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DPCR5 Close out: Consultation on proposed adjustments

Consultation

Publication date: 13 June 2017

Response deadline: 14 August 2017

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Overview:

The previous electricity distribution price control (DPCR5) ended on 31 March 2015. It had several elements, which could not be settled until the price control had ended. We have now assessed company performance for these areas and have come to a view on whether we will be making any revenue adjustments.

We are consulting on our view under each of the DPCR5 Close out mechanisms for each of the electricity distribution network operator (DNO) licensees. We are seeking views from DNOs and the wider stakeholder community.

Context

1.1. Electricity distribution networks carry electricity from the high voltage transmission network to industrial, commercial and domestic users. Distribution networks are owned and operated by private sector companies, known as distribution network operators (DNOs). There are 14 DNOs ('licensees') owned by six companies ('groups') in Great Britain.

1.2. Under the last electricity distribution price control (DPCR5), the DNOs committed to delivering specific outputs relating to network investment, and we put in place mechanisms to deal with areas of uncertainty.

1.3. At DPCR5 Final Proposals, we explained that some areas of the price control would need to be settled ("closed out") after the price control had ended. These include re-opener mechanisms, which deal with under or overspend, and output mechanisms, which enable us to reduce DNO revenues if they have not delivered the outputs they originally committed to.

1.4. We have now assessed company performance under the DPCR5 Close out mechanisms. This consultation document sets out our minded-to position following our assessment. Any resulting adjustments will be made through RIIO-ED1 allowed revenues as part of the 2017 Annual Iteration Process.

Associated Documents

Notes from the DPCR5 Close out – Working Group, July 2016
DPCR5 Close out methodologies - Decision, July 2016
DPCR5 Statutory Consultation Close out methodologies, June 2016
DPCR5 Close out Informal Consultation, May 2016
DPCR5 Close out methodologies - further changes since consultation, Dec 2015
DPCR5 Close out methodologies consultation, September 2015

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Executive Summary

The previous electricity distribution price control (DPCR5) ended on 31 March 2015.

In DPCR5 we put in place mechanisms to manage uncertainty and ensure DNOs deliver the outputs they committed to, some of which could not be settled until the price control had ended. These mechanisms fall under two broad categories as follows:

1. **Re-openers**, which enable us to deal with areas of uncertainty by adjusting revenues upwards or downwards. For any adjustments to be made under the re-opener mechanisms, these two conditions must be met:

    a. Adjustment threshold: a DNO's efficient expenditure, must be at least 20% higher or 20% lower than the relevant allowance for the whole of DPCR5; and
    b. Materiality test: the additional cost above or below the re-opener threshold must be greater than 1% of the licensee's revenue allowance for 2010/11.

2. **Output mechanisms**, which enable us to assess whether DNOs have delivered the outputs they committed to. We can make adjustments where we consider that a DNO has failed to deliver, and we can apply a penalty where appropriate.

For DPCR5 Close out, we are assessing efficient costs under two re-openers: the Load Related Expenditure (LRE) re-opener and the High Value Projects (HVP) re-opener. We are also assessing performance under two output mechanisms: the Network Output Measures (NOMs) and the HVP outputs mechanism.

We assessed DNO performance in these areas and have come to a minded-to position on proposed adjustments. We are now seeking stakeholder opinion on the results of our assessment.

Summary of our assessment

The result of our assessment of company performance under each mechanism is explained in more detail in chapter 2. In summary, our view is that:

- All DNOs have delivered a package of network outputs (NOMs) equivalent to what they committed to deliver at the start of the price control.
- Only SWEST, EPN, SPN, SPMW and SSEH trigger the LRE re-opener. We are therefore proposing a downwards re-opener adjustment for these licensees.
- Only EMID, EPN and SPN trigger the HVP re-opener. We are therefore proposing a downwards re-opener adjustment for these licensees.
- There are also a number of HVPs that have not been delivered, mainly as a result of changing needs. We are proposing to make adjustments for these projects under the outputs mechanism. EMID, LPN, EPN and SPN are the affected licensees.

Overall, we are proposing total adjustments of £206.83m (12/13 prices) against DPCR5 allowances across all mechanisms and all licensees, as detailed in the table below. All adjustments will be made through RIIO-ED1 revenues.

Table 1: DPCR5 Closeout – total adjustments (£m, 2012/13 prices)

	NOMs	**LRE Re-opener**	**HVP Re-opener**	**HVP Outputs**
Value of adjustments across all licensees	0.00	74.63	16.13	116.07
Total	206.83			

Next Steps

We are inviting responses to this consultation. Contact and deadline details are on page 1. After we have considered consultation responses, we will publish our decision by 30 September 2017. Our decision will outline our final view on:

- whether the licensees' efficient expenditure for LRE and HVPs trigger the relevant re-openers; and
- any failure to deliver outputs under the HVP outputs and NOMs mechanisms, and the monetary value associated with such failure.

We will also give licensees 28 days' notice of any associated revenue adjustments. Revenue adjustments will be calculated in line with the methodology set out in the Handbook. These revenue adjustments will be used in the calculation of revised allowed revenues as part of the 2017 Annual Iteration Process (AIP).

1. Introduction

Chapter Summary

This chapter sets out the purpose and structure of the document. It also provides an overview of our approach to closing out DPCR5.

Electricity Distribution

1.1. The 14 DNO licensees are below together with the companies that manage them (the DNO group).

Table 1.1: DNO ownership and names

DNO Group		DNO licensee	
ENWL	Electricity North West Limited	ENWL	Electricity North West Limited
NPg	Northern Powergrid	NPgN	Northern Powergrid (Northeast) Limited
		NPgY	Northern Powergrid (Yorkshire) plc
WPD	Western Power Distribution	WMID	Western Power Distribution (West Midlands) plc
		EMID	Western Power Distribution (East Midlands) plc
		SWALES	Western Power Distribution (South Wales) plc
		SWEST	Western Power Distribution (South West) plc
UKPN	UK Power Networks	LPN	London Power Networks plc
		SPN	South Eastern Power Networks plc
		EPN	Eastern Power Networks plc
SPEN	SP Energy Networks	SPD	SP Distribution plc
		SPMW	SP Manweb plc
SSEN	Scottish and Southern Electricity Networks	SSEH	Scottish Hydro Electric Power Distribution plc
		SSES	Southern Electric Power Distribution plc

Background

1.2. The previous electricity distribution price control (DPCR5) ran from 2010 to 2015. As part of DPCR5, the DNOs committed to delivering specific outputs relating to network investment, and we put in place mechanisms to deal with areas of cost uncertainty.

1.3. At DPCR5 Final Proposals, we explained that some cost and activity areas needed to be settled ("closed out") after the price control ended. These are outlined below and explained in Table 1.2:

- Network Output Measures (NOMs);
- Load Related Expenditure (LRE); and
- High Value Projects (HVP) re-opener and outputs mechanism.

1.4. At RIIO-ED1, we stated that we would work with stakeholders to develop methodologies to close out these areas. In July 2016, we modified the RIIO ED1 Price Control Financial Handbook ("the Handbook") to incorporate the DPCR5 Close

out methodologies. The methodologies, associated decision documents, consultations and responses, and the notes from Working Group meetings are all on our website.[1]

1.5. The companies gave us the data for our assessment on 31 October 2016. We carried out our assessment of DNO performance in line with the process and methodologies set out in the Handbook. We have also consulted bilaterally on our view. We are now seeking views on the results of our assessment.

Structure of this document

1.6. The next sections of Chapter 1 introduce each of the DPCR5 Close out Mechanisms, explain the assessment process under each mechanism, and show how readers can respond to this consultation.

1.7. Chapter 2 summarises our view of company performance for each individual DNO. This is supported by further detailin Appendices 1-3.

1.8. Alongside this document, we are also consulting on a minor correction to Annex A2 of the Handbook. This is set out in Chapter 3 of the document.

Overview of DPCR5 Close out mechanisms

1.9. There are two types of DPCR5 Close out mechanism: re-openers and output mechanisms.

1.10. **Re-openers** enable us to deal with areas of uncertainty by adjusting revenues upwards (for overspends) or downwards (for underspends). In order for any adjustments to be made, these two conditions must be met:

1. Adjustment threshold: a DNO's efficient expenditure, must be at least 20% higher or 20% lower than the relevant allowance for the whole of DPCR5; and
2. Materiality test: the amount above or below the re-opener threshold must be greater than 1% of the licensee's revenue allowance for 2010/11[2].

1.11. For DPCR5 Close out, we are assessing efficient costs under two re-openers: the Load Related Expenditure (LRE) re-opener and the High Value Projects (HVP) re-opener. Both re-openers can be triggered upwards and downwards. However, there have been no cases of overspend during DPCR5.

