Ofgem consultation (Published 30th July 2014)

RIIO-ED1: Draft Determination for the slow-track electricity distribution companies – Overview

SP Energy Networks (SPEN) Response

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PART A: EXECUTIVE SUMMARY

1. INTRODUCTION AND CONTEXT OF THIS DOCUMENT

1.1 The purpose of this document is to focus on the issues arising from the Consultation that are most critical to SP Distribution (SPD) and SP Manweb (SPM) (collectively SPEN). We start by explaining the context in which this document is provided.

1.2 It is important to recognise however that there is considerable uncertainty as a result of the recent promised constitutional change in the UK. This change is likely to take place throughout the course of the RIIO-ED1 period and produces significant uncertainties for DNOs operating in Great Britain. This change is likely to produce:

1.2.1 Further devolved powers for Scotland;

1.2.2 Further devolved powers for Wales; and

1.2.3 Potential constitutional changes in England as a result.

1.3 SPEN's licensees operate across all countries in GB. SPM operates in Wales and England and SPD operates in Scotland and England.

1.4 Such constitutional change could impact in a myriad of ways, as an example, tax and operational requirements e.g. safety and the environment. This gives rise to significantly more uncertainty and this uncertainty is not possible to scope at this stage.

1.5 SPEN's March 2014 business plan was submitted on the following basis:

1.5.1 "that the present currency, territorial and regulatory arrangements in Great Britain will continue in their present form throughout the duration of the RIIO-ED1 price control. If there is a material change to any aspect of these arrangements, then the respective business plans of each of SPT, SPD and SPM and their revenues will have to be reviewed."

1.6 SPEN emphasises the need to have open discussion with Ofgem as to the potential consequences of such change.

1.7 Throughout the RIIO-ED1 process SPEN has worked with Ofgem to ensure that RIIO-ED1 results in a high quality outcome for all stakeholders. SPEN's Business Plan has been formulated with that over-arching objective in mind. In particular, SPEN has taken full account of the need to ensure that RIIO-ED1:

1.7.1 protects the interests of present and future electricity consumers; and

1.7.2 provides SPD and SPM with sufficient resources to meet this objective and finance their licensed activities.

1.8 SPD and SPM hold electricity distribution licences and operate electricity distribution systems which serve 3.5 million customers. SPD and SPM are subject to a range of significant legal duties which define SPD and SPM's licensed activities. SPEN fully understands that it must discharge such responsibilities throughout RIIO-ED1 in order to ensure that:

1.8.1 consumers (present and future) continue to benefit from an efficient, secure and reliable supply of electricity;

1.8.2 all reasonable demands for electricity are met; and

1.8.3 SPEN's operations are conducted to reasonable and prudent standards of safety so that the general public is protected from the dangers arising from the distribution of electricity.

1.9 In order to continue to meet these objectives over the next eight years SPEN must make a range of significant investments. SPEN has formulated a programme of

investment that is critical in enabling SPEN to discharge its responsibilities. In preparing its programme of investment SPEN has taken full account of its duty to develop and maintain an efficient, co-ordinated and economical electricity distribution system.

1.10 SPEN appreciates that Ofgem's objectives are consistent with this background. Ofgem has to secure a price control settlement that benefits consumers, while recognising the need for efficient network companies to be able to finance their licensed activities.

1.11 In this document, SPEN raises a range of issues that are of critical importance. The appropriate resolution of these issues is central to ensuring that SPEN's price control settlement benefits consumers, and ensuring that SPD and SPM can finance their licensed activities.

1.12 If Ofgem implements the Draft Determination without adjustment, SPEN will not be able to deliver the comprehensive set of secondary deliverables and outputs that it has proposed in its Business Plan.

1.13 SPEN understands that the RIIO-ED1 process is highly demanding of the Ofgem team. The DNOs' Business Plans give rise to highly complex issues, and cover a wide range of engineering, operational and financial issues. SPEN will continue to work constructively with Ofgem to resolve any questions or clarifications in respect of this document and RIIO-ED1 more generally. We encourage Ofgem to continue to raise questions and clarifications and use all information provided by SPD and SPM to reach an informed decision.

1.14 At this stage both Ofgem and SPEN are, inevitably, focussed on resolving differences rather than discussing areas of agreement. This document focusses on those differences and, therefore, contains a range of criticisms of Ofgem's approach. However it should be emphasised that we have made significant progress with Ofgem to achieve a broad measure of agreement on a range of topics. SPEN is committed to resolving the outstanding issues so as to achieve a high quality outcome to SPEN's RIIO-ED1 price control in the interests of our customers and stakeholders.

2. STRUCTURE OF THIS DOCUMENT

2.1 As explained above, the purpose of this document is to focus on the issues arising from the Consultation that are most critical to SPD and SPM (collectively SPEN). We deal with these issues in the following order:

- 2.1.1 This Part A contains an Executive Summary.
- 2.1.2 Part B deals with Chapter 2 (Summary of assessment) and Chapter 3 (Outputs) of the Consultation.
- 2.1.3 Part C deals with Chapter 4 (Assessment of efficient expenditure) of the Consultation.
- 2.1.4 Part D deals with Chapter 5 (Assessment of efficient finance) of the Consultation.
- 2.1.5 Part E deals with Chapter 6 (Uncertainty and risk) of the Consultation.
- 2.1.6 Part F deals with SPEN's scheme-by-scheme analysis of the impact of the proposed determination.

2.2 We have sought to deal with these topics broadly in the same order as the questions raised in the Consultation. Where possible we have referred to the questions in the Consultation in the section headings (by cross referencing with the chapter number and question number).

2.3 A full table of contents follows this section.

2.4 SPEN's detailed responses to Ofgem's current RIIO-ED1 consultations are provided as annexes to this document as follows:

2.4.1 **Annex 1**. Response to "RIIO-ED1: Draft determinations for the slow-track electricity distribution companies – Business Plan expenditure assessment" (the "Expenditure Assessment").

