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# Assessment of the RIIO-ED1 business plans

## Supplementary annex


**Publication date:** 22 November 2013

**Response deadline:** 22 January 2014



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**Overview:**

This document summarises our assessment of the electricity distribution companies' business plans for the next distribution price control (RIIO-ED1). We have published this supplementary annex alongside our letter 'Assessment of RIIO-ED1 business plans and fast-tracking'. The letter sets out our high-level assessment and conclusions in an accessible format. This document provides additional supporting detail.

A core element of the RIIO framework is the concept that a DNO's price control can be settled early (called fast-tracking) if their business plans is of sufficiently high quality.

In this document we set out our assessment of each company's plan. In each case we set out our explanation of why we consider it to be, or not to be, of sufficiently high quality to be proposed for fast-tracking.

We have set out the Draft Determinations for the proposed fast-tracked DNOs in a separate document.

# Context

In the RIIO-ED1 price control review we will set the outputs that the 14 electricity distribution network operators (DNOs) need to deliver for their consumers and the associated revenues they are allowed to collect. The review covers the eight year RIIO-ED1 price control period which lasts from 1 April 2015 to 31 March 2023.

RIIO-ED1 is the first electricity distribution price control to reflect the new RIIO (Revenue = Incentives + Innovation + Outputs) model.

In March 2013 we published our decision on the key elements of the regulatory framework ('strategy') that the DNOs would need to understand in order to develop their business plans. We also set out our approach to assessing the business plans, including the role of proportionate treatment. Based on this decision, the DNOs submitted their business plans on 1 July 2013. The suite of documents we are publishing here concludes our assessment of the plans.

# Associated documents

**Assessment of RIIO-ED1 business plans and fast-tracking** (letter)

- Assessment of the RIIO-ED1 business plans
- Initial Assessment of the RIIO-ED1 innovation strategies
- RIIO-ED1 business plan expenditure - methodology and results document (to be published early December)
- RIIO-ED1 Glossary

The assessment letter and supplementary annexes can be found on our website at the following link:
https://www.ofgem.gov.uk/publications-and-updates/riio-ed1-draft-determinations-fast-tracked-distribution-network-operators

**RIIO-ED1: Draft Determinations for Western Power Distribution Ltd**

- RIIO-ED1 Fast-Track Draft Determination Financial Model (Excel)
- RIIO-ED1 Fast-Track Draft Determination Financial Model Audit Letter

The Draft Determinations and supplementary annexes can be found on our website at the following link:
https://www.ofgem.gov.uk/network-regulation-%E2%80%93-riio-model/riio-ed1-price-control

**Consultation on the methodology for assessing equity market returns** (to be published early December)
https://www.ofgem.gov.uk/network-regulation-%E2%80%93-riio-model/riio-ed1-price-control

**Strategy Decision for RIIO-ED1 – Overview**
https://www.ofgem.gov.uk/publications-and-updates/strategy-decision-riio-ed1-overview

# Contents

# 1. Introduction

**Chapter Summary**

A summary of the purpose and structure of this document and how it links to our 'Assessment of RIIO-ED1 business plans and fast-tracking' letter.

1.1. The electricity distribution price control review (RIIO-ED1) is the first review in electricity distribution to use our new RIIO model (Revenue = Incentives + Innovation + Outputs). RIIO is designed to drive real benefits for consumers; providing companies with strong incentives to meet the challenges of delivering a sustainable energy sector at lower cost. RIIO puts sustainability alongside consumers at the heart of what network companies do. It provides a transparent and predictable framework that rewards timely delivery.

1.2. A key part of the RIIO model is for companies to develop a well-justified business plan. This should be informed by enhanced stakeholder engagement. The 14 distribution network operators (DNOs) submitted and published their business plans for the next electricity distribution price control (RIIO-ED1) on 1 July 2013.

1.3. DNOs that have stepped up to the challenge of submitting realistic and well-justified business plans that provide demonstrable value to consumers may benefit from proportionate treatment. Proportionate treatment is a mechanism within RIIO where we subject particularly high quality elements of a company's plan to lighter touch regulatory scrutiny. If a plan is of sufficiently high quality and good value overall, we may consider it for fast-tracking. Fast-tracking means we accept the business plan as submitted and conclude the company's price control review early.

1.4. We have published a letter setting out a summary of our assessment of DNOs' business plans for RIIO-ED1.[1] The letter also sets out:

- our proposal to conditionally fast-track the four DNOs owned by Western Power Distribution (WPD)
- our decision that the DNOs owned by Electricity North West (ENWL), Northern Powergrid (NPg), UK Power Networks (UKPN), SP Energy Networks (SPEN) and SSE Power Distribution (SSEPD) will not be fast-tracked, and will therefore now follow the slow-track process.

1.5. Our proposal to fast-track WPD is subject to the outcome of this consultation and the consultation on our methodology for assessing equity market returns, which we describe in more detail in the 'Efficient financing' section of Chapter 3.

1.6. The purpose of this supplementary annex is to provide more detail on our

[1] https://www.ofgem.gov.uk/publications-and-updates/riio-ed1-draft-determinations-fast-tracked-distribution-network-operators

assessment of the DNOs' business plans. In doing so, we highlight the reasons for our decision on fast-tracking.

1.7. In a second document we consult on the Draft Determinations (the elements of the settlement) for the DNOs we propose to fast-track (WPD group). We will publish more detail on the expenditure assessment methodology and results at the start of December. At the same time we will also publish a consultation on our methodology for assessing equity market returns.

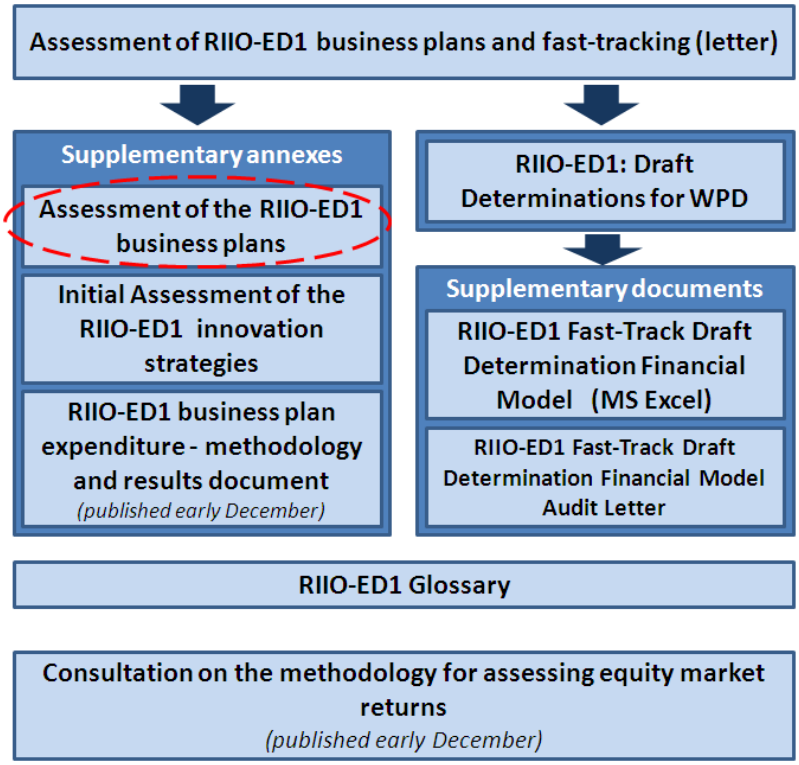
**Structure of this document**

1.8. This document is structured as follows:

- Chapter 2 sets out an explanation of the process we used for assessing the RIIO-ED1 business plans
- Chapter 3 provides a summary of our assessment of the plans in relation to our five high level criteria
- Chapters 4-9 set out an assessment of each of the six DNO groups' plans.
- Chapter 10 sets out next steps in this review
- Appendix 1 sets out a summary of respondents' views on the plans

1.9. Figure 1.1 below sets out a map of all the RIIO-ED1 documents we have published today. Links to all these documents are set out in the 'Associated Documents' section at the front of this document.

**Figure 1.1: Map of the RIIO-ED1 business plan assessment and Draft Determinations documents**



# 2. Overview of the assessment process

**Chapter Summary**

An overview of the assessment process, approach and criteria used.

## Assessment introduction

2.1. A core part of RIIO is the network companies' well-justified business plans. Each DNO is required to submit to Ofgem a detailed plan for the RIIO-ED1 period and beyond. This plan should demonstrate how it will deliver in the interests of both existing and future consumers and how they will meet the challenges associated with the transition to a low carbon energy sector. These plans should take into account the needs and views of customers and wider stakeholders.

2.2. In March 2013 we published our Strategy decision[2] on the key elements of the regulatory framework for RIIO-ED1. This included the outputs that we require companies to deliver, the incentive framework, and financial parameters. We also provided business plan guidance and described the tools we would use for assessing the DNOs' plans.

2.3. Under the RIIO framework, companies are incentivised to provide their best business plan by the potential to be fast-tracked. Fast-tracking is the process by which we settle a company's price control early based on the high quality of its submitted plan. Fast-tracking provides reputational benefits to the DNO, and enables it to start preparing for the new price control early (for example, by negotiating contracts). It also provides significant benefits to consumers in that it encourages companies to reveal information earlier in the process and to drive efficiencies and improve proposals for delivery from the companies remaining in the process.

2.4. The potential to be fast-tracked has clearly driven DNOs to raise their game in terms of delivering more for consumers for less. Plans show efficiency savings of more than £2bn versus previous forecasts. DNOs submitted their business plans to us at the start of July 2013, and published them on their websites. They have generally submitted good quality plans which demonstrate strong stakeholder engagement. They have provided significantly greater amounts of information for public scrutiny on their websites than ever before.

[2] See Ofgem (4 March 2013, ref: 26/13) Strategy decision for the RIIO-ED1 electricity distribution price control:
https://www.ofgem.gov.uk/ofgem-publications/47067/riioed1decoverview.pdf

## Incorporating stakeholder views

2.5. Stakeholders play a key role in RIIO. DNOs are assessed on the quality of engagement with their stakeholders, and how this has been reflected in their business plans. At the same time we have a multi-layered engagement process to ensure that all parties have the opportunity to give their views.

2.6. On receipt of the DNOs' business plans we published an open letter seeking views on the plans.[3] We received responses from 38 stakeholders, which we have taken into consideration when assessing the plans. We have published the non confidential responses on our website.[4] A summary of the responses is included in Appendix 1. A number of responses focussed on the DNOs' plans in terms of the respondents' areas of interest. Many simply confirmed their support of a DNO's plan.

2.7. DNOs presented summaries of their business plans at a Price Control Review Forum and stakeholders provided summary views.[5]

2.8. Our RIIO-ED1 Consumer Challenge Group (CCG) also reviewed the plans, met with the DNOs and provided its views to the RIIO-ED1 Committee of the Authority.[6]

2.9. The CCG is a small group of consumer experts which acts as a 'critical friend' to Ofgem. It provides an external perspective as we seek to ensure that the price control settlement is in the best interests of existing and future consumers. The CCG saw a transformation from previous reviews in the way DNOs have presented and informed their plans. It noted that there is a clear difference between the DNOs in terms of the way they have embraced RIIO and are enthusiastic about the way this enables them to own their plans and run their business.

## Assessment criteria

2.10. In our Strategy decision we set out the five core criteria against which we would assess the business plans. We also set out the key questions we would consider in assessing each DNO's business plan against the criteria. The criteria and questions are set out in Table 2.1 below.

2.11. We stated that in order to be fast-tracked, a DNO would need to demonstrate that their plan sufficiently met the criteria in all of the sections listed.

[3] https://www.ofgem.gov.uk/ofgem-publications/75338/riioed1bppublicationseekingviews.pdf
[4] https://www.ofgem.gov.uk/publications-and-updates/open-letter-consultation-riio-ed1-business-plans
[5] https://www.ofgem.gov.uk/publications-and-updates/price-control-review-forum-%E2%80%93-30-july-2013-summary-proceedings
[6] The Committee of the Authority is a sub-committee of the Authority, established to scrutinise the plans and advise the Authority on key areas of the development of Ofgem's proposals in relation to RIIO-ED1.

**Table 2.1: Assessment criteria**

| |
|---|
| **Process: Has the DNO followed a robust process?** |
| Is the business plan clearly presented, with all key content included? |
| Has the DNO engaged with stakeholders, and explained how this has influenced its business plan? |
| Has the DNO submitted, and justified, all data tables and the PCFM? |
| Does the business plan provide a strategy for long-term delivery? |
| **Outputs: Does the plan deliver the required outputs?** |
| Has the business plan covered the outputs specified in our Strategy decision or provided clear and compelling justification for any departures from the Strategy decision? |
| Has the DNO explained the resource implications for delivery of each output identified? |
| Has the DNO explained how it will deliver outputs, and justified output baseline/forecast? |
| Has the DNO explained the quality of its existing outputs and secondary deliverable information (including information on asset health, criticality and asset risk) and how it plans to improve this information in future? |
| **Resources (efficient expenditure): Are the costs of delivering the outputs efficient?** |
| Has the DNO demonstrated that cost projections are efficient? |
| How does the plan compare with others/does it reflect wider best-practice? |
| Has the DNO demonstrated that their financial costs are efficient? |
| Has the DNO explained cost projections in context of historical performance? |
| Has the DNO demonstrated a consideration of alternative approaches to achieving value for money in the delivery of its outputs? |
| Has the DNO clearly linked its expenditure to relevant outputs and secondary deliverables? |
| **Resources (efficient financing): Are the proposed financing arrangements efficient?** |
| Does the business plan conform with the financial policies specified in the strategy, are any departures well-justified? |
| Has the DNO provided evidence that financial costs are efficient? |
| Is the data in the plan consistent and has the DNO explained cost projections in context of historical performance? |
| **Uncertainty & risk: How well does the plan deal with uncertainty & risk?** |
| Has the DNO clearly articulated the key uncertainties it faces and considered how it will address them (eg including uncertainty mechanisms)? |
| Has the DNO considered risk and how to mitigate those risks? |

2.12. We have derived a 'traffic light' score for each of the five broad categories outlined above. These traffic lights produce a scorecard for each of the DNOs' performance. The scoring is as follows:

- green – areas of companies' plans that are broadly acceptable to us without the requirement for further (detailed) analysis
- amber - areas where we consider some work will be required to produce acceptable proposals in the business plan submitted at slow-track
- red - areas where we consider a lot of work will be required to produce acceptable proposals in the business plan submitted at slow-track.

## Assessment process

2.13. We have used a variety of qualitative and quantitative techniques to assess the plans. Our team met with the DNOs so that the DNOs could highlight where key elements are located in their plans. Throughout the assessment we have raised

points of clarification and potential errors with the DNOs through a formal question and answer process. As part of this process the DNOs have made some changes to elements of their plans – particularly the cost tables. We only allowed changes to correct errors - we have not considered any new or additional information that the DNOs have submitted since 1 July.

2.14. Our expenditure models and financial models have been checked multiple times by the companies during the process and we have also had the models externally audited.

# 3. Summary of assessment

**Chapter Summary**

A high-level summary of all the plans against the assessment criteria.

3.1. Our assessment of the DNOs' plans against each of the five assessment criteria is summarised in Table 1. For most elements other than costs, the DNOs presented common plans for the licensees within their groups. We have therefore presented our assessment by DNO group, unless different proposals were set out at the company level. Where this happens, we set out the individual assessments.

**Table 1: Summary of our assessment of DNOs' business plans**

| DNO Group | Licensee[7] | Process | Outputs | Resources – efficient costs | Resources – efficient finance | Uncertainty and risk |
|---|---|---|---|---|---|---|
| Electricity North West Ltd | ENWL | | | | | |
| Northern Powergrid (NPg) | NPgN | | | | | |
| | NPgY | | | | | |
| Western Power Distribution (WPD) | WMID | | | | | |
| | EMID | | | | | |
| | SWALES | | | | | |
| | SWEST | | | | | |
| UK Power Networks (UKPN) | LPN | | | | | |
| | SPN | | | | | |
| | EPN | | | | | |
| SP Energy Networks (SPEN) | SPD | | | | | |
| | SPMW | | | | | |
| SSE Power Distribution (SSEPD) | SSEH | | | | | |
| | SSES | | | | | |

## Criterion 1: Process

### Requirements of a well-justified plan

3.2. We set out in the Strategy decision that DNOs need to demonstrate through their well-justified business plans that a robust development process has been followed in planning for the RIIO-ED1 period. A well-justified plan should be clearly

[7] Electricity North West Ltd (ENWL); Northern Powergrid (NPg): Northeast and Yorkshire (NPgN and NPgY); Western Power Distribution: West Midlands, East Midlands, South Wales, South West (WMID, EMID, SWALES, SWEST); UK Power Networks (UKPN): London Power Networks, South East Power Networks, Eastern Power Networks (LPN, SPN, EPN); Scottish and Southern Energy Power Distribution (SSEPD): Hydro and Southern Electric (SSEH, SSES); SP Energy Networks (SPEN): Distribution and Manweb (SPD, SPMW)

communicated and evidenced and DNOs need to show that they have effectively engaged with stakeholders. A plan also needs to demonstrate that the DNO has not just considered delivery over the price control period but also the longer term. The plan should be a document that is owned by, and used by, the business rather than just being a regulatory submission

**Overview of the DNOs' performance with respect to process**

3.3. *Presentation and content*: In general all DNOs' plans are well presented and we have seen a step change in quality compared to submissions in previous price controls. Some DNOs' plans are clearly mapped out, making them easy to navigate and find specific information. NPg's plans are particularly well-written and have been praised by stakeholders. UKPN's plans are also very well presented.

3.4. All DNOs include a one-page summary of their plans for stakeholders, as set out in our Strategy decision. However, the format and presentation varied - we recognise that there was some confusion as to what should be included. We will provide more clarity on this in the future.

3.5. There were minor quality assurance issues with the data submitted alongside all the business plans. For most DNOs this did not have a material impact. However we have concerns regarding the accuracy of the some of the asset data submitted by SPEN.

3.6. *Stakeholder engagement:* We consider that the level of stakeholder engagement undertaken as part of RIIO-ED1 represents a significant improvement on previous price controls. DNOs have adopted different approaches and we would particularly like to highlight NPg's use of expert panels and the breadth and depth of WPD's approach that built upon their long-standing framework for engagement. All DNOs provide evidence that they have engaged with a broad range of stakeholders and used engagement mechanisms that are targeted to reflect different stakeholders' needs. We consider that improvements in stakeholder engagement have had a significant impact on the quality and transparency of DNOs' business plans. Stakeholder feedback is generally positive. However there are differences in quality between those DNOs where stakeholders have influenced the development of the business plan proposals from the outset and those where stakeholders may have been engaged with more to endorse proposals. We also note that while most plans include full details of engagement, some were not clear how they evaluated and monitored the effectiveness of their stakeholder engagement approach.

3.7. We are pleased to see that all DNOs commit to continue engaging with stakeholders. We will assess the quality of their ongoing engagement as part of our Stakeholder Engagement Incentive under the Broad Measure of Customer Service.

3.8. *Strategy for long-term delivery:* This was the weakest area of DNOs plans with respect to the process criterion. The majority of DNOs included limited consideration of long-term delivery. ENWL is the only DNO to set out a specific section on strategy for long-term delivery. Most DNOs consider long-term delivery as part of their sections on smart grids, low carbon technologies and stakeholder engagement.

## Criterion 2: Outputs

### Requirements of a well-justified plan

3.9. Under the RIIO model, we committed to setting out clear and comprehensive outputs that the network companies are required to deliver. These outputs, and the incentives to encourage the companies to deliver them, should ensure that the companies ensure value for money for current and future consumers while playing a full role in delivering a sustainable energy sector. In our Strategy decision we detailed output measures against the six primary output categories; safety, environment, customer satisfaction, connections, social obligations, and reliability and availability.

3.10. For many of the outputs we set the level (or baseline) to be delivered, taking into account stakeholder views. However, the DNOs were able to justify alternative baselines, and were also required in some areas to specify their own baselines (for example for the secondary deliverables asset health and loading indices).

3.11. We set out in the Strategy decision that we expected business plans to contain the following key elements.

- Justification of the DNO's proposed strategy for delivering their outputs against a thorough understanding of the long-term trends (and risks and uncertainties) they face.
- Clear links between expenditure, outputs and secondary deliverables.
- Demonstration that the DNO has considered stakeholders' views, and the opportunities to use innovative technologies, techniques or commercial arrangements to deliver their outputs at long-term value for money.

### Overview of the DNOs' performance with respect to outputs

3.12. All of the DNOs have built on the outputs framework we set out in our Strategy decision. The quality of strategies and explanations for the delivery of these outputs varies across the DNOs. As part of our assessment, we have also considered the DNOs' historical performance in delivering the outputs as a guide to how plausible we think their future plans are. A DNO that is currently a poor performer is not necessarily ineligible for fast-track, but where this is the case it will need to have recognised its current performance and put forward a credible plan for improvement.

3.13. All DNOs commit to complying with legislative safety requirements, and all accept our customer service and connections target setting proposals. All accepted, or in the case of WPD bettered, our requirements on reliability and availability. In particular, NPg and WPD submitted very strong strategies for helping customers in vulnerable situations. The majority of DNOs submitted strategies for the management of losses, although we were disappointed across the board with the standard of the associated cost benefit analysis and the level of ambition.

3.14. While some DNOs stated ambitions for performance under the Broad Measure of Customer Satisfaction, we have consulted on the target setting approach for this output, and therefore do not intend to bind the DNOs to their plan commitments in this area. However, for reliability the target setting methodology is clear – and one DNO group (WPD) has chosen to set out more aggressive targets. Within our assessment of the reliability output, we have scored a DNO that accepts our reliability targets green. We have also factored in the other elements of reliability, including health and criticality, load indices, resilience and guaranteed standards of performance. Where a DNO has set more aggressive reliability targets we have factored the value of the difference between its targets and ours into its assessment of efficient costs. We will include the enhanced targets in the fast-track licences.

3.15. All the DNOs include commitments to stakeholders in their plans. Most of these are not SMART (specific, measurable, achievable, relevant, timebound) and we therefore view them more as ambitions rather than outputs that we can hold the companies to. However we are creating a licence condition for all DNOs which will require them to publish an annual report on their progress on delivering the commitments in their plans. This will create a reputational incentive for them to deliver. We expect that stakeholders will engage with the DNOs on their performance on delivering their commitments.

## Criterion 3: Efficient expenditure

### Requirements of a well-justified plan

3.16. Under the RIIO framework, the onus is on the DNOs to demonstrate the cost-efficiency and long-term value for money of their business plans. As part of this we expected DNOs to set out:

- the costs of delivering the outputs and secondary deliverables that their plans will deliver
- cost projections in the context of historical performance
- proportionate cost benefit analysis and other justification for their expenditure
- the processes and tools they used to determine their efficiency; external benchmarking evidence; evidence of market testing and clear demonstration of consideration of their longer-term cost and output requirements.