1.12. **Output mechanisms** enable us to assess whether DNOs have delivered the outputs they committed to. We can make adjustments where we consider that a DNO has failed to deliver, and apply a penalty where appropriate. There are two output mechanisms in DPCR5 Close out: the NOMs and the HVP outputs.

1.13. We have now assessed company performance under all four mechanisms and are consulting on:

[1] For previous consultations, see Associated Documents
The DPCR5 Close out methodologies are available as 'Supplementary Annex 1 – DPCR5 Close out Methodologies' in the July 2016 Decision
[2] Post application of the DPCR5 IQI Incentive Rate.

- For re-openers: our view of the DNOs' efficient expenditure ('Efficient Qualifying Expenditure'), whether it meets the adjustment threshold and materiality test, and if so by how much ('Post-threshold Amount'); and
- For outputs mechanisms: is there an outputs gap; if so, what is the value of this outputs gap and should a penalty be applied?

1.14. We summarise our approach to closing out each mechanism in Table 1.2. Further information on each mechanism is available in previous consultations, and the full methodologies are in the Handbook.[3]

[3] See Associated Documents

Table 1.2: Overview of our assessment approach

Mechanism	Type of mechanism	Scope	Purpose	Methodology
Network Output Measures (NOMs) - commitment to delivering a "package of output measures", relating to network asset management	Outputs mechanism	**Health Indices (HIs)** to assess network asset health	Measure the health of the DNOs' assets. They are based on a combination of age and condition data. Asset categories range from HI1 assets, which are new or "as new" assets, to HI5 assets which are towards the end of their asset lives. HI4 and HI5 assets may require replacement or refurbishment.	We completed a quantitative and qualitative assessment of the three individual components of the NOMs – HIs, LIs and Fault Rates. For all three we assessed whether DNOs have: • met the targets that were agreed at DPCR5 (quantitative analysis); • managed their networks in a way that is in the interest of customers; and • displayed long-term asset stewardship. We also considered how well DNOs have responded to changes outside of their control impacting output delivery[4]. Our assessment determines whether the DNOs have, across all three components, delivered a set of outputs equivalent to those agreed at the start of DPCR5.
		Load Indices (LIs) to assess network loading	Measure the loading of a DNOs' network[5]. Demand Groups range from LI1 with a relatively low level of loading to LI4 and LI5, which represent peak loading above firm capacity, which may require additional capacity through network reinforcement.	
		Fault Rates to assess network faults	Measure of asset reliability in terms of the Fault Rates, which occur annually, and over a number of years. They only apply to assets which were not covered by HIs.	
'Load Related Expenditure' (LRE) – cost allowance to add more network capacity to meet demand	Re-opener	**Load Related re-opener** to assess LRE	When we set DPCR5, we recognised that there was significant uncertainty in economic conditions which could impact on forecast load growth and therefore the need for LRE. The Load related re-opener applies to uncertain costs relating to LRE, covering low volume high cost (LVHC) connections and general reinforcement but excluding fault level reinforcement.	Our assessment has focused on: • identifying any volume inefficiencies relating to primary and secondary reinforcement; • any unjustified under-recovery of LVHC connection costs; and • cost savings from innovative solutions leading to avoidance of general reinforcement or LVHC connections expenditure.

[4] These are known as material changes and include changes in input data, methodologies, external factors and changes in asset management approaches.
[5] Based on peak demand, firm capacity and hours at risk at each primary substation site ('Demand Group').

High value Projects (HVP) – cost allowance and a commitment to achieve certain outputs	Re-opener	**HVP re-opener** to assess HVP expenditure	HVPs are discrete projects or programmes with a value of more than £15m over the lifetime of the project (in 2007-08 prices). At the time of setting the price control, the final scope of these projects, and whether or not they would even go ahead, was uncertain. The HVP re-opener applies to uncertain costs associated with these projects.	Our assessment has focused on: • identifying any inefficiencies; • cost savings from innovative solutions; and • understanding the reasons for any project delays.
	Outputs mechanism	**HVP outputs** to assess actual delivery against commitments	In addition to assessing costs, we also assess whether DNOs have delivered on the outputs they committed to under each individual HVP.	We carried out a qualitative assessment to determine whether: • DNOs delivered the outputs they committed to; • any changes in outputs were in the interest of customers; and • DNOs have provided sufficient evidence that the outputs will be delivered, where a project has been rightfully delayed. Our assessment determines whether there is an outputs gap, and what the value of that gap is. We can also decide to apply a penalty where we consider that a DNO has taken a decision which was not in the interest of customers – for example, where a DNO has decided to cancel a project which should in fact have gone ahead.

Next Steps

1.15. If you would like to respond to this consultation, please do so by 14 August 2017.

1.16. We will consider any representations received in response to this consultation.

1.17. In line with the deadline in the Handbook, we will publish our decision by 30 September 2017. Our decision will outline our final view on:

- whether the licensees' efficient expenditure for LRE and HVPs trigger the relevant re-openers; and
- the final value of any outputs gap under the HVP outputs and NOMs mechanisms.

1.18. We will also give licensees 28 days' notice of any associated revenue adjustments. Revenue adjustments will be calculated in line with the methodology that has already been set out in the Handbook. These revenue adjustments will be used in the calculation of revised allowed revenues as part of the 2016/17 Annual Iteration Process (AIP).

Responding to this consultation

1.19. We welcome comments on our consultation by 14 August 2017 to RIIO.ED1@ofgem.gov.uk or in writing to:

Grant McEachran
RIIO Electricity Distribution
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3rd Floor, Cornerstone
West Regent Street
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1.20. Unless clearly marked confidential, all responses will be published on our website.

1.21. Please see Appendix 5 for details on how to provide feedback on this consultation.

2. DPCR5 Close out – proposed adjustments

Chapter Summary

This chapter summarises our proposed adjustments for each of the DNOs under each DPCR5 Close out mechanism.

Summary of proposed DNO adjustments

2.1. Table 2.1. sets out our view of the adjustments we propose to make. Our high-level assessment of company performance is later in this chapter. Detailed supporting analysis is in Appendices 1-3. All values are in 2012/13 prices.

2.2. For the two outputs mechanisms, the table summarises the value of the relevant output gaps. All outputs adjustments are negative. For the two re-opener mechanisms, the table summarises our view of efficient spend (the "Efficient Qualifying Expenditure") and our view of the portion of efficient spend which will be subject to a revenue adjustment (the "Post-Threshold Amount"). All companies have underspent, so the Post-Threshold Amount has been expressed as a negative.

2.3. We note that there are two mechanisms relating to HVPs. We have ensured that there is no double-counting between the two. You will find additional details in paragraphs 2.24, 2.27 and in the relevant appendices.

2.4. All proposed adjustments are against allowances. Our final view of each DNO's performance and any associated revenue adjustments is subject to consideration of any further information submitted and views in response to this consultation.

Table 2.1: Summary – Proposed adjustments (£m, 2012/13 prices)[6]

	NOMs	Load Related re-opener		HVP re-opener		HVP Outputs
	Value of the outputs gap	Efficient Qualifying Expenditure	Post-threshold Amount	Efficient Qualifying Expenditure	Post-threshold Amount[7]	Value of the outputs gap
ENWL	n/a	87.59	n/a	42.79	n/a	n/a
NPgN	n/a	60.52	n/a	n/a	n/a	n/a
NPgY	n/a	50.39	n/a	26.32	n/a	n/a
WMID	n/a	186.98	n/a	n/a	n/a	n/a
EMID	n/a	199.83	n/a	32.29	-12.65	17.83
SWALES	n/a	28.06	n/a	n/a	n/a	n/a
SWEST	n/a	17.86	-6.22	n/a	n/a	n/a
LPN	n/a	97.40	n/a	136.08	n/a	4.91
SPN	n/a	88.61	-22.75	38.75	0.00	19.10
EPN	n/a	145.46	-12.70	64.00	-3.48	74.23
SPD	n/a	66.76	n/a	n/a	n/a	n/a
SPMW	n/a	66.33	-26.87	23.16	n/a	n/a
SSEH	n/a	20.87	-6.09	n/a	n/a	n/a
SSES	n/a	127.54	n/a	93.57	n/a	n/a

Network Output Measures

2.5. Our view is that all 14 licensees have delivered a package of NOMs equivalent to what they committed to deliver at the start of the price control. We are therefore minded to make no adjustments relating to NOMs. All licensees have demonstrated that:

[6] Where we are not proposing adjustments, or where adjustments are not relevant (eg not all licensees have HVPs), we have used "n/a".
[7] This is the Post-double-count re-opener amount in the Handbook.