2.4.2 **Annex 2**. Response to "RIIO-ED1: Draft determinations for the slow-track electricity distribution companies – Financial Issues" (the "Financial Assessment").

2.4.3 **Annex 3**. Response to "Assessment of the resubmitted RIIO-ED1 innovation strategies" (the "Innovation Assessment").

2.4.4 **Annex 4**. Response to "Consultation on the treatment of real price effects for RIIO-ED1 slow-track electricity distribution network operators" (the "RPE Consultation").

2.5 In this document we cross refer to various documents. The table of contents on page 15 lists such documents and where these documents have not already been provided to Ofgem they are provided as further appendices to this document.

3. EXECUTIVE SUMMARY

3.1 SPEN welcomes the opportunity to comment formally on Ofgem's slow-track Draft Determination for RIIO ED1 – published on 30th July 2014.

3.2 Since publication of the Draft Determination we have set out our concerns about its terms through a range of engagements, including:

3.2.1 a range of meetings with Ofgem and the Committee of the Authority; and

3.2.2 by way of documentary evidence including expert reports.

3.3 This executive summary sets out our primary concerns and is supported by individual responses to each of the components of Ofgem's consultation. In addition we have provided a number of supporting annexes containing reports from our expert consultants. The structure of our response is set out at the end of this section.

3.4 The main concerns of SPEN in relation to the draft determination fall into the following categories:

3.4.1 The outcome for SP Manweb (SPM) arising from Ofgem's econometric modelling is to create a £178m shortfall in funding;

3.4.2 Change in Ofgem's approach on Real Price Effects from RIIO-T1, RIIO-GD1 and RIIO-ED1 Fast Track creates a further negative impact of £170m across SPEN;

3.4.3 Overstatement of modelled smart benefits and insufficient recognition of smart benefits already in our plan, leading to a further £89m negative impact across SPEN;

3.4.4 Punitive calibration of the Information Quality Incentive (IQI) and inclusion of uncertain items (RPEs and smart benefits), compounds the effect of above;

3.4.5 Taken in aggregate these negative impacts raise significant Financeability concerns, exacerbated by:

(i) A Cost of Equity below 6.4%; and

(ii) Cost of Debt indexation which should start at 15 years.

3.4.6 We can see no justification for the differences in approach, from the fast track decision, for these standard price control package items. It is essential Ofgem operate the price control in a non-discriminatory manner.

3.5 Each of these concerns is set out in more detail below.

The outcome for SP Manweb (SPM) arising from Ofgem's econometric modelling (materiality £178m)

3.6 There have been significant improvements in Ofgem's slow track assessment compared with the fast track assessment, and we are not surprised that the more comprehensive assessment has:

3.6.1 Identified SP Distribution's plan as the most efficient in the industry (including the fast track companies) with an efficiency score of 96.5% (before smart grid and RPE adjustments); and

3.6.2 Recognised that there is a need for a Manweb regional adjustment (as was the case in previous price controls albeit in a different form).

3.7 However, we believe that the analysis must be strengthened to adjust the modelling to take account of the reality that DNOs are at different points in their investment cycles.

3.8 In particular, Ofgem's cost assessment models do not reflect significant differences in the SP Manweb investment cycle relative to other DNOs and, as a result, the Draft Determination provides an unacceptable outcome for this business, its customers and its stakeholders. Ofgem's models identify an apparent efficiency gap for SPM ranging between £128m and £240m even before application of Ofgem's new approach on Real price Effects (RPEs) and smart benefits[1].

3.9 This outcome for SPM is surprising given that SPD is ranked as the most efficient company in the industry, better than all 13 other DNOs including the fast track company, and given that SPD and SPM plans apply consistent asset management processes and the same frontier unit costs for comparable activities. Both of our distribution licence areas are also managed by a single management team that also delivered the most efficient fast tracked plan at RIIOT1. This points to a need for further investigation by Ofgem.

3.10 We have identified a number of errors and issues with Ofgem's cost assessment, and have logged these and potential solutions through Ofgem's formal process for resolution. We have repeated details of all of these points within our consultation response, reflecting an update from Ofgem where these have been provided.

3.11 As we set out at our GEMA meeting on the 4th September 2014, these errors and issues have an aggregate value of £325m.

3.12 One of our critical concerns is the £178m apparent efficiency gap for SPM resulting from the outputs of Ofgem's cost assessment models.

3.13 In this regard we are pleased that GEMA accepted that before setting allowances in the Final Determination that they must first satisfy themselves that any apparent inefficiencies are not in fact justifiable differences between companies. One of our concerns, representing more than £100m of that £325m, is that the modelling is not properly adjusted to take account of legitimate factual differences between DNOs.

3.14 In SPMs case we believe that the econometric modelling is impacted by two key factors:

3.14.1 Ofgems totex models do not deal with differences in scope or volume of works arising from legitimate differences in investment cycle between DNOs;

3.14.2 Ofgems disaggregated cost model does not deal with differences in scope of works, arising from legitimate differences in investment cycle between DNOs.

[1] Ofgem's revised approach on RPEs (-£95m) and Smart benefits (-£47m) added to the outputs of the ecomometric modelling (-£178m) push SPMs apparent inefficiency to £320m

3.15 We have sought advice from our expert econometric consultants, NERA, and they have confirmed that this is the case (appendix 1).

Ofgems Disaggregated Cost Model

3.16 For SPEN the deficiencies in the disaggregated model are most apparent in relation to the assessment of our 132kV investment programme but also is clearly an issue for certain categories of asset refurbishment and civils costs at all voltage levels. Notably all these areas are characterised by relatively low volumes and variable scope of works across the industry. This is demonstrated by wide standard deviations (ranging 200% to 400%) around the median unit costs.

3.17 There is limited transparency, even to DNOs, of the approach adopted by Ofgem's engineering consultants to establish expert unit costs. The evidence so far justifies a need for Ofgem's engineering consultants to perform more detailed assessments of unit costs for activities where there is a wide standard deviation around the median unit cost, especially where volumes do not lend themselves to averaging out costs across a programme of works.

