggregated in each year or price control this can give the impression of overspend in an area where reductions due to capitalisation have been made. We have reviewed the items where there have been capex reductions. These are infrequent and the areas of significant reduction appear to be due to those tasks stopping or moving to a capex programme and our analysis determined that there should be no correction for these. There are de minimis amounts that have been included in the probable reductions categories due to the fact that capitalisation amounts vary year on year for certain tasks.

Figure 6.9 shows the totals for R&M expenditure from 2000-01 to 2010-11 and illustrates both the R&M Expenditure (Opex) and R&M capitalisation (Capex).

Figure 6.9 R&M expenditure from 2000-01 to 2010-11 - Capex and Opex in 2009-10 prices over RP3/4 (£m)



Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

The total R&M expenditure attributed to Opex is shown in red and can be seen diminishing year-on-year from approx £18m in 2000-01 to approx £10m in 2010-11. The blue series shows the R&M capitalisation increasing proportionately year-on-year, from £2m in 2000-01 to £10m in 2010-11. This proportional reducing/increasing relationship between Opex/Capex suggests that the difference in Opex each year is being predominantly capitalised rather than arising through improved operating efficiencies.

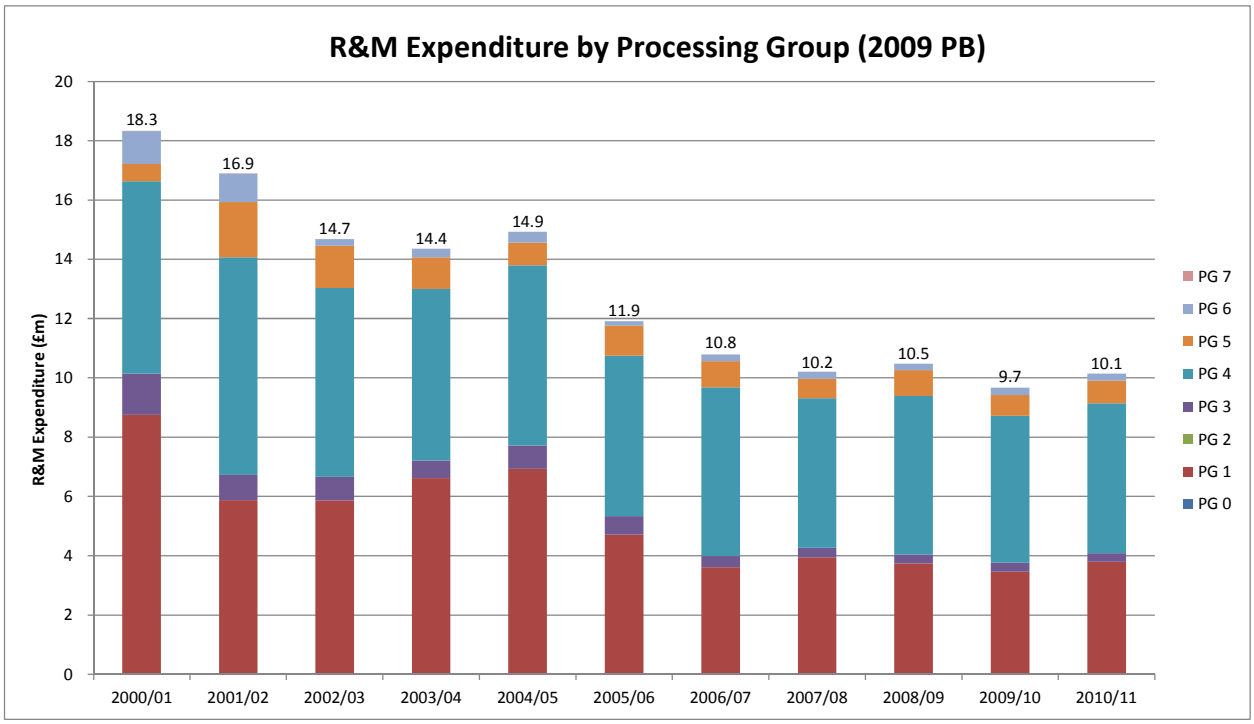
6.5.1. R&M by Processing Group (PG)

The analysis of total R&M expenditure from 2000-2011 as presented above indicates that there have been significant changes in R&M expenditure over the period. However to fully understand the causes for the reductions we have considered the expenditure broken down by *Processing Group* (PG).

Processing Groups are NIE's method for categorising R&M costs, and analysis using the coded PG categories has allowed a comprehensive and definitive assessment to be reached. The analysis by category is then used to expand on the findings of the analysis by PG.

The breakdown of R&M expenditure by PG is shown in Figure 6.10. It shows that the R&M costs are predominantly comprised of Routine Maintenance (PG0 & PG1) and Fault & Emergency (PG4).

Figure 6.10 R&M by Processing Group from 2000-01 to 2010-11 in 2009-10 prices over RP3/4 (£m)



Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

The descriptions for each PG are given by NIE as shown below in Table 6.8:

Table 6.8 Processing Groups

Processing Group 0	Not Applicable. Now Routine Maintenance
Processing Group 1	Routine Maintenance
Processing Group 3	Non-recoverable alterations
Processing Group 4	Fault & Emergency
Processing Group 5	Customer Driven (ToDo)
Processing Group 6	Metering
Processing Group 7	Ex-CSC. Now Customer Driven

Source: RM by PG AMI IO.xlsx supplied by NIE

Below we present our findings by processing group showing the reduction that we consider being due to R&M capitalisation (direct capitalisation), those that are in capital programmes (capital substitution) and the remainder that is due to volume and unit cost reductions or removed need.

6.5.2. Routine maintenance (PG0 & PG1)

On review of the Routine Maintenance (PG0 & PG1) as a whole it is not clear as to the reasons behind the reduction in routine maintenance expenditure over the RP3&4 periods. To draw conclusions the processing group was broken down into the various categories of expenditure as defined by NIE.

Routine Maintenance (PG0 & PG1) showed a total reduction in expenditure of £12.2m across the period of consideration through RP3 and RP4. The analysis by category showed that:

- £6.1m of this reduction was a result of increased capitalisation, including £1.6m resulting from direct R&M capitalisation and a further £4.5m transferred into capital programmes.
- £2.5m resulted from large one-off expenditures in RP3 that were no longer required in RP4.
- NIE also demonstrated reductions due to reduced volumes and unit cost following the implementation of new maintenance policies from 2004-05; these changes account for the remaining £3.6m output reduction.

The expenditure reductions for Routine Maintenance (PG0 & PG1) are summarised in Table 6.9 below.

Table 6.10: Routine maintenance (PG0 & PG1) summary table – values comprise identified and probable capitalisation and are shown in 2009 PB.

	RP3			RP4					Total
	2005-06	2006-07	RP3 Total	2007-08	2008-09	2009-10	2010-11	RP4 Total	
Total R&M expenditure reduction	£954 k	£2,124 k	**£3,077 k**	£1,919 k	£2,885 k	£3,475 k	£915 k	**£9,195 k**	**£12,272 k**
Output reduction	£210 k	£1,221 k	**£1,431 k**	£657 k	£892 k	£750 k	-£121 k[2]	**£2,177 k**	**£3,607 k**
Need reduction	£0	£0	**£0**	£0	£531 k	£1,803 k	£187 k	**£2,521 k**	**£2,521 k**
Total non-capitalised reduction	£210 k	£1,221 k	**£1,431 k**	£657 k	£1,423 k	£2,553 k	£65 k	**£4,698 k**	**£6,128 k**
Direct Capitalisation	£248 k	£320 k	**£568 k**	£308 k	£477 k	£169 k	£77 k	**£1,030 k**	**£1,599 k**
Capital substitution	£496 k	£583 k	**£1,079 k**	£955 k	£985 k	£754 k	£774 k	**£3,467 k**	**£4,546 k**
Total reduction due to capitalisation	£744 k	£902 k	**£1,647 k**	£1,263 k	£1,462 k	£922 k	£850 k	**£4,497 k**	**£6,144 k**

Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

[2] Negative output reduction indicates an increase in expenditure. Output reduction is calculated as the difference between the sum of remaining reductions (after capitalisation and one-off reductions) for all categories and the sum of individual increased expenditures for all categories.

The findings given in Table 6.10 are broken down into the identified and probable capitalisation portions in Table 6.11 below.

Table 6.11: Routine maintenance (PG0 & PG1) probability of capitalisation – values shown in 2009 PB.

	Description	Base	Expenditure	Difference	(A) Reduction due to direct R&M capitalisation (identified)	(B) Reduction due to direct R&M capitalisation (probable)	(C) Reduction due to capital programme substitution (identified)	(D) Reduction due to capital programme substitution (probable)	(E) Reduction due to one-off expenditure in RP3	(F) Remaining reductions	(G) Increased expenditure
Total	Routine Maintenance (PG0 & PG1)	£35,532 k	£23,259 k	-£12,272 k	£1,404 k	£194 k	£3,506 k	£1,040 k	£2,521 k	£6,959 k	£3,351 k
RP3 total	Routine Maintenance (PG0 & PG1)	£11,395 k	£8,317 k	-£3,077 k	£447 k	£121 k	£678 k	£401 k	£0	£2,638 k	£1,207 k
RP4 total	Routine Maintenance (PG0 & PG1)	£24,137 k	£14,942 k	-£9,195 k	£957 k	£73 k	£2,828 k	£639 k	£2,521 k	£4,320 k	£2,144 k

Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

Table 6.11 above can be interpreted as follows:

- Columns (A)-(D) show capitalised reductions where:
  - (A) + (B) gives the total direct capitalisation
  - (C) + (D) gives the total capital substitution
  - A & C are identified capitalisation
  - B & D are "probable" capitalisation.
- Column E shows large one-off expenditures in RP3 that were not required in RP4.
- Column F shows the remaining reductions after capitalisation and one-off reductions.
- Column G shows the sum of yearly expenditure increases.
- Columns (F) minus (G) give the output reduction.