- they have quantitatively delivered the level of risk reduction they agreed to deliver at DPCR5; and
- in doing so, they have qualitatively demonstrated that their asset management strategies were in the interest of customers and resulted in efficient outcomes.

2.6. You will find more details on company performance against each component of the NOMs in Appendix 1.

2.7. The two SSEN licensees (SSEH and SSES) were unable to provide all of the information we requested relating to the HI component of NOMs in October 2016. This included information that we requested regarding changes to asset risk of failure as a result of unexpected changes in data (eg asset health degradation being better or worse than forecast), and/or from external factors (classified as "Material Changes") and how these may have made the original targets more or less difficult to achieve. We stated in our Final Proposals[8] that DNOs were expected to make efficient asset management decisions in response to the new information received over the period.

2.8. We accepted at the start of DPCR5 that DNOs were at various stages of HI data collection for different asset classes, and encouraged further improvement and innovation during DPCR5.

2.9. However, towards the end of DPCR5, the two SSEN DNOs identified concerns with their asset management systems and the reliability of their asset management data. We note that SSEN has since replaced many aging asset management systems, stopped using offline data repositories, and audited and ensured the quality (and quantity) of their asset condition data.

2.10. As a result, SSEN was required to provide substantial evidence demonstrating that the asset management decisions during DPCR5 were made with the most up-to-date condition data in a way that provided the most benefits to consumers for assets covered under the HI mechanism. Through the course of the assessment process, including the bilateral consultation and additional auditing work, SSEN was able to give us enough evidence to meet the requirements of the Performance Assessment.

Load Related re-opener

2.11. We assessed the performance of all licensees under the Load Related Re-opener. In doing so, we found no evidence of inefficiencies in primary and secondary reinforcement. This is because the scheme papers and planning documents submitted to us by all DNOs demonstrated efficient expenditure with clear optioneering approaches taken.

2.12. We also found no evidence of unjustified under-recovery of Low Volume High Cost (LVHC) connections.

2.13. We note that eight DNOs claimed a total of £45million cost savings through innovative solutions. We assessed the submissions and propose to reject 84% of the

[8] https://www.ofgem.gov.uk/ofgem-publications/46748/fp2incentives-and-obligations-final.pdf

£45million, accepting only £7.3million in total across five DNOs. See details in Appendix 2.

2.14. On whether the DNOs' efficient expenditure meets the triggers, our view is that:

- ENWL, NPgN, NPgY, WMID, EMID and SWALES do not trigger the re-opener, as their Efficient Qualifying Expenditure does not meet the 20% adjustment threshold.
- LPN, SPD and SSES do not trigger the re-opener. Although they meet the 20% adjustment threshold, they do not meet the materiality test.

2.15. Therefore, for these DNOs, there will be no Load Related re-opener adjustment.

2.16. For SWEST, EPN, SPN, SPMW and SSEH, our view is that these DNOs trigger the re-opener downwards as their efficient expenditure meets both the adjustment threshold and materiality test. Therefore, we are proposing a Load Related Re-opener adjustment. Values are specified in Table 2.1 and further details are in Appendix 2.

High Value Projects re-opener

2.17. NPgN, WMID, SWALES, SWEST, SPD and SSEH did not receive an allowance for HVPs so a re-opener assessment is not applicable.

2.18. We assessed the remaining DNOs' performance under the HVP re-opener. We consider that the licensees' HVP related expenditure during the DPCR5 period has been efficient across the board.

2.19. There have been two claims of innovative solutions. We have considered and propose to reject both claims. Details are in Appendix 3.

2.20. We also note that some DNOs have experienced significant delays with a number of HVPs, but have shown us enough evidence that outputs relating to these projects will be delivered. We therefore propose to allow the DNOs to retain the forecast spend required to finalise these projects and exclude the associated underspend from our assessment. We have introduced a cap to ensure that the DNOs' actual expenditure, combined with the amount they are allowed to retain under the re-opener cannot exceed the original DPCR5 HVP allowance.

2.21. Our view is therefore that:

- ENWL, NPgY, LPN, and SSES do not trigger the re-opener as their Efficient Qualifying Expenditure does not meet the 20% adjustment threshold.
- SPMW does not trigger the re-opener, as although its Efficient Qualifying Expenditure is 20% lower than its DPCR5 allowance, its reduced costs below the 20% ('Post-threshold Amount'), after application of the DPCR IQI Incentive Rate, is not greater than 1% of DPCR5 base revenue (materiality test).

2.22. For these licensees we are not proposing a HVP re-opener adjustment.

2.23. EMID, EPN and SPN all meet the HVP re-opener adjustment threshold and materiality test. We are therefore proposing a re-opener adjustment for these licensees. Values are specified in Table 2.1 and further details are in Appendix 2.

2.24. We also note that there are interactions between the DPCR5 HVP re-opener and outputs mechanisms (see below). Where there is both a re-opener and an outputs gap adjustment, there is a risk of companies being penalised twice for not delivering a project. The Handbook allows us to take double-counting into account as part of our re-opener assessment. You will find detailed calculations for the affected DNOs in appendix 3.

High Value Projects outputs

2.25. NPgN, WMID, SWALES, SWEST, SPD and SSEH did not receive an allowance for HVPs and an outputs assessment is not applicable. Table 2.3 summarises our view of HVP output delivery for all other licensees.

Table 2.3: Summary of HVP output delivery

Licensee	HVP	Output Delivery Status	Value of Outputs Gap	Additional Comments
ENWL	BT21CN	**Outputs Delivered**	£ -	
ENWL	Wigan 132kV Reinforcement (Orrell)	**Outputs Delivered**	£ -	
NPgY	Creyke Beck 132kV substation replacement	**Outputs Delivered**	£ -	
NPgY	Doncaster Thorpe Marsh	**Outputs Delivered**	£ -	We note a significant change in outputs relating to this project. Please see Appendix 3 for details.
EMID	Northampton 132 kV reinforcement	**Outputs not delivered**	£ 17.83	This project was cancelled. We note that EMID incurred minor initial costs which we consider to be efficient and have deducted from the total value of the outputs gap.
EMID	BT21CN	**Outputs delivered**	£ -	We note a significant change in outputs relating to this project. Please see Appendix 3 for details.
EMID	Stoke Bardolph – new GSP	**Outputs delivered**	£ -	
EPN	Norwich Earlham	**Outputs delivered**	£ -	
EPN	Marston	**Outputs delivered**	£ -	
LPN	Willesden Taylors Lane	**Outputs delivered**	£ -	
LPN	Finsbury tunnel (now Brunswick Osborn street)	**Outputs delivered**	£ -	
LPN	Finsbury market (install 3x132kV cables	**Outputs partially delivered**	£ 4.91	We note some outputs have not been delivered and are funded under RIIO-ED1. Please see Appendix 3 for details.
LPN	New Osborn street	**Outputs delivered**	£ -	
LPN	Seacoal Lane (now Limeburner)	**Outputs delivered**	£ -	
LPN	St Pancras	**Outputs delivered**	£ -	
SPN	Ashford Sellindge	**Outputs delivered**	£ -	
SPN	West Weybridge	**Outputs delivered**	£ -	
SPN/ EPN	BT21CN	**Outputs delivered**	£ -	
EPN	Rye House	**Outputs partially delivered**	£ 8.68	We note some outputs have not been delivered and are funded under RIIO-ED1. Please see Appendix 3 for details.

EPN	Eaton Socon	**Outputs not delivered**	£ 15.70	The project is significantly delayed and Eaton Socon is one of the HVPs in RIIO-ED1. For the purpose of the DPCR5 Close out assessment, this project is being treated as cancelled. We note that EPN incurred minor initial costs which we consider to be efficient and have been deducted from the total value of the outputs gap.
EPN	Parker Avenue	**Outputs not delivered**	£ 21.93	This project has been replaced in full by a RIIO-ED1 scheme.
EPN	Lawford Rayleigh	**Outputs not delivered**	£ 20.64	The project has been deferred due to lower than expected load growth and for the purpose of DPCR5 Close out, we consider that this project has been cancelled.
EPN	Willesden Taylors Lane	**Outputs not delivered**	£ 7.27	The original project need has been addressed by a combination of adjacent projects and solutions. No expenditure was incurred in relation to this project, no assets were delivered.
SPN	PO route rebuild	**Outputs not delivered**	£ 19.10	For the purposes of DPCR5 Close out, we consider that this project has been cancelled. SPN has confirmed the breakdown of the expenditure incurred and we have identified some reusable assets and minor initial costs which were efficiently incurred and have been deducted from the total value of the outputs gap.
SPMW	BT21CN	**Outputs delivered**	£ -	
SPMW	Legacy to Oswestry	**Outputs delivered**	£ -	
SSES	Bracknell Camberley	**Outputs delivered**	£ -	
SSES	ESQCR tree continuity	**Outputs delivered**	£ -	
SSES	Ealing Bridge Rd	**Outputs delivered**	£ -	

2.26. The Handbook enables us to add an additional penalty to any outputs adjustment we make, where we consider that DNO action did not result in an efficient outcome and was not in customers' interests. We consider that all DNOs have acted efficiently and in customers' interests within the context of DPCR5 HVPs.