3.18 We believe that the disaggregated model is subject to a negative bias working against the companies since the median is influenced by a number of different companies ("cherry-picking"), and therefore must be adjusted to deal with differences in cost classifications and company policies. This is demonstrated by the output from the disaggregated modelling (post upper quartile adjustment) being a £1.3bn negative adjustment to all 14 DNOs plans, including the frontier company SPD.

Ofgems Totex models

3.19 The high level nature of Ofgem's totex modelling means it cannot be established where any apparent inefficiency lies for further investigation. However it would seem a reasonable starting position that £128m of the apparent inefficiency relates to the same apparent inefficiency arising from the disaggregated model, whilst the remainder of the difference results from the disaggregated models greater capability to deal with differences in investment cycles.

Ofgem Econometric Models – Essential issues to be resolved

3.20 The econometric models are a means of highlighting differences between companies. We are unclear with respect to the models how Ofgem have ensured that companies being penalised are not simply legitimately different and companies that are being uplifted can justify the outcome in terms of efficiency.

3.21 It is imperative and of wider public interest that Ofgem investigate these through detailed examination of material differences to ensure that appropriate allowances are set for DNOs that enable them to satisfy their statutory duties.

3.22 Ofgem must consider all relevant information before determining any element of SPEN's investment programmes. As an example, the RIIOED1 framework mandated that SPEN must submit a well justified Cost Benefit Analysis (CBA) for major schemes and programmes, supported by robust asset health information. This is, as Ofgem has said, a critical input to SPEN's business plan and therefore Ofgem must consider this information. This is consistent with Ofgem's approach at RIIO-T1.

3.23 We note from Ofgem's comprehensive CBA report from CEPA that the CBAs associated with our main areas of concern (132kV asset replacement and refurbishment) were not reviewed by the econometric consultants as these areas of costs were being reviewed by Ofgem's engineering consultants DNV KEMA. Ofgem explained at our recent bilateral meeting that an equivalent report was not within the scope of Ofgem's DNV KEMA engagement. SPEN has subsequently engaged PA Consulting (an independent expert engineering consultant) to review the CBAs associated with our 132kV programmes and we have provided their report to Ofgem. This report agrees with our conclusion that our proposed investment decisions are in our customers best interests. We trust, therefore, that Ofgem will permit them to be made.

3.24 SPENs investment programmes are a central part of our plan to deliver high quality outcomes for present and future consumers and the general public, by maintaining security of supply and ensuring the continued safe operation of our network. Ofgem's final decision must give appropriate weight to these important factual considerations and must be made following a careful review of all relevant information.

Overstatement of potential Smart Grids/ Smart Meter Benefits and insufficient recognition of benefits already embedded in SPEN plan (materiality £89m)

3.25 SPEN appreciates and supports the significant benefits of smart grids. SPEN will deliver significant efficiencies, already included in our business plan, as a result of smart grids. Savings and customer benefits associated with our plan amount to ca.£190m (that accrues to customers via lower totex and connections charges).

3.26 Ofgem assessment states that we are expected to deliver £129m of benefits, but only recognises ca.£40m of the smart benefits that our plan delivers. We do not agree with Ofgems assessment of additional smart savings, or the approach to allocate potential smart savings across the industry.

3.27 Therefore we do not accept the validity of the £89m stretch that has been added to our plans:

- 3.27.1 The assessment does not recognise all of the smart savings that are already embedded in our plans (including benefits that will accrue to connecting customers);
- 3.27.2 1% p.a. compounding efficiency embedded in our plans includes smart technology benefits and £38m is double counted;
- 3.27.3 Totex reductions are not sufficiently supported by evidence or robust modelling;
- 3.27.4 Incorrect application of smart metering benefits;
- 3.27.5 Incorrect allocation of benefits across the industry;
- 3.27.6 Ofgem's analysis has wrongly utilised SPENs TRANSFORM model from our Fast Track submission;

Change in Ofgem Approach on Real Price Effects (materiality £170m)

3.28 We are surprised that Ofgem is considering fundamental changes to its approach to Real Price Effects (RPEs) at this stage of RIIO-ED1. We have communicated to Ofgem a number of questions and identified issues with the methodology that Ofgem

has used for RPEs, and we set these out again in this detailed consultation response.

3.29 Our primary concerns, supported by our economic consultant NERA are:

3.29.1 Ofgem is projecting future RPEs using a long-term average that includes data from a period of unprecedented recession; and

3.29.2 Ofgem use linear projections which do not allow for reversion to the underlying long term trend; and

3.29.3 There are number of errors in Ofgem's implementation of its methodology;

3.30 However, there have been no material factual developments in connection with RPEs and smart grids since the determination of the fast track that would justify a fundamental change in approach. If SPEN's allowances for RPEs are determined on a quite different basis to those of WPD this will lead to a significant difference in treatment between the two DNOs.

3.31 To put this in context the Fast Track company will receive an RPE allowance of c8% of its totex as an ex ante allowance, whilst the Draft Determination proposes Slow Track companies should receive a reduction of 0.2% to their totex, or perhaps an uncertainty mechanism that will be developed in the 2 months left to the Final Determination.

3.32 There can be no reasonable justification for this. Therefore, the proposed change in approach would, if implemented, be discriminatory and unfair and threaten to distort the RIIO regulatory regime.

Punitive Calibration of the Information Quality Incentive (IQI) and inclusion of uncertain items (RPEs and smart benefits)

3.33 The IQI calibration mechanism remains more punitive than those applied at RIIOT1 and RIIOGD1, despite the fact that in areas such as smart benefits and RPEs the uncertainty is much greater.

3.34 For example at RIIO-GD1 the frontier company with an efficiency score of 106.1% achieved 1.5% of totex as an IQI reward, whilst at RIIO-ED1 it is proposed that the frontier company SPD with a better efficiency score of 104% (even after smart and RPE adjustments) will receive a lower 1.09% of totex IQI reward.