6.5.3. Non-recoverable alterations (PG3)

The analysis found that the £2m reduction in non-recoverable alterations is entirely attributable to R&M capitalisation. The expenditure reductions for Non-Recoverable Alterations (PG3) are summarised in Table 6.12 below.

Table 6.12: Non-recoverable alterations (PG3) summary table – values shown in 2009 PB.

	RP3			RP4					Total
	2005-06	2006-07	RP3 Total	2007-08	2008-09	2009-10	2010-11	RP4 Total	
Total R&M expenditure reduction	£96 k	£338 k	**£434 k**	£474 k	£277 k	£478 k	£332 k	**£1,561 k**	**£1,995 k**
Output reduction	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Need reduction	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Total non-capitalised reduction	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Direct Capitalisation	£96 k	£338 k	**£434 k**	£474 k	£277 k	£478 k	£332 k	**£1,561 k**	**£1,995 k**
Capital substitution	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Total reduction due to capitalisation	£96 k	£338 k	**£434 k**	£474 k	£277 k	£478 k	£332 k	**£1,561 k**	**£1,995 k**

Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

All capitalisation values given in 6.12 have been identified and accounted for with no expenditure grouped as "probable".

6.5.4. Fault & Emergency (PG4)

The analysis found that the £4.3m reduction in Fault & Emergency expenditure is entirely capitalised, with £3.2m attributed to direct capitalisation and a further £1.3m substituted into capital programmes. The expenditure reductions for F&E (PG4) are summarised in Table 6.13 below.

Table 6.13: Fault & emergency (PG4) summary table – values comprise identified and probable capitalisation and are shown in 2009 PB

	RP3			RP4					Total
	2005-06	2006-07	RP3 Total	2007-08	2008-09	2009-10	2010-11	RP4 Total	
Total R&M expenditure reduction	£671 k	£389 k	**£1,061 k**	£1,331 k	£450 k	£1,112 k	£357 k	**£3,249 k**	**£4,310 k**
Output reduction	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Need reduction	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Total non-capitalised reduction	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Direct Capitalisation	£649 k	£389 k	**£1,038 k**	£1,331 k	£450 k	£1 k	£357 k	**£2,138 k**	**£3,176 k**
Capital substitution	£22 k	£0	**£22 k**	£0	£0	£1,111 k	£0	**£1,111 k**	**£1,133 k**
Total reduction due to capitalisation	£671 k	£389 k	**£1,061 k**	£1,331 k	£450 k	£1,112 k	£357 k	**£3,249 k**	**£4,310 k**

Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

.

The findings given in Table 6.13 are broken down into the identified and probable capitalisation portions in Table 6.14 below.

Table 6.14: Fault & emergency (PG4) probability of capitalisation – values shown in 2009 PB.

	Description	Base	Expenditure	Difference	(A) Reduction due to direct R&M capitalisation (identified)	(B) Reduction due to direct R&M capitalisation (probable)	(C) Reduction due to capital programme substitution (identified)	(D) Reduction due to capital programme substitution (probable)	(E) Reduction due to one-off expenditure in RP3	(F) Remaining reductions	(G) Increased expenditure
Total	Faults & Emergency (PG4)	£35,812 k	£31,502 k	-£4,310 k	£3,176 k	£0	£151 k	£982 k	£0	£0	£0
RP3 total	Faults & Emergency (PG4)	£12,161 k	£11,100 k	-£1,061 k	£1,038 k	£0	£22 k	£0	£0	£0	£0
RP4 total	Faults & Emergency (PG4)	£23,651 k	£20,401 k	-£3,249 k	£2,138 k	£0	£129 k	£982 k	£0	£0	£0

Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

Table 6.14 above can be interpreted as follows:

- Columns (A)-(D) show capitalised reductions where:
  - (A) + (B) gives the total direct capitalisation
  - (C) + (D) gives the total capital substitution
  - A & C are identified capitalisation
  - B & D are "probable" capitalisation.
- Column E shows large one-off expenditures in RP3 that were not required in RP4.
- Column F shows the remaining reductions after capitalisation and one-off reductions.
- Column G shows the sum of yearly expenditure increases.
- Columns (F) minus (G) give the output reduction.

6.5.5. Customer Driven (PG5 & PG7)

On review of the Customer Driven (PG5 & PG7) expenditure as a whole it is not clear as to the reasons behind the reduction in routine maintenance expenditure over the RP3&4 periods. To draw conclusions the processing group was broken down into the various categories of expenditure. The processing group showed a total reduction in expenditure of £1.5m across the period of consideration through RP3 and RP4. The analysis by category showed that:

- £730k of this reduction was a result of increased capitalisation, including £272k resulting from direct R&M capitalisation and a further £459k transferred into capital programmes identified by NIE.
- A further £814k in reductions showed no evidence of arising through increased capitalisation based upon the corresponding growth in the capital programmes identified by NIE.

The reductions for Customer Driven (PG5 & PG7) expenditure is summarised in the table below.

Table 6.15: Customer driven (PG5 & PG7) summary table – values comprise identified and probable capitalisation and are shown in 2009 PB.

	RP3			RP4					Total
	2005-06	2006-07	RP3 Total	2007-08	2008-09	2009-10	2010-11	RP4 Total	
Total R&M expenditure reduction	£70 k	£210 k	**£280 k**	£758 k	£192 k	£66 k	£249 k	**£1,264 k**	**£1,544 k**
Output reduction	£0	£210 k	**£210 k**	£587 k	£0	£0	£17 k	**£604 k**	**£814 k**
Need reduction	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Total non-capitalised reduction	£0	£210 k	**£210 k**	£587 k	£0	£0	£17 k	**£604 k**	**£814 k**
Direct Capitalisation	£70 k	£0	**£70 k**	£84 k	£114 k	£2 k	£2 k	**£201 k**	**£272 k**
Capital substitution	£0	£0	**£0**	£86 k	£77 k	£65 k	£230 k	**£459 k**	**£459 k**
Total reduction due to capitalisation	£70 k	£0	**£70 k**	£170 k	£192 k	£66 k	£232 k	**£660 k**	**£730 k**

Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

All capitalisation values given in Table 6.15 have been identified and accounted for with no expenditure grouped as "probable".

6.5.6. Metering (PG6)

The analysis finds that the £358k reduction in metering expenditure showed no evidence of arising through increased capitalisation based upon the corresponding growth in the capital programmes identified by NIE. The expenditure reduction for Metering (PG6) expenditure is summarised in the table below.

Table 6.16: Metering (PG6) summary table – values shown in 2009 PB.

	RP3			RP4					Total
	2005-06	2006-07	RP3 Total	2007-08	2008-09	2009-10	2010-11	RP4 Total	
Total R&M expenditure reduction	£144 k	£68 k	**£211 k**	£1 k	£88 k	£133 k	-£76 k	**£146 k**	**£358 k**
Output reduction	£144 k	£68 k	**£211 k**	£1 k	£88 k	£133 k	-£76 k[3]	**£146 k**	**£358 k**
Need reduction	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Total non-capitalised reduction	£144 k	£68 k	**£211 k**	£1 k	£88 k	£133 k	-£76 k	**£146 k**	**£358 k**
Direct Capitalisation	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Capital substitution	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**
Total reduction due to capitalisation	£0	£0	**£0**	£0	£0	£0	£0	**£0**	**£0**

Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

All capitalisation values given in 6.16 have been identified and accounted for with no expenditure grouped as "probable".

[3] Negative output reduction indicates an increase in expenditure. Output reduction is calculated as the difference between the sum of remaining reductions (after capitalisation and one-off reductions) for all categories and the sum of individual increased expenditures for all categories.

6.5.7. Conclusion

In summary we have identified £13.18m of costs charged to Capex that arise from changes in the application of capitalisation practices and are not the result of efficiency gains. The costs include £7.04m attributed to direct R&M capitalisation and £6.14m attributed to capital substitution. The amount combines the total identified and probable capitalisation. The adjustment comprises the following annual adjustments given in Table 6.17.

Table 6.18, overleaf, shows that £10.96m (A+C) of the total has been identified and accounted for whilst £2.22m (B+D) is considered as "probable" capitalisation.

Table 6.17 summary of capitalisation practices adjustment – values comprise identified and probable capitalisation and are shown in 2009 PB.