2.27. We also note that there are interactions between the DPCR5 HVP re-opener and outputs mechanisms. Where DNOs both trigger the re-opener and are subject to an outputs gap adjustment, there is a risk of companies being penalised twice for not delivering a project. The Handbook allows us to take double-counting into account as part of our re-opener assessment. You will find detailed calculations for the affected DNOs in Appendix 3.

3. Proposed amendment to the Handbook

Chapter Summary

We are proposing to make a minor amendment to the Handbook to correct a typographical error. This chapter outlines our proposed change and the process for implementing this change.

3.1. We are proposing a minor amendment to the Handbook to correct an error in Annex A2. This error relates to an erroneous reference to a unit cost.

3.2. Specifically, we are proposing to replace a reference to "the DPCR5 Allowed Unit Cost" in paragraph 1.2 (i)(d), 1.2 (ii)(d) and 1.3(ii) of Annex A2 of the Handbook with the words "Ofgem DPCR5 Survey unit cost". This corrects the error and brings paragraph 1.2 and 1.3 in line with the rest of Annex A2, where the correct reference is used throughout. Please see Appendix 4 for further details.

3.3. Paragraph 4A.4 of Charge Restriction Condition (CRC) 4A Governance of ED1 Price Control Financial Instruments requires us to assess whether any proposed modification to the Handbook is likely to have a significant impact on licensees and other stakeholders.

3.4. We consider that because our proposed change corrects an error in the Handbook, it will not have a significant impact on any of the persons listed in paragraph 4A.4. This is in line with paragraph 4A.6 of CRC4A.

3.5. We propose that the change take effect from 15 September 2017, ahead of our 30 September decision on DPCR5 Close out (see paragraph 1.17 for details).

3.6. This consultation serves as Notice under paragraph 4A.9 of CRC4A. We welcome views from stakeholders on:

- the proposed modification;
- our assessment that the proposed modification does not have a significant impact on any of the persons listed in paragraph 4A.4 of CRC4A; and
- the proposed date for the modification to take effect.

3.7. Please respond in line with paragraph 1.19 of this document.

Appendices

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Appendix 1 – NOMs Supporting Analysis

Summary

A1.1 In line with the Handbook, we have carried out a quantitative and qualitative assessment of all licensees' performance under the HI, LI and Fault Rate components of NOMs. Our view is that all licensees have delivered the outputs they committed to at DPCR5.

Health Indices (HIs)

A1.2 Our view is that all licensees have delivered the HI component of NOMs.

Quantitative Analysis

A1.3 Table A1.1 compares all licensees' actual performance against the HI targets agreed at DPCR5 using the Risk Points Methodology set out in Annex A2 of the Handbook.

A1.4 The table also compares delivery against adjusted targets. In our DPCR5 Final Proposals[9] we recognised that DNOs were at various stages in the collection of quality HI data and further updates and improvements were encouraged during the price control period. We recognised that as a result of such improvements, the initial targets set out at the start of DPCR5 may not be as equally challenging at the end of DPCR5.

A1.5 Therefore, as part of the assessment process, DNOs were allowed to make adjustments to the targets to take into account any new asset condition information which could have made the agreed targets more or less challenging than was initially intended ("Material Changes"). We have tested the DNO's rebasing assumptions to ensure their methodology is robust.

A1.6 Where a DNO did not submit any adjusted targets, we required evidence that the agreed targets were as equally challenging as initially intended at the start of DPCR5.

Table A1.1: HI Risk Points Delivery

	Agreed Risk Points Target Delta	Adjusted Risk Points Target Delta	Achieved Risk Points Delta	Delivered HI Risk Point delta as a % of target
ENWL	-18,949,449	-18,949,449	-23,485,302	124%
NPgN	-16,567,166	-16,567,166	-18,763,199	113%
NPgY	-24,833,762	-24,833,762	-27,087,315	109%
WMID	-23,149,148	-23,149,148	-25,391,333	110%
EMID	-20,942,978	-20,942,978	-25,682,935	120%
SWALES	-11,140,510	-11,140,510	-12,689,076	114%
SWEST	-19,370,011	-19,370,011	-20,345,179	106%
EPN	-11,738,527	-13,307,177	-19,788,895	149%
LPN	-10,283,595	-11,034,453	-10,620,951	96%
SPN	-18,848,561	-20,092,859	-24,094,024	120%

[9] https://www.ofgem.gov.uk/ofgem-publications/46748/fp2incentives-and-obligations-final.pdf

SPD	-10,738,464	-10,407,631	-12,092,980	116%
SPMW	-21,855,396	-20,838,687	-22,111,700	106%
SSEH	-9,176,120	-9,176,120	-11,229,162	122%
SSES	-21,859,724	-21,945,359	-25,309,603	115%

A1.7 All licensees have met the 95% risk reduction target required in Annex A1, paragraph 1.21(i) of the Handbook.

Qualitative Analysis

A1.8 Through our Performance Assessment we have evaluated the asset management decisions made during DPCR5 to determine if they represent effective stewardship in the interest of consumers.

A1.9 This includes capturing information about Material Changes and their impacts upon the risk to the DNOs asset base. Material Changes recorded by the DNOs during DPCR5 included:

- introduction of improved asset modelling capabilities;
- updates to assessment techniques and calculation methodologies used to assign risk rankings to assets (to reflect best practice);
- general asset condition data updates from both scheduled and non-scheduled asset inspections and maintenance; and
- changes due to external factors (e.g. exceptional events, speed of economic recovery).

A1.10 We note that a number of licensees have overdelivered on their targets. We have reviewed the evidence submitted and consider that outperformance has been justified. Outperformance has been driven by a number of factors:

- re-prioritisation of activities and investment between asset types to secure the best value risk reduction for customers;
- improved targeting of investment at assets in worst conditions;
- enhanced modelling techniques; and
- the implementation of innovative engineering solutions and refurbishment options in lieu of replacement for some assets, where it has been cost effective to do so.

A1.11 In determining whether the licensees' HI Intervention policy has been in the interest of consumers, we required all licensees to explain how trade-offs were made between replacement and refurbishment as well as between HI Asset Categories. All licensees have provided adequate supporting information detailing how improvements in condition data developed during DPCR5 determined the trade-offs between assets.

Load Indices (LIs)

A1.12 Our view is that all licensees have delivered the LI component of NOMs.

Quantitative Analysis

A1.13 Tables A1.2 and A1.3 compare the licensee's actual performance against targets for LI Band Profiles. Table A1.2 sets out the delivered number of LI4 and LI5 Demand Groups as a percentage of the Target, and Table A1.3 sets out detailed numbers of Demand Groups in each band LI1-5.

Table A1.2 LI4 and LI5 Band Profile Delivery (discounting the effect of Material Changes)

	% of Target Delivered
ENWL	273%
NPgN	450%
NPgY	433%
WMID	167%
EMID	152%
SWALES	500%
SWEST	400%
LPN	165%
SPN	300%
EPN	160%
SPD	500%
SPMW	150%
SSEH	37%
SSES	467%

Table A1.3 Detailed LI Band Profile Delivery

		LI1	LI2	LI3	LI4	LI5
ENWL	Target position	299	39	50	15	15
	Actual position (end of 2015)	396	18	5	1	3
	Actual position (end of 2015) – discounting effect of material changes	389	10	7	8	3
NPgN	Target position	174	26	6	7	2
	Actual position (end of 2015)	202	4	2	1	1
	Actual position (end of 2015) – discounting effect of Material Changes	201	5	2	0	2
NPgY	Target position	346	59	7	8	5
	Actual position (end of 2015)	400	17	0	1	4
	Actual position (end of 2015) – discounting effect of Material Changes	405	16	0	1	2
WMID	Target position	125	65	29	2	8
	Actual position (end of 2015)	100	78	43	5	3
	Actual position (end of 2015) – discounting effect of Material Changes	115	75	37	2	4
EMID	Target position	139	166	107	19	16
	Actual position (end of 2015)	152	182	105	10	1
	Actual position (end of 2015) – discounting effect of Material Changes	148	179	101	14	9
SWALES	Target position	90	43	39	4	1
	Actual position (end of 2015)	137	38	8	0	1