3.35 As calibrated, the rewards available for Fast Track go far beyond the 2.5% totex in lieu of IQI rewards that were consulted on for Fast Track, and as such are disproportionate to those available to the frontier company. This outcome is not in wider interests of customers, as it is the frontier company that drives the wider industry efficiency targets, and it likely to encourage unintended behaviours which run counter to public interest.

3.36 SPEN do not agree that companies efficiency scores should include apparent inefficiencies arising directly from changes on approach to RPEs and smart grid/metering benefits, given both of these items are by their very nature highly uncertain and difficult to predict. The purpose of the IQI mechanism is to reward or to

penalise companies for accuracy of forecast costs that are controllable and for which they can forecast with a relatively high degree of certainty.

3.37 A standard track DNO's RoRE and financeability is sensitive to this efficiency assessment and its direct implications on the IQI incentive mechanism.

3.38 Errors made in the cost assessment benchmarking are further compounded by the operation of the IQI mechanism.

3.39 The IQI assessment is determined by Ofgem's view of the efficiency of a DNO's totex forecast. Therefore the robustness of the benchmarking methodology applied, which will underpin the efficiency assessment, is of critical importance. An error in the slow track benchmarking which may result from placing reliance on regressions with omitted variables, or other mis-specifications, would likely lead to a systematic difference, which equity holders will be exposed to for a period of eight years. We detail in this response variables we believe Ofgem have omitted from their benchmarking analysis.

Ofgems Draft Determination Raises Financeability Concerns

3.40 Our financeability analysis shows that SPD and SPM will not be adequately funded over RIIO-ED1 if we are to meet our licence and statutory obligations within the constraints of Ofgem's draft determination on revenues. Furthermore, the normal operation of RIIO-ED1 incentives will likely lead to financial distress based on our financeability modelling of cash flows provided by the Draft Determination.

3.41 We are strongly of the view that our totex forecast in the standard track submission was as efficient as possible and is all necessary.

3.42 The comprehensive risk analysis we have undertaken, incorporating our forecast expenditure, indicates that an equity injection of £235m will be required in 2017 for SPM to remain investment grade during RIIO-ED1.

3.43 We believe there are a number of actions Ofgem should take, in the interest of customers, to ensure the financial resilience of SPD and SPM. These include:

- 3.43.1 Ofgem reassess the translation of the CMA's cost of equity decision which we believe will lead to the setting of an allowance of 6.4%. Critically, this will be proportionate to the fast track decision;
- 3.43.2 Establish an equitable and theoretically sound methodology for the cost of debt index by expanding the opening for the trombone index to 15 years, so the average maturity of DNO debt of c20 years is reflected in the index as soon as 20 years data becomes available; and
- 3.43.3 Calculate the cost of debt index for SPEN from the BBB iBoxx non-financial sterling corporate bond data, to ensure consistency with the credit rating, which will apply to SPEN in RIIO-ED1, as results from the financial ratios.

We cannot see any justification for a Cost of Equity below 6.4%

3.44 Our own analysis and that of our advisers, NERA, continues to support a cost of equity of at least 6.4% for RIIO-ED1.

3.45 There are a number of errors in Ofgem's "translation" of the CMA's cost of equity decision for NIE, including:

3.45.1 The CMA's focus on short-run evidence is less relevant to the RIIO-ED1 price control period. Ofgem should base its estimate for the total market return for RIIO-ED1 on long-run averages, especially as there are no reliable financial and economic forecasts out to 2023.

3.45.2 Ofgem assumes a debt beta of 0.1 for the DNOs, which is:

(i) higher than the CMA's assumption of 0.05 debt beta for NIE;

(ii) inconsistent with the CMA's de-gearing of the empirical equity beta estimates, which used a debt beta of 0.05;

(iii) inconsistent with Ofwat's assumption of a zero debt bet beta for the water companies;

(iv) inconsistent with Ofgem's assumption of a higher credit rating (A/BBB) for DNOs than the CMA assumed for NIE (BBB+);

3.45.3 In our view, 0.4 would be an equally applicable asset beta to use in the "translation" of the CMA's calculation.

(i) Ofgem uses an asset beta of 0.38 for the DNOs, which is below the CMA's assumption of 0.4 for NIE;

(ii) However, the RIIO framework is less proven than RPI-X and the longer duration and untested operation of the mid-term review increases uncertainty.

3.46 Ofgem's interpretation of the CMA's report does not bear close scrutiny, especially in regard to Ofgem's assumptions for the asset beta and debt beta, and the ignoring of the difference in the length and timing of price control periods.

3.47 The proposed 40bps reduction in the cost of equity, from that recently set for WPD, is disproportionate and neither supported by changes in capital market conditions nor other empirical evidence.

Cost of Debt indexation should start at 15 years and then trombone to 20 years

3.48 Ofgems proposal for "trombone-like" expanding of the trailing average window, for calculation the cost of debt index, is a step forward but we see no logical reason for starting at 10 years, when moving to 20 years is accepted in principle.

3.49 We propose that the cost of debt index should be further refined by:

3.49.1 establishing an equitable and theoretically sound methodology for the cost of debt index by expanding the opening for the trombone index to 15 years, so the average maturity of DNO debt of c20 years is reflected in the index as soon as 20 years data becomes available;

3.49.2 calculating the cost of debt index for SPEN from the BBB iBoxx non-financial sterling corporate bond data, to ensure consistency with the credit rating, which will apply to SPEN in RIIO-ED1, consistent with Ofgem's modelling of our financial ratios.

3.50 We note that the Competition Markets Authority (CMA), formerly the Competition Commission (CC), in its determination for Northern Ireland Electricity (NIE), used a

higher Cost of Debt, based on NIE's embedded debt, in comparison to Ofgem's established policy decision for RIIO of using debt indexation. The cost of NIE's embedded debt was assessed as 3.2% (real) and the cost of new debt was set at 2.1% (real), giving a weighted average (with weights of 90% for embedded debt and 10% for new debt) of 3.1% (real) for NIE. This is considerably above that proposed for RIIO-ED1. Ofgem are not consistently implementing the CMA's approach to setting the cost of capital.