3.17. The DNOs were required to set out forecast expenditures and volumes against all four scenarios for future low carbon penetration developed by the Department of Energy and Climate Change (DECC)[8] and justify how they had determined the scenario on which they had based their plans. We also set out in the Strategy decision that we expected the DNOs to demonstrate how they have considered

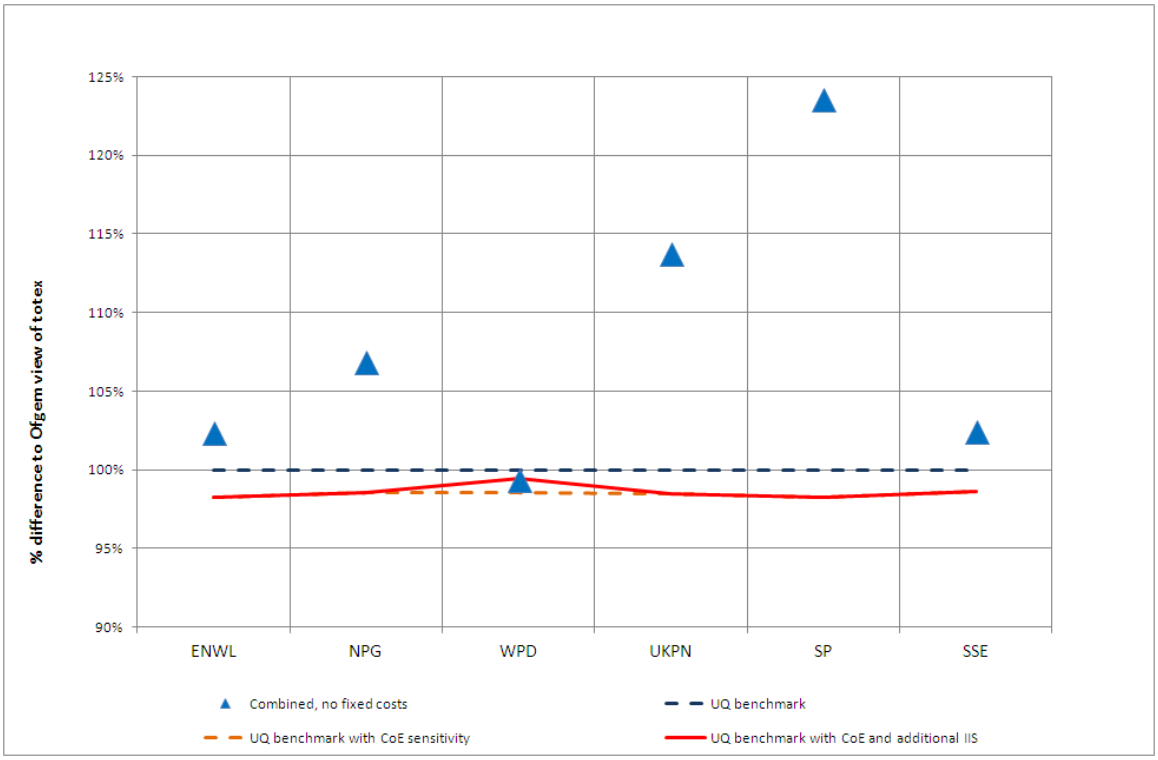
[8] DECC have created and updated four scenarios on the potential take-up of low carbon technologies. All scenarios meet the 2030 4th Carbon Budget but involve different relative contributions from the electrification of heat and transport and the use of carbon credits to offset emissions.

"smart grids" solutions in their plans, as well as the roll-out of innovation trialled in the current price control, and the impacts of the roll-out of smart meters.

**Overview of the DNOs' performance with respect to efficient expenditure**

3.18. Figure 3.1 provides a view of our overall assessment of expenditure for each of the DNO groups.

**Figure 3.1: Graph of submitted total expenditure versus our view of the efficient level, by DNO group**




3.19. Figure 3.1 shows each DNO group's proposed totex as a percentage of our assessed efficient level of totex. Our view of totex brings together the different elements of our toolkit approach. These comprise our three totex assessment models, two of which are based on assessments of totex as a whole ('top-down'), and one derived from an activity-level assessment. Our benchmarked efficient level of totex for each group uses the upper quartile (UQ), and is show as the blue dotted, 100 per cent, line in the graph.

3.20. In the combined view of totex, we have decided that it is appropriate to place a significantly greater weight on our activity-level analysis. We have set out more detail on how we assessed expenditures in Appendix 2. We will publish more detail on both the methodology and results in the RIIO-ED1 business plan expenditure - methodology and results document, which we will publish in early December 2013.

3.21. We set out in the following section on efficient financing that we have tested the DNOs' business plans against a range of realistic downside cost of equity scenarios. This is to ensure that any fast-tracked company remains sufficiently efficient overall to represent value for money for consumers. The orange dotted line on Figure 3.1 represents our central reference point for this.

3.22. In addition we have also factored instances where DNOs have offered up tighter customer interruptions (CI) and customer minutes lost (CML) targets than our benchmarking methodology has produced. This produces the red line on Figure 3.1 above.

3.23. As set out in Appendix 2 – Expenditure assessment, we have also carried out a range of sensitivity analysis to ensure the robustness of our assessment.

3.24. As shown on the chart, WPD is the only group on or below the red line. This means that the four WPD companies were robust to our testing of efficient costs. There is a clear and material difference in efficiency between WPD and the next closest DNO groups – ENWL and SSEPD.

3.25. We note that the DNOs provide a significant amount of information to enable us to conduct our assessment. In many cases they augment their submissions with detailed consultant's reports and their own analysis and benchmarking. There were notable variations in the robustness of the plans, with some companies articulating their plans and providing the requested information clearly and correctly.

## Criterion 4: Efficient financing

### Requirements of a well-justified plan

3.26. In the context of a price control, financing costs consist of two broad areas: technical accounting costs (the Regulatory Asset Value (RAV), totex capitalisation, pensions and tax), and corporate finance costs (allowed return on the RAV, depreciation, financeability and any transitional arrangements). A well-justified business plan would include, with regard to both technical accounting and corporate finance, all the key content, reflect our policies and represent efficient costs to consumers supported by relevant evidence. Any proposed departure from our policies should be based on robust analysis.

### Overview of the DNOs' performance with respect to efficient financing

*Technical accounting*

3.27. The DNOs generally comply with the technical accounting policies specified in our strategy decision document. Some DNOs assume significant increases in ongoing pension contribution rates. These are outside the scope of the RIIO-ED1 review. We will assess those assumptions as part of the pensions reasonableness review, which

will take place during 2014 in parallel to RIIO-ED1. Some DNOs do not provide evidence to support the proposed totex capitalisation rates.

*Corporate finance*

3.28. All companies accept the RIIO cost of debt index. All companies propose notional gearing ratios (65 per cent) and, apart from ENWL, cost of equity allowances (6.7 per cent) in line with those we set for DPCR5. ENWL propose a slightly higher cost of equity allowance at 6.8 per cent. SPEN accepted our approach to transitioning immediately to 45-year asset lives for calculating regulatory depreciation while other companies proposed to transition progressively over the eight years of the RIIO-ED1 period. We consider this longer transition would not disadvantage consumers overall. We are satisfied that the companies' proposals for other variables are generally acceptable.

3.29. The quality and diversity of the DNOs' submissions were limited. This partly reflects a reliance on jointly-commissioned studies. While recognising their business plans were submitted only months after our decision on equity allowances for broadly comparable gas distribution network companies in RIIO-GD1, no DNO referred to the evidence that had emerged since that decision. Although one company, SPEN, made reference to it, no DNO addressed the issues raised in our RIIO Financeability Study published in December 2012.[9]

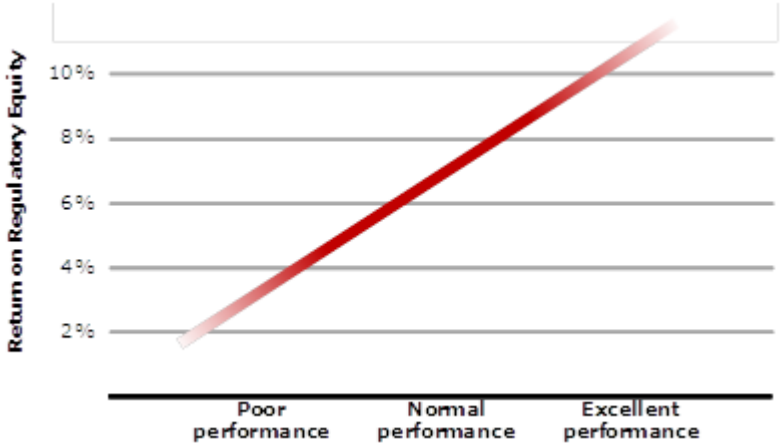
3.30. We have considered a range of market evidence that has emerged since our RIIO-GD1 decision, including transaction values for regulated network businesses. We have also reflected on statements of and reports for other regulators and we have analysed the impact of the Office of National Statistics' (ONS) conclusion on its review of the Retail Prices Index (RPI), announced on 10 January 2013.

3.31. We recognise there are dangers in giving undue weight to new evidence and that regulatory assessments over the years have generally been informed by longer-term perspectives. We also recognise that the overall prospective cost of capital implied by the DNOs' proposals is consistent with a cost of capital benchmark indicated by Ofwat for its PR14 review.[10] The cost of equity is necessarily an uncertain estimate. However, we consider that the balance of uncertainty at the time of this decision is on the downside relative to DNO assumptions.

3.32. An established principle of incentive regulation is that well-performing companies, operating against tough benchmarks, can earn good returns. Under-performers, on the other hand, would expect to earn below-normal returns. This principle is illustrated in Figure 3.2 below.

[9] https://www.ofgem.gov.uk/sites/default/files/docs/2012/12/9_riio_financeability_study_dec12.pdf
[10] A cost of equity of 6.7 per cent, gearing of 65 per cent and the 2.72 per cent RIIO cost of debt for 2014-15 generates a vanilla cost of capital of 4.1 per cent, equal to the figure cited in 'A message for water companies from Ofwat's Sonia Brown', Utility Week, 30 October 2013.

**Figure 3.2: RIIO equity returns**




3.33. As flagged in the previous section on efficient expenditure, in light of this principle, we have tested the DNOs' business plans against a range of realistic downside cost of equity scenarios. This is to ensure that any fast-tracked company remains sufficiently efficient overall to represent value for money for consumers. Our central reference point for this testing has been a cost of equity assumption of 6.3 per cent per annum. Proposing a higher cost of equity allowance means that a company needs to set itself especially challenging cost and output benchmarks to be acceptable for fast-tracking.

3.34. The business plans for the four WPD licensees were the only plans that remained robust to this testing. WPD provides the most cost efficient business plans and sets itself tougher reliability targets than those set by Ofgem. Our assessment confirms that the value of these, taken together with its proposed cost of equity allowance, represents real value for money for consumers.

3.35. Our assessment of cost of equity allowances for slow-tracked companies will be informed by the quality of the companies' revised business plan submissions and by new information up to the time of our Draft and Final Determinations in July and November 2014, respectively. It will also be informed by our analysis of the complex financeability issues that arise in a changing inflation and interest rate environment.

**Consultation on our methodology for assessing equity market returns**

3.36. The Competition Commission (CC) published its provisional determination for Northern Ireland Electricity (NIE) on 12 November 2013.[11] The CC, or its successor the Competition and Markets Authority, is the appeal body for the RIIO-ED1 settlements. Its position on this material matter of policy is therefore relevant.

[11] http://www.competition-commission.org.uk/assets/competitioncommission/docs/2013/northern-ireland-electricity-price-determination/131112_main_report.pdf

3.37. The CC estimates NIE's weighted average cost of capital (WACC) to be 4.1 per cent. This is broadly similar to the prospective WACC for the DNOs taking their proposed cost of equity allowances, notional gearing ratios and our estimate of the RIIO cost of debt index for 2014-15. Although its overall estimate is similar, the Competition Commission assessed a rather higher cost of debt and a rather lower cost of equity.

3.38. The higher cost of debt incorporates an assessment of the company's actual cost of existing debt and reflects the CC's observation of an historical premium in the yield on NIE's debt compared with debt issued by the DNOs in Great Britain.

3.39. Some of the lower cost of equity can be attributed to differences in gearing assumptions, offset in part by a slightly higher asset beta. The CC assessed NIE's asset beta on the basis that the Northern Ireland regime is less well understood by investors than that operating in Great Britain. There remains a material underlying difference in the cost of equity because the CC appears to have adopted a different approach to assessing equity market returns.

3.40. The CC's point estimate for NIE's cost of equity is based on a prospective equity market return of 6.0 per cent, significantly lower than regulators have conventionally used. Ofgem, like other regulators, has historically given significant weight to longer run evidence of equity market returns and the recommendations of the jointly commissioned Smithers & Co study in 2003[12] that equity market returns are relatively stable. Smithers & Co estimated a range of 6.5 to 7.5 per cent for equity market returns and regulators have since remained broadly within that range (real, RPI-adjusted). We consider that a structural change in the formula effect in the RPI may now require this range to be re-calibrated. We also note the CAA's October 2013 decision[13] estimated a narrower range of 6.5 to 7.0 per cent for the equity market return and used a point estimate of 6.75 per cent. The reference point we have used for stress-testing the DNO business plans is consistent with an equity market return of 6.85 per cent.

3.41. The CC's lower estimate arises from its general approach[14] that long-run averages are relevant only to the extent that they affect the cost of capital in the control period. In its discussion on the cost of equity, the CC signalled a forward-looking approach and expressed its view (paragraph 13.144(d)) that "A forward-looking expectation of a return on the market of 7.0 per cent does not appear credible to us, given economic conditions observed since the credit crunch and lowered expectations of returns".

3.42. Our interpretation is that the CC has not necessarily changed its approach, but it appears to have given more weight to more contemporary evidence, both since the middle of the last century and since the credit crunch.

[12] 'A Study into Certain Aspects of the Cost of Capital for Regulated Utilities in the UK', Smithers & Co, February 2003
[13] CAP 1115, 'Estimating the cost of capital: a technical appendix to the CAA's Final Proposal for economic regulation of Heathrow and Gatwick after April 2014' CAA, October 2013.
[14] explained in paragraph 13.6 of its report

3.43. Other things being equal, we calculate that adopting the CC's assessment of equity market returns for RIIO-ED1 would have the effect of reducing allowances for the cost of equity by about 0.8 per cent per annum.

3.44. However, we consider there is a broader policy question for Ofgem behind the decision whether to base market return assessments on long-run historical averages or forward-looking estimates informed by more contemporary market evidence. It is therefore important that we analyse the issues from the perspective of the consumer interest, taking both current and future consumers into account.

3.45. We will need to assess the impact on consumers of adopting a more contemporary forward-looking basis for assessing equity market returns. We will consider the positive and negative impacts on both current and future consumers of:

- a lower equity market return assessment for RIIO-ED1
- whether cost of equity assessments might become more volatile
- whether investment incentives might be better calibrated
- whether more contemporary forward-looking assessments would be compatible with RIIO eight-year control periods
- whether more short-run market factors and associated systematic risk would be introduced into regulatory assessments
- whether there would be more methodological uncertainty and perceived regulatory risk.

3.46. We propose to consult on our methodology early in December 2013, holding a workshop on the issues early January 2014, with a view to reaching a conclusion in February 2014 before our fast-track decision. Our conclusion would establish an enduring policy basis for our cost of equity assessments. If that policy basis represents a change from that signalled in our Strategy decision, we will provide WPD with the opportunity to accept an adjusted cost of equity as part of its fast-track settlement. We would calibrate the adjustment to reflect only the impact of the policy change.

3.47. Since we will consult on our methodology for assessing equity market returns in the light of the CC's recently published position, we have not incorporated a change to our methodology in our analysis. For the remainder of this document when we refer to downside testing on cost of equity we are referring to the testing set out in paragraph 3.32.

## Criterion 5: Uncertainty and risk

### Requirements of a well-justified plan

3.48. We expected each DNO to clearly articulate the key uncertainties it faces, and how it proposes to address them. We set out in our Strategy decision what we considered to be an appropriate set of uncertainty mechanisms. However, we noted

that DNOs could justify different or new mechanisms in their plans. In our assessment we consider whether the DNO has an appropriate balance of risk between themselves and customers. This includes how well the DNO has justified its view of the take up of low carbon technologies (LCTs) in its areas in comparison to the DECC scenarios.

3.49. We also expected the DNO to consider the residual risk it faces (assuming any uncertainty mechanisms are in place), and the mitigations it has considered. In assessing this we consider how well the DNOs have set out how they might transition between their chosen scenario for the take-up of LCTs and any other scenario that could arise.

**Overview of the DNOs' performance with respect to uncertainty and risk**

3.50. The majority of DNOs include the uncertainty mechanisms we set out in the Strategy decision. ENWL and SSEPD proposed additional mechanisms. We consider ENWL's mechanism to be well-justified and accept the proposal for one of SSEPD's mechanisms. We consider that SSEPD's other proposals for uncertainty seek to transfer too much risk to customers.

3.51. While all DNOs describe how they developed the forecast volumes of LCTs, there is variation in how thorough their approaches are. A range of methods has been used, but all feature stakeholder engagement. However, the business plans generally do not provide very detailed evidence to support the forecast LCT volumes. While most DNOs have chosen a variation of DECC's low scenario, there is wide variation in forecasts for each LCT.

3.52. The DNOs do not include much on how they plan to manage the residual risk in RIIO-ED1. What information they provide varies between DNOs. There is also variation in the detail of DNOs' strategies for managing the uncertainty of transition between LCT scenarios. All DNOs identify additional revenue requirements for the different scenarios. They set out how they will accommodate increases in LCT penetration beyond their 'best view' forecast by using uncertainty mechanisms or adjusting their investment plans. However, not all DNOs consider in detail the impact of different scenarios on a wide range of areas of their business.

# 4. Next steps

**Chapter Summary**

The next steps in the RIIO-ED1 review.

4.1. The consultation on our proposal to fast-track WPD, and on its Draft Determinations, closes on 22 January 2014. As stated earlier, we will also consult in parallel on our methodology for assessing equity market returns. We aim to publish the decision on our methodology in February 2014 in advance of our decision on fast-track. Should we conclude it is appropriate for us to adopt the CC's position, we will offer WPD the opportunity to accept an adjusted cost of equity as part of its fast-track settlement. Subject to this, and if, following consideration of responses, we confirm our intention to fast-track WPD we will publish its Final Determination at the end of February. If, in light of the consultation, we decide not to fast-track WPD, it will return to the slow-track process with the remaining DNOs. In this case, it is likely that many elements of its plan would be suitable for proportionate treatment.

4.2. We have been working with the DNOs to create the licence conditions for RIIO-ED1. We will issue an informal consultation on the conditions in January 2014, and plan to issue the licences for WPD in May 2014. We expect most of the licence conditions to be the same for fast-track and slow-track companies.

4.3. Slow-track DNOs will submit their revised business plans in March 2014, and we will publish Draft Determinations in July. We recognise that our consultation on our methodology for assessing equity market returns creates some uncertainty over what the DNOs should assume for their revised business plans. The DNOs are likely to be finalising their plans in advance of our publication of our conclusion on this matter. For the purposes of revising their plans DNOs should assume that we will maintain our existing methodology for assessing equity market returns, ie the same basis as we have assessed their current plans. However, they should also consider what elements of their plans they would need to change if we were to adopt the CC's position.

4.4. We will publish Final Determinations for slow-track DNOs in November 2014.

4.5. The forward timetable for RIIO-ED1 is set out in Figure 4.1 below.

**Figure 4.1: RIIO-ED1 high-level timetable**

| | | |
|---|---|---|
| **2013** | **early December** | Consultation on methodology for assessing equity market returns published |
| **2014** | **end February** | Decision on methodology for assessing equity market returns published<br>Fast-track Final Determinations published |
| | **mid March** | Slow-track DNOs submit & publish revised business plans<br>Invitation for comment (4 weeks) |
| | **May** | Issue fast-track licence (provisional timing) |
| | **July** | Slow-track Draft Determinations published (8 weeks consultation) |
| | **November** | Slow-track Final Determinations published |
| | **December** | Statutory consultation (28 days) on licence modifications |
| **2015** | **April** | 1st - new price control (RIIO-ED1) commences |

# Appendices

# Appendix 1 - Summary of responses

1.1. We received 38 responses to our July open letter.[15] The non-confidential responses can be found on our website.[16] We summarise the key points raised by respondents in this appendix.

## Process

### Stakeholder engagement

1.2. Respondents were generally positive about the DNOs' stakeholder engagement. Many reported that discussions had been constructive and that their views had been taken into account in the business plans.

1.3. One respondent felt that the DNOs had balanced the varied views of different stakeholders very well and also commented that they had responded positively to the challenge of engaging with consumers. However, another respondent was disappointed with the DNOs' engagement with unmetered supply customers at local authorities. A third respondent also considered that manufacturers and service providers should be recognised as stakeholders and that DNOs should engage formally with trade bodies that represent these parties.

1.4. One respondent commented positively on the range of different engagement approaches used by the DNOs. However, two respondents questioned the value of broad stakeholder sessions where many different issues are addressed; these stakeholders thought that the smaller, more bespoke session were more productive. Another stakeholder requested more tailored sessions for major generation customers connecting to distribution networks.

1.5. One respondent felt it was appropriate for the DNOs to include details in their plans about ongoing stakeholder engagement, given the number of areas which involve future uncertainty. They were pleased that a number of DNOs, including ENWL, NPg and UKPN, had established groups within this remit.

1.6. A number of respondents made comments relating to specific DNOs. NPg in particular was praised by several different respondents. Reasons included its proactive approach to seeking input, openness to taking on board comments and responding to challenges, and its provision of good quality feedback on progress. One respondent cited the development of a real-time outage notification system in NPg's business plans as evidence of feedback taken on board.

[15] https://www.ofgem.gov.uk/ofgem-publications/75338/riioed1bppublicationseekingviews.pdf
[16] https://www.ofgem.gov.uk/publications-and-updates/open-letter-consultation-riio-ed1-business-plans

1.7. UKPN was also praised by two respondents for taking on board the views of London stakeholders, with one commenting on UKPN's willingness to adapt their consultation strategy. Another stakeholder praised the good leadership shown by ENW through smart grids and distributed generation (DG) forum events.

1.8. WPD also received some positive comments about its willingness to engage, but was criticised by two respondents for failing to explain why their views on undergrounding were not reflected in its business plan.

1.9. A few respondents reported that they were displeased with SPEN's overall engagement. This was for a variety of reasons including a lack of willingness to engage and failure to reflect stakeholder views in its business plan. However a number of late responses were more complimentary.

**Structure and presentation of plans**

1.10. Several respondents commented that the business plans were too long and inconsistent for stakeholders to be able to easily extract the information of relevance to them. This also made the plans hard to compare. A couple of respondents commented that the plans read too much like regulatory submissions and could be more customer and stakeholder focussed. Suggestions to overcome these issues included the use of a standard format for summaries, tables containing key highlights, word limits and the publication of targeted material or summaries for specific stakeholder groups.

1.11. One respondent considered that the plans were an improvement on the plans submitted by gas distribution companies during the RIIO-GD1 price control review and that there had been a better use of executive summaries. A couple of respondents also commented positively about the user-friendliness of the DNO websites.

1.12. One respondent felt that the business plans contained very few links for business customers as most of the focus was on households. It commented that WPD has one of the more easily navigable websites for distributed generation customers, but that this is missing from its business plan.

**Complete information**

1.13. Two respondents thought that the DNOs' use of 2012-2013 prices for the comparison of charges from year to year was misleading, as it did not give an indication of the actual trends.

1.14. Another considered that whilst ENWL's business plan was comprehensive and well justified in respect of undergrounding, it would have been useful if it had provided a breakdown of the costs associated with each National Park and Area of Natural Beauty (AONB).

1.15. Two respondents commented that NPg's plan had all the information necessary for them to understand its impact on social issues and staffing respectively.