	RP3			RP4					Total
	2005-06	2006-07	RP3 Total	2007-08	2008-09	2009-10	2010-11	RP4 Total	
Direct Capitalisation	£1,063 k	£1,047 k	**£2,110 k**	£2,196 k	£1,319 k	£649 k	£767 k	**£4,931 k**	**£7,041 k (A)+(B)**
Capital substitution	£518 k	£583 k	**£1,101 k**	£1,041 k	£1,063 k	£1,930 k	£1,004 k	**£5,037 k**	**£6,137 k (C)+(D)**
Total reduction due to capitalisation	£1,581 k	£1,630 k	**£3,211 k**	£3,237 k	£2,381 k	£2,579 k	£1,770 k	**£9,968 k**	**£13,179 k**

Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

Table 6.18, overleaf, can be interpreted as follows:

- Columns (A)-(D) show capitalised reductions where:
  - (A) + (B) gives the total direct capitalisation
  - (C) + (D) gives the total capital substitution
  - A & C are identified capitalisation
  - B & D are "probable" capitalisation.
- Column E shows large one-off expenditures in RP3 that were not required in RP4.
- Column F shows the remaining reductions after capitalisation and one-off reductions.
- Column G shows the sum of yearly expenditure increases.
- Columns (F) minus (G) give the output reduction.

6.5.8. Findings summary table

Table 6.18: findings summary table – values shown in 2009 PB.

	Description	Base	Expenditure	Difference	(A) Reduction due to direct R&M capitalisation (identified)	(B) Reduction due to direct R&M capitalisation (probable)	(C) Reduction due to capital programme substitution (identified)	(D) Reduction due to capital programme substitution (probable)	(E) Reduction due to one-off expenditure in RP3	(F) Remaining reductions	(G) Increased expenditure
R&M total		**£83,661 k**	**£63,182k**	**-£20,478 k**	**£6,847 k**	**£194 k**	**£4,116 k**	**£2,022 k**	**£2,521 k**	**£8,332 k**	£3,553 k
Total	Routine Maintenance (PG0 & PG1)	£35,532 k	£23,259 k	-£12,272 k	£1,404 k	£194 k	£3,506 k	£1,040 k	£2,521 k	£6,959 k	£3,351 k
	Non Recoverable Alterations (PG3)	£4,221 k	£2,226 k	-£1,995 k	£1,995 k	£0	£0	£0	£0	£0	£0
	Faults & Emergency (PG4)	£35,812 k	£31,502 k	-£4,310 k	£3,176 k	£0	£151 k	£982 k	£0	£0	£0
	Customer Driven (PG5 & PG7)	£6,434 k	£4,891 k	-£1,544 k	£272 k	£0	£459 k	£0	£0	£939 k	£126 k
	Metering (PG6)	£1,662 k	£1,304 k	-£358 k	£0	£0	£0	£0	£0	£434 k	£76 k
RP3 total		**£27,764 k**	**£22,702 k**	**-£5,063 k**	**£1,990 k**	**£121 k**	**£700 k**	**£401 k**	**£0**	**£3,185 k**	£1,333 k
RP3 total	Routine Maintenance (PG0 & PG1)	£11,395 k	£8,317 k	-£3,077 k	£447 k	£121 k	£678 k	£401 k	£0	£2,638 k	£1,207 k
	Non Recoverable Alterations (PG3)	£1,439 k	£1,005 k	-£434 k	£434 k	£0	£0	£0	£0	£0	£0
	Faults & Emergency (PG4)	£12,161 k	£11,100 k	-£1,061 k	£1,038 k	£0	£22 k	£0	£0	£0	£0
	Customer Driven (PG5 & PG7)	£2,168 k	£1,889 k	-£280 k	£70 k	£0	£0	£0	£0	£335 k	£126 k
	Metering (PG6)	£602 k	£391 k	-£211 k	£0	£0	£0	£0	£0	£211 k	£0
RP4 total		**£55,896 k**	**£40,481 k**	**-£15,416 k**	**£4,857 k**	**£73 k**	**£3,416 k**	**£1,621 k**	**£2,521 k**	**£5,147 k**	£2,220 k
RP4 total	Routine Maintenance (PG0 & PG1)	£24,137 k	£14,942 k	-£9,195 k	£957 k	£73 k	£2,828 k	£639 k	£2,521 k	£4,320 k	£2,144 k
	Non Recoverable Alterations (PG3)	£2,782 k	£1,221 k	-£1,561 k	£1,561 k	£0	£0	£0	£0	£0	£0
	Faults & Emergency (PG4)	£23,651 k	£20,401 k	-£3,249 k	£2,138 k	£0	£129 k	£982 k	£0	£0	£0
	Customer Driven (PG5 & PG7)	£4,266 k	£3,002 k	-£1,264 k	£201 k	£0	£459 k	£0	£0	£604 k	£0
	Metering (PG6)	£1,060 k	£914 k	-£146 k	£0	£0	£0	£0	£0	£223 k	£76 k

Source: Derived from RM by PG AMI IO.xlsx supplied by NIE

6.6. Overheads capitalisation

NIE has explained that indirect costs associated with the network are charged to Opex and then an adjustment is made on a monthly basis to transfer a proportion of those costs to Capex. As part of this review we requested further details of Capitalised Overheads and this was provided in the form of spreadsheets representing SAP Report 50 for each year from 2002-03 to 2010-11.

NIE has confirmed that over RP3 and RP4 it has increased the percentage that it has applied to derive the Capitalised Overhead adjustment and has justified this on the basis that an increasing proportion of its costs are capitalised. Regardless of whether the increased level of capitalisation has been influenced by a change in capitalisation practices, the effect of this increase at a time when the Rolling Opex mechanism is in operation is to reduce Opex and increase Capex without an associated efficiency gain. We understand that the increases in percentages applied to the capitalisation of overheads were not discussed with the Utility Regulator and based on our findings have resulted in a windfall gain for NIE.

The following illustrates the overhead capitalisation percentages applied to different categories of cost in RP4 compared with the corresponding period in RP3.

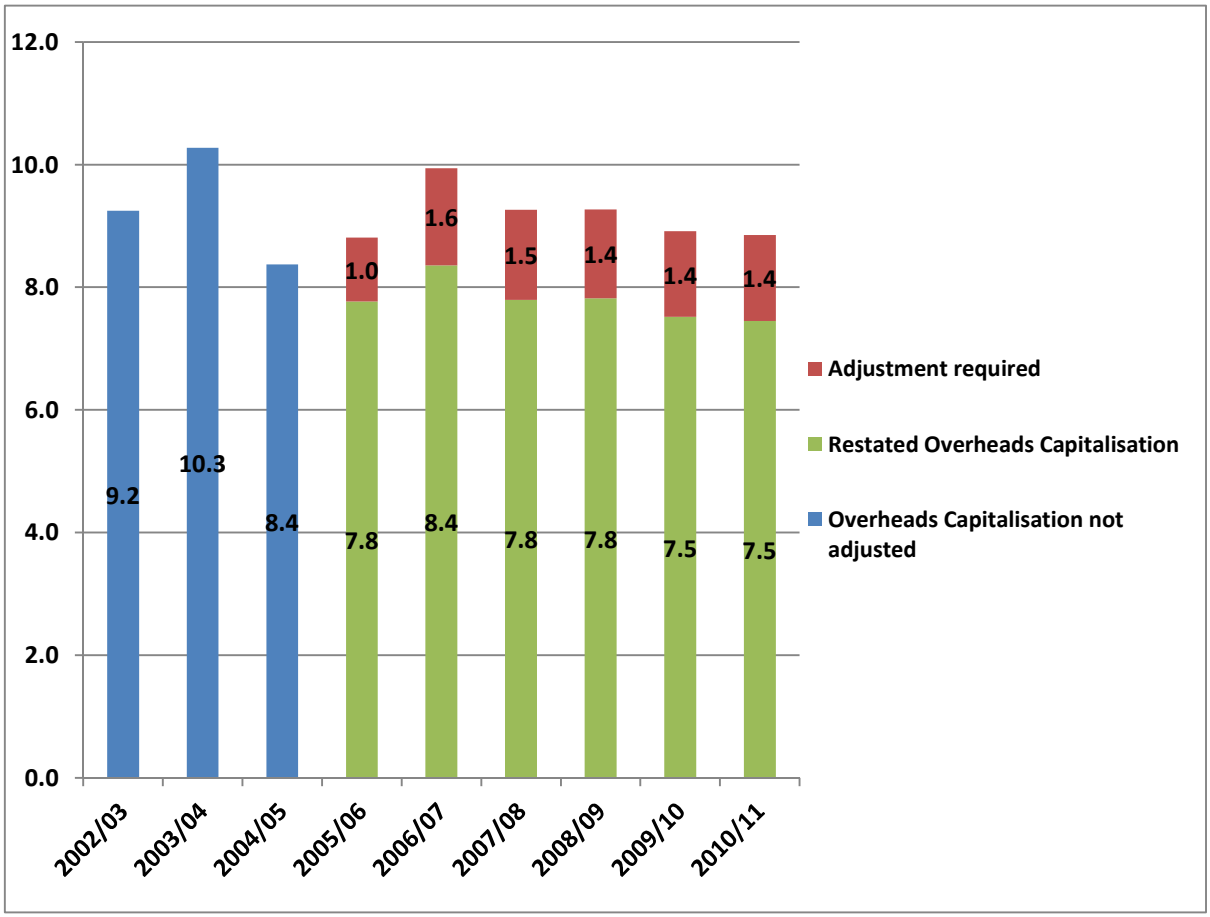
Table 6.19 Overhead capitalisation percentages RP3 and RP4