Overall position relative to the fast track companies

3.51 Ofgem's current approach leads to a material reduction in SPEN outputs and TOTEX. The difference in treatment between SPEN and WPD is extremely significant and cannot be explained as a proportionate reward for being fast tracked.

3.52 The differential severely undermines the reliability of the RIIO model and regulatory regime, to the detriment of present and future consumers and investor confidence. It also potentially means that no DNO will be able to match WPDs future performance during ED1 or in the fast track assessment for ED2. We would emphasise that RIIO-ED1 is a "framework contract" for outputs which SPEN commits to deliver over 8 years.

3.53 Even if Ofgem were able to make adjustments to their evaluation to deal with the significant variation between the treatment of WPD and other DNOs in their RIIO-ED2 fast track process to enable any other DNO to have a fair opportunity to achieve fast tracking, this would not address the discriminatory and unfair outcome which would, in fact, occur during RIIO-ED1.

3.54 All stakeholders expect the RIIO regime to be operated in a fair and even handed way. The differential points to a need to revisit a range of critical aspects of the draft determination at this stage. On the current assessment, SPEN will be underfunded and placed at a significant disadvantage in seeking to meet the proper requirements of its stakeholders and to discharge its legal obligations. This is a significant risk to stakeholders and consumers.

3.55 RIIO-ED1 is critical to SPEN's stakeholders and it is important to achieve a fair and non-discriminatory outcome which delivers a high quality service to consumers.

Conclusion

3.56 As set out above SPEN has a number of concerns regarding proportionate treatment of its plans in a number of key policy areas that have a material and discriminatory effect.

3.57 Of equal importance is a clear requirement that Ofgem assess our plans on their own merits, having taken into account all relevant facts, and make adjustments to the outputs of their econometric modelling that reflect facts and legitimate differences between DNOs.

3.58 Ofgem have stated that they are assessing the efficiency of company's plans "in the round". However, GEMA have accepted that in order to do this effectively they must

demonstrate that apparent differences in efficiency are real rather than due to other explanatory factors.

3.59 The draft determination is drafted on the basis of a range of factual errors. Ofgem must make its decision on a sound factual basis, in light of all relevant factual information. The Draft Determination places too much weight on the outputs of the totex and disaggregated models and insufficient weight on factual analysis of SPEN's Business Plan. Ofgem has confirmed that it must consider whether any apparent inefficiency disclosed by its models is in fact justified by the wider factual background. Ofgem has not taken into account detailed evidence provided by SPEN such as Cost Benefit Analyses (CBAs) asset health information and expert reports. As a consequence, Ofgem's draft determination contains a range of material factual errors.

3.60 There are also a number of inconsistent decisions. Ofgem must treat all DNOs fairly and must not unlawfully discriminate between them. There are a range of decisions that involve inconsistent treatment of DNOs with adverse consequences for SPD and SPM.

3.61 SPEN is subject to a range of important legal and regulatory obligations. SPEN's expenditure proposals are made on the basis of robust analysis. This includes a thorough needs assessment of what is truly necessary to deliver the proposed outputs and secondary deliverables and secure compliance with such obligations. The totex and financial allowances (cost of equity and debt) in the draft determination would not enable SPD and SPM to finance their licensed activities.

3.62 In this regard it should be noted that an "in the round" assessment of SPEN's expenditure in the Final Determination must be treated with great caution. All material lines of expenditure proposed by SPEN have been robustly assessed by SPEN.

3.63 In this context it is important to understand the practical consequences of a settlement based on the Draft Determination. Whilst SPEN understands that Ofgem does not "approve" programmes, if Ofgem provides a lower settlement than that requested by SPEN the real effect is to disapprove programmes. It will result in significant cuts to SPEN's investment programme. This will increase the risk to the safety of the general population and materially diminish SPEN's quality of service and ability to contribute to securing that all reasonable demands for electricity are met. This is not in the interests of consumers.

3.64 Ofgem explained (at a bilateral with SPEN on 18th September) that Ofgem's plan, and still current intention, was that the Draft Determination be set primarily using the outputs of the econometric modelling and the period between publication of that and concluding the Final Determination would be used to deploy Ofgem's expert engineering consultants to review in detail areas of companies plans where the modelling showed significant apparent inefficiency.

3.65 Where this assessment identifies that differences are due to explanatory factors other than inefficiency, then Ofgem must adjust the outputs of all three cost models to reflect the facts.

3.66 As set out in this consultation response and various letters to Ofgem during August and September 2014, this stage of the RIIO ED1 process is critical to ensuring that the outcome of the Final Determination is fair, based on facts, and delivers a high quality outcome for customers. SPEN is committed to working with the Ofgem team and their engineering consultants to help them understand the facts behind any apparent inefficiency in the SPEN plans.

The SPEN Board will test the Final Determination on the basis of three criteria

3.67 The Final Determination should allow SPEN to deliver our legal obligations for a safe and reliable network and to deliver the outputs (secondary deliverables) that will be set out in our Licence:

- 3.67.1 The Draft Determination does not satisfy this for SPM in particular;
- 3.67.2 We hope that through detailed engineering engagement, further improvement of the models and a recognition of our comprehensive CBAs by Ofgem we can get there.

3.68 The ability to finance our plan at an acceptable level of risk:

- 3.68.1 We cannot see the empirical evidence that supports 6% for the Cost of Equity nor a differential with the FT company;
- 3.68.2 We believe the Trombone mechanism can be refined as outlined earlier;
- 3.68.3 We are concerned about the compounding impacts on risk to cash-flow across an 8 year contract from the current RPE and Smart Grids positions.

3.69 Structural disadvantage to WPD that now pre-determines the outcome of ED2:

- 3.69.1 We have demonstrated across your incentive measures in DPCR5 that we have the ambition and ability to challenge WPD's position on a level playing field;
- 3.69.2 Ofgem's latest evidence shows our proposals to be considerably more efficient than the Fast Track Groups.