1.16. Another respondent commented that the trend in distribution use of system charges for non-domestic customers contained in SPEN's business plan did not tally with its own experience. The respondent was also disappointed that UKPN failed to properly demonstrate the year on year change in these charges.

## Outputs

### Customer service and social obligations

1.17. One respondent considered that the DNOs' proposals in relation to managing interruptions, communicating with consumers, tackling vulnerability and maintaining guaranteed standards were positive changes which built on strong past performance. However, more could be done to improve the experience of Worst Served Customers (WSC). In cases where reinforcement is very expensive, the respondent considered that DNOs should explore alternative measures to improve WSC experience.

1.18. The same respondent commented that, although the debate surrounding DNO action on fuel poverty was at an early stage, the DNOs could explore taking more substantive action in this area (eg details of pilot projects and partnerships).

1.19. The respondent also believed that there could be better linkages between low carbon work and fuel poverty/social work, noting that WPD is undertaking work in this area. Nevertheless, it was pleased that DNOs were starting to recognise that consumers demanding community-level DG may require different types of assistance.

1.20. A respondent highlighted that there were several areas where suppliers and network operators could collaborate to help address consumer vulnerability and encouraged companies to explore these opportunities.

1.21. Two respondents praised NPg for its clear commitment to deliver on social issues.

### Safety

1.22. One respondent considered that NPg's business plans demonstrate it would be able to manage safety effectively and continue to be a sector leader in this area.

1.23. Another respondent requested further detail in relation to the steps DNOs take to comply with the Electricity Safety, Quality and Continuity Regulations (2002) and to mitigate the risk of intake/meter fires.

1.24. Several respondents praised SPEN's approach to worker safety.

**Visual amenity**

1.25. A few respondents commented that they were pleased that the DNOs had generally chosen to invest their whole allowance for undergrounding in AONBs and National Parks. However, there was some confusion as to why there was variation in the allowance commitment.

1.26. In particular, there was concern about WPD's decision to only invest 23 per cent of its allowance. These stakeholders felt that this decision was not well justified, as it had not taken into account a number of relevant issues and because it was based on WPD's own more limited analysis rather than Ofgem's national willingness-to-pay research. As a result, these stakeholders recommended that WPD should not be fast-tracked.

**Meeting the needs of specific stakeholder groups**

1.27. Two respondents considered that UKPN's plans should deliver a more efficient and robust network in London and that its planned reinforcement of existing substations should provide sufficient capacity to accommodate London's development projections through to 2023. Their main concern was whether the reinforcement plan is flexible enough to ensure capacity is available in sufficient time to meet property developers' needs.

1.28. One of these respondents was also pleased that UKPN had committed to the development of a customer portal for fault information in London. However, it felt that UKPN had not sufficiently explained how it would do more to manage the incidence of street works and that the impact of lane rental on street works should have been taken into account. It was also concerned about the potential impact of standby diesel generators on air quality in London.

1.29. Another respondent noted that, while it was pleased with the general trend of price reductions for customers, resilience and the availability of capacity are more important for many business customers.

1.30. One respondent felt there should be improved consistency in DNOs taking a proactive approach to enable Independent Connection Providers to operate across the entire UK.

**TO and SO interactions**

1.31. A few respondents commented that there appeared to be very little in the DNO business plans on Transmission Operator (TO) and System Operator (SO) interactions. For example, it was not clear to one respondent that the DNOs had identified the resources needed to address the increasingly important need to make DNO system data available for SOs. Respondents also questioned whether TO and DNO business plans and incentives were sufficiently aligned.

**Innovation and smart grids**

1.32. One respondent commented that NPg's plans are ambitious, comprehensive and well-justified in terms of innovation. This was due to commitments to incorporate solutions such as real time thermal ratings, demand-side response and more sophisticated voltage control and the inclusion of promising initiatives around how best to explore smart meters and modern information communication technologies. The respondent was also encouraged by the explicit recognition that the move to more innovation will require changes in terms of skills and operations.

1.33. Another respondent was extremely concerned that innovation would be limited to cases where DNOs perceived that improvements could lead to rewards through multiple reward mechanisms. It was worried that, for example, triple rewards could be gained for innovation that helps with environmental emissions, which in turn results in greater efficiency and is paid for through the LCN Fund.

1.34. A couple of respondents felt that DNOs were too reactive when it came to innovation, and that they should set out a more proactive approach in their plans.

1.35. A number of respondents indicated that they felt there was a lack of a long term strategy from the DNOs when it came to innovation and the reinforcement of the grid to facilitate small-scale and large-scale generation. One respondent commented that the majority of innovation strategies were nondescript and did not give an indication of what could be expected in the future. It had also not received a clear explanation of LCN Fund benefits from DNOs despite asking numerous times.

1.36. In addition, the respondent also had great difficulty in understanding the business plans in terms of the assistance DNOs will offer suppliers with the smart meter roll-out. In its view, there had been a lack of thought about the benefits of smart meter data. This view was supported by another stakeholder which commented that there was no clear picture of the link between smart meters and the development of smart grids.

**Distributed generation and connections**

1.37. A number of respondents welcomed the proposals around improvements in service for generation customers, including the establishment of account managers and points of contact. However, one respondent considered that there could be greater detail on some of the timescales involved with these proposals, including what it considered to be NPg's excellent proposal to produce a guide for connecting small-scale generation.

1.38. The respondent also called into question the use of broad customer satisfaction measures. It felt there should be disaggregated satisfaction measures, with different weightings for different customer groups (eg more emphasis on connections for DG customers). Another respondent also stressed the need for representative satisfaction measures for the new Incentive for Connections Engagement.

1.39. One respondent was disappointed to see little evidence of proactive, innovative ideas to facilitate the strategic reinforcement of the grid. It noted that smaller generators cannot always trigger investment by themselves and may be given prohibitive quotations. However, DNOs could invest on the basis broad interest in a particular area. The respondent would welcome wider interest from DNOs in this kind of idea. Another respondent from the South West of England called for WPD to set out key criteria for a consortium approach to support reinforcement.

1.40. A respondent also called for DNOs to include strategies in their plans for carrying out the pre-approval works for necessary investment before they have contractual agreements between parties (as is the case for transmission).

## Efficient costs

### Future efficiency gains

1.41. One respondent stated that price reductions were smaller than expected for all DNOs. It was not confident that they offered consumers value for money. It considered that cost savings in the following areas had not been fully recognised:

- reduced reinforcement due to lower demand growth
- benefits from smart meters and smart grids
- benefits from projects such as the LCN Fund
- the impact of reducing depreciation for new assets from 20 years to 45 years.

1.42. In particular, the respondent was very disappointed by the lack of information in all the business plans about potential efficiency gains from the LCN Fund, smart solutions and future innovation. It considered that savings in these areas had generally not been thought through, largely underestimated and in some cases completely ignored (for example potential benefits from DSR). In particular, the respondent highlighted the inconsistency across DNOs in the estimates of savings from smart meters/grids. It believed that underestimations of these benefits could either lead to serious inefficiency or unwarranted gains through the IQI mechanism.

1.43. However, a different respondent considered that there was evidence that the DNOs had considered learning from the LCN Fund and that there was a strong emphasis on translating this into business as usual.

1.44. Another respondent considered that NPg's business plans are very optimistic about efficiency gains from new technology before 2023.

### General expenditure

1.45. Three respondents supported UKPN's proposed expenditure on the London network, including the proposed £100m expenditure for the London Infrastructure Plan. However, the respondents were disappointed that, due to a regulatory constraint, this had been reduced from £170m. They highlighted that they would be

very concerned were this to be reduced further. In their view, UKPN's business plan met the conditions to be fast-tracked.

1.46. Two of these respondents also voiced support for the proposed £40m expenditure on greater network resilience and the establishment of two 24 hour fault response service depots, with one referencing London customers' high Value of Lost Load (VoLL) as evidence that this expenditure was justified.

1.47. One respondent considered that NPg's expenditure proposals were based on a significant increase in productivity and were therefore stretching. However, this provided a strong incentive for staff to continue to be engaged in improving efficiency. The respondent thought that ultimately NPg's costs were well-justified and reflected the strong expertise of its staff.

1.48. One respondent was pleased that WPD had put forward £2.8m for grid reinforcement due to the deployment of DG, but was concerned that this might not be enough given current constraints and future demand. One respondent questioned why UKPN and SPMW's investment costs exceeded operating costs by more than the other DNOs.

1.49. Two respondents noted that DNO investment should be examined in the context of wider energy costs. One of these respondents considered the DNOs' analysis of the impact of expenditure proposals on consumer bills was limited, as it did not take into account the potential wider savings from investment, such as swifter connections, reduced risk and protection from the volatility of fossil fuel prices.

1.50. One respondent considered that allowances should not be given for real price effects (RPEs) and that price control settlements have been overly generous in this area previously. This was based on the view that there was no reason why DNOs should be protected from the economy-wide effect of wages falling below inflation.

1.51. Other generic comments on DNO expenditure included:

- in order to protect consumers, a DNO should only be fast-tracked if Ofgem is confident it is in the upper-quartile in terms of cost efficiency
- the decrease in capital expenditure in a number of areas warrants attention given the need for widespread DG connections
- some of the current network design policies have led to unnecessary infrastructure investment in the past; these should possibly be examined in more detail
- the assessment of plans should not be overly influenced by the apparent trend in price decreases from DPCR5; this is in part due to the profiling of revenues during DPCR5. Average revenues are in fact increasing in RIIO-ED1
- finding it hard to reconcile that five out of six of the DNOs have benchmarked themselves as efficient

- the move to an outputs based approach to regulation should be treated with caution and there should be no step change in the level of non load-related asset replacement from DPCR5
- with their expenditure proposals, DNOs should recognise the pressure their market power places on manufacturers, and the possible consequences for innovation and the interests of consumers
- suppliers should take a leading role on DSR; providing funding to DNOs to build customer relationships in this area would be inefficient.

## Financing

1.52. One respondent considered that none of the DNOs' financial proposals were efficient. As a result, it believed that none of the DNOs met the conditions to be fast-tracked and that fast-tracking any company would lead to an overall detriment to consumers. This view was based on analysis it commissioned by and independent consultant. Among its key points were:

- the effective cost of equity proposed by all DNOs of around 7.7 per cent far exceeds the efficient range of 6.0-6.5 per cent provided by its independent analysis
- the cost of debt indexation contained implicit headroom and DNOs would continue to outperform this index
- DNOs are seeking to justify their required rate of return based on the existing DPCR5 package rather than the standalone cost of capital.

1.53. Two respondents noted that the financial packages being requested by DNOs were dependent on a company being fast-tracked. These respondents did not consider that slow-tracked DNOs should receive a higher cost of capital.

1.54. One respondent believed that NPg's financial proposals were realistic in an environment where significant large scale investment is needed in many sectors. This respondent felt that NPg was accepting a high level of financial risk and that its plan should be fast-tracked to reassure investors.

## Uncertainty and risk

### Innovation and uptake of low carbon technologies

1.55. Several respondents commented on the DNOs' approaches to addressing future uncertainty about network innovation and the uptake of low carbon technology. One respondent considered that the plans had recognised the need for flexibility in this area.

1.56. However, two respondents questioned the contingency plans DNOs have in place for the higher than anticipated uptake of low carbon technology. They thought that there needs to be more comprehensive strategies for not only reacting to, but

also facilitating, greater uptake in renewable generation. In particular, it was not clear to one respondent the extent to which DNOs would engage with low carbon connections as expenditure reached and exceeded reopener thresholds.

1.57. Another respondent thought NPg's plan struck an appropriate balance between a conservative approach that constrains low carbon deployment and a risky approach that wastes consumer money.

1.58. One respondent thought the low DECC scenarios used by DNOs in relation to the uptake of low carbon technologies were unambitious and self-fulfilling. In particular it questioned:

- why some DNOs have assumed only 3 per cent of households will install photovoltaics when DECC has previously spoken of up to 17 per cent?
- why no companies, except for UKPN, have set out specific examples for wind deployment?
- why is there a disparity between the DNO's assumptions and NGET's 'Gone Green' scenario?
- whether DNOs had opted for low expenditure scenarios solely because they believed this would increase their chance of being fast-tracked?

**Other**

1.59. One respondent believed that the Interruptions Incentive does not reflect an appropriate balance between risk and reward. This is because the target measures will provide DNOs with large rewards for no real improvement in service. In its opinion, this reinforced the view that the returns being sought by DNOs are unacceptable.

1.60. The respondent also noted that load growth assumptions for DPCR5 turned out to be significantly higher than expected. It warned that the same could occur for RIIO-ED1 if DNOs estimations of economic recovery are too high.

## Other

1.61. Respondents made a number of other comments on wider issues and Ofgem's role, some of which are summarised below:

- The four-week consultation period provided to analyse the plans is not long enough given the importance of the consultation. In addition, it is disappointing that the framework for incentives and key outputs cannot be added to at this stage of the process, as it is only once business plans are published that certain deficiencies can be revealed.
- Use of the Transform model for long term strategic planning and smart grid deployment is supported, but how it is used by DNOs during the price control should be reviewed.
- Ofgem should publish all outstanding Annual Reports in order to assist stakeholders in benchmarking and the analysis of the business plans.

- If WPD is fast-tracked, the unused allowance for undergrounding should be reallocated to other DNOs, so that the national willingness-to-pay is reflected.
- Ofgem should review its strategy around DNO network investment ahead of need; in particular UKPN should be allowed to future-proof the London network to ensure that developers have certainty that capacity will be available in required timescales.
- Ofgem should make a summary of its expert analysis of the model outputs available on its website.
- Tools should be developed that allow a distribution network to be able to solve a problem on a transmission network (and vice versa) where this is more efficient.
- Ofgem should not intervene in salary or pensions proposals when it comes to price control negotiations, as this could deter skilled individuals from joining the industry.
- There needs to be wider economic analysis of the impact of business plan proposals on consumer bills (not just the direct effect from expenditure). Ofgem may wish to provide guidance in this area to ensure consistency in the methodologies used.
- Ofgem could examine how it could permit reasonable anticipatory investment by DNOs where this might be needed for large scale renewable projects.
- Ofgem's support is essential to reduce the volatility of distribution charges.

# Appendix 2 – Expenditure assessment

1.1. As set out in our Strategy decision, and building on our approach from DPCR5 and RIIO-GD1, we have applied a broad toolkit approach to our cost assessment that makes good use of the rich information that is now available under the RIIO framework to differentiate the quality of DNOs' business plans. We have made use of quantitative and qualitative assessment, DNO narrative and supporting evidence, historical cost and performance data and company forecasts. We have carried out comparative analysis for both totex as a whole and on an activity level basis. This ensures that no single approach is deterministic in reaching our view on the efficiency of expenditure in the DNOs' plans. We have used specific technical and economic expertise to inform and assist us in carrying out our assessment and to provide assurance on the robustness of our approach.

1.2. We have benchmarked the efficient level of totex for each DNO using the upper quartile (UQ) rather than the frontier to allow for other factors that may influence the DNOs' costs. The upper quartile level of efficiency (lower quartile level of costs) is the 75 per cent value in the distribution of efficiency scores. While, on any one measure of efficient totex, it is only possible for four out of 14 DNOs to outperform this, we also have given regard to the spread of efficiency scores. Had most of the DNOs been tightly banded, we would have considered DNOs close to the upper quartile as being efficient. We have made an adjustment to the upper quartile level of efficiency to take account of instances where DNOs have offered up tighter customer interruptions (CI) and customer minutes lost (CML) targets than our benchmarking methodology has produced. These differences have been valued at the relevant CI and CML incentive rates. We have adjusted the efficiency level to ensure our testing is robust to downside cost of equity (for further detail see the Efficient financing section in Chapter 3).

1.3. For our activity level analysis we sum forecast and modelled costs back up to totex and calculate an overall efficiency for each DNO before calculating the upper quartile benchmark. This reduces the risk of cherry-picking between activities.

1.4. We have decided that it is appropriate to place a significantly greater weight on our activity-level analysis in reaching our conclusions for fast-tracking. This is because our activity level analysis enables a richer model specification, ie we can take into account a greater number of potential factors that explain costs, including the efficiency of both volumes and unit costs. It also enables us to take into account the qualitative work carried out by our technical consultants, KEMA, and economic consultants, CEPA, in reviewing the plans and the associated cost benefit analysis (CBA) assessments. This analysis gives greater clarity on where companies' forecasts are better or worse than our benchmarks.

1.5. We consider that our different assessments of totex have provided significant value in helping us to qualitatively challenge the results of our activity level analysis and understand the key drivers of differences in performance. However, we consider it is important to recognise the limitations of the top-down totex approaches. We are

concerned that some DNOs appear to have submitted over-optimistic forecasts of the cost drivers used in our totex analysis. This would favour them in the efficiency results. Given the limited number of data points it is only realistic to use a small number of cost drivers in the totex benchmarking. We consider that this approach may not sufficiently address differences in sparsity for SSEH and SWEST, differences in transmission connection point charges, the uptake of DG or differences in the asset replacement cycle.

1.6. We have also carried out a range of sensitivity analyses in our quantitative work to ensure the robustness of our assessment. These include:

- varying the regional labour- and company-specific factors
- using common allocation of indirects
- dropping SPEN's data from the benchmarking as SPEN is an outlier in our cost assessment, largely driven by the scale of expenditure requirements it has put forward for SPMW
- applying a fixed cost adjustment for each DNO based on the work that was carried out by KPMG on behalf of ENWL
- carrying out regressions using 13 years of data rather than just the historical years
- using Random Effects rather than our main pooled ordinary least squares methodology.

1.7. These sensitivities give us confidence that the overall conclusions drawn using our toolkit approach are robust.

1.8. We have circulated an early version of our models to the DNOs in order for them to check normalisations, linkages between workbooks and internal calculations. We appointed an academic advisor, and an external auditor, to minimise the risk of inaccuracies in our modelling. We have completed our cost assessment for fast tracking and we do not intend to make any further corrections to this assessment for any points that may be subsequently identified by the DNOs. Our approach of applying the upper quartile, and using a broad toolkit including quantitative and qualitative analysis and a range of sensitivities, takes into account the possibility of inaccuracies in the modelling and we are therefore confident that our overall assessment is robust.

1.9. We will provide further detail in the RIIO-ED1 business plan expenditure – methodology and results document which we will publish in early December 2013.

# Appendix 3 – Assessment of ENWL's plans

**Chapter Summary**

High-level assessment of Electricity North West Limited's business plans.

## Overall assessment of ENWL's plan

1.1. ENWL's plan is available at http://www.enwl.co.uk/businessplan. We conclude that it is a strong overall plan. However, at this stage, we are not convinced that its proposed expenditure allowances are efficient.

1.2. Our assessment against the criteria is summarised in the table below and explained further in the remainder of this chapter. On the basis of our assessment **we have decided not to fast-track ENWL**.

| Criteria | ENWL |
|---|---|
| Process | |
| Outputs | |
| Efficient expenditure | |
| Efficient financing | |
| Uncertainty and risk | |

## Respondents' views

1.3. Five respondents provided comments specifically on ENWL's plan. Key points raised were:

- questions about how ENWL (and the other DNOs) will ensure safety during the smart meter roll-out. We consider these to be useful issues for the DNOs to consider going forwards
- ENWL's good quality engagement with stakeholders interested in the undergrounding of lines in designated areas
- the fact that ENWL had obtained external assessment for its stakeholder engagement, and has established ongoing stakeholder groups.

## Assessment of ENWL's plan - process

1.4. ENWL's plan is clear and relatively easy to navigate. Its plan broadly follows the structure that we set out in our Strategy decision, although the number of sub-headings sometimes makes finding information difficult, particularly when reading the plan on its website.

1.5. ENWL provides evidence of robust stakeholder engagement governance arrangements. It engaged with stakeholders as part of its "Switched-On: North West" campaign. It provides evidence that it differentiates between stakeholders and tailors engagement mechanisms to reflect their needs. It provides some information about how feedback from stakeholders has shaped its business plan.

1.6. ENWL has set out a comprehensive strategy for long-term delivery in a separate section of its business plan. Its strategy considers a range of areas including the impact of low carbon technologies and consideration of future reinforcement. It also includes an overall forecast of required network investment over the next 40 years. Overall we consider that ENWL's plan demonstrates that a robust process was followed.

## Assessment of ENWL's plan – outputs

### Safety

1.7. We have considered the evidence provided by the Health and Safety Executive (HSE) and have concluded that ENWL's business plan is consistent with it meeting the primary output for health and safety.

### Customer satisfaction

1.8. ENWL's proposals are consistent with our Strategy decision. ENWL is currently amongst the worst performing DNOs under our Broad Measure of Customer Service. In its business plan, ENWL sets itself ambitious targets to improve for RIIO-ED1 (eg ENWL aims to resolve 90 per cent of complaints in one day during RIIO-ED1, which compares to an equivalent performance level of approximately 35 per cent during 2012-13). ENWL provides some information about the activities it will undertake to improve customer service during the current price control (DPCR5) and RIIO-ED1 (eg training staff and improving communication), however it remains to be seen whether these will be sufficient to achieve the turnaround required. Overall, ENWL's customer service proposals are acceptable.

### Environment

*Losses*

1.9. ENWL sets out a comprehensive losses reduction strategy. It addresses all key aspects of our Strategy decision and commits to a holistic approach incorporating losses reduction in network analysis going forward. It will continue with its current loss reduction strategies, and additionally commits to the replacement of 652 pre-1990 transformers over the first four years of RIIO-ED1, at a total cost of £9.8m. It forecasts that by 2021 its actions will reduce losses by 11,000MWh/year.

1.10. ENWL proposes to focus on system modelling and smart meter data in order to establish a reliable baseline of losses over the price control period. It will also

incorporate shared knowledge from current innovation projects into its network analysis. It proposes to retain its current revenue protection services and further expand its team to address electricity theft. ENWL has a balanced losses reduction strategy, although further focus on robust CBA considering the value of losses across all network investment is encouraged.

*Other environmental impacts*

1.11. ENWL proposes to spend its entire £9m undergrounding allowance to underground 80km of lines in designated areas. It demonstrates good practice in its policy for delivery, prioritisation and stakeholder engagement. It proposes a 10 per cent reduction in its Business Carbon Footprint (BCF) by 2020, which indicates a reduced ambition compared to DPCR5 where its target is a 60 per cent reduction in BCF. It has a target to reduce SF6 leakage by 0.5 per cent through improved leak detection and asset replacement. Costs associated with actions on BCF and SF6[17] are not clear. It demonstrates continued good practice in its ongoing commitment to a 30-year plan to phase out Fluid Filled Cables (FFCs). In RIIO-ED1 it commits to reducing oil in use by 11 per cent by replacing 57km of cable at a cost of £40.4m. ENWL outlines its proposals well, demonstrating stakeholder engagement (particularly for undergrounding) and transparency regarding costs on FFCs. However, its proposed actions on BCF and SF6 would benefit from greater clarity on costs.

**Conditions for connections**

1.12. ENWL's proposals are consistent with our Strategy decision. ENWL is currently one of poorer DNOs in relation to its connections services. This is reflected in the customer satisfaction scores it receives from connections customers and data provided on the time it takes to issue quotes and complete new connections. It provides some information about how it intends to improve its connection service during RIIO-ED1 (eg developing online applications and implementing a customer relationship management system). As part of its business plan, ENWL sets itself target levels of performance to achieve during RIIO-ED1 (eg the time taken to issue a connection and complete a connection) although it remains to be proven whether these will deliver the necessary improvements in time taken to connect and the quality of service provided. Overall though, ENWL's connection proposals are acceptable.