	Actual position (end of 2015) – discounting effect of Material Changes	136	39	8	0	1
SWEST	Target position	178	87	56	7	1
	Actual position (end of 2015)	251	65	12	4	0
	Actual position (end of 2015) – discounting effect of Material Changes	255	67	8	2	0
LPN	Target position	37	37	30	12	9
	Actual position (end of 2015)	50	37	29	7	1
	Actual position (end of 2015) – discounting effect of material changes	50	39	28	7	1
SPN	Target position	107	84	54	33	7
	Actual position (end of 2015)	157	89	33	18	2
	Actual position (end of 2015) – discounting effect of material changes	155	84	28	23	2
EPN	Target position	193	148	138	45	11
	Actual position (end of 2015)	293	160	84	22	1
	Actual position (end of 2015) – discounting effect of material changes	281	156	86	33	1
SPD[10]	Target position – rebased for material changes	351	27	18	5	5
	Actual position (end of 2015)	374	19	7	1	1
SPMW	Target position – rebased for material changes	265	56	25	5	7
	Actual position (end of 2015)	349	25	7	4	4
SSEH	Target position	188	39	35	16	6
	Actual position (end of 2015)	249	19	7	0	0
	Actual position (end of 2015) – discounting effect of Material Changes	187	11	11	56	4
SSES	Target position	369	81	56	10	4
	Actual position (end of 2015)	429	63	22	0	0
	Actual position (end of 2015) – discounting effect of Material Changes	431	56	21	3	0

A1.14 Table A1.4 sets out LI risk points agreed at DPCR5 and actual risk points, using the Risk Points Methodology set out in Annex A2 of the Handbook.

[10] The data for SPD and SPMW is presented differently to other licensees as SPEN calculated a rebased Target, instead of a rebased Actual position. This does not make a difference to the final result.

Table A1.4 LI Risk Point Delivery

	Baseline risk points	Target risk points	Actual risk points	Delivered risk points (discounting effect of Material Changes)	% of Target Delivered
ENWL	35,002,044	13,685,535	4,968,750	5,298,437	258%
NPgN	4,891,370	6,046,040	2,862,401	2,698,605	224%
NPgY	6,685,096	10,479,483	4,763,007	4,463,525	235%
WMID	19,547,886	12,371,975	5,369,617	6,288,537	197%
EMID	37,153,935	30,635,428	7,128,469	22,440,614	137%
SWALES	3,481,957	2,798,077	2,160,923	2,160,923	129%
SWEST	14,538,412	13,231,108	4,418,754	3,073,345	431%
EPN	54,545,837	32,905,039	12,862,169	16,790,080	196%
LPN	32,457,899	39,837,250	8,508,434	8,193,734	486%
SPN	33,941,220	18,199,249	12,915,753	14,231,439	128%
SPD[11]	11,363,385	3,850,792	2,382,037	n/a	162%
SPMW	17,455,381	8,638,150	7,026,747	n/a	123%
SSEH	2,161,934	1,703,007	722,821	2,535,169	67%
SSES	10,012,725	9,906,525	5,728,697	5,918,805	167%

Qualitative Analysis

A1.15 The results of our quantitative assessment shows that all licensees except SSEH have met their LI Band Profile and LI Risk Point targets, with all showing less LI4 and LI5s and less risk than targeted.

A1.16 Based on our baseline assessment, SSEH would have 60 substations rated in LI4 or LI5 at the end of DPCR5 against a target of 22, and 2,535,169 LI Risk Points against a target of 1,703,007. When we rebased to take account of the P2/6 derogated single transformer site in SSEH's area, SSEH had no LI4s or LI5s at the end of the period and only 722,821 LI Risk Points, the lowest of all DNOs. As such, SSEH had no scope to intervene to reduce the number of LI4 and LI5s and consequently LI Risk Points. In line with the qualitative assessment set out in paragraph 1.48 in Annex A1 of the Handbook, we therefore consider that SSEH have delivered the LI component of their NOMs.

Fault Rates

A1.17 Our view is that all licensees have delivered the Fault Rate component of NOMs.

A1.18 Table A1.5 compares the licensees' actual performance against agreed targets for Fault Rates using the Risk Points Methodology set out in Annex A2 of the Handbook.

[11] As per previous footnote

Table A1.5 Fault Rates Delivery

	Maximum Fault Rate Points Allowance	**Delivered Fault Rate Points**	**Delivered Fault Rate Point** as a % of maximum Fault Rate Points allowance (Variance as % of Forecast)
ENWL	23,902	19,146	89%
NPgN	22,026	18,792	85%
NPgY	39,942	31,444	79%
WMID	25,544	21,166	83%
EMID	21,594	20,977	97%
SWALES	9,494	11,332	84%
SWEST	17,846	14,803	121%
EPN	32,710	34,088	104%
LPN	21,747	22,835	105%
SPN	29,409	27,897	95%
SPD	17,368	17,859	103%
SPMW	13,876	12,802	92%
SSEH	8,046	6,996	87%
SSES	28,612	19,636	69%

A1.19 In our view all licensees have provided sufficient evidence to demonstrate that improvements in Fault Rates have been secured through three main areas of response to underlying fault causes:

- improved targeting of proactive replacement activities on the highest risk assets;
- investments in new technology to identify repeatedly faulting assets and enable replacing them before they produce recurrent faults; and
- incidental benefits from other proactive investment programmes, for example Electricity Safety, Quality and Continuity Regulations (ESQCR).

A1.20 All licensees have also identified the key drivers behind variances between actual Fault Rates and original DPCR5 forecasts.

Appendix 2 – Load Related Re-opener Supporting Analysis

Summary

A1.1 Tables A2.1 and A2.2 detail how we have calculated the Load Related Efficient Qualifying Expenditure and Post-threshold Amount for the licensees.

Table A2.1 Calculation of Load Related Efficient Qualifying Expenditure (£m, 2012/13 prices)

	Load Related Actual Incurred Expenditure	Adjustment for efficient and LVHC connections under-recovery (Annex B paragraphs 1.19 to 1.23)	Adjustment for innovative solutions (Annex B paragraphs 1.24 to 1.28)	Load Related Efficient Re-opener Expenditure (Handbook Annex B Step 4)	RPE forecast adjustment (Handbook Annex B Step 5 - adjust to level of RPEs at DPCR5 Final Proposals)	Load Related Efficient Qualifying Expenditure (Handbook Annex B Step 5 - adjust to level of RPEs at DPCR5 Final Proposals)
ENWL	76.86	0	2.77	79.63	7.95	87.59
NPgN	52.48	0	2.19	54.67	5.85	60.52
NPgY	45.28	0	0	45.28	5.10	50.39
WMID	168.76	0	0	168.76	18.22	186.98
EMID	179.33	0	0	179.33	20.50	199.83
SWALES	25.29	0	0	25.29	2.77	28.06
SWEST	16.37	0	0	16.37	1.50	17.86
LPN	88.49	0	0.20	88.68	8.72	97.40
SPN	80.99	0	1.26	82.25	6.36	88.61
EPN	131.89	0	0	131.89	13.57	145.46
SPD	59.58	0	0.91	60.49	6.27	66.76
SPMW	60.39	0	0	60.39	5.94	66.33
SSEH	19.19	0	0	19.19	1.68	20.87
SSES	117.04	0	0	117.04	10.50	127.54

Table A2.2 Calculation of Post-threshold Amount (£m, 2012/13 prices)

	DPCR5 Revenue Allowance	Does the licensee meet the threshold test (Handbook para. 15.131)	Does the licensee meet the materiality test (Handbook para. 15.132)	Load Related Post-threshold Amount
ENWL	104.60	No	N/A	0
NPgN	66.70	No	N/A	0
NPgY	57.10	No	N/A	0
WMID	176.00	No	N/A	0
EMID	198.20	No	N/A	0
SWALES	25.00	No	N/A	0
SWEST	30.10	Yes	Yes	-6.22

LPN	128.70	Yes	No	0
SPN	139.20	Yes	Yes	-22.75
EPN	197.70	Yes	Yes	-12.70
SPD	85.50	Yes	No	0
SPMW	116.50	Yes	Yes	-26.87
SSEH	33.70	Yes	Yes	-6.09
SSES	162.40	Yes	No	0
TOTAL	**1,521.4**			**-74.63**

A1.2 For those licensees triggering, Table A2.3 details the profile of the Aggregate Baseline Expenditure Allowance figure and the profile of the Load Related Re-opener Post-threshold amount that should be attributed to each Regulatory Year of DPCR5, as specified in paragraph 15.135 of the Handbook. Both the Aggregate Baseline Expenditure Allowance and the Load-Related Post-Threshold Amount are profiled in line with Load Related Actual Incurred Expenditure.