Percentage of Opex indirect costs that has been capitalised	**Price control period**	Year 1 **RP3** RP4	Year 2 **RP3** RP4	Year 3 **RP3** RP4	Year 4 **RP3** RP4	Year 5 **RP3** RP4
Powerteam Managed Service / Supply Chain						
Actual Capitalisation Rate Applied	**RP3**	**65.0%**	**65.0%**	**65.0%**	***72.5%***	***80.0%***
Actual Capitalisation Rate Applied	RP4	*80.0%*	*80.0%*	*80.0%*	*80.0%*	*80.0%*
Connections Department						
Actual Capitalisation Rate Applied	**RP3**	**65.0%**	**65.0%**	**65.0%**	***77.5%***	***77.5%***
Actual Capitalisation Rate Applied	RP4	*77.5%*	*77.5%*	*77.5%*	*77.5%*	*77.5%*
Networks Department						
Actual Capitalisation Rate Applied	**RP3**	**65.0%**	**65.0%**	**65.0%**	***72.5%***	***72.5%***
Actual Capitalisation Rate Applied	RP4	*72.5%*	*72.5%*	*72.5%*	*72.5%*	*72.5%*
Technology Department						
Actual Capitalisation Rate Applied	**RP3**	**40.0%**	**40.0%**	**40.0%**	***45.0%***	***45.0%***
Actual Capitalisation Rate Applied	RP4	*45.0%*	*45.0%*	*45.0%*	*45.0%*	*45.0%*

Source: Summarised from overheads capitalisation supplied by NIE

The basis of the adjustment which is detailed in Annex A is that the percentages applied during the first three years of RP3 (shown in red bold text) should be applied to all subsequent years (actual capitalised overhead percentages applied by NIE are shown italicised). Our conclusion is that a capitalisation adjustment of £8.3m over the six years to 2010-11 is required. The following figure shows the adjustment required which in 2009-10 prices totals £8.3m.

Figure 6.4 Adjustment required to Capitalised Overheads in 2009-10 prices £m



Source Derived from information provided by NIE

7. ROLLING PROGRAMMES CHANGES

The main focus of our analysis has been change in the scale and nature of operating expenditure with a view to basing potential adjustments on areas where there is a lack of consistency in capitalisation practices between RP3 and RP4. One area of inconsistency has been the overhead lines rolling programmes. The RP4 Capex submission confirmed that these programmes were expanded in scope towards the end of RP3. NIE claims that they have operated throughout the period under review and has provided supporting information to indicate the scale of activity each year under these programmes. The three programmes under which all expenditure is capitalised are as follows:

- 5 year Targeted Asset Replacement;
- 15 year Refurbishment;
- 45 year Re-engineering.

In its information provided for the RP5 price control and updated for the capitalisation review NIE stated "*The specification for TAR is primarily tree cutting with some defect rectification (decayed poles). It is not possible to separate defect and tree cutting costs - the assumption is that the costs are all attributable to tree cutting*". This compares with the description of the TAR programme included in the RP4 Capex submission which had a broader focus including:

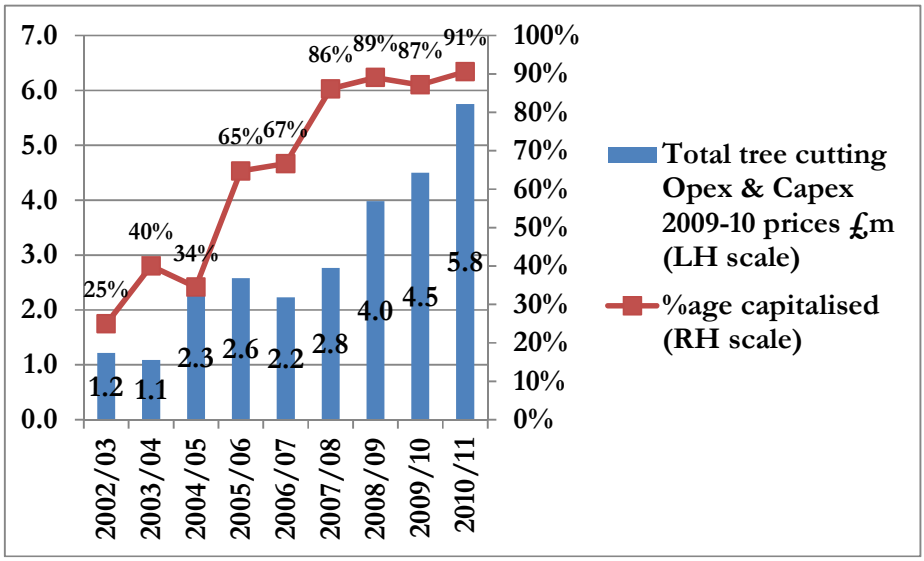
- The condition of poles;
- The condition of insulators and fittings;
- The condition of conductors and connectors; and
- The intrusion of trees and other vegetation.

At the time of the RP4 price control, the consultants that reviewed NIE's RP4 Capex submission described the TAR in the following terms:

"Targeted Asset Replacement (TAR): *This category focuses on storm resilience and shortterm performance improvement. TAR focuses on decayed poles and all defects. In addition, TAR includes tree cutting on circuits that have not been prioritised for refurbishment. NIE notes that the key difference between TAR and refurbishment is that refurbishment replaces all assets worn to the extent that failure may occur before the next refurbishment, whereas TAR only replaces assets that are worn and in need of replacement now."*

The following illustrates (a) the increasing scale of tree cutting over RP3 and RP4 and the increasing proportion that has been capitalised.

Figure 7.1 Total tree-cutting (Opex and Capex) and percentage capitalised RP3 and RP4



Source: Derived from NIE Rolling Programmes submitted with RP5 BPQ and updated for this review

The following table summarises the capitalised tree cutting element across all programmes in RP4 as provided for the RP5 price control (this includes a further column for capitalised tree-cutting for the low voltage LV network) and (shaded yellow) the information for earlier years.

Table 7.1 Overhead lines Rolling Programmes – summary of tree-cutting costs

	Summary 09-10 prices £m based on above NIE information	5 yr TAR	15 yr Refurb	45 yr re-eng	Total	LV	Total incl LV	TAR incl LV
RP2	2000-01		1.3		1.3		1.3	0.0
	2001-02		0.4		0.4		0.4	0.0
RP3	2002-03		0.3	0.0	0.3		0.3	0.0
	2003-04		0.4	0.1	0.4		0.4	0.0
	2004-05		0.7		0.7		0.7	0.0
	2005-06	1.2	0.4	0.0	1.7		1.7	1.2
	2006-07	1.0	0.5	0.0	1.5	0.0	1.5	1.0
RP4	2007-08	1.2	0.9	0.1	2.3	0.1	2.4	1.3
	2008-09	2.0	0.8	0.2	3.1	0.4	3.5	2.5
	2009-10	2.3	1.0	0.1	3.4	0.5	3.9	2.8
	2010-11	3.2	1.1	0.2	4.6	0.7	5.2	3.9
	2011-12	4.3	1.2	0.2	5.7			
	Total	**13.2**	**5.1**	**0.9**	**19.1**	**1.7**		

Source: Derived from rolling programme information provided by NIE

In its RP4 submission showing historic costs in RP3 and earlier years, NIE had typically capitalised one third of tree-cutting. NIE has provided information on the Rolling Programmes that confirms a material increase in the combined Opex/Capex tree-cutting and has also confirmed the increasing proportion that is capitalised, justifying the increased expenditure on the basis that it has reduced the risk of storm damage and therefore enhanced the value of the Overhead-lines Network.

In its response to issues raised by the Regulator in relation to the nature of capitalisation policies and practices, NIE responded on 30 September 2011 as follows:

"During 2000/01 and 2001/02 (RP2), tree cutting which was carried out alongside the 33kV and 11kV overhead line refurbishment programmes was capitalised. Other tree cutting carried out on the 33kV and 11kV

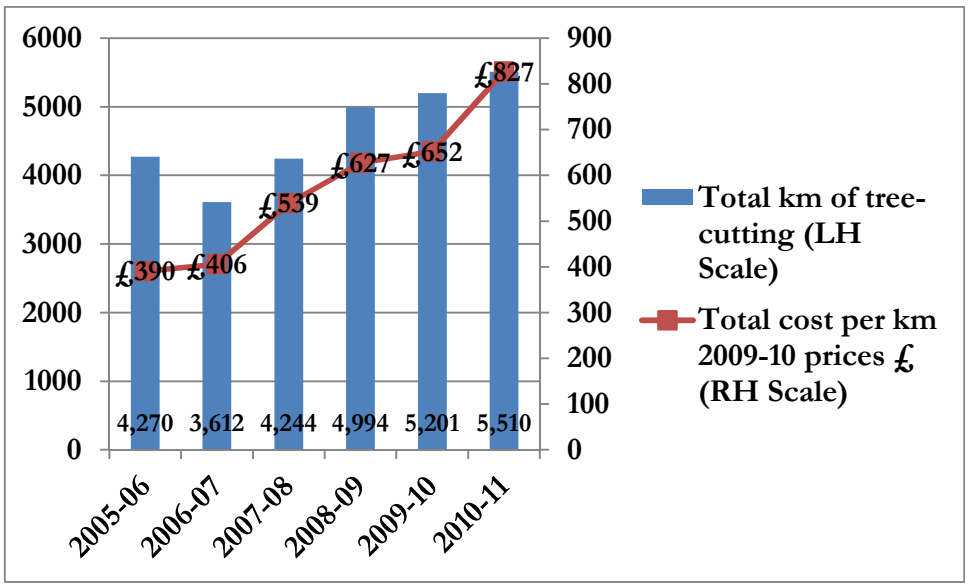
lines was assigned to R&M. There was additional hotspot tree cutting carried out under R&M as per current practice.