**Social obligations**

1.13. ENWL's strategy for addressing social obligations is consistent with the outputs in our Strategy decision. ENWL intends to align its activities to the British Standard for vulnerability. ENWL provides detailed information about how it intends to address consumer vulnerability during RIIO-ED1 (eg improving network resilience in regions that have an especially large population of vulnerable customers and providing additional support to Priority Services Register (PSR) customer through utilising

[17] Sulphur hexafluoride

partnerships with other organisations). ENWL also commits to better use of data to understand who is connected to its network and how it can best serve customer needs. ENWL provides evidence that it has engaged with stakeholders to develop its proposals (eg through its Engaged Consumer Panel and national consumer survey). Overall, ENWL's social proposals are acceptable.

### Reliability and availability

1.14. ENWL accepts the reliability target setting methodology set out in the Strategy decision. Historically ENWL has outperformed targets and states that it aims to continue to outperform in the future. ENWL agrees with our proposals for both the guaranteed standards and worst served customers and provides well-justified explanations as to how they will deliver these. ENWL has well-developed health, criticality and load indices, and its proposals for managing network risk are well explained. ENWL sets out appropriate steps for network resilience and its business plan is generally well developed across all aspects of reliability.

## Assessment of ENWL's plan – efficient expenditure

### Overall assessment

1.15. ENWL is close to, but above our overall fast-track cost assessment benchmark for RIIO-ED1 (ie higher cost). This takes into account how it performs on pure cost assessment, the monetisation of additional outputs and the downside testing on cost of equity. Whilst our central view does not include any adjustment for ENWL's view of 'fixed costs', our sensitivity analysis with 'fixed costs' included shows that ENWL is still above our overall fast-track cost assessment benchmark.

1.16. Its forecast for annual totex during RIIO-ED1 shows a two per cent decrease on its average annual costs for the first three years of DPCR5, which is below average for the DNOs. Its business plan submissions indicate that this is mainly driven by significant reductions in non load-related expenditure and non-operational capex following delivery of ENWL's improvement programme in these areas. ENWL's average annual expenditure on asset replacement is increasing, which is partly attributable to its adoption of a new and improved condition based risk management (CBRM) approach. ENWL attributes other cost reductions to the continuation of efficiency improvements which have begun during DPCR5.

1.17. ENWL forecasts significant cost savings from innovation during RIIO-ED1, although linkages to and improvements in outputs arising from innovation could be clearer. ENWL has not provided a robust or coherent strategy for incorporating smart grids into its business plan. There is also little evidence that ENWL has systematically reviewed the outputs of smart grid innovation projects run by other DNOs.

### Network operating costs (NOCs) and closely associated indirects (CAIs)

1.18. We consider that ENWL's network operating cost forecasts are amongst the most realistic of the DNOs and it benchmarks well on these activities. ENWL has

provided appropriate justification for its network operating costs and is forecast to be the frontier performer in some NOC activities. ENWL forecasts that its level of expenditure on CAIs will remain static during RIIO-ED1, compared with the DPCR5 period to date. Its costs in this area appear realistic compared with other DNOs and it benchmarks well.

**Asset replacement and other non load-related expenditure**

1.19. ENWL's replacement and refurbishment volumes are high compared to our modelling and it is expensive on unit costs across the majority of assets. Its asset replacement strategy is well articulated, with robust justification of volumes for a number of the asset categories.

**Load-related expenditure**

1.20. Across the areas that make up load-related expenditure ENWL benchmarks relatively poorly on unit costs, but appears reasonable in terms of forecast workloads. Its reasonable unit costs on LCT-driven interventions are offset by relatively high unit costs on the delivery of primary network capacity and connection activities. Its strategy for load-related expenditure is supported by the strongest DNO primary network scheme papers whilst its forecast volume of interventions and capacity requirements benchmark well.

**Business support**

1.21. ENWL's business support expenditure is the least efficient of all the DNO groups and in our view has not been sufficiently well-justified. ENWL provided a well presented consultant's report on the potential size of fixed costs faced by a single DNO group. Single DNO status is not an inherent characteristic and ENWL proposed no means of protecting their customers should their status change. However, as noted above we have undertaken sensitivity analysis on the basis of ENWL's view of 'fixed costs' as part of our overall benchmarking. ENWL remains above our benchmark under these sensitivities. We have carried out sensitivities in our analysis including accounting for 'fixed costs', but the evidence presented for fast-track was not sufficiently compelling for us to incorporate it at this stage.

**Ongoing efficiency and Real Price Effects (RPEs)**

1.22. The net impact of ENWL's RPE and ongoing efficiency assumptions is that, all else held equal, its costs will have reduced by an average of 0.1 per cent per annum by the end of RIIO-ED1. Its business plan includes a consultant's report on RPEs which does not clearly set out how the assumptions in the business plan were reached. The RPE assumptions for capex labour are higher than the assumptions all other DNOs have included. The assumptions in other cost areas are lower than, or comparable to, other DNOs. ENWL's assumptions for ongoing efficiency are well-justified and are greater than its consultant's recommendation.

### Smart grids, smart metering and innovation

1.23. In its business plan, ENWL forecasts cost savings of £132m from innovation during RIIO-ED1. The plan demonstrates that it is forecasting the use of learning from its own Innovation Funding Incentive (IFI) and LCN Fund projects, in particular its 'C2C' project. Of the £132m savings, around £34m appear as benefits of using smart grid technologies. In response to a supplementary question, ENWL has provided clarity on where the savings have been reflected in its plan. However, ENWL provides no robust or coherent strategy for incorporating smart grids into its business. Regarding smart meters ENWL uses the latest indicative figures from DECC to estimate the costs. Limited cost breakdown and information on IT design are provided in the plan. The benefits of smart meters are estimated at £3.4m, which does not outweigh the £14.8m of costs.

## Assessment of ENWL's plan – efficient financing

### Technical accounting

1.24. ENWL's business plan generally complies with the policies specified in our Strategy decision. The business plan assumes significant increases in ongoing pension contribution rates. We will assess that assumption as part of the pensions efficiency review, which will take place during 2014 in parallel to RIIO-ED1.

### Corporate finance

1.25. ENWL provides a fairly brief section on its corporate finance proposals. A relative risk assessment by Oxera is used to justify an allowed return on equity of 6.8 per cent. However, ENWL does not address the challenges raised in the RIIO reviews financeability study nor appear to consider any new information since the Oxera report (November 2012). We consider that the evidence since then indicates a balance of uncertainty around the return on equity that is weighted towards the downside. ENWL provides little evidence in support of the proposed notional gearing assumption of 65 per cent. Indexation of the allowed return on debt is accepted as part of the overall package.

1.26. ENWL seeks transition on asset lives over the course of RIIO-ED1 on financeability grounds. However, we note that ENWL's key credit metric, the Post-Maintenance Interest Cover Ratio (PMICR), is specifically calibrated to be neutral to changes in depreciation profiles. ENWL also proposes to defer £25m of allowed revenue from 2014-15 into the first year of RIIO-ED1 (2015-16) on the basis that this would strengthen financeability. We interpret this proposal to affect cash flows, but not to represent a transfer of value between consumers and ENWL. Therefore, our assessment of the efficiency of ENWL's financing costs is neutral to this proposal.

1.27. Overall for the financing criteria we have assessed ENWL's proposals to be consistent with the policies set out in our Strategy decision. As with all the DNOs, we have tested the downside cost of equity in our cost efficiency assessment (see the Efficient costs section in Chapter 3).

## Assessment of ENWL's plan – uncertainty and risk

1.28. ENWL includes the uncertainty mechanisms we set out in the Strategy decision, and has set out an additional mechanism for the reinforcement costs they might face depending on which option National Grid chooses in order to connect Moorside nuclear power station. It sets out a clear justification for this mechanism, including options considered, and we agree that its selected mechanism provides an appropriate balance of risk between it and the customer.

1.29. ENWL has undertaken an excellent process for developing its best view scenario and the LCT volumes forecast are well justified.

1.30. While ENWL's plan focuses on uncertainty, it does discuss its delivery model, how it can flex and options to optimise its delivery capacity. It sets out a good strategy for flexing its investment plan between LCT scenarios. This includes taking a 'connect and manage' approach to new connections and increased network monitoring. The business plan also sets out a programme to monitor the volume of LCTs connected so as to know when to adapt its strategy accordingly. However, the business plan is lacking in detail and there is little evidence of how ENWL will consider alternative solutions in different scenarios.

# Appendix 4 – Assessment of NPg's plans

**Chapter Summary**

High-level assessment of Northern Powergrid (Northeast and Yorkshire) business plans.

## Overall assessment of NPg's plans

1.1. NPg's plans are available at http://www.yourpowergridplan.com/. We conclude that they are very well developed and presented, demonstrating high quality stakeholder engagement. However, at this stage, we are not convinced that its proposed expenditure allowances are efficient.

1.2. Our assessment against the criteria is summarised in the table below and explained further in the remainder of this chapter. On the basis of our assessment **we have decided not to fast-track NPgN or NPgY**.

| Criteria | NPgN | NPgY |
|---|---|---|
| Process | | |
| Outputs | | |
| Efficient expenditure | | |
| Efficient financing | | |
| Uncertainty and risk | | |

## Respondents' views

1.3. 12 respondents provided comments specifically on NPg's plans. Key points raised were:

- questions about how NPg (and the other DNOs) will ensure safety during the smart meter roll-out. We consider these to be useful issues for the DNOs to consider going forwards
- praise for NPg's stakeholder engagement process, external review of its plans and that it has established ongoing stakeholder groups
- praise for NPg's proposals across all of the criteria
- praise for NPg's social proposals.

## Assessment of NPg's plans - process

1.4. NPg's plans are well-written, concise and well-structured and have been praised by stakeholders for their clarity and readability. NPg has clearly mapped out its plan making it easy to find specific information. We are particularly impressed with the

quality of its website with information being easy to find when assessing the plans online. NPg's plans contain the information required, including the full suite of data tables.

1.5. NPg provides evidence that it has engaged with a broad range of stakeholders and that it used a wide variety of methods to inform and consult with these stakeholders. We are particularly impressed by the good use of expert panels. NPg sets out how stakeholders have influenced business decisions and provides a summary of the feedback it has received. Overall, we consider that NPg provides significant evidence of how stakeholder feedback has informed the development of its business plan.

1.6. NPg's plans do not include a section on long-term delivery. NPg does, however, consider the long-term as part of its discussion of Smart Grids and future scenarios. Overall we consider that NPg's plans clearly demonstrate that a very robust process was followed.

## Assessment of NPg's plans – outputs

### Safety

1.7. We have considered the evidence provided by the HSE and have concluded that NPg's business plans are consistent with it meeting the primary output for health and safety.

### Customer satisfaction

1.8. NPg's customer service outputs are consistent with our Strategy decision. NPg is targeting to resolve 80 per cent of complaints within one day[18] and increase its average customer satisfaction rating to 8.5 (out of 10).[19] NPg provides detailed information about how it intends to deliver improvements in customer service (eg make better use of web-based communication channels and provide more information to connection and interruption customers). NPg provides evidence to demonstrate how customers and wider stakeholders have informed the development of its business plans. Overall, NPg's customer service proposals are acceptable.

### Environment

*Losses*

1.9. NPg sets out a comprehensive losses reduction strategy, addressing most key aspects of our Strategy decision. It considers a multi-layered approach but does not

[18] During 2012-13, NPg resolved 39 per cent of complaints in one day in NPgN and 41 per cent in NPgY.
[19] NPgN's overall customer satisfaction score during 2012-13 was 7.79 and NPgY's overall customer satisfaction score was 7.81.

attribute any additional expenditure to losses reduction alone. It proposes to continue its current approach of network replacement with low loss equipment, and will review its design policies to optimise losses reduction. It does not set out a baseline for losses or forecast of losses savings.

1.10. NPg plans to focus on losses through analysing metering data, and will also use smart metering data to establish a reliable baseline of losses. Expenditure on systems to analyse smart metering data is not specifically attributed to losses reduction. It proposes to incorporate current and future innovation learning into network management to manage losses. It will retain its current revenue protection services, and maintain a 24 hour technical helpline to address theft. It proposes to consider losses in all future network investment decisions. NPg has a balanced losses reduction strategy, although further focus on robust CBA considering the values of losses across all network investment is encouraged.

*Other environmental impacts*

1.11. NPg proposes to spend its entire £13.9m undergrounding allowance to underground 100km of lines in designated areas. It demonstrates good practice in delivery policy and stakeholder engagement, although it is unclear how projects will be prioritised. It clearly outlines a strategy to achieve a 10 per cent reduction in its BCF over RIIO-ED1, which is a reduced ambition compared to DPCR5 where it is committed to a 5 per cent year on year improvement. It demonstrates good practice in improving reporting and monitoring of its BCF emissions from its contractors. NPg's target is to avoid 112kg of SF6 lost to the atmosphere by 2023, building on good progress in DPCR5 where it has improved transparency and accuracy of its SF6 inventory. It commits to a target to reduce oil lost to the environment from FFCs by 15 per cent by 2023, identifying key actions and costs. NPg outlines its proposals well, providing evidence of consistency and transparency across all aspects of its business plan and demonstrates instances of good practice (eg accounting for contractor emissions in its BCF). Its approach is engineering focussed with clear assumptions, evidence of innovation and stretch in some of its targets.

**Conditions for connections**

1.12. NPg's proposed connection outputs are consistent with our Strategy decision. NPg states that it will reduce the overall time taken to receive a connection by 30 per cent. NPg intends to tailor its connection service to reflect customers' needs (eg offering account management for large connection customers and online self-service for smaller (domestic) customers). We consider that NPg provides detailed information about how it intends to improve its service and how stakeholders' views have shaped its proposals. Overall, NPg's connection proposals are acceptable.

**Social obligations**

1.13. NPg's proposals for addressing social outputs are consistent with our Strategy decision. NPg commits to broadening its definition of vulnerability and provides evidence that it has engaged with others to develop its proposals (eg commissioning National Energy Action to undertake research and establishing an independently

chaired expert panel to help inform their approach to social issues). In the business plans, NPg recognises the important role that it can play in helping to address a range of social issues and commits to collaborating with relevant agencies to improve the service and communicate more effectively with vulnerable customers (eg training for front-line staff and providing more information during a power cut). NPg provides evidence that it has engaged with stakeholders to develop its proposals and is committed to keeping its proposals under review (eg an annual independent 'care quality' survey and annual report on consumer vulnerability commitments). Overall we consider that NPg provides evidence of a very comprehensive strategy to address social obligations and its proposals are good.

**Reliability and availability**

1.14. NPg accepts the reliability target setting methodology set out in the Strategy decision. Historically it has outperformed its reliability targets, but has not shown the degree of improvement that many other DNOs have demonstrated. It agrees with our proposals for both the guaranteed standards and worst-served customers and provides well-justified explanations as to how it will deliver these. It has also agreed to make top up payments to non-domestic and priority service register customers in the event of some failures under the guaranteed standards. NPg has well developed health indices, and whilst it indicates that it will allow overall asset health on its network to deteriorate over the course of RIIO-ED1, it provides a well-justified explanation as to why this is the case and of its plans for managing asset health appropriately. NPg's plans for managing network load were not always supported by sufficient evidence. NPg's plans for improving network resilience in the areas of flood mitigation and blackstart are detailed and well-justified. NPg's business plan is generally strong across all aspects of reliability and we consider its proposals to be consistent with our Strategy decision.

## Assessment of NPg's plans – efficient expenditure

**Overall assessment**

*NPg*

1.15. Both NPgN and NPgY are above our overall fast-track cost assessment benchmark for RIIO-ED1. This takes into account how they perform on pure cost assessment, the monetisation of additional outputs and the downside testing on cost of equity.

1.16. NPgN's forecast for annual totex during RIIO-ED1 shows a 16 per cent increase on its average annual costs for the first three years of DPCR5, which is above average for the DNOs. NPgY's forecast for annual totex during RIIO-ED1 shows a 15 per cent increase on its average annual costs for the first three years of DPCR5, which is above average for the DNOs. NPg's business plan narrative indicates that these increases are mainly driven by higher network operating and support costs and a new focus on severe weather events. NPg is aiming to improve its responsiveness to power cuts, reduce safety risk and improve communications with its customers. The increase is also partly attributable to NPg's relatively low levels of expenditure

during the first three years of DPCR5. NPgN's and NPgY's forecasts for average annual costs during RIIO-ED1 represent only a three per cent and a two per cent increase, respectively on their annual average when all five years of DPCR5 are considered.

1.17. NPg's plan contains good examples of specific network innovation and it has identified where these feed into outputs. NPg has not quantified the benefits or financial savings to customers of these innovations, or the improvement they have made to output targets however, making it difficult to assess their impacts thoroughly. NPg provides a strategy for incorporating smart grids into its business operations and has demonstrated how cost savings can be achieved from this. NPg's business plan considers the outputs of a number of smart grid projects but there is little evidence of a systematic review of projects run by other DNOs.

**Network operating costs (NOCs) and closely associated indirects (CAIs)**

1.18. We consider both NPgN's and NPgY's network operating costs to be amongst the least efficient of the DNOs and both benchmark poorly on these activities. They have not appropriately justified their network operating expenditures. Both NPgN's and NPgY's expenditure on closely associated indirects is below average compared with other DNOs. NPgN benchmarks very well, while NPgY is assessed as the most efficient company in this area.

**Asset replacement and other non load-related expenditure**

1.19. Both NPgN's and NPgY's replacement volumes are high compared to our modelling despite a forecast increase in asset risk on its network. They are expensive on replacement and refurbishment unit costs across many assets. Their asset replacement strategy is well articulated in places but for many asset groups the information is not provided. In places their replacement strategy is justified by integrated CBAs but there are some discrepancies with its asset health data and the linkages to this are not fully explained in their commentary.

**Load-related expenditure**

1.20. Across the areas that make up load-related expenditure NPgN benchmarks relatively poorly on unit costs, but appears reasonable in terms of forecast workload. Its realistic unit cost on LCT-driven interventions is offset by its high unit cost of delivering capacity and connection activities. Its overall strategy for load-related expenditure is well articulated and its forecast volume of interventions and capacity requirements benchmark fairly well.

1.21. NPgY benchmarks well on unit costs across the areas that make up load related expenditure, but appears poor in terms of forecast workload. Its overall strategy for load-related expenditure is well articulated but the ratio of primary network capacity forecast to be added relative to demand growth is not sufficiently explained and therefore its forecast of capacity requirements does not benchmark well.

### Business support

1.22. NPg's business support expenditure benchmarks well against other DNO groups.

### Ongoing efficiency and RPEs

1.23. The net impact of NPg's RPE and ongoing efficiency assumptions is that its costs will have increased at an average rate of 0.4 per cent per annum by the end of RIIO-ED1, assuming that volumes are constant. This growth is higher than all other DNOs assume in their business plans. NPg states that it has relied on the assumptions we developed for RIIO-T1, except for short term labour, but does not justify why these apply to its own costs. RPE assumptions for labour and materials are some of the highest assumed by the DNOs. NPg has included the impact of its own current pay deals in its labour RPE assumptions. We do not consider this justification to be valid as in itself it does not demonstrate efficiency. Its assumptions for ongoing efficiency are comparable to other DNOs' assumptions.

### Smart grids, smart metering, and innovation

1.24. NPg's plan consistently forecasts cost savings of £31m over RIIO-ED1 from use of smart grid solutions. There is a net cost for smart grids of £50m in the plan, justified on the basis of at least £88m benefits during the RIIO-ED2 period. NPg provides an excellent strategy for incorporating smart grids into its business and realising the full benefits of these approaches. In relation to smart meters NPg's business plan clearly articulates the cost of obtaining smart meter data from the DCC. The latest figures from DECC are used in their calculation. NPg provides a coherent strategy that explains how £129m of total system benefits of using smart meter data will offset the £12.9m cost of using and obtaining smart meter data. However, while the overall plan is of good quality, the design of the IT system does not include a system for data aggregation or for storage of data. NPg's plan outlines some good examples of specific innovation across its business and has identified where these innovations feed into outputs. However, there is no quantification of the benefits or financial savings to customers of these innovations, or the improvement they have made to output targets, in the plan.

## Assessment of NPg's plans – efficient financing

### Technical accounting

1.25. NPg's business plans generally comply with the policies specified in our Strategy decision. The business plans assume significant increases in ongoing pension contribution rates. We will assess that assumption as part of the pensions efficiency review, which will take place during 2014 in parallel with RIIO-ED1.

**Corporate finance**

1.26. NPg provides a substantial section on its corporate finance proposals. Relative risk assessment by Oxera is used to justify an allowed return on equity of 6.7 per cent. However, NPg's plan does not address the challenges raised in the RIIO reviews financeability study nor appears to consider any new information since the Oxera report (November 2012). Little evidence is provided in support of the proposed notional gearing assumption of 65 per cent. NPg's submission emphasises that the RIIO approach to indexation of the allowed return on debt would not sufficiently fund its existing debt. Nevertheless, NPg accepts the approach as part of the overall package.

1.27. NPg seeks transition on asset lives over the course of RIIO-ED1 on financeability grounds. The business plan includes some high-level financeability assessment to support this proposition. NPg also summarises the risks and rewards in its business plan with a return on regulatory equity (RoRE) chart.

1.28. Overall for the financing criteria we have assessed NPg's proposals to be consistent with the policies set out in our Strategy decision. As with all the DNOs, we have tested the downside cost of equity in our cost efficiency assessment (see the efficient expenditure section in Chapter 3).

## Assessment of NPg's plans – uncertainty and risk

1.29. NPg includes the uncertainty mechanisms we set out in the Strategy decision. It has undertaken an excellent process for developing its 'best view' scenario for the take-up of LCTs and the LCT volumes forecast are well justified. It has justified its choice of best view scenario with reference to historical trends and stakeholder engagement. NPg has reviewed the barriers to LCT up-take to understand the likely volumes connecting during the RIIO-ED1 price control period.

1.30. NPg's plans concentrate on financial risk, but also set out how NPg has stress-tested its plans against aggregate risk factors. It looks at the cost impacts of these aggregate risks, but has little on how it will manage them. It provides an excellent strategy for flexing its investment plan to manage uncertainty around low carbon scenarios. It has considered how planning and design practices may need to be amended during RIIO-ED1. It has also considered the solutions that may be necessary to manage greater network impacts than occur under its best view scenario. Its plans also show that it has considered how to make best use of smart grid enablers included in the business plan to manage uncertainty within RIIO-ED1 and beyond.

# Appendix 5 – Assessment of WPD's plans

**Chapter Summary**

High level assessment of Western Power Distribution (West Midlands, East Midlands, South Wales, South West) business plans.

## Overall assessment of WPD's plans

1.1. WPD's plans are available at http://www.westernpower.co.uk/About-us/Stakeholder-information/Our-Future-Business-Plan. We conclude that they are very good overall plans, demonstrating strong output delivery that go beyond our requirements with respect to reliability for efficient cost, and therefore offering good value for money for current and future consumers.