3.70 Set against this backdrop we could not accept Ofgem's proposals as set out in the Draft Determination

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Appendices	
1.	High Level Commentary on Ofgem's Benchmarking - NERA
2.	Ofgem's approach to totex modelling – NERA
3.	Additional Totex Analysis – NERA
4.	Regional Wage Differential– NERA (2014)
5.	Manweb Special factor – NERA (2014)
6.	SPEN ED1 Smart Grid Review - Smart Grid Solutions – (2014)
7.	Review of SP Manweb 132kV SG CBAs – PA Consulting (2014)
8.	ENA Engineering recommendation G91 Black start resilience (2012)
9.	SP SlowTrack LRE Reinforcement Benchmarking Review – TNEI - (2014)
10.	Reckon LLP Update on RIIO-ED1 ongoing efficiency gains
11.	NERA - A Response to Ofgem's Cost of Equity Estimates
12.	NERA - Analysis of Ofgem's Cost of Debt Draft Determination for RIIO-ED1
13.	NERA Response to Ofgem proposals on CoE CoD
14.	NERA - Review of Ofgem's Estimate of the RPI Formula Effect
15.	NERA Review of Ofgem's Draft Determination of Real Price Effects for RIIO-ED1
16.	First Economics review of RIIO ED-1 draft determination RPEs
17.	Frontier Economics - CMA RPEs methodology in NIE inquiry applied to GB DNOs

PART B – Chapter 2 (Summary of Assessment) and Chapter 3 (Outputs)

5. CH2, Question 1: Do you think our assessments for each of the five criteria are appropriate?

5.1 We do not agree with the following assessments:

5.1.1 Resources – Efficient Costs – Red ranking for SPM – as the assessment has been made on the basis of the outputs of econometric modelling with insufficient adjustments to reflect important and significant differences between DNOs

5.1.2 Resources - Efficient Finance – Amber ranking for both SPD and SPM – as the assessment has been made on a different basis to Fast Track

RESOURCES – Efficient Costs – RED ranking for SPM

5.2 Firstly, we do not believe that the cost assessment process has taken sufficient account of clear differences between companies, and that Ofgem is incorrectly deeming this to be inefficiency through over reliance on the output of unadjusted econometric models.

5.3 We believe this is the only explanation for SPM being 13th, albeit still ranking alongside WPD South Wales. This is in contrast to SPD being ranked as the most efficient DNO, above all 13 others including the WPD DNOs.

5.4 Given that the two companies use the same frontier unit costs where appropriate, the same asset management processes and are managed by a single management team that also manages SP Transmission, the most efficient company at RIIOT1, this outcome is not credible and we are confident is due to systematic issues with Ofgem's econometric benchmarking models, and that the outputs from these should be tested and corrected prior to the efficiency assessment being finalised.

5.5 For example, our expert economic consultant (NERA), have confirmed that the Ofgem's totex models take no account of health index or investment cycle (see appendix 1-3), whilst the disaggregated model relies upon industry median unit costs that take no cognisance of scope of works as determined by asset condition.

5.6 This becomes a particular problem when the scope and scale of schemes increases as we move up the network voltage levels and projects costs increase but volumes diminish.

5.7 Secondly, we do not believe that it is appropriate that the slow track DNOs plans have been assessed in a different manner than the fast track DNO in relation to Real Price Effects and Smart Grids/Metering savings. Ofgem's application of these new policies directly results in slow track companies receiving a much harsher assessment than WPD. For example, SPD as the frontier company, sees its efficiency score reduced from 96.5% to 104.5%, despite it having greater smart savings and around half of the Real Price Effects costs of WPD.

RESOURCES – Efficient Finance – AMBER ranking for SPD and SPM

5.8 We do not agree with the Resources - Efficient Finance scores assessment as it seems to be entirely based on accepting a Cost of Equity of 6.0% and ignores DNOs efficient financing assessments.

5.9 At Fast Track WPD were flagged GREEN with a CoE of 6.7%, subsequently reduced to 6.4%, and with a less stretching finance package than SPEN have proposed.

5.10 These issues are set out in greater detail in the relevant sections of this response, including the improvements that are needed for the Final Determination.

6. CHAPTER 3 - OUTPUTS

6.1 Ofgem has asked companies to update their outputs (called secondary deliverables) in light of the Draft Determination.

6.2 However, companies are unclear as yet with respect to the final outcome and have reason to reflect on the final outcome in terms of the funding before they commit to volumes of activity that may not be achievable if the funding is insufficient.

6.3 The RIIO package equates revenue to physical outputs (called secondary deliverables). Ofgem askes companies to specify a value associated with those outputs so that they can ensure that the customer is receiving value.

6.4 Should a company fail to deliver those outputs, that value multiplied by both the Efficiency Incentive Rate (EIR) and a marginal penalty rate is returned to customers.

6.5 Hence the companies must carefully consider whether (a) funding is adequate, and (b) outputs achievable on a detailed basis.

6.6 It is reasonable to expect that Ofgem are doing the same on behalf of consumers and given the vast volumes of CBAs and supporting evidence companies were asked to provide it is essential that Ofgem do so.

6.7 This task however can only be completed when both parties are clear on the Final Determination.

PART C: RESPONSE TO CHAPTER 4 (ASSESSMENT OF EFFICIENT EXPENDITURE)

7. CH 4, Question 1: Do you agree with our totex benchmarking?

7.1 We have identified a number of errors and issues with Ofgem's totex cost assessment, and have logged these and potential solutions through Ofgem's formal process for resolution.

7.2 The main issues fall into six categories:

- 7.2.1 Ofgem's general approach to cost assessment
- 7.2.2 Ofgem's over reliance on the outputs of statistical models
- 7.2.3 Asset classes excluded from the Modern Equivalent Asset Value cost driver
- 7.2.4 Costs that should be excluded from the totex modelling
- 7.2.5 Company specific adjustment for unique SP Manweb network design
- 7.2.6 Regional wage adjustments are needed for Scottish companies

Ofgem's general approach to cost assessment

7.3 Chapter 4 deals with Ofgem's modelling. Ofgem uses two totex models and disaggregated, (activity) level benchmarking as well as reviewing proposed expenditure on a qualitative basis. Ofgem's general approach to cost assessment is set out at the Consultation at paragraph 4.8.