During RP3 and RP4, tree cutting continued to be carried out alongside our overhead line capital programmes. As such the treatment of tree cutting has not altered from RP3 to RP4. In the first 2 years of RP3, there was a higher element of R&M tree cutting than during the later half of the period which reflects a revised overhead line strategy. From 2004 onwards the capital work specifications changed to those of reengineering, refurbishment and targeted asset replacement (TAR). In order to address the quantity of tree cutting required on the network, tree cutting became fully aligned with these three strategies of targeted asset replacement (5 yr), refurbishment (15 yr) and reengineering (45 yr). Throughout the period, R&M tree cutting associated with 'hotspot' or 'customer reactive' progressed alongside the capital programme. This strategy continued for the remainder of RP3 and remained unchanged throughout RP4 and forms the basis of the RP5 submission."

This acknowledges that the capitalisation practices changed in mid RP3 but this description in September 2011 differs from how the programmes were described in the RP4 Capex submission. For example, NIE emphasised the cost of pole replacement and pole pinning under its LV TAR programme and across the three Rolling Programmes, tree cutting was referred to as secondary to asset replacement, refurbishment and re-engineering. The Overhead Lines Capital Programmes reviewed by the engineering consultants give no indication that capitalised tree cutting would increase from £4.5m in RP3 (after a steep increase in the final two years of RP3) to over £20m in RP4.

Over the period 2005-06 to 2010-11 there has also been a significant increase in the cost per kilometre of tree-cutting. Both the increase in the amount and the cost per kilometre of tree cutting is shown in the graph below.

Figure 7.2 Total tree-cutting in kms and cost per km in 2009-10 prices £,



Source: Derived from NIE Rolling Programmes submitted with RP5 BPQ and updated for this review

In the table below one third of total tree-cutting (Capex and Opex) is assumed to be Capex and the additional amount of Capex is derived as Excess Capex below and then reduced by the tree-cutting included within the capitalisation practices adjustment R&M above to derive the further capitalisation adjustment required.

Table 7.2 Summary of total Capex and Opex tree cutting and the calculation showing the excess Capex requiring adjustment (2009-10 prices £m)

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	
Opex	0.9	0.7	1.5	0.9	0.7	0.4	0.4	0.6	0.5	
Capex	0.3	0.4	0.8	1.7	1.5	2.4	3.5	3.9	5.2	
Total	1.2	1.1	2.3	2.6	2.2	2.8	4.0	4.5	5.8	
Applying NIE's historic ratio of 1/3rd Capex 2/3rd Opex	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Total
Applying NIE's historic ratio of 1/3rd Capex 2/3rd Opex - Opex	0.8	0.7	1.5	1.7	1.5	1.8	2.7	3.0	3.8	14.5
Applying NIE's historic ratio of 1/3rd Capex 2/3rd Opex - Capex	**0.4**	**0.4**	**0.8**	**0.9**	**0.7**	**0.9**	**1.3**	**1.5**	**1.9**	**7.3**
Actual Capex	**0.3**	**0.4**	**0.8**	**1.7**	**1.5**	**2.4**	**3.5**	**3.9**	**5.2**	**18.2**
Excess Capex	-0.1	0.1	0.0	0.8	0.7	1.5	2.2	2.4	3.3	10.9
Less tree cutting element induded in R&M capex adjustment				0.2	0.3	0.7	0.7	0.1	0.3	2.3
Tree cutting Capex adjustment				0.6	0.4	0.8	1.5	2.3	3.0	8.6

Source: Derived from rolling programme information provided by NIE

Our conclusion is that there has been an excessive level of capitalised tree-cutting and that an adjustment is required covering 2005-06 to 2010-11 and a further adjustment will be required when the 2011-12 information is available. Part of the required adjustment (totalling £2.3m) is included within the Repairs and Maintenance adjustment above. This represents the Capex that we believe should be transferred back to Opex based on applying consistent historic levels of operational tree-cutting over the review period.

A further adjustment of £8.6m is required for the increased level of tree-cutting over the period 2005-06 to 2010-11 and assumes that one third of tree-cutting should be capitalised in line with historic trends. We have not considered whether the historic trend is reasonable based on the work undertaken but have focused on ensuring consistency through the Rolling Opex period. We believe that this cost should be transferred out of Capex and treated as Opex. We understand that the nature of the Opex adjustment is to be considered further by the Utility Regulator and will include a similar adjustment for 2011-12 when the actual level of capitalised tree-cutting is known, and the treatment of tree-cutting within Rolling Programmes in RP5 and beyond.

8. NEGATIVE DT COUNTER-CLAIMS

NIE has made operational changes that involve reducing or eliminating operational activities and therefore operational costs. These could represent a simple deferment of expenditure to a later price control period or a risk-based rescheduling of maintenance plans. A mechanism that operated throughout RP4 was Dt claims where NIE was entitled to claim additional allowances for any costs incurred in relation to activities that did not apply during RP3 (see Annex D for the explanation of Dt costs contained within the NIE licence). NIE has made a number of claims for Dt costs throughout RP4 totalling over £35m which has included the cost of existing staff being utilised on these additional activities. We have drawn the Utility Regulator's attention to whether there is a case for counter-claim or negative Dt claim where reductions in Opex are not the result of efficiency gains. This is for the Utility Regulator to decide in the light of the licence conditions that operated in RP4.

Also under this heading are exceptional non-recurring items of expenditure which were not excluded from the RP3 controllable Opex annual outturns that were used as the basis for the controllable Opex allowance in the corresponding year in RP4. When these costs did not recur in RP4, NIE experienced a windfall and we believe an adjustment to the Rolling Opex allowance is appropriate.

We have identified a one-off cost in 2004-05 relating to a project to install earthing mats following a fatality in GB. The cost of the project was £633k and was included in the Rolling Opex allowance given to NIE for 2009-10. As this cost was not incurred in any of the RP4 years this represents a profit (out-performance) for NIE that is not associated with an efficiency gain and this needs to be adjusted by reducing the Rolling Opex allowance for that year. Other less significant one-off costs may have been incurred in RP3 and resulted in similar windfalls that are not associated with efficiency gains. The scope of our work has not identified less significant one-off costs and we have not proposed any adjustment for this.

9. CAPEX TO OPEX ALLOWANCE CHANGES WHERE THERE IS NO OUT-PERFORMANCE

This change relates to capitalisation changes that exceed the controllable Opex out-performance and occur towards the end of the Rolling Opex mechanism. For example the capitalisation of tree-cutting continues in 2011-12 when there is no overall out-performance but £5.7m has been capitalised. Final costs for 2011-12 are not yet available but based on the forecast and applying the historically consistent proportion of capitalised tree-cutting (one-third of total) would require an adjustment of nearly £4m.

Similarly, if the capitalised overheads adjustment were extended to include 2011-12 then a further reduction in the RAB of £1.5m would be required.

Finally if the adjustments relating to the capitalisation practice changes R&M were applied to the Capex for the year 2011-12 (to be consistent in terms of capitalisation practices with the first four years of RP4) a further adjustment that would not be covered by NIE's out-performance would be required. This analysis was beyond the scope of this review and we draw attention to this consistency issue so that the Utility Regulator may decide whether any action is required.

If the Utility Regulator wishes to issue guidance to NIE on future accounting treatment of tree cutting and wishes make a capitalisation adjustment for these changes in 2011-12 then the lack of out-performance in 2011-12 means that impact on Opex should be discussed and agreed with NIE. No adjustment has been included at this stage.

10. GOVERNANCE ARRANGEMENTS

10.1. Reports by the external auditors

NIE has provided heavily redacted copies of the external audit reports for the years 2000-01 to 2010-11. For the years 2000-01 to 2006-07 the reports were addressed to the Viridian Group Board and NIE has provided only those contents that relate solely to NIE Transmission and Distribution (T&D). These extracts are brief and do not refer to capitalisation practices. It is possible that such matters would have been discussed in relation to the Group as a whole rather than exclusively T&D. We have made a further request seeking confirmation from NIE that there are no audit comments addressed to the Viridian Group Board that are relevant to T&D as well as the remainder of the Group. NIE has confirmed that their understanding is that no such reports exist but have advised we should approach Viridian, the parent company at the time of the period under review, to confirm this. At this stage we have not felt it necessary to approach Viridian.