Table A2.3 Profile of Aggregate Baseline Expenditure Allowance and Load Related Post-threshold Amount for those licensees triggering the re-opener (£m, 12/13)

		2010/11	2011/12	2012/13	2013/14	2014/15	**Total**
Aggregate Baseline Expenditure Allowance	SWEST	6.52	5.51	3.66	3.98	10.43	**30.10**
	SPN	46.41	22.22	20.14	26.47	23.96	**139.20**
	EPN	21.85	29.23	25.79	51.95	68.89	**197.70**
	SPMW	11.87	25.22	14.55	25.37	39.50	**116.50**
	SSEH	4.96	5.68	8.71	9.34	5.01	**33.70**
Load Related Post-threshold Amount	SWEST	-1.35	-1.14	-0.75	-0.82	-2.15	**-6.22**
	SPN	-7.58	-3.63	-3.29	-4.33	-3.92	**-22.75**
	EPN	-1.40	-1.88	-1.66	-3.34	-4.43	**-12.70**
	SPMW	-2.74	-5.82	-3.36	-5.85	-9.11	**-26.87**
	SSEH	-0.90	-1.03	-1.57	-1.69	-0.90	**-6.09**

Determining Efficient Qualifying Expenditure

A1.3 As noted in paragraph 2.11 above, we have found no evidence of inefficiencies in primary and secondary reinforcement, as per Annex B paragraphs 1.21 to 1.23 of the Handbook. As per paragraph 2.12 above, we also found no evidence of unjustified under-recovery of Low Volume High Cost (LVHC) connections, as per Annex B paragraph 1.19 of the Handbook. There were under-recoveries from connection customers of £14,808 for NPgN and £31,350 for NPgY for LVHC. However, we consider that the under-recoveries for the full DPCR5 period are immaterial and well within reasonable tolerances for high cost projects over a 5-year period. Therefore, we are not proposing to make any adjustments to submitted expenditure. We do propose to make adjustments to submitted expenditure for innovative solutions. See details below.

A1.4 In terms of adjustments to submitted expenditure for innovative solutions, a summary by DNO group is provided below and further details are included in Table A2.4.

- ENWL claimed four innovative solutions (across five sites). We propose to accept two (across three sites), at a total value of £2.77m.
- NPg claimed three innovative solutions: two for NPgN and one for NPgY. We propose to accept one, at a total value of £2.19m for NPgN.

- WPD did not claim any innovative solutions.
- UKPN claimed nine innovative solutions across thirteen sites; two for EPN (across three sites), one for LPN and six (across nine sites) for SPN. We propose to accept three (across four sites), at a total value of £1.46m, comprising £0.20m for LPN and £1.26m for SPN.
- SPEN claimed one innovative solution for SPD, which we propose to accept, at a total value of £0.91m.
- SSEH claimed two innovative solutions, which we do not propose to accept.

Table A2.4 Ofgem view on licensees' innovative solutions adjustments

Licensee	Solution	Description	Cost saving adjustment to submitted expenditure	Ofgem view: do we accept it?	Ofgem comments
ENWL	DSR	ENWL entered into contracts with customers to allow the reduction in demand during peak periods to ensure firm capacity is not exceeded.	£850,000	Yes	
ENWL	Capacity to Customers (C2C)	ENWL have utilised learning from the C2C LCNF project to enable loads to be more flexible on their system	£1,920,000	Yes	
ENWL	Automatic use of Interconnectors	ENWL utilised automatic switching to be able to restore supplies via interconnectors in the event of a fault at a substation.	£4,560,000	No	We do not view this as being an innovative approach as the use of automated switching to restore supplies is an existing widespread solution on the GB system.
ENWL	Co-ordinated planning and design	ENWL grouped nearby substations that required reinforcement and co-ordinated the investment on a group basis rather than individually.	£2,288,785	No	We do not view this as being an innovative approach as DNOs are required to carry out the planning of their system in an efficient and co-ordinated fashion as per their licence conditions.
NPgN	In-feed generation ANM	NPgN deployed a generator active network management system which was able to manage a constraint on their network. The scheme managed a number of large distributed generators on their network which when generating at full capacity would exceed the network's capabilities. By implementing the scheme NPgN were able to avoid significant reinforcement costs.	£10,000,000	No	This scheme, whilst being innovative, is not being awarded under this specific mechanism as the system manages distributed generation and this is not within the scope of the Load Related Re-opener.
NPgN	Innovative agreement with a third party	NPg have set up an agreement with a third party, which we consider meets the relevant criteria. The details of this agreement are commercially sensitive.	£2,187,785	Yes	

NPgY	Innovative agreement with a third party	NPg have set up an agreement with a third party, which we do not believe meets the relevant criteria. The details of this agreement are commercially sensitive.	£900,000	No	
LPN	DSR	During construction LPN opted to enter a contract with a nearby 3rd party standby generator rather than deploying their own diesel generation	£195,585	Yes	
SPN	Blast Fans	SPN installed additional cooling to existing radiator banks to enhance the cyclic rating of the transformer	£1,070,821	No	We do not view this as being innovative. It is common practice to enhance the rating of transformers by additional cooling, be that through the use of pumps or cooling fans.
SPN	Dynamic Transformer Rating (DTR)	SPN utilised the variability of the environment and cooling to increase the rating of transformers to reflect their true capacity capabilities	£814,508	Yes	
SPN	CRATER	SPN utilised a software package to rerate a series of cable circuits thus increasing their known capabilities	£446,555	Yes	
SPN	Perfluorocarbon Tracer (PFT) to avoid fluid filled cables*	SPN utilised an additive to the fluid circuit to enable quicker location of leaks.	£6,377,080	No	During the SQ phase, SPN withdrew this innovation claim. It is our view that PFT is a maintenance activity and has no impact on load related expenditure.
SPN	Enhanced Network Modelling	DIgSILENT was used to carry out a voltage collapse study that showed reinforcement was not required.	£1,649,520	No	In our view this is not an innovative solution as this is a standard power systems modelling activity.
SPN	ACCC	SPN utilised ACCC to conductor a circuit rather than utilise AAAC and rebuild a number of towers	£4,050,893	No	Whilst this is an innovative solution we have decided not to make an adjustment. The reason is that SPN included in their FBPQ the costs for ACCC thus taking into account the savings from using the innovative solution already. As a result, there is no saving to be made against the FBPQ figure.
EPN	Battery Energy Storage*	EPN installed a battery that allowed them to avoid traditional reinforcement	£890,415	No	During the SQ phase EPN decided to withdraw their submission for this

		at a highly loaded site.			innovation.
EPN	Blast Fans	EPN installed additional cooling to existing radiator banks to enhance the cyclic rating of the transformer	£2,720,341	No	We do not view this as being innovative. It is common practice to enhance the rating of transformers by additional cooling, be that through the use of pumps or cooling fans.
SPD	Flexible network control and dynamic thermal rating	SPD deployed a number of innovative technologies within the St. Andrews area. These included dynamically controlling the network and the deployment of dynamic thermal rating to avoid reinforcing the network.	£910,000	Yes	
SSEH	Bespoke Transformer Modelling Schemes	SSEH carried out modelling of a set of primary transformers in areas where capacity was reaching maximum. The modelling showed that with additional cooling SSEH would be able to increase capacity at minimal cost.	£1,975,000	No	It is our view that this is not innovative. It is common practice to increase the rating of transformers by the inclusion of additional cooling. This can be done in a number of ways.
SSEH	Switch Capacitor Device	SSEH installed a switched capacitor device on a circuit that required a reinforcement. A traditional reinforcement would have resulted in another circuit being built at significant cost.	£1,640,000	No	We consider that utilisation of capacitors, switched and unswitched on the DNOs' networks in GB is sufficiently widespread, that this solution is not deemed to be innovative.

*UKPN subsequently withdrew the proposed innovation of Battery Energy Storage and PFT.

Appendix 3 – High Value Projects Supporting Analysis

HVP Re-opener assessment

A3.1 There were 30 HVPs in DPCR5. Table A3.1 below gives details of allowances and expenditure associated with these projects.