1.2. Our assessment against the criteria is summarised in the table below, and explained further in the remainder of this chapter. On the basis of our assessment **we are proposing to fast-track WMID, EMID, SWALES and SWEST**.

| Criteria | WMID | EMID | SWALES | SWEST |
|---|---|---|---|---|
| Process | | | | |
| Outputs | | | | |
| Efficient expenditure | | | | |
| Efficient financing | | | | |
| Uncertainty and risk | | | | |

## Respondents' views

1.3. Eight respondents provided comments specifically on WPD's plans. Key points raised were:

- questions about how WPD (and the other DNOs) will ensure safety during the smart meter roll-out. We consider these to be useful issues for the DNOs to consider going forwards
- WPD's work on accommodating renewables in the South West, and that for distributed generation connections the WPD website is one of the more easily navigable (but the business plans are not as navigable)
- disappointment that WPD is not proposing to spend all of its undergrounding allowance, and a perceived lack of justification for this
- concern whether WPD's approach, in considering uncertainty in the clustering of LCTs is too passive – but also that WPD is undertaking research to better understand linkages between its work on low carbon, fuel poverty and social issues

- its approaches to increase its capability to handle consumer calls respond at peak times.

## Assessment of WPD's plans - process

1.4. WPD's plans are clear and reasonably easy to navigate although it can be quite difficult to find specific information.

1.5. In its business plans, WPD describes robust RIIO-ED1 stakeholder engagement governance arrangements. It provides evidence that it has made use of a wide range of engagement mechanism (eg stakeholder forums chaired by the CEO, willingness to pay surveys and focus groups). It provides evidence to demonstrate that it has engaged with a broad range of stakeholders and we note it is the only DNO explicitly to incorporate the interests of 'future' consumers. Overall, we consider that WPD provides significant evidence how stakeholder feedback has informed the development of its business plan and ongoing business operations.

1.6. WPD's plan includes some consideration of long-term delivery within its overview document, including a discussion of the long-term needs of the network and adapting to climate change. It also includes consideration of a strategy for RIIO-ED2 and beyond within its section on smart grids. Overall we consider that WPD's plan demonstrates that a robust process was followed.

## Assessment of WPD's plans – outputs

### Safety

1.7. We have considered the evidence provided by the HSE and have concluded that WPD's business plans are consistent with it meeting the primary output for health and safety.

### Customer satisfaction

1.8. WPD's proposals for customer service are consistent with our Strategy decision. Historically, WPD has been the best performing DNO in terms of customer service. In its business plan, WPD sets out an ambition to remain the top performing DNO group in this output area. WPD provides some information about how it intends to make further improvements in performance (eg improving the provision of information and broadening its communication channels). WPD provides evidence to demonstrate how stakeholders' views have shaped its customer service proposals. Overall, WPD's customer service proposals are acceptable.

**Environment**

*Losses*

1.9. The WPD losses reduction strategy references most of the key aspects of our Strategy decision, but these are not clearly set out. It does not quantify the impact on losses of its proposed actions. It proposes a holistic approach to network investment, but does not provide supporting CBA evidence. It includes two CBAs specifically relating to low-loss expenditure, but these do not consider a range of options and do not provide any detail on underlying assumptions. WPD does not include any expenditure specifically to reduce losses.

1.10. WPD's main focus is on implementing learning from innovation projects to establish a reliable baseline, and to improve network monitoring and configuration to identify and address LCT hotspots (which can increase losses). It does not set out any outputs which can be measured. WPD proposes to continue its current revenue protection services and address electricity theft in conveyance and unmetered supplies in line with any licence obligation. WPD is encouraged to review its losses reduction strategy at an early opportunity to take a more holistic view to network investment, based on robust CBA and supported by well justified assumptions.

*Other environmental impacts*

1.11. WPD proposes to spend £7.7m of its £32.9m undergrounding allowance to underground 55km of lines in designated areas, and this is justified on the basis of low stakeholder support. There is limited transparency on its process for project prioritisation and for ongoing stakeholder involvement. It proposes a 5 per cent reduction in its BCF in RIIO-ED1, which represents a low ambition compared to other DNOs. It does not include any costs specifically to reduce its BCF. It proposes to reduce SF6 leakage by 17 per cent by replacing its leakiest assets as part of its existing planned asset replacement programme. It focuses on minimising oil leakage from FFCs, which will be achieved in part by installing detection equipment and by replacing a poorly performing cable in the WMID. WPD's business plans appear to consist largely of business as usual practices, rather than providing evidence of stretch or innovation within its targets. Its target reductions would benefit from greater transparency. Its approach to undergrounding would benefit from greater justification regarding its decision not to spend its total allowance.

**Conditions for connections**

1.12. WPD's proposed connection outputs align with our Strategy decision. WPD states that it will improve the provision of information to potential customers (eg capacity maps for generation customers) and improve the service provided to those that progress with a connection (eg more online services). WPD also states that it will improve the overall time to connect by 20 per cent and provides some information about how it will achieve this (eg through monitoring and targeting improvements against key performance indicators and enhancing its IT systems). WPD provides evidence to demonstrate how connection customers and wider

stakeholders informed the development of its business plans. Overall, WPD's connection proposals are acceptable.

**Social obligations**

1.13. WPD's strategy for addressing social obligations is consistent with our Strategy decision. Historically, WPD has been the most proactive DNO in developing partnerships with other organisations in order to provide assistance and support to customers in vulnerable situations. For the RIIO-ED1 business plan WPD builds upon this track record and provides evidence of having a comprehensive strategy in place to maximise the effectiveness of its contribution in addressing a range of social issues. WPD intends to adopt the British Standard of Inclusive Provision and develop its own strategy to improve its understanding of consumer vulnerability. WPD commits to improving the data it holds on PSR customers by contacting these customers on a regular basis. WPD also intends to work with other agencies to enhance its understanding of its customer base. It will also improve the service it provides for vulnerable customers (for example through distributing crisis packs to vulnerable customers) and helping to address fuel poverty through partnerships with regional agencies (eg Citizens Advice and local authorities). WPD provides evidence that it has engaged with stakeholders to develop its proposals (eg its Customer Panel and with National Energy Action). Overall, we consider that WPD's social proposals are acceptable.

**Reliability and availability**

1.14. WPD has historically shown strong performance in reliability, in particular in its original network areas, South Wales and South West. Since the acquisition of West and East Midlands it has also significantly improved their reliability. WPD has put forward tighter targets than those arising from our target setting methodology. WPD agrees with our proposals for both the guaranteed standards and worst served customers and provides well justified explanations as to how they will deliver these. WPD has also voluntarily offered to double the value of payments for failures against the guaranteed standards. WPD's health, criticality and load indices are well developed, and we note that it is looking to make some significant reductions in risk during RIIO-ED1.

1.15. WPD's plan for maintaining network resilience is comprehensive although some of its proposed schemes seem to be expensive compared with other DNOs on a unit cost basis. WPD's business plan is generally strong across all aspects of reliability and we consider its proposals to be consistent with our RIIO-ED1 Strategy decision.

## Assessment of WPD's plans – efficient expenditure

**Overall assessment**

1.16. WPD's four DNOs performed best in our overall cost assessment benchmarking. WMID, EMID and SWEST are all within a tight tolerance band (less than two per cent) around our cost benchmark adjusted for cost of equity and interruptions. WPD

as a whole is slightly ahead of our efficient adjusted cost benchmark. If we were to place a slightly greater weight on our activity level analysis all four DNOs would at or better than our benchmark. SWALES is significantly better than our benchmark. This takes into account how both perform on pure cost assessment, the monetisation of additional outputs and the downside testing on cost of equity.

1.17. WMID's forecast for annual totex during RIIO-ED1 shows a two per cent increase on its average annual costs for the first three years of DPCR5, in contrast to the twelve per cent average increase for the DNOs. EMID's forecast for annual totex during RIIO-ED1 shows a three per cent increase on its average annual costs for the first three years of DPCR5, below the average increase for the DNOs.

1.18. Business plan narratives for both WMID and EMID indicate that the decreases are mainly driven by a reduction in network operating costs and closely associated indirects. These DNOs attribute these reductions to efficiency savings which have been made following WPD's acquisition of the two Midlands distribution network regions. They both forecast increases in reinforcement expenditure required to meet increasing capacity demands during RIIO-ED1, and asset replacement expenditure required to replace ageing assets on their networks. These increases partially offset the cost reductions both DNOs have forecast.

1.19. SWALES' forecast for annual totex during RIIO-ED1 shows a nine per cent increase on its average annual costs for the first three years of DPCR5, which is below the average for the DNOs. Its business plan indicates that this is mainly driven by an increase in asset replacement expenditure, required to replace ageing assets on its network. SWALES also forecasts significant increases in non load-related expenditure and reinforcement expenditure, which it believes is required to meet increasing capacity demands during RIIO-ED1.

1.20. SWEST's forecast for annual totex during RIIO-ED1 shows a 20 per cent increase on its average annual costs for the first three years of DPCR5, which is above average for the DNOs. Its business plan indicates that this is mainly driven by an increase in asset replacement expenditure, required to replace ageing assets on its network. SWEST also forecasts significant increases in non load-related expenditure and reinforcement expenditure, which it believes is required to meet increasing capacity demands during RIIO-ED1.

1.21. All four DNOs have provided a reasonable strategy for delivering benefits from the smart meter roll-out. They have not fully justified the costs of the roll-out compared with the benefits that are expected to arise. Whilst a number of their plans for innovation do appear to be genuinely innovative, some appear less so and more in line with well established activities. The majority of their plans for innovation have limited detail on the cost savings or output benefits they deliver and do not fully explain how these have been incorporated in its business plan, making them difficult to assess.

1.22. WPD includes the costs of diverting lines £96m associated with Network Rail's electrification programme as part of its core expenditure request. The DNOs have met with government and Network Rail, and discussions have raised questions as to

which entity will bear these costs. We consider that, from a public policy perspective, these costs should not be borne by energy consumers, but should be recovered from rail customers. We have concluded that we will allow the costs (which we assess to be efficient) in WPD's business plans, but, should it be decided that another party will fund them, we will include a facility in WPD's licence to remove them from the settlement.

**Network operating costs (NOCs) and closely associated indirects (CAIs)**

1.23. We consider that for network operating costs all four WPD DNOs have forecast workloads that are particularly efficient compared with other DNOs. Unit costs in WMID, EMID and SWEST are behind those in SWALES, which benchmarks well. WPD has appropriately justified its network operating costs and the savings it intends to make during RIIO-ED1. For closely associated indirects WMID's, EMID's and SWALES's costs also appear reasonable compared with other DNOs. SWEST has forecast a significant increase in annual average expenditure during RIIO-ED1 and benchmarks relatively poorly in this area.

**Asset replacement and other non load-related expenditure**

1.24. All four DNOs' volumes are above our modelled volumes for a number of assets. However, they are very efficient on replacement and refurbishment unit costs across most asset categories. Their asset replacement strategies are well articulated for some, but not all, asset groups. Whilst their asset replacement data corresponds with data submitted for asset health, linkages between the two could be better explained. Their CBA submissions are also not always well integrated to justify chosen asset replacement strategies.

**Load-related expenditure**

1.25. Across all the areas that make up load-related expenditure SWALES, SWEST and WMID benchmark as the three most efficient companies, with unit costs that benchmark particularly well. EMID also performs reasonably well across unit cost assessment, but less strongly on its forecast workload.

1.26. The WPD strategies for load-related expenditure are generally well articulated but do not fully justify the high volume of LCT-driven interventions in WMID and EMID relative to the number of devices connecting.

**Business support**

1.27. WPD's business support expenditure appears more efficient than the DNO group benchmark and is suitably justified.

### Ongoing efficiency and RPEs

1.28. WPD's assumptions for RPEs and ongoing efficiency result in costs increasing by 0.4 per cent on average per annum by the end of RIIO-ED1, assuming all else is held equal. Its business plan includes a consultant's report on RPEs. The methodology used in this report takes a different approach to that which we have used previously. While this in itself does not mean the assumptions are not justified we question the validity of the choice of cost indices and time periods used to base the RPE assumptions on. The business plan also does not clearly set out how its RPE assumptions were derived from this report. While WPD's assumptions for ongoing efficiency are comparable to other DNOs, they are slightly reduced as they are not applied across all cost areas and it is unclear whether they are applied to the forecast costs in the DPCR5 period.

### Smart grids, smart metering and innovation

1.29. In its business plan, WPD forecasts cost savings of £128m over RIIO-ED1 from use of smart grid solutions. The plan gives us confidence that these savings have been reflected in its forecast costs. WPD's plan is lacking in detail on how smart grid solutions will be used, and how they have been embedded into its business. Regarding smart meters in WPD's business plan, the calculation of the fixed DCC costs is well justified using the latest figures released by DECC. WPD's plan aims to deliver a moderate level of benefits through the use of smart meter data and a reasonable strategy for delivering these benefits is demonstrated. WPD's total costs of IT and DCC data associated with smart metering are £24.3m. These costs are not fully justified in comparison to the £12m identified in benefits from using the data. WPD's plan includes a number of claimed innovations. For the vast majority of identified innovations there is no detail on the result savings, or impact on output targets, or explanation of how these have been built into the plan. This makes it difficult to assess the impact of the innovation and its scale across the business.

## Assessment of WPD's plans – efficient financing

### Technical accounting

1.30. WPD's business plans generally comply with the policies specified in our Strategy decision. We did not identify any major issues.

### Corporate finance

1.31. WPD provides a substantial section on its corporate finance proposals. Consultancy advice by NERA is used to justify an allowed return on equity of 6.7 per cent. However, WPD does not address the challenges raised in the RIIO reviews financeability study nor appear to consider any new information since the Strategy decision document. WPD proposes notional gearing of 65 per cent based on assessment by NERA. WPD also accepts the indexation of the allowed return on debt.

1.32. WPD seeks transition on asset lives over the course of RIIO-ED1 on financeability grounds. However, we note that transition improves credit metrics that, by WPD's own assessment, already look comfortable without transition. The one credit metric that looks stretched in WPD's assessment – PMICR – is specifically calibrated to be neutral to changes in depreciation profiles. We also note that credit metrics in WPD's business plan narrative do not agree to the numbers in the financial model submitted with the business plan.

1.33. Overall for the financing criteria we have assessed WPD's proposals to be consistent with the policies set out in our Strategy decision. As with all the DNOs, we have tested the downside cost of equity in our cost efficiency assessment (see the Efficient costs section in Chapter 3).

## Assessment of WPD's plans – uncertainty and risk

1.34. WPD has undertaken a good process for developing its best view scenario for the take-up of LCTs and the LCT volumes forecast are justified. It has worked with the Centre for Sustainable Energy (CSE) to develop detailed forecasts for the number and location of premises likely to install LCTs during the RIIO-ED1 price control period and has also used stakeholder engagement to develop its LCT forecasts.

1.35. WPD has little consideration of residual risk in its business plans – and descriptions focus on probability rather than how it would manage risk. It provides a good strategy for flexing its investment plan to manage uncertainty around low carbon scenarios. It has considered how to identify potential LCT hotspots and the development of leading indicators of network and resourcing impacts. WPD will respond to different scenarios by deploying flexible solutions. It also plans to upsize assets during replacement in areas identified as LCT hotspots. WPD proposes to use the load-related expenditure reopener to manage the high levels of uncertainty between the scenarios.

# Appendix 6 – Assessment of UKPN's plans

**Chapter Summary**

High level assessment of UK Power Networks (London Power Networks, South East Power Networks, Eastern Power Networks) business plans.

## Overall assessment of UKPN's plans

1.1. UKPN's plans are available at http://www.ukpowernetworks.co.uk/internet/en/about-us/business-plan/. We conclude that they are well developed plans, demonstrating good stakeholder engagement. However, at this stage, we are not convinced that the expenditures they contain are efficient and have we concerns over some of their secondary deliverables on reliability.

1.2. Our assessment against the criteria is summarised in the table below, and explained further in the remainder of this chapter. On the basis of our assessment **we have decided not to fast-track LPN, SPN or EPN**.

| Criteria | LPN | SPN | EPN |
|---|---|---|---|
| Process | | | |
| Outputs | | | |
| Efficient expenditure | | | |
| Efficient financing | | | |
| Uncertainty and risk | | | |

## Respondents' views

1.3. Seven respondents provided comments specifically on UKPN's plans. Key points raised were:

- questions about how UKPN (and the other DNOs) will ensure safety during the smart meter roll-out. We consider these to be useful issues for the DNOs to consider going forwards
- praise for UKPN's stakeholder engagement and that it has established ongoing stakeholder groups
- that LPN's plan is a platform for short term solutions to secure investment in London's electricity infrastructure
- that LPN's plan will deliver a more robust network, with sufficient capacity to accommodate development projections and greater network resilience
- concern about the age of the network in some areas, the impact on air quality from using stand-by generators, and how UKPN will manage street works.

## Assessment of UKPN's plans - process

1.4. UKPN's plan is clear and well-structured. Within its plan UKPN demonstrates a clear understanding of what its stakeholders require and we particularly like its explanation of the level of technical knowledge needed to understand each document within the plan. UKPN's business plan data templates as originally submitted were not completed correctly, which took some time to resolve.

1.5. UKPN provides evidence to demonstrate that its stakeholder engagement strategy is underpinned by robust governance arrangements. It has engaged a broad and inclusive range of stakeholders using a wide variety of mechanisms. We are particularly impressed with the use of a critical friends panel and the establishment of an Electricity Regulation Working party to engage with stakeholders in central London. Overall we consider that UKPN provides significant evidence of how stakeholder feedback informs its plan and ongoing business operations (eg the "You Said, We Did, We Will Do" approach).

1.6. UKPN's plan does not contain a specific section on long-term delivery. It has included a section on climate change adaption which includes some consideration of the long term in this context. Overall we consider that UKPN's plan clearly demonstrates that a robust process was followed.

## Assessment of UKPN's plans – outputs

### Safety

1.7. We have considered the evidence provided by the HSE and have concluded that UKPN's business plan is consistent with it meeting the primary output for health and safety.

### Customer satisfaction

1.8. UKPN's proposed outputs for customer service during RIIO-ED1 are consistent with our Strategy decision. Historically London Power Network's (LPN's) customer service performance has been amongst the worst of the DNOs. In the business plan, UKPN includes detailed information about how it intends to improve performance. UKPN also provides evidence to demonstrate how stakeholders have informed the development of its customer service proposals. Overall, UKPN's customer service proposals are acceptable.

### Environment

*Losses*

1.9. UKPN set out a comprehensive losses reduction strategy, clearly addressing all key aspects of our Strategy decision. It explains its holistic approach to network management, which it forecasts will reduce losses by 229 GWh over RIIO-ED1. It

also commits to regularly reviewing its strategy. UKPN includes a number of CBAs to justify its strategy, providing clear details on the assumptions and related costs, although some related societal benefits appear inflated and could affect the outcomes.

1.10. UKPN's plan does not identify any expenditure for loss-reduction alone, as it will take an opportunistic approach to network investment, considering using low loss alternatives in its normal asset replacement programmes. It will share innovation learning, particularly on network management, with a focus on better understanding the network. UKPN addresses proposed electricity theft reduction activities in detail, including theft in UKPN has a balanced losses reduction strategy, although reconsideration of some assumptions underlying CBAs could lead to support for additional loss reducing actions.

*Other environmental impacts*

1.11. UKPN proposes to spend its entire £20.2m allowance on undergrounding 176km of lines in designated areas, which is the highest target of the DNOs. However, its approach on stakeholder engagement and details of project delivery and prioritisation is less developed. UKPN has a good track record on undergrounding in previous price controls, in regards to the amount of undergrounding they have completed. It commits to a two per cent annual reduction in BCF and demonstrates good practice on tracking and monitoring fuel usage inventories for contractors. On SF6 it focuses on minimising leakages while exceeding international standards on leakage rates. It sets out a target to reduce cable fluid leakage by two per cent per annum, over the eight years and it presents CBA evidence supporting a programme of 37 projects. This builds upon good progress in DPCR5. UKPN's business plan represents some elements of good practice with clearly outlined justification and consistency across its various business plan documents. Its undergrounding and BCF build on their past track record.

**Conditions for connections**

1.12. UKPN's proposed outputs are consistent with our Strategy decision. UKPN states in the business plan that it will improve the timeliness of connections (eg through targeting improvements against internal key performance indicators) and service provided to connection customers (eg enabling online applications). UKPN provides information in its business plan about how it will improve engagement with large connection customers (eg establishing 'User Groups' for different types of connection customers) and provide customers with more choice (eg longer contact hours and longer expiry dates for connection quotations). Overall, UKPN's connection proposals are acceptable.

**Social obligations**

1.13. UKPN's proposals for addressing social outputs are consistent with our Strategy decision. In its plan, UKPN provides a comprehensive social strategy that it commits to develop throughout RIIO-ED1. UKPN provides detailed information on how it will improve the service provided to PSR customers and commits to developing

partnerships (eg with National Energy Action and the British Red Cross) to deliver positive outcomes for its customers. UKPN provides evidence that it has engaged extensively with stakeholders to develop its proposals (eg its Critical Friends' Panel and input from National Energy Action). Overall, we consider that there is evidence of a comprehensive social strategy and that its proposals are acceptable.

### Reliability and availability

1.14. UKPN's reliability performance has improved since its change in ownership, and it accepts the reliability target setting methodology set out in the Strategy decision. UKPN's plans for addressing our proposals for guaranteed standards are not sufficiently well developed. UKPN has voluntarily offered to increase the value of payments to domestic customers for failures against the guaranteed standards. For both the LPN and SPN network areas it has provided relatively poor justification for the load index movements included in their plans, with scheme papers and data submitted providing insufficient detail for a comprehensive assessment. UKPN's proposals for resilience, including plans for flood mitigation and blackstart are acceptable however these lack the detail provided in other DNOs' plans. Overall we feel that UKPN's business plans require further development in order for it to acceptably address the reliability output.

## Assessment of UKPN's plans – efficient expenditure

### Overall assessment

1.15. LPN and EPN are significantly above our overall fast-track cost assessment benchmark for RIIO-ED1. SPN was closer to, but still some way off of our overall fast-track cost assessment benchmark for RIIO-ED1. The benchmark takes into account how DNOs performs on pure cost assessment, the monetisation of additional outputs and the downside testing on cost of equity. Our overall cost assessment benchmark takes into consideration regional wage differentials and certain company specific factors, but even so no UKPN DNO outperforms the benchmark.

1.16. LPN's forecast for annual totex during RIIO-ED1 shows a 24 per cent increase on its average annual costs for the first three years of DPCR5, which is above average for the DNOs. Its business plan narrative indicates that this is mainly driven by a significant increase in reinforcement expenditure, which LPN forecasts will be required to meet capacity requirements for its forecast load growth. LPN also forecasts a significant increase in asset replacement which it states is necessary because of its ageing asset base.

1.17. SPN's forecast for annual totex during RIIO-ED1 shows a four per cent increase on its average annual costs for the first three years of DPCR5, which is below average for the DNOs. SPN's business plan narrative indicates that it has been able to keep costs relatively static during RIIO-ED1 due to savings from smart technologies offsetting the requirement to increase capacity to meet forecast load growth. Whilst SPN has forecast significant increases in reinforcement expenditure and closely associated indirect costs, these are partly offset by decreases in business support and network operating costs.

1.18. EPN's forecast for annual totex during RIIO-ED1 shows a seven per cent increase on its average annual costs for the first three years of DPCR5, which is below average for the DNOs. Its business plan indicates that this increase is mainly due to a significant increase in reinforcement expenditure, which EPN forecasts will be required to meet capacity requirements for its forecast load growth. EPN also forecasts a significant increase in asset replacement which it states is necessary because of its ageing asset base. This is partly offset by decreases in other areas including significant decreases in network operating costs and business support expenditure.