The only capitalisation matters referred to in the redacted reports provided are as follows:

- In 2000-01 there was record of a discussion of the treatment of capital expenditure under the Financial Reporting Standard Number 15 on Tangible Fixed Assets. This confirmed that the network assets be treated as an infrastructure asset with capital expenditure defined in the NIE Capital Expenditure Manual as any that extends the useful life of the asset and/ or increases the capacity of the network. The applicable depreciation rates were reviewed for compliance with the standard with some impairment likely in relation to Towers where the policy was depreciation over 60 years compared with 50 in the Standard.
- In the 2005-06 report the auditors refer to £1.8m of costs for FEMO assets in the course of construction that had been depreciated as if the asset had come into use. The depreciation charged was reversed and NIE decided that £1.8m of impairment should be applied to the asset in the course of construction.
- In the 2006-07 report the auditors refer to the implementation of the new Customer Care and Billing System that replaced the LCIS billing system. Their concerns related to the lack of change control procedures applied by Northgate in relation to the project.

The published statutory and regulatory accounts for NIE include unqualified audit reports for all years under review. The Utility Regulator has not specified any specific accounting treatment for the regulatory accounts and therefore the profit and loss account and balance sheet for the statutory and regulatory accounts contain the same information with some additional segmental analysis in the regulatory accounts.

This report has raised issues about a lack of consistency in the application of accounting practices and the scale of capitalised tee-cutting. We have not discussed these issues with the external auditors.

10.2. Internal Audit arrangements

NIE's Audit Committee has outsourced the provision of internal audit services. The Audit Committee approves the annual internal audit plan as part of a longer term rolling programme of review work. The Audit Committee meets with the internal auditors without NIE management present and considers the findings, recommendations and proposed actions in the internal audit reports. We have no comments to make regarding these governance arrangements.

ANNEX A – CALCULATIONS FOR THE RESTATEMENT OF CAPITALISED OVERHEADS

Figure A1 Calculations for the restatement of capitalised overheads in 2009-10 prices (£, millions)

Analysis of Capitalised Overheads - 2009/10 Price Base (as provided by NIE during the course of the RP5 price control review)

For information and for comparison

RPI factor	1.2142	1.1829	1.1453	1.1174	1.0778	1.0340	0.9922	1.0000	0.9566
	RP3					RP4			
	2002/03	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
	Capitalisation	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**
	Actual	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Forecast**
	£'000	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**
NIE Powerteam Managed Service & Supply Chain	5,327	5,790	4,569	4,762	5,011	4,676	4,454	4,340	4,489
Connections	2,160	2,605	2,391	2,257	2,216	2,078	1,967	1,839	1,735
Networks	1,544	1,994	2,016	2,003	2,482	2,262	2,592	2,466	2,547
Technology	75	167	172	211	242	249	142	104	179
Other	0	0	0	0	0	68	-7	-25	0
Total	**9,106**	**10,556**	**9,149**	**9,233**	**9,950**	**9,333**	**9,147**	**8,724**	**8,951**

Analysis of Capitalised Overheads - 2009/10 Price Base (based on PKF analysis of NIE's Report 50 data)

As used in the adjustment of the capitalised overheads calculation below

	RP3					RP4			
	2002/03	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
	Capitalisation	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**	**Capitalisation**
	Actual	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Forecast**
	£'000	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**
NIE Powerteam Managed Service & Supply Chain	5,470	5,633	3,891	4,761	5,031	4,677	4,455	4,341	4,489
Connections	2,160	2,536	2,370	2,257	2,282	2,078	1,943	1,839	1,854
Networks	1,543	1,940	1,939	1,582	2,390	2,261	2,551	2,467	2,510
Technology	75	166	172	211	240	249	322	265	-2
Other	0	0	0	0	0	0	0	0	0
Total	**9,248**	**10,275**	**8,371**	**8,812**	**9,943**	**9,266**	**9,271**	**8,912**	**8,851**

Review of Capex / Opex split

Powerteam Managed Service / Supply Chain									
Ratio of Total Gross Capex .v. Gross R&M	81.1%	81.5%	81.2%	84.6%	87.2%	88.9%	89.4%	89.5%	90.0%
Actual Capitalisation Rate Applied	65.0%	65.0%	65.0%	72.5%	80.0%	80.0%	80.0%	80.0%	80.0%
Connections Department									
Ratio of Gross Connections Capex .v. Alterations and Rechargeable Work	84.9%	85.8%	82.7%	86.2%	84.9%	88.6%	85.6%	87.2%	88.9%
Actual Capitalisation Rate Applied	65.0%	65.0%	65.0%	77.5%	77.5%	77.5%	77.5%	77.5%	77.5%
Networks Department									
Ratio of Gross Core Network Capex .v. Gross R&M	73.5%	74.1%	74.7%	77.4%	79.2%	81.8%	84.7%	85.4%	86.3%
Actual Capitalisation Rate Applied	65.0%	65.0%	65.0%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%
Technology Department									
Ratio of IT Capex .v. IT costs expensed to P&L	19.4%	34.9%	43.7%	45.0%	45.9%	49.8%	54.9%	48.0%	44.5%
Actual Capitalisation Rate Applied	40.0%	40.0%	40.0%	45.0%	45.0%	45.0%	45.0%	45.0%	45.0%

PKF workings using same capitalisation basis from 2004-05

	2002/03	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
Powerteam Managed Service / Supply Chain	£5,470	£5,633	£3,891	£4,269	£4,088	£3,800	£3,620	£3,527	£3,648
Connections Department	£2,160	£2,536	£2,370	£1,893	£1,914	£1,743	£1,629	£1,542	£1,555
Networks Department	£1,543	£1,940	£1,939	£1,419	£2,142	£2,027	£2,287	£2,212	£2,250
Technology Department	£75	£166	£172	£188	£214	£222	£287	£236	-£2
Other ignored									
Restated Overheads Capitalisation based on **RP3** below	£9,248	£10,275	£8,371	£7,768	£8,358	£7,792	£7,823	£7,517	£7,451
Capitalised by NIE	£9,248	£10,275	£8,371	£8,812	£9,943	£9,266	£9,271	£8,912	£8,851
Adjustment required	**£0**	**£0**	**£0**	**-£1,044**	**-£1,585**	**-£1,474**	**-£1,448**	**-£1,395**	**-£1,400**
Restated adjustment 09-10 prices £m									
Adjustment required				1.0	1.6	1.5	1.4	1.4	1.4
Overheads Capitalisation not adjusted	9.2	10.3	8.4						
Restated Overheads Capitalisation				7.8	8.4	7.8	7.8	7.5	7.5

Source: Derived from NIE's Capitalised Overheads calculations and SAP Report 55 data

ANNEX B – DETAILED CALCULATIONS FOR TREE-CUTTING ADJUSTMENT

Figure B1 Rolling Programmes showing network length covered and cost for each year of RP4 in 2009-10 prices (£, millions)

09/10 PB	2007/8						2008/9						2009/10						20010/11						20011/12					
	45 year re-engineering		15 year refurbish-ment		5 year TAR		45 year re-engineering		15 year refurbish-ment		5 year TAR		45 year re-engineering		15 year refurbish-ment		5 year TAR		45 year re-engineering		15 year refurbish-ment		5 year TAR		45 year re-engineering		15 year refurbish-ment		5 year TAR	
	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Lengt h (km)	Cost (£)
Programme expenditure																														
33kV Overhead Lines	0	20,562	182	707,071	836	116,839	30	207,304	160	219,318	843	220,909	17	259,331	157	347,664	766	206,167	39	174,472	186	194,138	790	300,991	13	180,527	178	134,773	839	325,607
Revised figures from NIE June 2012						*116,852*						*220,907*						*206,167*						*300,991*						
11kV Overhead Lines	183	1,251,556	1,374	3,093,669	1,669	1,109,867	321	1,737,594	1,116	2,652,848	2,524	1,823,554	158	762,727	1,236	2,605,019	2,867	2,112,664	199	1,272,044	1,128	2,549,481	3,167	2,938,992	208	1,055,536	1,144	1,883,309	4,054	4,003,162
Revised figures from NIE June 2012						*1,109,991*						*1,823,537*						*2,112,862*						*2,938,992*						
Tree cutting																														
33kV Overhead Lines			182	25,436			30	7,862	160	41,928			17	4,493	157	42,320			39	15,017	186	70,969			13	5,123	178	69,010		
11kV Overhead Lines	183	121,729	1,374	913,969			321	231,918	1,116	806,294			158	116,670	1,236	910,808			199	184,859	1,128	1,046,882			208	205,412	1,144	1,129,765		

TAR: The specification for TAR is primarily tree cutting with some defect rectification (decayed poles).
It is not possible to separate defect and tree cutting costs - the assumption is that the costs are all attributable to tree cutting

Tree Cutting: Each km of Reengineering and refurbishment has asscoiated tree cutting
33kV and 11kV Refurb and Re-eng tree cutting estimated cost based on total kms * TAR unit cost.
Refurb & Re-eng costs are adjusted by same amount to remove the tree cutting element (although SAP collects these together)