Table A3.1 – HVP projects, allowances and submitted DPCR5 expenditure (£m, 2012/13 prices)

DNO Group	Licensee	Scheme name	Allowance	DPCR5 Expenditure[12]
ENWL	**ENW**	BT21C	£ 22.95	£ 22.75
ENWL	**ENW**	Wigan 132kV Reinforcement (Orrell)	£ 22.95	£ 16.40
NPg	**NPGY**	Doncaster B / Central / Thorpe Marsh reinforcement	£ 19.81	£ 9.20
NPg	**NPGY**	Creyke Beck 400/132kV	£ 12.20	£ 15.26
WPD	**EMID**	Stoke Bardolph - New GSP	£ 36.54	£ 24.62
WPD	**EMID**	Northampton 132kV reinforcement	£ 18.34	£ 0.51
WPD	**EMID**	BT21C	£ 19.12	£ 4.17
UKPN	**LPN**	Willesden - Taylors Lane Gibbons Rd link tunnel & FFC Replacement	£ 15.13	£ 14.14
UKPN	**LPN**	Construct Finsbury Mkt-Osborn St-Wellclose-Brunswick Wharf Cable Tunnel	£ 65.10	£ 31.51
UKPN	**LPN**	St Pancras: Substation asset replacement and uprating	£ 18.89	£ 4.94
UKPN	**LPN**	Osborn St: Establish new Osborn Street 'B' 132/11kV Substation	£ 15.01	£ 18.02
UKPN	**LPN**	Seacoal Lane: Establish new 132/11kV Substation	£ 25.92	£ 20.91
UKPN	**LPN**	Finsbury Mkt-Brunswick Wharf Tunnel: Install 3x132kV ccts	£ 21.35	£ 2.08
UKPN	**SPN**	PO Route Rebuild	£ 19.24	£ 3.40
UKPN	**SPN**	West Weybridge - Replace 132kV Switchgear	£ 16.54	£ 15.96
UKPN	**SPN**	BT21C	£ 19.24	£ 10.54
UKPN	**SPN**	SPN: Ashford - Sellindge - 33kV Reinforcement	£ 8.68	£ 8.98
UKPN	**EPN**	Reinforcement of the Lawford/Rayleigh 132kV double Circuit (PNB, PUD,PAE)(RDP)	£ 20.64	£ -
UKPN	**EPN**	Proposed Marston 132/33kV Grid S/S - 2 x 90MVA	£ 12.43	£ 5.84
UKPN	**EPN**	Parker Avenue 132/33kV Grid S/S - install grid transformers and 132kV circuits (2x90MVA)	£ 21.93	£ (0.69)
UKPN	**EPN**	Norwich/Earlham 132 kV switchboard and 132kV Cable scheme	£ 27.10	£ 31.45
UKPN	**EPN**	Eaton Socon 132kV GSP - 3rd SGTand new 132kV GIS switchboard	£ 16.07	£ 0.37
UKPN	**EPN**	Rye House 132kV Grid S/S - Replace switchgear	£ 21.70	£ 1.81
UKPN	**EPN**	BT21C	£ 31.44	£ 20.08
UKPN	**EPN**	Willesden - Taylors Lane Gibbons Rd link tunnel & FFC Replacement	£ 7.27	£ -
SPEN	**SPMW**	BT21C	£ 12.32	£ 8.29
SPEN	**SPMW**	Legacy to Oswestry Rein	£ 17.36	£ 9.32
SSEPD	**SSES**	Bracknell - Camberley	£ 52.78	£ 39.39
SSEPD	**SSES**	ESQCR tree continuity	£ 29.32	£ 21.96
SSEPD	**SSES**	Ealing - Bridge Road 66kV gas cable	£ 14.55	£ 11.70

[12] Net costs

A3.2 Table A3.2 below summarises our assessment under the HVP Re-opener for the three licensees for which we propose to trigger the re-opener.

A3.3 For the cancelled "PO route rebuild" project, SPN have confirmed the breakdown of the expenditure incurred as surveys (£0.14m) and cable procurement (£3.27m). As the cables are reusable assets, only the survey expenditure will be treated as qualifying expenditure and also deducted from the output gap.

A3.4 A number of HVPs have started but finalisation has been delayed into RIIO-ED1. We are proposing an adjustment to enable DNOs to retain the allowance required to finalise the projects. DNOs have explained the delays and provided robust evidence that these projects will deliver the agreed outputs. We have capped any adjustments for project delay to the original individual DPCR5 HVP allowance.

Table A3.2 – HVP Re-opener summary assessment (£m, 2012/13 prices)

	EMID	**EPN**	**LPN**	**SPN**
HVP Actual Incurred Expenditure	29.30	58.86	91.60	38.88
Adjustment for efficiency	0.00	0.00	0.00	-3.27
Adjustment for delayed or deferred projects (Step 4, Annex C1 of the Handbook)	0.16	0.01	30.36	-0.23
Adjustment for innovative solutions (Step 5, Annex C1 of the Handbook)	0.00	0.00	0.00	0.00
RPE adjustment	2.84	5.13	14.13	3.37
HVP Efficient Qualifying Expenditure	**32.29**	**64.00**	**136.08**	**38.75**
DPCR5 Revenue Allowance	74.00	158.59	161.40	63.69
Threshold test: is the Efficient Qualifying Expenditure 120% above or 80% below the HVP Allowance?	Yes	Yes	No	Yes
Materiality test: is the Efficient Qualifying Expenditure greater than 1% DPCR5 Base Revenue	Yes	Yes	No	Yes
HVP Post-threshold Amount	**-26.91**	-62.87	0.00	-12.21

A3.5 We note that UKPN have made two claims for innovative solutions. We are proposing to reject both claims. The claims, and our reasons for rejecting them are outlined in Table A3.3 below.

Table A3.3 – HVP Re-opener innovation claims (£m, 2012/13 prices)

Licensee	**Claim Description**	**Claim Value**	**Accepted/ Rejected**	**Reason**
EPN	Use of DIgSILENT PowerFactory and the collaborative approach to a study with National Grid	£9.67m	Rejected	In line with Ofgem's view on Load Related innovative solutions adjustment for SPN, it is our view that the network modelling software DIgSILENT is not an innovative solution as this is a standard power systems modelling activity.
LPN	Design review of a breathing apparatus and re-specification of the materials used	£0.68m	Rejected	The reduction in expenditure for the specific project was triggered by the council refusing use of the park area for an intermediate shaft site, thus requiring for an alternative solution, in this case a re-design of the project and re-specification of the breathing apparatus. "Re-specification" of the breathing apparatus described in the PAS seems to be a minor adjustment to the technical specifications of the apparatus, which builds upon existing technology rather than introducing innovation. In addition, very limited information has been

				provided in detailing exactly how UKPN participated in the design review of the breathing apparatus and what the actual changes have been.

A3.6 We also note that EMID have made a claim for an additional £0.88m to be taken into account as part of our HVP Re-opener assessment. This relates to IT&T costs which have contributed to the delivery of EMID's BT21CN HVP. We have rejected this claim because the primary driver for these costs was IT&T and not the BT21CN HVP.

A3.7 Table A3.4 below details the profile of the Aggregate Baseline Expenditure Allowance figure and the profile of the HVP Post-threshold Amount that should be attributed to each Regulatory Year of DPCR5 for each licensee. We have profiled against actual expenditure, as specified in paragraph 15.205 of the Handbook.

Table A3.4 – HVP Re-opener profiling of Post-threshold Amount (£m, 2012/13 prices)

		2010/11	2011/12	2012/13	2013/14	2014/15	**Total**
EMID	Aggregate Baseline Expenditure Allowance	3.97	5.42	39.41	20.66	4.54	**74.00**
	HVP Post-threshold Amount	-1.44	-1.97	-14.33	-7.51	-1.65	**-26.91**
EPN	Aggregate Baseline Expenditure Allowance	38.88	27.04	37.29	18.96	36.42	**158.59**
	HVP Post-threshold Amount	-15.41	-10.72	-14.78	-7.51	-14.44	**-62.87**
SPN	Aggregate Baseline Expenditure Allowance	5.05	11.69	20.86	12.63	13.45	**63.69**
	HVP Post-threshold Amount	-0.97	-2.24	-4.00	-2.42	-2.58	**-12.21**

A3.8 As explained in paragraph 2.24 of chapter 2, there is a risk of double-counting where licensees are subject to both a re-opener and an outputs adjustment. Paragraphs 15.216 to 15.221 of the Handbook detail our methodology for avoiding double-counting. Table A3.5 below provides our view of how we propose to apply the methodology in the Handbook and the resulting adjustments.