1.19. In its business plan, UKPN has forecast significant savings from the use of smart grid solutions and clearly sets out a well developed process to assess where benefits will arise, supported by its innovation trials. There is little quantification of the benefits of innovation in terms of cost savings. UKPN does provide a clear breakdown of the costs and benefits of using smart meter data and we consider this area of its plan to represent good value for customers.

**Network operating costs (NOCs) and closely associated indirects (CAIs)**

1.20. We consider that LPN has network operating expenditure that is significantly less efficient than other DNOs and it benchmarks poorly on this area. It has not appropriately justified its network operating expenditure. LPN's expenditure on closely associated indirects has increased significantly since the last price control and it performs satisfactorily when benchmarked on regressed CAI activities.

1.21. Both SPN and EPN have network operating costs that are realistic compared to other DNOs. They have appropriately justified these costs for RIIO-ED1 and provided good explanations as to how they intend to reduce unit costs. SPN's expenditure on closely associated indirects is also significantly above the average for all DNOs and is higher than its equivalent annual average for DPCR5 to date. SPN performs poorly for the regressed CAI activities. EPN's expenditure on closely associated indirects is higher than its equivalent annual average for DPCR5 to date and it benchmarks very poorly in this area.

**Asset replacement and other non load-related expenditure**

1.22. LPN's volumes are high compared to our asset replacement modelling and, despite factoring in certain company specific factors, it is expensive on unit costs across the majority of assets. Its asset replacement strategy is well articulated and supported by evidence of health and risk performance information. Although there are a number of discrepancies between volumes indicated in the narrative and information in the asset replacement data submissions which undermines confidence in their submission.

1.23. SPN's and EPN's volumes are realistic compared to our modelling and they have submitted reasonable unit costs across the majority of assets. Their asset replacement strategies are well articulated and supported by evidence of health and risk performance information. There are a number of discrepancies between volumes

indicated in the narrative and information in the asset replacement data submissions which undermines our confidence in their submissions.

**Load-related expenditure**

1.24. Across the areas that make up load-related expenditure LPN benchmarks poorly on unit costs and relatively poorly on forecast workloads. Its reasonable unit costs of delivering connection activities are offset by relatively poor asset unit costs within its primary network schemes. Its strategy for load-related expenditure is well articulated at a high-level but lacks detail at the individual scheme paper level. This made it difficult to justify their relatively high volumes of interventions and capacity increases, which benchmarked poorly.

1.25. SPN benchmarks relatively poorly on both unit costs and forecast workload across the areas that make up load-related expenditure. Its efficient unit cost of delivering connection activities is offset by relatively poor unit costs on the delivery of primary network capacity and LCT-driven interventions. Its strategy for load-related expenditure is well articulated at a high-level but lacks detail at the individual scheme paper level. This made it difficult to justify their relatively high volumes of interventions and capacity increases, which benchmarked poorly.

1.26. EPN benchmarks relatively well on unit costs, but poor in terms of forecast workload across the areas that make up load-related expenditure. EPN's unit cost of delivering primary network capacity was particularly strong, but is let down by some poor performance on intervention unit costs relating to fault level issues and the accommodation of LCTs. Its strategy for load-related expenditure is well articulated at a high-level but lacks detail at the individual scheme paper level. This made it difficult to justify their relatively high volumes of interventions and capacity increases, which benchmarked poorly.

**Business support**

1.27. For business support we consider UKPN to be inefficient relative to the DNO group benchmark and it has not sufficiently justified its forecast expenditure.

**Ongoing efficiency and RPEs**

1.28. UKPN's RPE and ongoing efficiency assumptions result, on average, in a marginal increase in costs of 0.1 per cent per annum by the end of RIIO-ED1. Its business plan includes a well justified consultant's report on RPEs; however there are inconsistencies with the business plan data, resulting in UKPN's RPE assumptions being higher than those proposed in the report. UKPN's assumptions for ongoing efficiency are comparable with other DNOs and outperform its consultant's recommendation.

### Smart grids, smart metering and innovation

1.29. In its business plan, UKPN has used a combination of the Transform model and its own 'LRE model' to forecast cost savings of £135m over RIIO-ED1 from use of smart grid solutions. However, existing solutions already deployed account for £30m of these savings. UKPN clearly sets out an excellent process that it has followed to assess where smart grid solutions may provide benefits. For smart meters, UKPN's Business plan provides a good breakdown of both the DCC fixed costs and the functionality needed for an IT system to make use of smart meter data. The benefits these services will generate are quantified as £67.2m and the costs of using this data is quantified as £20.4m. £13.9m is calculated to benefit consumers directly.

1.30. UKPN's plan contains a number of innovations across a variety of areas. Many of these are smart grid developments which are discussed in more detail in the separate smart grids assessment. The innovations are clearly linked to output categories however, there is little quantification of the benefits of innovation in terms of the savings it has led to or the improvement in output targets it can achieve. This makes it difficult to assess the impact of the innovation and its scale across the business.

## Assessment of UKPN's plans – efficient financing

### Technical accounting

1.31. UKPN's business plan generally complies with the policies specified in our Strategy decision. UKPN does not provide a calculation to support its proposed totex capitalisation rate. We note that the proposed rate of 70 per cent is substantially lower than UKPN's historical statutory capitalisation rate.

### Corporate finance

1.32. UKPN provides a substantial section on its corporate finance proposals. Relative risk assessment by Oxera and UKPN's own relative risk analysis is used to justify an allowed return on equity of 6.7 per cent. However, UKPN does not address the challenges raised in the RIIO reviews financeability study nor appears to consider any new information since the Oxera report (July 2013). Little evidence is provided in support of the proposed notional gearing assumption of 65 per cent. UKPN's submission emphasises that the RIIO approach to indexation of the allowed return on debt would not sufficiently fund its existing debt. Nevertheless, UKPN accepts the approach as part of the overall package.

1.33. UKPN seeks transition on asset lives over the course of RIIO-ED1 on financeability grounds. However, we note that transition improves credit metrics that, by UKPN's own assessment, already look comfortable without transition. The one credit metric that looks stretched in UKPN's assessment – PMICR – is specifically calibrated to be neutral to changes in depreciation profiles.

1.34. Overall for the financing criteria we have assessed UKPN's proposals to be consistent with the policies set out in our Strategy decision. As with all the DNOs, we have tested the downside cost of equity in our cost efficiency assessment (see the Efficient costs section in Chapter 3).

## Assessment of UKPN's plans – uncertainty and risk

1.35. UKPN includes the uncertainty mechanisms we set out in the Strategy decision. It has undertaken an excellent process for developing 'best view' scenario for the take-up of LCTs and the LCT volumes forecast are well justified. Its best view scenario has been developed using a variety of tools and takes into account local customer types. The plan also includes evidence that stakeholder engagement has been used to modify the forecast volumes.

1.36. Although not lengthy, UKPN includes the best description of holistic risk of all the DNOs, setting out its business wide approach to risk. It provides an excellent strategy for flexing its investment plan to manage uncertainty around low carbon scenarios. It has used both the Transform model and its own Load-related Expenditure (LRE) model to understand the range of expenditures required to manage the DECC scenarios. It sets out three detailed approaches to managing uncertainty, involving developing leading indicators of LCT take-up, increasing data monitoring, and further deployment of smart grid solutions.

# Appendix 7 – Assessment of SPEN's plans

**Chapter Summary**

High-level assessment of SP Power Distribution (Distribution and Manweb) business plans.

## Overall assessment of SPEN's plans

1.1. SPEN's plans are available at http://www.spenergynetworks.co.uk/serving_our_customers/business_plan.asp. We conclude that while the presentation of its plan is acceptable, and the plan contains more financing justifications that other DNOs, in general the plan is weak on outputs and cost efficiency and contains some major data issues.

1.2. Our assessment against the criteria is summarised in the table below, and explained further in the remainder of this chapter. On the basis of our assessment **we have decided not to fast-track SPD or SPMW**.

| Criteria | SPD | SPMW |
|---|---|---|
| Process | | |
| Outputs | | |
| Efficient expenditure | | |
| Efficient financing | | |
| Uncertainty and risk | | |

## Respondents' views

1.3. Eight respondents provided comments specifically on SPEN's plans (including three received in October). Three responses were received after our consultation closed which were supportive of SPEN's plans. Key points raised were:

- questions about how SPEN (and the other DNOs) will ensure safety during the smart meter roll-out. We consider these to be useful issues for the DNOs to consider going forwards
- mixed response to stakeholder engagement, both critical and praising
- support for SPEN's approach to zero harm for workers and general agreement with SPEN's plans to provide cost effective and safe service whilst improving customer service.

## Assessment of SPEN's plans - process

1.4. SPEN's plan is clear although some information can be difficult to find. SPEN's submission to Ofgem did not initially include the Transform models despite this being

a clear requirement. In SPEN's original submission of the business plan data templates, there were a number of instances where required data was either absent or not submitted in accordance with guidelines. In answer to a clarification question, SPEN provided us with information that gives us significant doubt about the quality of SPEN's asset data – especially that reported historically. We are continuing to investigate this matter.

1.5. SPEN provides high level information on the governance arrangements and strategy it used to engage stakeholders as part of its plan development. It commissioned an independent market research company to independently review the scope of its stakeholder engagement and to help facilitate stakeholder workshops. SPEN used a variety of tailored mechanisms to engage with stakeholders. It provides some information about how feedback from stakeholders has shaped its business plan proposals.

1.6. SPEN's plan does not contain a specific section on long-term delivery. Its plan has some limited consideration of the longer term in its sections on smart grids. Overall we do not consider that SPEN's plan sufficiently demonstrates that a robust process was followed.

## Assessment of SPEN's plans – outputs

### Safety

1.7. We have considered the evidence provided by the HSE and have concluded that SPEN's business plan is consistent with it meeting the primary output for health and safety.

### Customer satisfaction

1.8. SPEN's proposed customer service outputs are consistent with our Strategy decision. SPEN propose several voluntary compensation payments (eg £10 if it fails to return a customer's calls). SPEN also set themselves target levels of performance for RIIO-ED1 (eg improving customer satisfaction scores by 20 per cent). The targets are ambitious, based on current levels of performance (eg average overall customer satisfaction with SPMW's service during 2012-13 was 7.91 out of 10 and a 20 per cent improvement would equate to a score of 9.49). We therefore expected more detailed information on how SPEN intends to achieve these targets. Overall, we consider that SPEN's customer service proposals are acceptable.

### Environment

*Losses*

1.9. SPEN does not provide a detailed losses reduction strategy. It proposes to replace all pre-1962 secondary transformers, citing reduced losses as the primary motivation. Its losses-related expenditure is £3.9m out of a total replacement cost of

£130m. Its CBA for this expenditure does not clearly explain the assumptions, although SPEN states that the replacement will reduce losses from these transformers by 50 per cent. SPEN also states that it will use network optimisation (including identifying LCT hotspots and upsizing assets where justified) to manage losses.

1.10. SPEN does not set out any plans for establishing a reliable baseline for losses, nor does its business plan address electricity theft. SPEN's approach to losses reduction did not adequately address all aspects of the expected losses strategy. Further focus on incorporating losses reduction into CBA of all network investment decisions, as well as implementing innovation learning and establishing a reliable baseline, is encouraged.

*Other environmental impacts*

1.11. SPEN proposes to underground 85km of lines in designated areas; it is unclear whether it intends to spend its allowance of £12.2m. Stakeholders appear to support schemes outside of designated areas, which cannot be funded through the allowance. Its undergrounding delivery policy is unclear. It focuses on meeting its parent company target BCF and has limited commitments to specific actions. It proposes to replace the leakiest equipment, and exceed international leakage rate standards; however, there is limited transparency on its forward strategy. It commits to a target of 50 per cent reduction in oil lost to the environment from FFCs through a like-for-like replacement of a single cable; the industry norm is to replace FFCs with solid polymeric alternatives. SPEN's proposals lack clarity and justification, particularly with respect to the benefits of its proposals. In some cases, it does not provide clear targets (eg SF6) and/or it is unclear on the rationale for the action (eg FFC like-for-like replacement). There is little evidence of innovation or stretch within its proposed targets.

**Conditions for connections**

1.12. SPEN's proposed connection outputs are consistent with our Strategy decision. SPEN states that it will provide quicker connections, improve its service to connection customers and help facilitate competition. SPEN provides some information about how it will deliver improvements in service (eg proactively contacting connection customers, offering account management for larger connection customers and promoting flexible connection solutions). Overall, we consider that SPEN's connection proposals are acceptable.

**Social obligations**

1.13. SPEN's proposed social outputs are broadly consistent with our Strategy decision. SPEN provides information about it will provide a better service to vulnerable customers (eg training staff to recognise and deal with vulnerable customers, proactively contacting vulnerable consumers and providing winter packs to all vulnerable customers). SPEN also state that it will collaborate with communities and partner organisations to help deliver these solutions. Whilst some aspects of SPEN's plan to address social outputs are good, overall its overall strategy is not as

clear or comprehensive as we expected. We expect to see more information about how SPEN's proposals will be coordinated and directed (eg a through an overarching governance framework), what steps SPEN will take to develop its understanding of consumer vulnerability and how it has worked with stakeholders (eg an independent expert panel) to develop its business plan proposals.

**Reliability and availability**

1.14. SPEN accepts the reliability target setting methodology set out in the Strategy decision. It agrees with our proposals for both the guaranteed standards and worst served customers and provides sufficient explanation as to how it will deliver these. SPEN has also voluntarily offered to double the value of payments for failures against the guaranteed standards, excluding those for exceptional events which are subject to separate arrangements. SPEN provides a very limited view of criticality across its network, with only criticality index ratings for its high voltage assets. This means that we do not have full visibility of what it proposes to deliver through its asset replacement expenditure at other voltage levels. The justification behind movements in SPEN's load indices is also not sufficiently well developed and there are omissions in its plans for addressing network resilience. Due to the issues identified in SPEN's business plan we do not therefore consider it to have acceptably addressed the reliability output.

## Assessment of SPEN's plans – efficient expenditure

**Overall assessment**

1.15. Both SPD and SPMW are above our overall fast-track cost assessment benchmark for RIIO-ED1, with SPMW the worst performing DNO by some margin. This takes into account how they perform on pure cost assessment, the monetisation of additional outputs and the downside testing on cost of equity.

1.16. SPD's forecast for annual totex during RIIO-ED1 shows a 15 per cent increase on its average annual costs for the first three years of DPCR5, which is above average for the DNOs. SPMW's forecast for annual totex during RIIO-ED1 shows a 27 per cent increase on its average annual costs for the first three years of DPCR5, which is well above average for the DNOs. SPEN's business plan indicates that these increases are mainly driven by significant increases in asset replacement expenditure which are necessary to due to increasing volumes of assets approaching the end of their operational lives. Increased reinforcement expenditure, due to SPEN's adoption of a reduced trigger point for when reinforcement is considered necessary, is also a significant contributor to the increase in annual expenditure.

1.17. SPEN has suggested there are additional costs associated with operating its SPMW interconnected network but it has failed to provide adequate evidence to quantify this claim.

1.18. SPEN has included some examples of innovations in its plan, which it has embedded into its core business, and claims significant benefits for the roll-out of

such innovations (including smart grids). The specific impacts of the innovation, in terms of cost savings and which areas of the business will benefit are not clear in SPEN's plan. There is little evidence that SPEN has considered how it will amend planning and operational processes to ensure it identifies opportunities to deploy smart grid solutions and its strategy for delivering smart meter benefits is also not well developed. Costs for IT and data from the Data Communications Company are not justified when compared to the expected benefits.

**Network operating costs (NOCs) and closely associated indirects (CAIs)**

1.19. We consider that both SPD and SPMW have network operating expenditure that is less realistic than the majority of other DNOs. We do not feel that SPEN has appropriately justified its forecasts in these activities. For closely associated indirects, SPEN's expenditure appears less justifiable than other DNOs and both its DNOs benchmark poorly, with SPD benchmarked as the least efficient company for the regressed CAI activities.

**Asset replacement and other non load-related expenditure**

1.20. SPD's replacement and refurbishment volumes are high compared to our modelling. SPMW's asset replacement volumes are extremely high compared to our modelling and its refurbishment volumes are also high. SPD is efficient on asset replacement and refurbishment unit costs across the majority of assets. SPMW is relatively high on unit costs across the majority of assets. SPEN's asset replacement strategy is not well justified and criticality information is limited; they have assumed an average criticality score where criticality information is not available. In addition there is a weak narrative to explain volumes and justification of some key asset groups.

**Load-related expenditure**

1.21. Across the areas that make up load-related expenditure SPD benchmarks poorly on unit costs, but appears reasonable in terms of forecast workloads. Its efficient unit cost for interventions to accommodate LCTs is offset by poor performance across the remaining areas of load-related expenditure. Although its volumes benchmark well across each area of load-related expenditure, SPD's strategy for load-related expenditure is not well articulated and justifications for high unit costs are weak. Its approach to LCT forecasting is not robust and contradictory in places.

1.22. SPMW benchmarks poorly on both unit costs and forecast workload. Its unit costs perform poorly in most areas of load-related expenditure. Its strategy for load-related expenditure is not well articulated and justifications for high unit costs are weak. Its high volumes of LCT-driven interventions relative to the number of connecting devices is not justified by its approach to LCT forecasting, which is not robust and contradictory in places.

**Business support**

1.23. SPEN's business support expenditure appears to be efficient when compared against the DNO group benchmark and is sufficiently well justified.

**Ongoing efficiency and RPEs**

1.24. The net impact of SPEN's RPE and ongoing efficiency assumptions is that, all else held equal, costs will decrease by the end of RIIO-ED1 by an average of 0.1 per cent per annum, on average. Its business plan includes a detailed and largely well justified approach to deriving RPE assumptions. However, having developed low and high case RPE assumptions it does not clearly justify the use of the high case. Overall SPEN's RPE assumptions are lower than those of all other DNOs. SPEN's assumptions for ongoing efficiency are comparable to other DNOs' assumptions.

**Smart grids, smart metering and innovation**

1.25. In its business plan, SPEN forecasts cost savings of £90m over RIIO-ED1 from use of innovation and smart grid solutions. The plan indicates that a number of smart grid solutions from a range of LCNF and IFI projects run by other DNOs have been examined. SPEN has outlined a good process by which solutions have been assessed by consultants for their use on its network. We were not able to identify where the smart grid solutions mentioned are being embedded into its business.

1.26. For smart meters SPEN's business plan provides a robust calculation of the costs of collecting smart meter data from the DCC using the latest available figures from DECC. The plan does not include a well developed strategy for delivering smart meter benefits. Consequently, the £5m claimed in benefits through the avoidance of network reinforcement is not robustly supported. As such, the business case presented in its plan lacks coherence; the costs of £11m for IT and data from the DCC are not justified when compared to the £5m of benefits.

1.27. SPEN's plan includes some examples of innovations which it has embedded into its core business. However, it is not clear where the benefits of these innovations lie across SPEN's business and how they have been reflected in the plan in terms of cost savings or output targets. This makes it difficult to assess the impact of the innovation and its scale across the business.

## Assessment of SPEN's plans – efficient financing

**Technical accounting**

1.28. SPEN's business plan generally complies with the policies specified in our Strategy decision. We did not identify any major issues.

**Corporate finance**

1.29. SPEN provides a comprehensive section on its corporate finance proposals. Consultancy advice by NERA, as well SPEN's own analysis against a range of models, is used to justify an allowed return on equity of 6.7 per cent. SPEN also takes on board some of the recommendations of the RIIO reviews financeability study with regard to beta estimates. However, there is little consideration of new information since the Strategy decision document

1.30. SPEN uses RoRE analysis and risk modelling by NERA to support its proposed notional gearing assumption of 65 per cent. Indexation of the allowed return on debt was accepted as part of the overall package. SPEN also provides detailed financeability assessment of its proposals. SPEN accepts the move to 45 year asset lives for new assets without transition.

1.31. Overall for the financing criteria we have assessed SPEN's proposals to be consistent with the policies set out in our Strategy decision. As with all the DNOs, we have tested the downside cost of equity in our cost efficiency assessment (see the Efficient costs section in Chapter 3).

## Assessment of SPEN's plans – uncertainty and risk

1.32. SPEN includes the uncertainty mechanisms we set out in the Strategy decision. Its process for developing a 'best view' scenario for the take-up of LCTs relies predominantly on stakeholder engagement, taking account of government policy. SPEN forecasts relatively high volumes of LCTs during the RIIO-ED1 price control period compared to other DNOs and does not provide sufficient detailed evidence to fully support these forecasts.

1.33. SPEN has little consideration of residual risk in its business plan. While it says that it will manage risks, it provides no explanation of what the risks are and how it will manage them. SPEN's strategy for flexing its investment plan to manage uncertainty around low carbon scenarios is generally good but lacks in detail in some areas. It has considered the commercial innovation and smart solutions to be deployed under its best view forecast but there is little evidence of consideration of how these could change across other scenarios. It has gone through a good process to understand the impact of LCTs on actual parts of the network. However, its narrative does not provide evidence of how this is used to inform a strategy which allows it to flex between scenarios.

# Appendix 8 – Assessment of SSEPD's plans

**Chapter Summary**

High-level assessment of Scottish and Southern Energy Power Distribution's (Hydro and Southern Electric) business plans.

## Overall assessment of SSEPD's plans

1.1. SSEPD's plan is available at http://www.yourfutureenergynetwork.co.uk/. We conclude that while the presentation of SSEPD's is acceptable, certain outputs are lacking, we are not currently convinced that the expenditures are efficient and we consider that the plan seeks to transfer too much risk to customers.

1.2. Our assessment against the criteria is summarised in the table below, and explained further in the remainder of this chapter. On the basis of our assessment **we have decided not to fast-track SSEH or SSES**.

| Criteria | SSEH | SSES |
|---|---|---|
| Process | | |
| Outputs | | |
| Efficient expenditure | | |
| Efficient financing | | |
| Uncertainty and risk | | |

## Respondents' views

1.3. Two respondents provided comments specifically on SSEPD's plan. Questions were raised about how SSEPD (and the other DNOs) will ensure safety during the smart meter roll-out. We consider these to be useful issues for the DNOs to consider going forwards.

## Assessment of SSEPD's plans - process

1.4. SSEPD's plan is clear and easy to follow. Its website version of the plan is relatively well laid out. However the submitted hard copy is difficult to navigate as it does not delineate sections.

1.5. SSEPD provides high level information on the governance arrangements and strategy it used to engage stakeholders as part of its plan development. It sets out its 12 commitments on six key stakeholder issues. In its plan, SSEPD outlines a variety of mechanisms that it has used to engage stakeholders. However, we

expected more information on why these engagement mechanisms were chosen. It provides some information about how feedback from stakeholders has shaped its business plan proposals. We expected more evidence on how SSEPD prioritised issues, gathered feedback on options and ultimately decided on its business plan.

1.6. SSEPD's plan does not contain a specific section on long-term delivery. Its plan has some limited detail on long-term delivery in the section on smart grids. Overall we consider that SSEPD's plan demonstrates that a reasonably robust process was followed.

## Assessment of SSEPD's plans – outputs

### Safety

1.7. We have considered the evidence provided by the HSE and have concluded that SSEPD's business plan is consistent with it meeting the primary output for health and safety.