PKF workings																														
Total capitalised tree cutting	*183*	*121,729*	*1,556*	*939,405*	*2,505*	*1,226,706*	*351*	*239,779*	*1,276*	*848,222*	*3,367*	*2,044,463*	*175*	*121,163*	*1,393*	*953,128*	*3,633*	*2,318,831*	*239*	*199,876*	*1,314*	*1,117,852*	*3,957*	*3,239,983*	*221*	*210,535*	*1,322*	*1,198,776*	*4,893*	*4,328,768*
Per km		*665*		*604*		*490*		*683*		*665*		*607*		*692*		*684*		*638*		*838*		*851*		*819*		*952*		*907*		*885*
Total km						*4244*						*4994*						*5201*						*5510*						*6436*
Total cost excl LV						*2287841*						*3132465*						*3393122*						*4557711*						*5738079*
Total cost per km						*539*						*627*						*652*						*827*						*892*

Summary 09-10 prices £m based on above NIE information	***5 yr TAR***	***15 yr Refurb***	***45 yr re-eng***	***Total***	***LV***	***Total incl LV***	***TAR incl LV***
2000-01		*1.3*		1.3		1.3	0.0
2001-02		*0.4*		0.4		0.4	0.0
2002-03		*0.3*	*0.0*	0.3		0.3	0.0
2003-04		*0.4*	*0.1*	0.4		0.4	0.0
2004-05		*0.7*		0.7		0.7	0.0
2005-06	*1.2*	*0.4*	*0.0*	1.7		1.7	1.2
2006-07	*1.0*	*0.5*	*0.0*	1.5	*0.0*	1.5	1.0
2007-08	1.2	0.9	0.1	2.3	0.1	2.4	1.3
2008-09	2.0	0.8	0.2	3.1	0.4	3.5	2.5
2009-10	2.3	1.0	0.1	3.4	0.5	3.9	2.8
2010-11	3.2	1.1	0.2	4.6	0.7	5.2	3.9
2011-12	4.3	1.2	0.2	5.7			
Total	***13.2***	***5.1***	***0.9***	***19.1***	***1.7***		

Source: NIE's Rolling Programmes submitted at price control and updated during capitalisation review

Figure B2 Rolling Programmes showing network length covered and cost for each year of RP3 in 2009-10 prices (£, millions)

09/10 PB	2002/3						2003/4						2004/5						20005/6						2006/7					
	45 year re-engineering		15 year refurbish-ment		5 year TAR		45 year re-engineering		15 year refurbish-ment		5 year TAR		45 year re-engineering		15 year refurbish-ment		5 year TAR		45 year re-engineering		15 year refurbish-ment		5 year TAR		45 year re-engineering		15 year refurbish-ment		5 year TAR	
	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)
Programme expenditure																														
33kV Overhead Lines																							1,749	768,368		35,366		94,296	1,069	454,926
11kV Overhead Lines																			21	290,798	1,220	3,705,656	1,280	456,358	22	411,484	1,230	3,205,326	1,291	513,386
Tree cutting																														
33kV Overhead Lines	1	513	189	74,659					58	22,298																				
11kV Overhead Lines	73	28,609	506	199,669			154	59,205	883	339,467					1,779	662,173			21	7,449	1,220	435,044			22	8,627	1,230	489,022		
	74	29,122	695	274,328			154	59,205	941	361,765					1,779	662,173			21	7,449	1,220	435,044	3,029	1,224,726	22	8,627	1,230	489,022	2,360	968,312
Per km		395		395				384		384						372				357		357		404		398		398		410
TAR:	The specification for TAR is primarily tree cutting with some defect rectification (decayed poles).																							*4270*						*3612*
	It is not possible to separate defect and tree cutting costs - the assumption is that the costs are all attributable to tree cutting																							*1667219*						*1465962*
																								390						*406*
Tree Cutting:	Each km of Reengineering and refurbishment has asscoiated tree cutting																													
	33kV and 11kV Refurb and Re-eng tree cutting estimated cost based on total kms * TAR unit cost.																													
	Refurb & Re-eng costs are adjusted by same amount to remove the tree cutting element (although SAP collects these together)																													
2011/12																														
Refurb and Re-eng costs adjusted for assoc TC																														
2010/11																														
RPI of 1.5% had previously been applied. Reset at 4.537%																														

Source: NIE's Rolling Programmes submitted at price control and updated during capitalisation review

Figure B3 Rolling Programmes showing network length covered and cost for each year of RP2 in 2009-10 prices (£, millions)

09/10 PB	2000/01						2001/02					
	45 year re-engineering		15 year refurbish-ment		5 year TAR		45 year re-engineering		15 year refurbish-ment		5 year TAR	
	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)	Length (km)	Cost (£)
Programme expenditure												
33kV Overhead Lines												
11kV Overhead Lines												
Tree cutting												
33kV Overhead Lines			513	209,864					273	109,871		
11kV Overhead Lines			2,676	1,094,564					614	247,130		
			3,189	1,304,427					886	357,001		
Per Km				409						403		

Source: NIE's Rolling Programmes submitted at price control and updated during capitalisation review

Figure B4 Rolling Programmes summary of Capex and Opex tree cutting, percentage capitalised and calculation of tree cutting adjustment of £7.2m in 2009-10 prices (£, and £m)

As per RP4 OHL Programme Sheet and updated for earlier years by NIE											
	2000/01	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
11Kv TAR OHL prog						456,358	513,386	1,109,991	1,823,537	2,112,862	2,938,992
33Kv TAR OHL prog				15,260	122,718	769,368	454,926	116,852	220,907	206,167	300,991
LV TAR							17,304	95,623	417,024	527,427	650,263
Total Capex TAR	0	0	0	15,260	122,718	1,225,726	985,616	1,322,466	2,461,468	2,846,456	3,890,245
Total Capex TAR £m	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**1.2**	**1.0**	**1.3**	**2.5**	**2.8**	**3.9**
15 yr and 45 yr programmes as above	**1.3**	**0.4**	**0.3**	**0.4**	**0.7**	**0.4**	**0.5**	**1.1**	**1.1**	**1.1**	**1.3**
Total tree-cutting in Capex	**1.3**	**0.4**	**0.3**	**0.4**	**0.8**	**1.7**	**1.5**	**2.4**	**3.5**	**3.9**	**5.2**
Tree cutting Opex	125,044	821,698	912,436	653,181	1,490,455	908,014	742,287	384,718	436,406	578,459	543,427
	2000/01	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
Tree cutting Opex £m	**0.1**	**0.8**	**0.9**	**0.7**	**1.5**	**0.9**	**0.7**	**0.4**	**0.4**	**0.6**	**0.5**
Total tree cutting Opex & Capex	**1.4**	**1.2**	**1.2**	**1.1**	**2.3**	**2.6**	**2.2**	**2.8**	**4.0**	**4.5**	**5.8**
%age capitalised	**91.3%**	**30.3%**	**25.0%**	**40.0%**	**34.5%**	**64.8%**	**66.6%**	**86.1%**	**89.1%**	**87.1%**	**90.6%**
	2002/03	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**		
Total tree cutting Opex & Capex 2009-10 prices £m (LH scale)	1.2	1.1	2.3	2.6	2.2	2.8	4.0	4.5	5.8		
%age capitalised (RH scale)	**25%**	**40%**	**34%**	**65%**	**67%**	**86%**	**89%**	**87%**	**91%**		
	2002/03	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**		
Opex	0.9	0.7	1.5	0.9	0.7	0.4	0.4	0.6	0.5		
Capex	0.3	0.4	0.8	1.7	1.5	2.4	3.5	3.9	5.2		
Total	1.2	1.1	2.3	2.6	2.2	2.8	4.0	4.5	5.8		
Applying NIE's historic ratio of 1/3rd Capex 2/3rd Opex	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**Total**	
Applying NIE's historic ratio of 1/3rd Capex 2/3rd Opex - Opex	0.8	0.7	1.5	1.7	1.5	1.8	2.7	3.0	3.8	14.5	
Applying NIE's historic ratio of 1/3rd Capex 2/3rd Opex - Capex	**0.4**	**0.4**	**0.8**	**0.9**	**0.7**	**0.9**	**1.3**	**1.5**	**1.9**	**7.3**	
Actual Capex	**0.3**	**0.4**	**0.8**	**1.7**	**1.5**	**2.4**	**3.5**	**3.9**	**5.2**	**18.2**	
Excess Capex	-0.1	0.1	0.0	0.8	0.7	1.5	2.2	2.4	3.3	10.9	
Less tree cutting element induded in R&M capex adjustment				0.2	0.3	0.7	0.7	0.1	0.3	2.3	
Tree cutting Capex adjustment				0.6	0.4	0.8	1.5	2.3	3.0	8.6	

Source: Derived from NIE's Rolling Programmes submitted at price control and updated during capitalisation review

ANNEX C – INFORMATION REQUESTED FROM NIE

The following information was requested on 1st March 2012:

1. Slide pack showing SAP structure for Capex and Opex and any other areas treated differently.
2. Annual Trial Balances
3. A list of all codes and their descriptions associated with all reports. This is to include lists of all key data fields and their descriptions including cost centres, GL account codes, other chart of account fields and descriptors including the 3rd and 4th characters of the Internal Order number.
4. Internal Order Report ('Report 70') for Capex by Category, AMI, and Internal Order
5. Internal Order Report ('Report 70') for Opex by Category, AMI, and Internal Order
6. Year end Management Accounts
7. Monthly balance sheets for NIE T&D and Powerteam.
8. Capitalisation Report ('Report 55') on capitalised overheads
9. Capital Investment Programme Reports
10. List of all AMIs (indicate what is currently available in soft copy)
11. All AMI reports for Capex
12. All AMI reports for Opex
13. External Auditor's reports (agreed record of audit matters brought to Management attention for each year) (Note: some were previously provided, but please include to ensure full information pack)
14. Calculation of Powerteam annual charge out rates (as 2009-10 example provided) and confirmation of the numbers of Powerteam staff required to complete timesheets in each of the relevant years.
15. Extension of RP4 Capex datasheet provided for price control to include the five years of RP3 and the two prior years (T&D only)
16. Excel rolling programme year end position (2004-5 onwards and whatever was utilised prior to this)
17. All of the journals (Opex to Capex) from Troubleman relating to the weekly 'EN Capitalisation forms'
18. Overview of Payroll system (JIC) and the 'eTime' system (timesheet tool).
19. As detailed in the Information notice, "if the Licensee (or any affiliate, holding company or subsidiary) has information that has not been specifically requested, but is relevant to the investigation, this be declared and provided at the earliest opportunity to the Utility Regulator to assist the Utility Regulator in completing its investigations and to minimise delays in so doing"

Further meetings took place on 27th and 28th March 2012 to discuss queries arising from the review of the information provided and the following further information was requested:

1. 70 report for all AMIs for R&M per year by GL code.
2. Breakdown of internal charges in 05/06, 06/07and 07/08 on capex.
3. Analysis of R&M by AMI and IO split by processing group
4. Explanation of negative £125k relating to Building Grounds in 05/06.
   This is an adjustment to an earlier accrual applied to cover for the asbestos removal from an NIE substation area within Ballylumford. The adjustment followed from a detailed site inspection by asbestos contractor.
5. April 04 to October 04 data relating to the manual capitalisation process and comparative SAP report for this period.

6. Info by fault type from 08-09.
7. Explanation required for positive amount in 03/04 for £87,551.23 - IO no 7544391.

The following further information was requested (including some information that had been requested previously) on 20th April 2012:

1. Analysis of time recorded on JIC, analysed by year and by activity (time recording code), to include all chargeable and non-chargeable time recorded in each year from 2000-01 to 2010-11.
2. Explanation of the Powerteam charging arrangements from 2000-01. A brief note on JIC has been provided together with spreadsheets supporting the Powerteam charge out rate and charging basis from 2005-06 to 2010-11. Please provide details covering the period from 2000-01 to 2004-05.
3. Powerteam costs by year to be apportioned between Capex and Opex. The first attached spreadsheet is the sheet covering RP4 which we require to be completed for RP3 and back to 2000-01.
4. T&D BPQ Opex information taken back to 2000-1 and 2001-2. The second attached spreadsheet is the information required (T&D combined) to include the first 2 years of the 11 year review period.
5. What overheads were capitalised and the basis of arriving at these amounts for 2000-01 and 2001-02
6. We have the SAP cost centre list. Please provide details of how these cost centres are aggregated within the reporting structures used for management reporting.
7. NIE has provided heavily redacted copies of the external audit reports for the years 2000-01 to 2010-11. For the years 2000-01 to 2006-07 the reports were addressed to the Viridian Group Board and NIE has provided only those contents that relate solely to NIE Transmission and Distribution (T&D). Please confirm that there are no audit comments addressed to the Viridian Group Board that are relevant to T&D, as part of the overall Group. Should there be any generic audit comments that relate to T&D or Powerteam please these.
8. Organisation chart from the beginning of the eleven year period (2000 or if not available as at the end of RP2) with headcount information

The following further information was requested on 16th and 21st May 2012:

Repairs and Maintenance

1. Maximo data detailing maintenance volumes for assets. The data should be grouped by Asset type and include:
   - Operating voltage
   - Unit cost of each maintenance
   - Maintenance type (e.g. Minor, Major overhaul, inspection etc)
   - Year of expenditure - Request for the whole period 2000-2011
2. Timeline and detail of policy changes to Routine Maintenance (PG0 & PG1). This should include:
   - Policy change descriptions and detail.
   - Description of reasoning for policy change e.g. statistical analysis indicates that specific asset group should be maintained every 10 years instead of every 5 years or movement to RCM.
   - Expected effects of policy change on R&M expenditure and capitalisation.
3. Operational restrictions – the numbers switchgear with operational restrictions on the system in each year. For the period 2000-2010

4. Explanation for "Project Opex" AMIs – this expenditure appears in 04/05 and largely disappears in 05/06.

PO01	Project Opex Miscellaneous
PO02	Project Opex ABSD
PO03	Project Opex Tree Cutting
	Project Opex Helicopter
PO04	Patrol
PO05	Project Opex Battery Testing
	Project Opex New
PO06	Equipment

5. Explanation for negative values attributed for Non-recoverable alterations (PG3).

JIC Powerteam time recording information

1. Full list of capitalised R&M Internal Orders for all years 2000-01 to 2010-11
2. Anonymised JIC time reports by IO for 13 Full-time individuals within Powerteam Plant / Technical who have been employed in the same department and at the same staff grade for each year between 2003-04 and 2010-11
3. Anonymised JIC time reports by IO for 23 Full-time individuals within Powerteam Overhead Lines who have been employed in the same department and at the same staff grade for each year between 2003-04 and 2010-11
4. Anonymised JIC time reports by IO for 24 Full-time individuals within Powerteam Customer Operations who have been employed in the same department and at the same staff grade for each year between 2003-04 and 2010-11
5. Anonymised JIC time reports by IO for 2 Full-time individuals within Powerteam Central Support who have been employed in the same department and at the same staff grade for each year between 2003-04 and 2010-11
6. Total JIC time reports by IO for each year 2003-04 to 2010-11, analysed between Powerteam departments i.e. Plant & Technical, Overhead Lines, Customer Operations, Safety & Risk, Training & Apprentices, Central Support etc.
7. FTE staff numbers completing timesheets for each year 2003-04 to 2010-11, analysed between Powerteam departments i.e. Plant & Technical, Overhead Lines, Customer Operations, Safety & Risk, Training & Apprentices, Central Support etc.
8. Explanation of PES and PES (UK) timesheet arrangements throughout the period 2003-04 to 2010-11
9. Analysis of Powerteam, PES and PES (UK) headcount per year, analysed by department, and between timesheeted and non timesheeted staff
10. Basis of calculation of "Number of basic hours used in calculation of hourly rate" in "Basis of Charging PT Costs to T&D" spreadsheets

Rolling annual reconciliation of controllable Opex

1. Various questions requesting further explanation and, in some case, supporting documentation for the efficiency savings shown in the rolling annual reconciliation of controllable Opex that was submitted during the price control.

Rolling Capex programmes for Overhead-lines

1. The RP4 analysis provided for the price control had been added to as part of the capitalisation review and this request asked for the further missing information to be provided.

Finally a number of follow on requests and clarification questions were made regarding most of the above requests. The final information request was completed on 24 June 2012 and the raising of clarification questions continued into early July 2012.

ANNEX D – EXTRACT OF DT CLAUSE FROM THE NIE LICENCE

The NIE licence is available for inspection on the Utility Regulator's Website. The following is the text explaining the derivation of Dt claims relating to categories of Opex costs expected to be incurred by NIE in the RP4 Rolling Opex price control that had not been incurred in RP3.

Dt means an allowance in relevant year t for excluded transmission and distribution costs calculated by adding together (whether a positive or negative amount) the following amounts, where not recovered by the licensee under another element of the transmission and distribution charge restriction conditions or under any other charge restriction conditions:

(i) an amount up to £727,000 (2007-08 prices) which represents expenditure under NIE's SMART 1 programme (Sustainable Management of Assets and Renewables Technology);

(ii) any reasonable costs incurred by the licensee in complying with the requirements of Condition 27, Part III of the Licence Document in respect of the renewable output factor arrangements;

(iii) amounts arising under the arrangements approved by the Authority which are designed to incentivise investment in Demand Side Management schemes;

(iv) amounts arising under the arrangements approved by the Authority which are designed to incentivise efficiency in network capital investments, and which shall be calculated in accordance with the 2006 Direction;

(v) any reasonable costs incurred by the Transmission and Distribution Business in complying with the requirements imposed on the licensee under legislation and other legal requirements through which Directive 2003/54/EC is implemented;

(vi) any reasonable costs incurred by the Transmission and Distribution Business in establishing and operating the arrangements to support the Single Electricity Market (being the project described in the Memorandum of Understanding dated 23 August 2004 and made between the Authority and the Commission for Energy Regulation in Dublin) including in providing those services provided by the Transmission and Distribution Business in its role as common services provider;

(vii) an amount not less than zero calculated in accordance with a method notified to the licensee by the Authority (after consultation with the licensee and such other persons as the Authority shall consider appropriate), representing amounts which the Authority is satisfied are likely to be equal to the licensee's costs of wheeling in respect of the relevant year in question; and

(viii) any other costs which the Authority shall determine, upon an application to it by

the licensee shall be included as excluded transmission and distribution costs.