Table A3.5 – Double-counting adjustments for EMID, EPN and SPN (£m, 2012/13 prices)

Licensee	**HVP Post-threshold Amount**	2010/11	2011/12	2012/13	2013/14	2014/15	**Total post double counting HVP Post-threshold Amount**
EMID	-26.91	-0.68	-0.93	-6.74	-3.53	-0.78	**-12.65**
EPN	-62.87	-0.85	-0.59	-0.82	-0.42	-0.80	**-3.48**
SPN	-12.21	0.00	0.00	0.00	0.00	0.00	**0.00**

HVP Outputs Assessment

A3.9 Table A3.6 below provides an overview of the total HVP Network Outputs Gap per licensee, profiled against the relevant allowances, as specified in the Handbook.

Table A3.6 – Total value of the HVP Network Outputs Gap per licensee (£m, 2012/13 prices)

	2010/11	2011/12	2012/13	2013/14	2014/15	**Total**
ENW	0.00	0.00	0.00	0.00	0.00	**0.00**
NPgY	0.00	0.00	0.00	0.00	0.00	**0.00**
EMID	0.00	0.00	-4.73	-4.73	-8.36	**-17.83**
LPN	-0.24	-1.92	-1.78	-0.97	0.00	**-4.91**
SPN	-0.70	-3.14	-4.89	-4.89	-5.47	**-19.10**
EPN	-4.72	-5.46	-11.91	-21.79	-30.35	**-74.23**
SPMW	0.00	0.00	0.00	0.00	0.00	**0.00**
SSES	0.00	0.00	0.00	0.00	0.00	**0.00**

A3.10 Table 2.3 in this document details our proposed view of the outputs gap for each individual HVP. Table A3.7 provides additional detail relating to projects that have only been partially delivered and/or projects that have experienced a significant change in scope.

Table A3.7 – HVP partial outputs delivery/ changes in scope

Licensee	Project	Description	Ofgem View
NPgY	Doncaster Thorpe Marsh	The aim of this project was to increase network capacity around Doncaster. The original scheme proposed required works by National Grid Electricity Transmission (NGET). NPgY re-engineered the scheme when NGET's costs became uneconomical.	**No outputs gap** We consider that NPgY's decision to change the scope of the project addresses the need while being in the interest of customers. We note that this has resulted in delays and the project will be completed in the ED1 period. We note that NPgY are being funded for this project in ED1 – however, there is no double-funding of the project.
EMID	BT21CN	We note that EMID has made significant changes to its proposed BT21CN solution because of the availability of more cost effective and flexible solutions, its decision to in-source work and the need to address wider communications issues. This has resulted in the significant underspend on this project.	**No outputs gap** We consider that this project has delivered the required outputs, by enabling EMID to migrate off the BT21CN network. Our view is that the

		We also note that the change in solution was partially driven by WPD's acquisition of the licensee during the DPCR5 period, and that EMID's amended strategy is consistent with the strategy deployed by WPD in its other licensees.	change in solution was in the interest of consumers. We believe EMID has acted efficiently and has delivered its outputs.
LPN	Finsbury market (install 3x132kV cables	This project is linked to the Finsbury Tunnel project and will be delivered in Q3 2017 once the tunnel has been finalised. As a result of delays, one element of the project is also funded under ED1 (£4.91m).	**Partial Outputs Gap** We consider that there is an HVP Network Outputs Gap associated with elements of the project also funded in ED1. This is valued at 23% of the allowance (£4.91m).
EPN	Rye House	EPN is still in the process of delivering works at Harlow West (separation of 132kV circuits) and Hatfield Grid (protection works) that are part of an alternative solution they have chosen to deliver. As part of these works, EPN has incurred expenditure of £1.81m in DPCR5, which is associated primarily with the replacement of 33kV switchgear. Part of the expenditure for the 33kV switchgear was included in the RIIO-ED1 plan. We note that EPN were also able to avoid the replacement of a 132kV circuit breakers.	**Partial Outputs Gap** We consider that there is an overall HVP Network Outputs Gap valued at 40% of the original allowance (£8.68m).

Appendix 4 – Proposed amendment to Annex A2 of the Handbook

A4.1 As stated in paragraph 3.2, we are proposing to replace the reference to the "DPCR5 Allowed Unit Cost" in paragraph 1.2 and 1.3 of Annex A2 of the Handbook with the words "Ofgem DPCR5 Survey unit cost". Please see the Handbook extract below for further details with the proposed amendment in red type:

"Stage 1 – Calculate Risk Points for HI Target Delta (in relation to Agreed Network Outputs and Adjusted Network Outputs)

1.2 The Authority will calculate the number of HI Risk Points that the licensee was expected to deliver by the end of the DPCR5 period in each HI Asset Category and overall, using either the DPCR5 Agreed Network Outputs or the Adjusted Network Outputs, as appropriate. The calculation involves the following steps:

(i) Calculation of risk points for assets covered by the Health Indices in the fifth year of DPCR5 if there was no investment for Interventions:

(a) the Authority will obtain the number of assets in each HI band for each HI asset category representing the Health Index in the fifth year of DPCR5 where there is no investment for Interventions;

(b) for each HI asset category, the Authority will multiply the number of assets in each HI Band by the HI Band Weighting (as defined in Table 1);

~~(iii)~~(c) the results from step (b)~~,~~ will then be summed by the Authority to determine the total for each HI Asset Category;

(d) the Authority will multiply the result from step (c) by the ~~DPCR5 Allowed Unit Cost~~ Ofgem DPCR5 Survey unit cost (A) for that HI Asset Category to determine the total HI Risk Points for that HI Asset Category;

(e) steps (b)-(d) are repeated for each HI Asset Category; and,

(f) the Authority will sum the results from step (d) across all HI Asset Categories to determine the total number of HI risk points in the fifth year of DPCR5 if there was no investment for Interventions.

(ii) Calculation of risk points for assets covered by the Health Indices in fifth year of DPCR5 with investment for Interventions:

(a) the Authority will obtain the number of assets in each HI band for each HI asset category representing the Health Index in the fifth year of DPCR5 where there was investment for Interventions;

(b) for each HI asset category, the Authority will multiply the number of assets in each HI Band by the HI Band Weighting (as defined in Table 1);

(c) the results from step (b)~~,~~ will then be summed by the Authority to determine the total for each HI Asset Category;

(d) the Authority will multiply the result from step (c) by the ~~DPCR5 Allowed Unit Cost~~ Ofgem DPCR5 Survey unit cost (A) for that HI Asset Category to determine the total HI Risk Points for that HI Asset Category;

(e) steps (b)-(d) are repeated for each HI Asset Category; and,

(f) the Authority will sum the results from step (d) across all HI Asset Categories to determine the total number of HI risk points in the fifth year of DPCR5 if there were no investment for Interventions.

(iii) Calculation of HI Risk Points Delta:

(a) the Authority will calculate the difference between the risk points calculated in (i) and subtract those calculated in step (ii).

Stage 2 – Determine Delivered Network Outputs for HI Component of the NOMs

1.3 Using the licensee's Network Outputs Reporting Workbooks and the HI Tracking Sheets, the Authority will determine the HI Risk Points Reduction that was delivered through asset replacement and refurbishment Interventions during the DPCR5 period. The calculation involves the following steps:

(i) for each HI Asset Category, the Authority will multiply the volume of assets in each HI band, representing the HI movements caused by asset replacement and refurbishment, by the HI band weightings in Table 1. The Authority will then sum the results to determine the total for each HI Asset Category;

(ii) the Authority will then multiply the result from step (i) by the ~~DPCR5 Allowed Unit Cost~~ Ofgem DPCR5 Survey unit cost (A) in paragraph 1.6 below for that HI Asset Category to generate the total HI Risk Points delivered in each category; and

(iii) the Authority will sum the results for all HI Asset Categories from step (ii) to determine the total HI Risk Points delivered by the licensee."

Appendix 5 - Feedback on this consultation

A1.1 We want to hear from anyone interested in this document. Send your response to the person or team named at the top of the front page.

A1.2 Unless you mark your response confidential, we'll publish it on our website, www.ofgem.gov.uk, and put it in our library. You can ask us to keep your response confidential, and we'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004. If you want us to keep your response confidential, you should clearly mark your response to that effect and include reasons.

A1.3 If the information you give in your response contains personal data under the Data Protection Act 1998, the Gas and Electricity Markets Authority will be the data controller. Ofgem uses the information from responses to consultation in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. If you are including any confidential material in your response, please put it in the appendices.

General feedback

A1.4 We believe that consultation is at the heart of good policy development. We are keen to hear your comments about how we've conducted this consultation. We'd also like to get your answers to these questions:

1. Do you have any comments about the overall process of this consultation?
2. Do you have any comments about its tone and content?
3. Was it easy to read and understand? Or could it have been better written?
4. Were its conclusions balanced?
5. Did it make reasoned recommendations for improvement?
6. Any further comments?

A1.5 Please send your comments to stakeholders@ofgem.gov.uk