### Customer satisfaction

1.8. SSEPD's proposed customer service outputs are consistent with our Strategy decision. SSEPD commits to making additional payments to customers if it fails to meet specific levels of service (eg £20 if it does not provide customers with five days' notice of a planned supply interruption). SSEPD states that it intends to make better use of a wider range of communication channels and will publish an annual report outlining improvements to service. Historically, SSEPD's rate of failure to answer telephone calls from customers during power cuts has been significantly higher than other DNOs. SSEPD provides some information about how it intends to address this during RIIO-ED1 (eg increasing the size of its call centre and investing in IT systems). Overall, we consider that SSEPD's customer service proposals are acceptable.

### Environment

*Losses*

1.9. The SSEPD losses reduction strategy covers most of the key aspects of our Strategy decision, but these are not clearly identified in the business plan. It proposes a holistic approach to network investment, but does not support this approach by CBA. It presents only one CBA looking at a dedicated programme to replace all equipment with low-loss equivalents, but the assumptions are not clearly explained. On the basis of this CBA it rejects all equipment replacement to reduce losses and proposes to maintain current practices. It includes expenditure of £1.5m for low-loss actions.

1.10. SSEPD proposes to focus on initiatives to correct data and establish a reliable baseline, particularly through smart metering and innovative data projects. It states

that 7 per cent of its networks could achieve a 10 per cent saving on losses through network optimisation and demand side response. SSEPD proposes to work with other stakeholders to address electricity theft and unmetered supplies to reduce losses. SSEPD's minimalist approach to losses reduction is disappointing, and we encourage further focus on robust CBA considering the values of losses across all network investment. This analysis should be supported by well-justified assumptions.

*Other environmental impacts*

1.11. SSEPD proposes to spend its entire £15.1m allowance undergrounding 90km of lines in designated areas. It demonstrates good practice on stakeholder engagement and on its approach to project delivery, prioritisation and stakeholder support. In previous price controls it has not spent any of its allowance for undergrounding in designated areas. It presents a clear set of targets for its BCF broken down by category, but there is a lack of clarity on the associated costs. It targets reducing SF6 leakage by 15 per cent through asset maintenance but does not provide any detail on its planned approach. It commits to specific asset replacement projects to reduce oil leakage from FFCs but the details on costs and targets in the business plan are inconsistent. SSEPD's proposals are inconsistent within its business plan and lack focus on the benefits and justification associated with its targets. In some instances (eg FFCs), the cost implications of certain activities are not provided. It does, however, demonstrate good practice regarding ongoing stakeholder engagement in undergrounding projects and prioritisation.

**Conditions for connections**

1.12. SSEPD's proposed connection outputs are consistent with our Strategy decision. SSEPD states that it will improve the service provided to connection customers (eg through better provision of information and use of a wider range of communication channels) and improve the timeliness of connections by 10 per cent (based on 2012-13 levels). SSEPD provides some information to explain how it will improve performance. Overall, SSEPD's connection proposals are acceptable.

**Social obligations**

1.13. SSEPD's proposed social outputs are broadly consistent with our Strategy decision. In its business plan, SSEPD recognises the importance of engaging with communities, especially during extreme weather situations, and will publish an annual Resilience Plan. In the business plan, SSEPD also commits to building partnerships and providing support to fuel poor customers (eg through deploying community energy coaches). Overall, we want SSEPD to provide more assurance that it has in place a comprehensive strategy in relation to consumer vulnerability. Support for customers in emergencies where they are without power remains critical, however we expect more evidence that SSEPD has considered the role it could play across a wider range of social issues. Accompanying this should be more information on the governance arrangements, development of partnerships and likely outcomes that accompany these activities. We also consider that this section of the business plan is heavily focused on the SSEH region and we expect more information about its approach to addressing a range of social issues in its SSES region.

**Reliability and availability**

1.14. SSEPD has historically performed well on reliability especially in the SSEH network area and it accepts the reliability target setting methodology set out in the Strategy decision. However, with regard to network risk indices, SSEPD has not included any information on asset criticality and is relatively weak on development of its load indices. This means that we do not have full visibility of what it proposes to deliver through its asset replacement expenditure. SSEPD has not fully justified its health index assessment and further explanation is required to reconcile this with information it provides on the average age of its assets. SSEPD does not agree with our proposals for worst-served customers, and is requesting over half of the total amount allocated to all GB customers to improve reliability for those worst served in its Hydro network region. We do not consider that this is sufficiently supported by the evidence SSEPD provides. Due to the issues identified above, we do not consider it to have acceptably addressed the reliability output.

## Assessment of SSEPD's plans – efficient expenditure

**Overall assessment**

1.15. Both SSEH and SSES are above our overall fast-track cost assessment benchmark for RIIO-ED1, with SSES being the closer of the two to our benchmark. This takes into account how SSEH performs on pure cost assessment, the monetisation of additional outputs and the downside testing on cost of equity.

1.16. SSEH's forecast for annual totex during RIIO-ED1 shows a 27 per cent increase on its average annual costs for the first three years of DPCR5, which is well above average for the DNOs. Its business plan narrative indicates that this is driven by a necessary shift towards asset replacement from asset refurbishment in managing its networks, and a number of specific large areas of spend including undergrounding of high voltage overhead lines. SSEH also identify the impact of transmission point exit charges, the growth and impact of renewable generation within its area, and planned programme to address a number of worst served customer areas, as significant drivers of the increase.

1.17. SSEPD's forecast for annual totex during RIIO-ED1 shows a 19 per cent increase on its average annual costs for the first three years of DPCR5, which is above average for the DNOs. The main drivers of this are significant increases in expenditure in the areas of reinforcement, asset replacement, network operating costs and the smart meter roll-out. In its business plan narrative SSES claims that over the course of RIIO-ED1 its annual expenditure will be 93 per cent of its DPCR5 annual allowance.

1.18. SSEPD has set out a wide range of innovations to be used during the price control period and followed a sensible process for prioritising the implementation of these. SSEPD's business plan does not provide a clear picture of the cost savings for RIIO-ED1 from the use of smart grid solutions and its cost benefit analyses covering these areas lack detail. Its plan for the smart meter roll-out is reasonably well developed, although it has not sufficiently justified the associated costs associated.

**Network operating costs (NOCs) and closely associated indirects (CAIs)**

1.19. We consider that SSEH has appropriately justified its network operating expenditure. It benchmarks reasonably well on network operating cost activities. For closely associated indirects, SSEH's forecast expenditure is significantly higher than current levels, although it performs satisfactorily when benchmarked on regressed CAI activities.

1.20. SSES's annual network operating costs expenditure is forecast to increase quite significantly from DPCR5 levels during RIIO-ED1. We consider that these costs remain efficient compared with other DNOs however and that SSES has appropriately justified them, with efficiencies forecast to be found in some areas. For closely associated indirects, SSES's forecast expenditure is significantly higher than current levels, although it performs satisfactorily when benchmarked on regressed CAI activities.

**Asset replacement and other non load-related expenditure**

1.21. SSEPD's volumes are generally in line with our benchmark modelling although it has submitted unit costs that are generally above our benchmarks across the majority of assets. SSEPD's asset replacement strategy is not comprehensive; there is good linkage between replacement volumes and asset health for some asset groups but explanation of volumes for some asset groups has not been provided and integration and quality of CBAs is poor.

**Load-related expenditure**

1.22. Across the areas that make up load-related expenditure SSEH benchmarks poorly on unit costs, but appears realistic in terms of forecast workloads. Its unit costs for the delivery of primary network capacity perform particularly poorly. Its strategy for load-related expenditure is well articulated in places however there is a lack of specific justification for forecasted interventions. The scheme papers submitted vary in quality and are lacking for some high-value schemes.

1.23. SSES benchmarks poorly on unit costs and relatively poorly on forecast workloads across the areas that make up load-related expenditure. Its unit costs for the delivery of assets within its primary network reinforcement schemes perform particularly poorly. Its strategy for load-related expenditure is well articulated in places. However, the scheme papers submitted vary in quality and are lacking for some high-value schemes. These scheme papers fail to justify the high level of capacity forecast to be added on the primary network. This contributes to a relatively poor performance in the primary network modelling. This poor performance is somewhat offset by a strong performance on the volume of interventions forecast to be required to accommodate LCTs.

**Business support**

1.24. For business support, SSEPD benchmarks reasonably well in comparison with other DNO groups.

**Ongoing efficiency and RPEs**

1.25. The net impact of SSEPD's RPE and ongoing efficiency assumptions is that, all else held equal, costs will have decreased by an average rate of 0.1 per cent per annum by the end of RIIO-ED1. SSEPD's business plan references a consultant's report on RPEs. The methodology used in this report takes a different approach to that which we have used previously. While this in itself does not mean the assumptions are not justified we question the validity of the choice of cost indices and time periods used to base the RPE assumptions on. The business plan reflects the assumptions derived in the report apart from the RPE assumptions for transport and other which SSEPD has not justified. Its specialist labour RPE assumptions are higher than those assumed by the other DNOs, but the overall impact of the RPE assumptions is comparable. SSEPD's assumptions for ongoing efficiency are the most ambitious of all DNOs.

**Smart grids, smart metering and innovation**

1.26. SSEPD's business plan does not provide a clear picture of the cost savings for RIIO-ED1 from the use of smart grid solutions. The business plan is not consistent on the benefits being achieved. It is not clear how SSEPD plans to deploy the solutions and therefore what the benefits are for customers. SSEPD has provided CBAs to justify the selection of a number of its innovations however, these are generally lacking in detail and it is difficult to align them with the narrative in the business plan.

1.27. For smart meters SSEPD's plan gives a good estimation of the cost of receiving data from the DCC on the basis of DECC's indicative figures. The plan includes a comprehensive evaluation of IT system requirements for the storage and use of smart meter data, as well as a broad breakdown of cost elements. Whilst SSEPD's smart metering business plan is, on the whole, reasonably well developed, the total IT and DCC costs of £81.7m are not well justified when compared to the £16.52m in benefits identified.

1.28. SSEPD's plan identifies 20 core innovations to be rolled out during RIIO-ED1. Many of these innovations are smart grid techniques and are discussed in the separate smart grids assessment. SSEPD's plan explains that it has tried to foster a culture of innovation within its business. This includes tasking business support units to use innovation to find operational savings of between 0.5-1 per cent. It is not clear in the plan whether SSEPD will achieve this ambition, or what the total savings were. SSEPD also ran a 'licence to innovate' scheme for staff which produced £14m of savings in DPCR5. Again it is not clear what benefits of this have been embedded into SSEPD's RIIO-ED1 plan. Consequently, it is difficult to assess the impact of the innovation across its business in terms of costs and outputs.

## Assessment of SSEPD's plans – efficient financing

### Technical accounting

1.29. SSEPD's business plan generally complies with the policies specified in our Strategy decision. SSEPD does not provide a calculation to support its proposed totex capitalisation rate, but states that it is proposing a rate towards the upper end of its range of historical statutory capitalisation rates.

### Corporate finance

1.30. SSEPD provides a substantial section on its corporate finance proposals. Consultancy advice from Oxera and a relative risk assessment is used to justify an allowed return on equity of 6.7 per cent. However, SSEPD does not address the challenges raised in the RIIO reviews financeability study nor appears to consider any new information since the Strategy decision document. SSEPD uses RoRE analysis to support its proposed notional gearing assumption of 65 per cent. Indexation of the allowed return on debt is accepted as part of the overall package.

1.31. SSEPD seeks transition on asset lives over the course of RIIO-ED1 on financeability grounds. However, we note that transition improves credit metrics that, by SSEPD's own assessment, already look comfortable without transition. The one credit metric that looks stretched in SSEPD's assessment, PMICR, is specifically calibrated to be neutral to changes in depreciation profiles.

1.32. Overall for the financing criteria we have assessed SSEPD's proposals to be consistent with the policies set out in our Strategy decision. As with all the DNOs, we have tested the downside cost of equity in our cost efficiency assessment (see the Efficient costs section in Chapter 3).

## Assessment of SSEPD's plans – uncertainty and risk

1.33. While SSEPD includes the uncertainty mechanisms we set out in the Strategy decision, it has modified several of them and includes two additional mechanisms. We agree with its proposed new uncertainty mechanism for the line diversion costs it incurs for Network Rail's electrification schemes. However it extends the period over which it can recover the DCC licence fee and does not support the tapering mechanism for the recovery of costs incurred by DNOs for smart meter roll-out. All other DNOs accepted these mechanisms and SSEPD provides no explanation of why its needs are different.

1.34. SSEPD also includes a new, cumulative uncertainty mechanism which provides it with additional risk protection. The mechanism involves a re-opener where a cumulative threshold across the other uncertainty mechanisms is reached, despite individual elements not having reached their individual re-opener thresholds. SSEPD states that this mechanism was adopted in gas distribution, but has not justified why DNOs need it. No other DNO has requested this mechanism. We consider that this mechanism provides SSEPD with significant additional cost protection at customers'

expense and is not justified. We see the overall SSEPD approach to risk as one of de-risking its plan, which we do not consider appropriate for customers to bear.

1.35. SSEPD describes a good process for developing a best view scenario for the take-up of LCTs and its LCT volumes forecast are reasonable compared to other DNOs. It states that its best view scenario has been developed using historical trends, stakeholder engagement and local planning requirements, however it is not clear how this process has informed the forecast volumes.

1.36. While SSEPD does not mention risk in its customer-facing documents, it sets out its general approach to risk management in two of the appendices submitted to Ofgem. However, it includes little on the potential risks in RIIO-ED1 and any mitigation actions. Its strategy for flexing its investment plan to manage uncertainty around low carbon scenarios is lacking in detail. It proposes to use innovation to provide flexibility to meet different scenarios, but there is little detail of how it will flex its investment strategy. It does mention the need to be aware of resourcing requirements of different scenarios when reviewing its workforce renewal and training programmes. It considers the use of the load-related expenditure reopener as the main method for managing uncertainty between the scenarios.

# Appendix 9 – Expenditure tables

1.1. This appendix sets out the summary expenditures proposed by the DNOs for RIIO-ED1. The figures shown here may not match those set out in the DNOs' published business plans. This is for two reasons:

(a) The clarification and error correction process we have been through with the DNOs
(b) Some DNOs categorise their expenditures differently in their plans

**Table A9.1: DNOs' forecast of total expenditure (totex) in RIIO-ED1** (real, in 2012-13 prices including RPEs)

| DNO | Average annual forecast (£m) | Percentage change over DPCR5 actuals |
|---|---|---|
| ENWL | 237.6 | -2% |
| NPgN | 170.6 | 16% |
| NPgY | 232.5 | 15% |
| WMID | 263.2 | 2% |
| EMID | 263.9 | 3% |
| SWALES | 140.4 | 9% |
| SWEST | 214.3 | 20% |
| LPN | 246.2 | 24% |
| SPN | 237.3 | 4% |
| EPN | 357.9 | 7% |
| SPD | 217.5 | 15% |
| SPMW | 277.5 | 27% |
| SSEH | 155.5 | 27% |
| SSES | 311.2 | 19% |

**Table A9.2: DNOs' forecast of load-related expenditure in RIIO-ED1** (real, in 2012-13 prices including RPEs)

| DNO | Average annual forecast (£m) | As a proportion of totex | Percentage change over DPCR5 actuals |
|---|---|---|---|
| ENWL | 18.5 | 8% | 66% |
| NPgN | 12.5 | 7% | 35% |
| NPgY | 14.5 | 6% | 58% |
| WMID | 27.9 | 11% | 62% |
| EMID | 37.1 | 14% | 91% |
| SWALES | 6.9 | 5% | 102% |
| SWEST | 12.0 | 6% | 207% |
| LPN | 48.1 | 20% | 212% |
| SPN | 30.2 | 13% | 49% |
| EPN | 46.4 | 13% | 103% |
| SPD | 23.6 | 11% | 107% |
| SPMW | 33.0 | 12% | 100% |
| SSEH | 22.1 | 14% | 551% |
| SSES | 36.7 | 12% | 83% |

**Table A9.3: DNOs' forecast of network investment (NI) in RIIO-ED1** (real, in 2012-13 prices including RPEs)

| DNO | Average annual forecast (£m) | As a proportion of totex | Percentage change over DPCR5 actuals |
|---|---|---|---|
| ENWL | 98.9 | 42% | 9% |
| NPgN | 60.7 | 36% | 12% |
| NPgY | 90.8 | 39% | 13% |
| WMID | 90.9 | 35% | 12% |
| EMID | 80.1 | 30% | -1% |
| SWALES | 54.3 | 39% | 17% |
| SWEST | 79.3 | 37% | 28% |
| LPN | 76.6 | 31% | 22% |
| SPN | 75.1 | 32% | 9% |
| EPN | 118.7 | 33% | 16% |
| SPD | 82.1 | 38% | 29% |
| SPMW | 133.4 | 48% | 67% |
| SSEH | 40.6 | 26% | 19% |
| SSES | 105.9 | 34% | 5% |

**Table A9.4: DNOs' forecast of network operating costs (NOCs) in RIIO-ED1** (real, in 2012-13 prices including RPEs)

| DNO | Average annual forecast (£m) | As a proportion of totex | Percentage change over DPCR5 actuals |
|---|---|---|---|
| ENWL | 40.7 | 17% | -6% |
| NPgN | 39.9 | 23% | 9% |
| NPgY | 59.7 | 26% | 6% |
| WMID | 49.8 | 19% | -17% |
| EMID | 52.0 | 20% | -10% |
| SWALES | 27.6 | 20% | -5% |
| SWEST | 44.2 | 21% | 2% |
| LPN | 44.6 | 18% | -4% |
| SPN | 46.1 | 19% | -18% |
| EPN | 74.8 | 21% | -17% |
| SPD | 41.4 | 19% | 10% |
| SPMW | 45.5 | 16% | 15% |
| SSEH | 34.4 | 22% | 0% |
| SSES | 62.4 | 20% | 16% |

**Table A9.5: DNOs' forecast of closely-associated indirects (CAI) in RIIO-ED1** (real, in 2012-13 prices including RPEs)

| DNO | Average annual forecast (£m) | As a proportion of totex | Percentage change over DPCR5 actuals |
|---|---|---|---|
| ENWL | 42.0 | 18% | 0% |
| NPgN | 30.5 | 18% | 15% |
| NPgY | 35.8 | 15% | 14% |
| WMID | 53.6 | 20% | -15% |
| EMID | 53.3 | 20% | -12% |
| SWALES | 29.9 | 21% | 3% |
| SWEST | 43.8 | 20% | 11% |
| LPN | 43.3 | 18% | 21% |
| SPN | 51.2 | 22% | 10% |
| EPN | 71.8 | 20% | 7% |
| SPD | 43.6 | 20% | -7% |
| SPMW | 41.3 | 15% | -16% |
| SSEH | 32.7 | 21% | 29% |
| SSES | 62.6 | 20% | 21% |

**Table A9.6: DNOs' forecast of business support in RIIO-ED1** (real, in 2012-13 prices including RPEs)

| DNO | Average annual forecast (£m) | As a proportion of totex | Percentage change over DPCR5 actuals |
|---|---|---|---|
| ENWL | 31.9 | 13% | -13% |
| NPgN | 17.6 | 10% | 9% |
| NPgY | 20.2 | 9% | 10% |
| WMID | 27.6 | 10% | -1% |
| EMID | 28.7 | 11% | 10% |
| SWALES | 14.8 | 11% | 1% |
| SWEST | 23.7 | 11% | 8% |
| LPN | 21.7 | 9% | -19% |
| SPN | 22.6 | 10% | -10% |
| EPN | 28.9 | 8% | -22% |
| SPD | 19.3 | 9% | -26% |
| SPMW | 17.4 | 6% | -39% |
| SSEH | 18.9 | 12% | 2% |
| SSES | 28.8 | 9% | 11% |

**Table A9.7: DNOs' forecast of smart meters (on-site & indirect/IT for smart meter roll-out) in RIIO-ED1** (real, in 2012-13 prices including RPEs)

| DNO | Average annual forecast (£m) | As a proportion of totex | Percentage change over DPCR5 actuals |
|---|---|---|---|
| ENWL | 0.6 | 0% | N/A |
| NPgN | 1.6 | 1% | N/A |
| NPgY | 2.2 | 1% | N/A |
| WMID | 1.3 | 0% | N/A |
| EMID | 1.4 | 1% | N/A |
| SWALES | 0.6 | 0% | N/A |
| SWEST | 0.8 | 0% | N/A |
| LPN | 3.8 | 2% | N/A |
| SPN | 3.1 | 1% | N/A |
| EPN | 4.9 | 1% | N/A |
| SPD | 0.6 | 0% | N/A |
| SPMW | 0.5 | 0% | N/A |
| SSEH | 1.2 | 1% | N/A |
| SSES | 4.5 | 1% | N/A |

**Table A9.8: DNOs' forecast of non-operational capex in RIIO-ED1** (real, in 2012-13 prices including RPEs)

| DNO | Average annual forecast (£m) | As a proportion of totex | Percentage change over DPCR5 actuals |
|---|---|---|---|
| ENWL | 5.1 | 2% | -73% |
| NPgN | 7.7 | 5% | 63% |
| NPgY | 9.2 | 4% | 45% |
| WMID | 12.1 | 5% | 27% |
| EMID | 11.2 | 4% | 6% |
| SWALES | 6.3 | 4% | 4% |
| SWEST | 10.5 | 5% | 34% |
| LPN | 8.2 | 3% | -27% |
| SPN | 9.0 | 4% | -26% |
| EPN | 12.5 | 3% | -21% |
| SPD | 6.9 | 3% | 71% |
| SPMW | 6.5 | 2% | 51% |
| SSEH | 5.5 | 4% | -12% |
| SSES | 10.4 | 3% | 11% |

# Appendix 10 – Historical performance

## Reliability

**Table A10.1: Customer interruptions (CIs), by DNO, over the DPCR5 period to date**

| | 2010/11 | | 2011/12 | | 2012/13 | |
|---|---|---|---|---|---|---|
| | Target | Performance | Target | Performance | Target | Performance |
| ENWL | 52.9 | 47.8 | 52.7 | 45.9 | 52.5 | 46.6 |
| NPGN | 68.3 | 65.2 | 68.2 | 67.9 | 68.2 | 65.7 |
| NPGY | 75.3 | 69.9 | 75.3 | 69.3 | 75.3 | 72.3 |
| WMID | 109.9 | 102.2 | 109.9 | 73.7 | 109.9 | 81.4 |
| EMID | 75.7 | 61.7 | 75.7 | 52.9 | 75.7 | 48.2 |
| SWales | 79.5 | 58.4 | 79.5 | 56.0 | 79.5 | 48.4 |
| SWest | 73.6 | 61.5 | 73.6 | 53.9 | 73.6 | 60.3 |
| LPN | 33.4 | 24.4 | 33.4 | 27.6 | 33.4 | 25.0 |
| SPN | 85.0 | 76.9 | 84.2 | 53.3 | 83.3 | 54.9 |
| EPN | 76.1 | 86.0 | 75.9 | 63.2 | 75.7 | 56.7 |
| SPD | 60.1 | 50.7 | 60.1 | 52.6 | 60.1 | 51.6 |
| SPMW | 45.6 | 39.3 | 45.5 | 36.0 | 45.3 | 34.1 |
| SSEH | 77.0 | 74.0 | 77.0 | 70.1 | 77.0 | 68.6 |
| SSES | 73.8 | 63.6 | 73.2 | 69.8 | 72.6 | 61.8 |

1.2. For 2012/13 'performance' is derived from data submitted by DNOs to date, however this is still subject to confirmation.