> *"4.8. As at fast-track, we have used a toolkit approach to assess the DNOs' expenditures for slow-track. This makes use of the better information available under RIIO. Our work includes quantitative and qualitative assessment, reviewing DNO narrative and supporting evidence, including historical cost and performance data and company forecasts. We have done both comparative analysis and company-specific assessment."*

7.4 Ofgem then go on to explain that "there is no definitive answer to assessing comparative efficiency".[2]

7.5 The relevant background here is that each DNO faces different circumstances:

- 7.5.1 DNOs' networks differ;
- 7.5.2 DNOs have different investment cycles;
- 7.5.3 There are a range of appropriate solutions which can be used to meet customers' needs, and DNOs can therefore approach similar issues in different ways; and
- 7.5.4 It is important to encourage DNOs to take different approaches because that fosters innovation, and, in the long run, efficiency.

7.6 This has an important consequence for the weight that Ofgem can place on the outputs of its econometric modelling. Ofgem must consider the outputs of the modelling in light of factual and expert engineering and econometric analysis.

7.7 Ofgem has confirmed that before setting totex allowances in the Final Determination it must assess whether apparent inefficiencies arising from the cost benchmarking

[2] Consultation Paragraph 4.9.

arise from justifiable differences between the DNOs. SPEN agrees. When the models disclose an apparent inefficiency it does not follow that there is an inefficiency. Ofgem must carefully consider whether:

7.7.1 the apparent inefficiency arises as a result of legitimate differences between the DNOs; and

7.7.2 the difference in spend, cost or activity is caused by the differences and not, therefore, inefficiency.

7.8 Simply put, the outputs of the models must be adjusted to take account of legitimate factual differences between the DNOs.

The importance of considering all relevant facts

7.9 Ofgem must make its assessment of DNOs' Business Plans on a sound factual basis. In that regard Ofgem must consider all relevant information before determining any element of SPEN's investment programmes. As an example, SPEN must submit a well justified cost benefit analysis (CBA) for major schemes and programmes, supported by robust asset condition data and Health information index information. Ofgem has said that this is a critical input to the Business Plans and therefore Ofgem must consider this information. This is consistent with Ofgem's approach in RIIO-T1.

7.10 At a high level, there would appear to be a measure of agreement on this point. The process of normalisation and other adjustments to the cost assessment models aims to ensure that the models produce an accurate proxy of the efficiency DNOs' Business Plans. However as Ofgem recognise[3] it is important to cross-check the results of the modelling against the known facts and engineering analysis and in light of the particular circumstances of individual DNOs.

7.11 Such analysis needs to have full regard to a range of evidence including DNO narrative and supporting evidence,[4] such as scheme papers.[5] Other examples of relevant evidence is listed at paragraph 7.11 of the Expenditure Assessment:

7.11.1 business cases and other supporting narratives for named schemes and high value assets;

7.11.2 asset specific condition information;

7.11.3 relationships to health indices;

7.11.4 evidence of poor or worsening performance;

7.11.5 evidence of type faults, failure modes and safety issues; and

7.11.6 reports from specialist external consultants.

7.12 SPEN has provided a significant volume of evidence of these types to support such analysis. Such analysis should be carried out by appropriately qualified personnel, by way of example, experienced engineers.

[3] Expenditure Assessment 3.2
[4] Expenditure Assessment 3.1
[5] Expenditure Assessment 3.18

7.13 We are therefore pleased to note that Ofgem has made use of factual analysis in preparing the Draft Determination. We also recognise that such analysis can be complex, and that dialogue is essential to ensure that it is carried out to the requisite standards.

7.14 However Ofgem has given insufficient weight to factual analysis in assessing SPEN's Business Plan and we are therefore reassured that Ofgem have confirmed that their review of the factual and expert evidence is not complete and continues to progress.

Ofgem's over reliance on the outputs of statistical models

7.15 SPENs primary issue with the totex modelling is that neither totex benchmarking model is designed to take into account differences in investment cycles between DNOs, and Ofgem have not performed adequate investigation of apparent inefficiencies following the econometric modelling.

Investment cycles

7.16 As Ofgem are aware, the annual regulatory reporting packs DNOs are required to submit to Ofgem gathers information on asset health, age, turnover and more recently criticality.

7.17 It is important to consider whether differences in planned expenditure are explained by DNOs' different investment cycles. Investment cycles can differ for a range of reasons.

7.18 Our expert econometric consultant NERA observe (report in appendix 1):

7.18.1 Ofgem's totex models seek to explain variation in DNOs' capex and opex over the DR5 and ED1 periods using data on the variation in companies' size, represented by metrics such as MEAV. These size variables bear no relation to asset condition, and so DNOs incurring a high level of capex because of poor asset condition will appear "inefficient". In reality, DNOs' asset condition can vary for many reasons:

(i) DNO assets are long-lived, and many date from the pre-privatisation era. If a large number of assets are approaching the end of their lives in a particular control period, it may well be efficient for the DNO(s) affected by this trend to seek additional funding for their replacement. The longevity of assets also means that decades may pass between individual DNOs' large replacement and refurbishment programmes.

(ii) There may also be economies of scale and scope in replacement and refurbishment programmes, making "lumpy" investment profiles efficient.

7.18.2 This potential need for high levels of replacement and refurbishment expenditure can be identified and explained by variation in DNOs' asset condition, as measured, for instance, by their respective health indices. Our previous analysis of the link between health indices and DNOs' totex has suggested that including the health index in the regression materially reduces the modelled efficiency "gap" (i.e. the difference between business plan submissions and Ofgem allowances) for SPMW.