**Figure A10.1: Interruptions longer than 12/18hrs for year 2010/11**

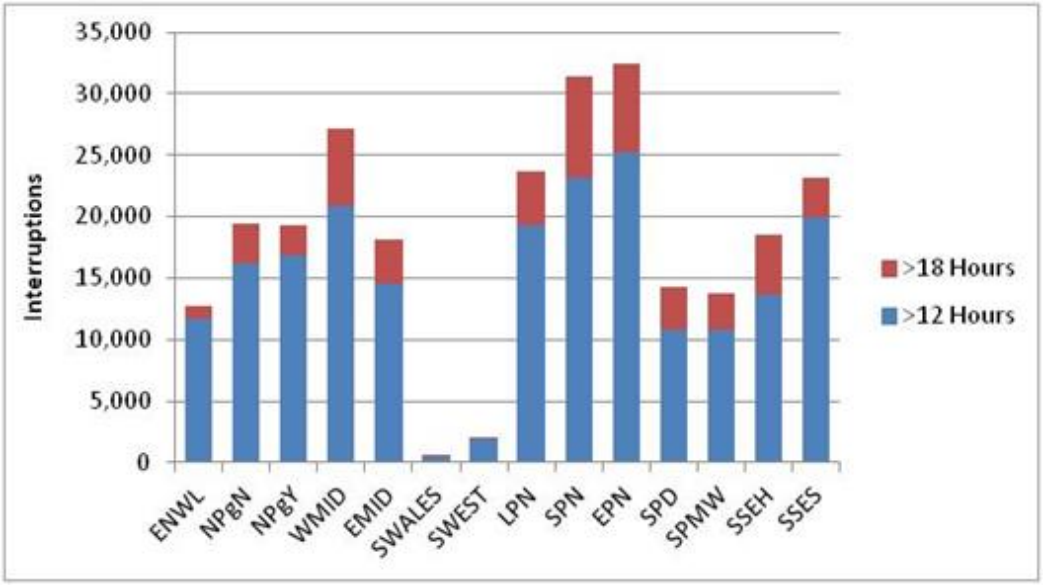


**Figure A10.2: Interruptions longer than 12/18hrs for year 2011/12**

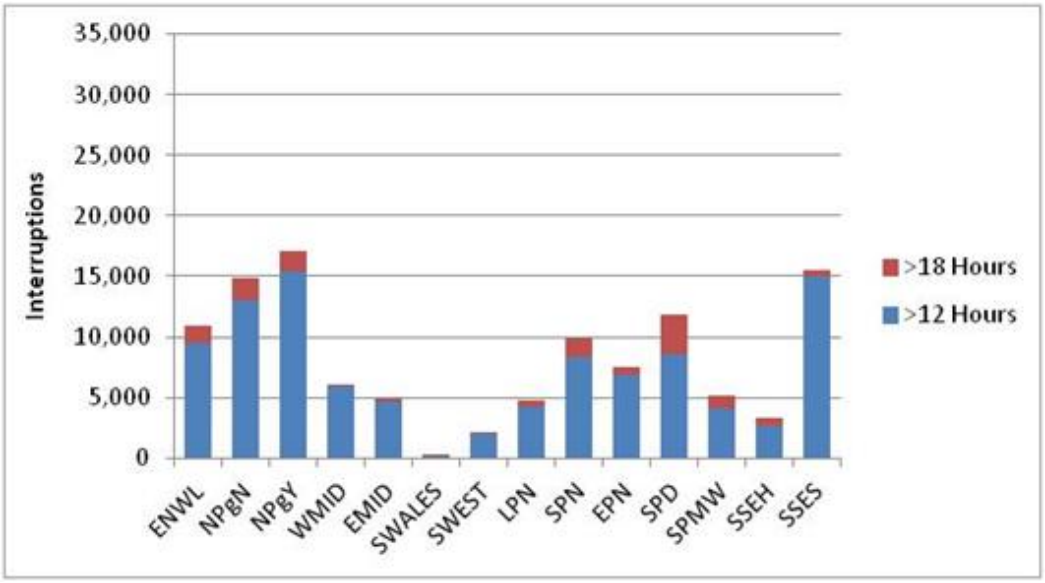



**Figure A10.3: Interruptions longer than 12/18hrs for year 2012/13**

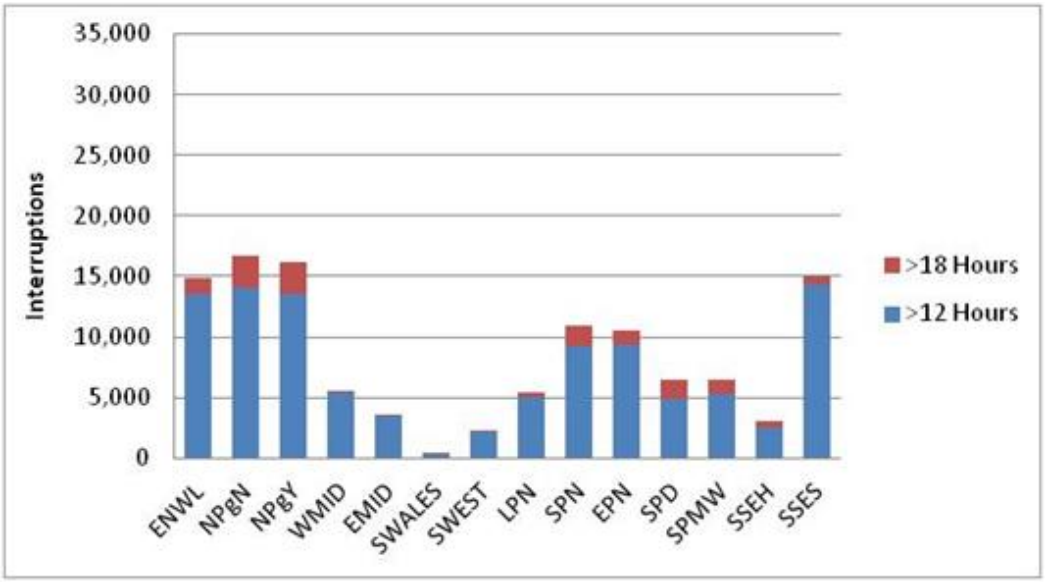


**Table A10.2: Customer minutes lost (CMLs), by DNO, over the DPCR5 period to date**

| | 2010/11 | | 2011/12 | | 2012/13 | |
|---|---|---|---|---|---|---|
| | Target | Performance | Target | Performance | Target | Performance |
| ENWL | 55.6 | 47.3 | 55.6 | 47.6 | 55.6 | 49.3 |
| NPGN | 71.3 | 71.1 | 71.1 | 68.5 | 70.9 | 74.2 |
| NPGY | 76.0 | 68.2 | 76.0 | 65.0 | 76.0 | 62.8 |
| WMID | 97.0 | 89.5 | 96.3 | 49.0 | 95.6 | 44.8 |
| EMID | 69.0 | 54.9 | 68.6 | 37.0 | 68.2 | 30.2 |
| SWales | 44.6 | 32.4 | 44.6 | 37.1 | 44.6 | 29.8 |
| SWest | 51.0 | 42.6 | 51.0 | 39.7 | 51.0 | 46.0 |
| LPN | 41.0 | 42.4 | 41.0 | 31.2 | 41.0 | 33.8 |
| SPN | 87.6 | 73.2 | 82.9 | 42.8 | 78.1 | 47.0 |
| EPN | 71.1 | 72.4 | 69.7 | 47.4 | 68.3 | 49.6 |
| SPD | 65.5 | 49.4 | 63.5 | 48.8 | 61.5 | 45.7 |
| SPMW | 61.1 | 47.5 | 60.6 | 43.6 | 60.1 | 42.8 |
| SSEH | 75.1 | 78.4 | 75.1 | 71.4 | 75.1 | 68.0 |
| SSES | 69.1 | 64.1 | 68.3 | 60.3 | 67.5 | 65.2 |

1.3. For 2012/13 'performance' is derived from data submitted by DNOs to date, however this is still subject to confirmation.

## Customer satisfaction

**Table A10.3: Broad Measure of Customer Service – Customer Satisfaction Survey Scores 2012-13 (in descending order of overall score)**

| *all scores out of 10* | Supply Interruptions | Connections | General Enquiries | Overall |
|---|---|---|---|---|
| SWALES | 8.78 | 8.33 | 8.71 | 8.59 |
| SWEST | 8.58 | 8.57 | 8.65 | 8.59 |
| EMID | 8.48 | 8.42 | 8.53 | 8.46 |
| SSEH | 8.73 | 8.14 | 7.99 | 8.35 |
| WMID | 8.39 | 8.21 | 8.34 | 8.31 |
| SPMW | 8.29 | 7.33 | 8.33 | 7.91 |
| SSES | 7.97 | 7.78 | 7.97 | 7.89 |
| EPN | 8.11 | 7.34 | 8.23 | 7.82 |
| NPY | 8.04 | 7.48 | 8.01 | 7.81 |
| NPN | 8.06 | 7.36 | 8.07 | 7.79 |
| SPN | 7.92 | 7.47 | 8.11 | 7.78 |
| SPD | 8.13 | 7.41 | 7.79 | 7.77 |
| ENWL | 7.77 | 7.62 | 7.14 | 7.59 |
| LPN | 7.56 | 7.23 | 6.87 | 7.29 |
| Average | 8.2 | 7.76 | 8.05 | 8.00 |

## Secondary deliverables – health and load indices

1.4. The graphs in this section show our estimation of the DNOs' performance against their health indices (HIs) and load indices (LIs) to date in the DPCR5 price control period. These indices are secondary deliverables for reliability.

1.5. For both HIs and LIs, there are no annual or mid period targets. Therefore our charts show how much of each DNO's total DPCR5 indicators it has delivered to date. This is used as an indicator as to whether the DNO may be on track to deliver its indices by the end of the current price control period (DPCR5).

**Figure A10.4: DPCR5 to date HI Delta from Refurbishment & Replacement (as a percentage of total DNO deliverable)**

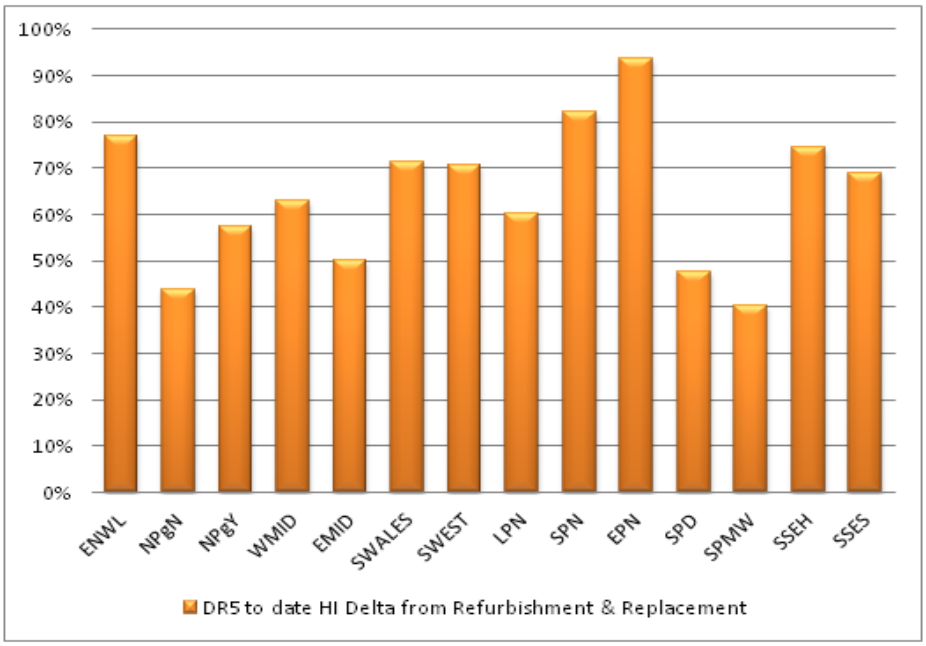


**Figure A10.5: DPCR5 to date HI Delta from Refurbishment & Replacement (as a percentage of total DNO deliverable) by DNO group**

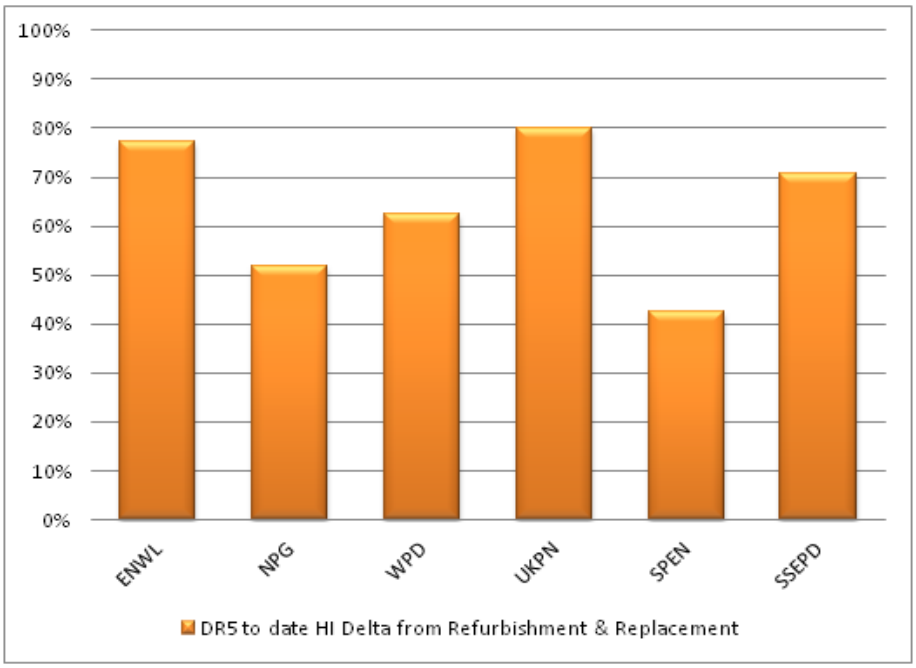
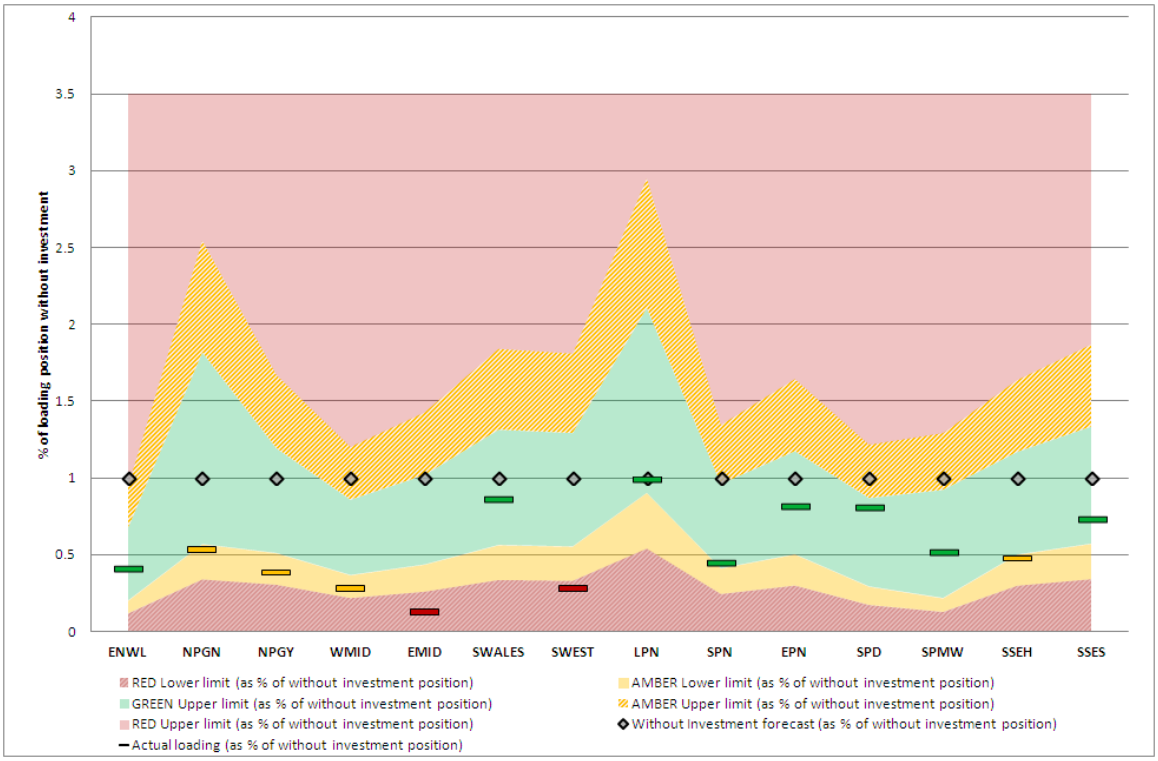



**Figure A10.6: Load index (LI) delivery after three years of DPCR5 - expressed as percentage of forecast position without investment**



1.6. Due to the different approaches and inconsistency in how DNOs assess LIs in DPCR5, we have used three tracking options for where we would expect DNOs to be:

1. three-fifths of the difference between their starting point and without intervention 2015 position (generally for DNOs reducing the loading on their network over DPCR5)
2. at the year three position as identifiable from their DPCR5 submissions (generally for DNOs that have a back-loaded plan, and/or where big projects that take time to deliver are the key drivers for the movements)
3. within a tolerance band of their final 'year 5' position (for DNOs that are planning to maintain loading at a constant level).

1.7. The maximum and minimum of these three values sets the green band. This then has an amber band on either side, with performance above/below this classed as red.

1.8. The maximum demand at a primary network substation, a key element in the calculation of LI rating, will be largely driven by customer usage at a particular point in time. To this end, performance against the LI deliverable is not wholly within the control of the DNO. DNO load forecasts for DPCR5 were put together at a point in time before the economy went into recession. Therefore, a key consideration in assessing reinforcement expenditure and delivery against the load index in the first three years of DPCR5 has to be the background localised economic performance.

1.9. Where actual demand exceeds the level forecast by the DNO, full delivery of the LI deliverable would likely require further expenditure than the level that the DNO has been funded for. Where actual demand is below the level forecast by the DNO, full delivery of the LI deliverable will likely require less expenditure than the level that the DNO has been funded for. To this end, we do not expect DNOs to rigidly pursue the reinforcement schemes listed in their DPCR5 business plan where the actual levels of demand at substations suggest that they are no longer required.

1.10. Since their acquisition by WPD, WMID and EMID have changed their approach to LIs to be in line with that of the other WPD licensees. However their targets are still derived from the data that their previous owner, Central Networks, provided in its submissions for DPCR5. This difference in calculation methodology plays a significant role in where WMID and EMID currently sit in DPCR5.

# Appendix 11 – Provisional targets for IIS

1.1. In our Strategy decision (Appendix 2 of the 'Supplementary annex – Reliability and safety') we set out indicative targets for unplanned interruptions under the Interruptions Incentive Scheme. The targets are set for customer interruptions (CIs) and customer minutes lost (CMLs). We stated that we would finalise the targets (using the same methodology) once we had received the 2012-13 data.

1.2. In the tables below we set out the provisional targets for RIIO-ED1. They are provisional given the licence requirements to formalise 2012-13 annual performance and for DNOs to review and confirm that the target setting methodology has been applied correctly.

1.3. We will set out the final targets in advance of our fast-tracking decision.

1.4. It should be noted that for three of its DNOs, WPD has set CML targets that are tougher than the indicative targets calculated through Ofgem's methodology. For one of its DNOs, WPD has also set CI targets that are tougher than our methodology in certain years. In these years, the lower of the WPD and Ofgem targets has been selected for the DNO.

**Table A11.1: Provisional CI targets for RIIO-ED1**

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|
| ENWL | 45.8 | 45.5 | 45.3 | 45.1 | 44.9 | 44.6 | 44.4 | 44.2 |
| NPGN | 59.0 | 58.7 | 58.4 | 58.1 | 57.8 | 57.5 | 57.2 | 56.9 |
| NPGY | 65.7 | 64.7 | 63.7 | 62.7 | 61.8 | 60.9 | 60.0 | 59.1 |
| WMID | 85.7 | 84.4 | 83.2 | 81.7 | 80.0 | 78.3 | 76.7 | 75.1 |
| EMID | 51.1 | 50.4 | 50.1 | 49.9 | 49.6 | 49.4 | 49.1 | 48.9 |
| SWALES | 49.9 | 49.6 | 49.4 | 49.1 | 48.9 | 48.6 | 48.4 | 48.2 |
| SWEST | 55.4 | 55.1 | 54.8 | 54.6 | 54.3 | 54.0 | 53.8 | 53.5 |
| LPN | 27.4 | 27.3 | 27.1 | 27.0 | 26.9 | 26.7 | 26.6 | 26.5 |
| SPN | 63.0 | 62.7 | 62.4 | 62.1 | 61.8 | 61.5 | 61.2 | 60.9 |
| EPN | 66.1 | 65.7 | 65.4 | 65.1 | 64.8 | 64.4 | 64.1 | 63.8 |
| SPD | 50.1 | 49.9 | 49.6 | 49.4 | 49.1 | 48.9 | 48.6 | 48.4 |
| SPMW | 35.1 | 34.9 | 34.7 | 34.5 | 34.4 | 34.2 | 34.0 | 33.9 |
| SSEH | 66.6 | 66.3 | 66.0 | 65.6 | 65.3 | 65.0 | 64.7 | 64.3 |
| SSES | 59.4 | 58.6 | 57.7 | 57.4 | 57.1 | 56.8 | 56.5 | 56.2 |

**Table A11.2: Provisional CML targets for RIIO-ED1**

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|
| **ENWL** | 39.3 | 38.6 | 37.9 | 37.2 | 36.5 | 35.8 | 35.2 | 34.5 |
| **NPGN** | 51.9 | 50.9 | 50.0 | 49.0 | 48.1 | 47.3 | 46.4 | 45.5 |
| **NPGY** | 54.9 | 53.8 | 52.8 | 51.8 | 50.8 | 49.8 | 48.9 | 47.9 |
| **WMID** | 51.1 | 50.3 | 49.5 | 48.7 | 47.9 | 47.1 | 46.4 | 45.6 |
| **EMID** | 36.7 | 35.9 | 35.1 | 34.4 | 33.7 | 32.9 | 32.3 | 31.6 |
| **SWALES** | 27.5 | 27.5 | 27.4 | 27.4 | 27.3 | 27.3 | 27.2 | 27.1 |
| **SWEST** | 35.8 | 35.6 | 35.4 | 35.2 | 35.0 | 34.8 | 34.6 | 34.4 |
| **LPN** | 39.5 | 38.9 | 38.3 | 37.8 | 37.2 | 36.7 | 36.1 | 35.6 |
| **SPN** | 44.6 | 43.7 | 42.7 | 41.8 | 41.0 | 40.1 | 39.3 | 38.5 |
| **EPN** | 45.2 | 44.2 | 43.3 | 42.4 | 41.5 | 40.6 | 39.8 | 38.9 |
| **SPD** | 40.8 | 40.0 | 39.3 | 38.5 | 37.8 | 37.1 | 36.4 | 35.7 |
| **SPMW** | 33.5 | 32.8 | 32.1 | 31.3 | 30.7 | 30.0 | 29.3 | 28.7 |
| **SSEH** | 52.2 | 51.1 | 50.0 | 49.0 | 47.9 | 46.9 | 45.9 | 45.0 |
| **SSES** | 46.2 | 45.3 | 44.4 | 43.6 | 42.8 | 41.9 | 41.2 | 40.4 |