7.19 Ofgem have the data required to complete this assessment between annual RRP submissions and company ED1 plans. As evidenced, analysis of the DPCR4 and 5 regulatory reporting packs shows that DNOs have different investment cycles and approaches. To take an example, over 18 years Electricity North West's overhead lines investments are comparable to SPEN's. What is different is the timing. SPD and SPM's programme is 35% lower than ENWL's over DPCR4 and 5 but 38% higher in RIIO-ED1. This represents prudent profiling on the part of SPEN, avoiding imposing financing and other costs on consumers until it is necessary to do so.

7.20 The outputs from the totex models are as follows[6]:

7.20.1 The top down totex model identifies a £929m negative variance for 8 DNOs and a positive variance of £433m for 6 DNOs

7.20.2 The bottom up totex model identifies a £950m negative variance for 7 DNOs and a positive variance of £488m for 7 DNOs

7.21 However, these outcomes from the econometric models are not a measure of the DNOs relative efficiency, but rather a comparison of forecast costs versus those of a 'typical' DNO only in the period that the costs relate to.

7.22 We have seen no evidence as to how Ofgem have ensured that companies being penalised are not simply different and companies that are being uplifted can justify the outcome in terms of efficiency. For example, SSES were deemed £84m inefficient in the disaggregated model but uplifted as a result of apparent £120m and £51m efficiency in the totex models. The relevant information to perform this has been provided as part of the price control process.

7.23 A simple reliance on the model outputs to set totex allowances will therefore penalise any company that has an investment cycle that is higher than a typical DNO during the ED1 period including companies that identify and strive to address emerging issues. The natural extension of this is that some companies apparent efficiency may also simply be a function of their investment cycle meaning that they have a lower relative investment need during the ED1 period.

7.24 Our expert econometric consultants NERA have provided reports that explain this issue in greater detail (appendices and 2).

Implications for SP Manweb: cost assessment and statistical models

7.25 We now turn to how Ofgem must approach the assessment of the outputs from the statistical models.

7.26 The points we discuss in this section are of particular relevance to Ofgem's assessment of SPM. Ofgem's models identify an apparent efficiency gap for SP Manweb ranging between £128m and £240m (even before application of Ofgem's

[6] Extracted from Ofgem's spreadsheet that populates Table 2.3 in RIIO-ED1: Draft Determination for the slow-track electricity distribution companies - Business Plan Expenditure Assessment

new approach on Real Price Effects (RPEs) and smart benefits) which push this apparent inefficiency to £320m.

7.27 SPD is ranked as the most efficient DNO in the industry, better than all 13 other DNOs including the fast-track DNOs. This suggests that the reasons behind SPM's apparent inefficiency require careful further scrutiny by Ofgem. In particular it should be noted that:

7.27.1 SPD and SPM's plans apply consistent asset management processes.

7.27.2 SPD and SPM's plans apply the same frontier unit costs for comparable activities.

7.27.3 SPD and SPM are also managed by a single management team.

7.27.4 SPD and SPM are managed on the same basis and according to consistent practices and procedures.

7.27.5 That management team delivered the most efficient fast tracked plan at RIIO-T1.

7.28 In this context the apparent inefficiency requires careful scrutiny by Ofgem. There should be no automatic assumption of inefficiency. SPEN's position is that a range of factors need to be examined including:

7.28.1 SPM's investment cycle, which as noted above appears to be different.

7.28.2 SPM's asset condition and health index information supporting this.

7.28.3 SPM's scope of works is different as evidenced by the wide distribution of unit costs around the industry median.

7.28.4 SPMs CBAs that demonstrate that investment decisions drive the most efficient outcome for consumers.

7.29 We were pleased at our recent meeting (4th September) that GEMA accepted that, before setting totex allowances in the Final Determination, they and Ofgem needed to establish that apparent inefficiencies arising from the cost benchmarking, were not in fact justifiable differences between companies.

7.30 SPEN has provided extensive asset condition data, Health Index information, and Cost Benefit Analysis to demonstrate that investment choices are in in customer's best interests. We have also provided detail of particular investment programmes that stakeholders and customers want us to deliver, and for which customers have demonstrated a willingness to pay, e.g. greater storm resilience.

7.31 We believe that it is clear that Ofgem needs to take all this available information into account and make appropriate adjustments to the model outputs, in order to take account of facts that demonstrate justifiable differences between DNOs, and adjust the outputs of its models to take account of these outcomes.

Assets excluded from the Modern Equivalent Asset Value (MEAV) cost driver

7.32 We do not agree that Pilot Cables should be excluded from the MEAV used to assess relative DNO efficiency in both the Totex (top down) and Totex (bottom up) models, and believe that a refined approach would be more proportionate and deliver a fairer outcome.

7.33 Our economic consultant (NERA) has provided a report that demonstrates that these exclusions do not improve the statistical validity of the totex models (appendix 3).

7.34 We can understand the rationale for excluding Rising and Lateral mains as there are consistency issues across the industry regarding ownership and those DNOs actively replacing RLM assets will be affected differently from those that are not addressing the safety issues. In addition, Ofgem has excluded the RLM costs from the totex model, so this exclusion from the cost driver is logically consistent.

7.35 We accept that there appear to be unusually low volumes of batteries, cable tunnels and cable bridge assets across some DNO groups. Whilst these exclusions have a relatively small impact on the output of the models, we believe that by including these assets in the MEAV Ofgem will encourage all DNOs to adopt best practice in recording these asset classes going forward. However, there are areas where we disagree.

7.36 The exclusion of Pilot Cables is SPENs main area of concern with this aspect of the modelling. This is a critical asset that protects the public, staff and also electrical assets from harm and damage. Pilot wires appear to have been excluded specifically because two of the six DNO groups (WPD and UKPN) have not reported a volume for these assets in this asset category. Excluding these assets results in material understatement of the MEAV for those companies that have reported their pilot wire assets and in particular for SP Manweb which has proportionately more pilot assets than a typical DNO.

7.37 Counterintuitively, the impact of the approach adopted for the Draft Determination is that those companies whose data is missing or questionable suffer the least impact.

7.38 We recommend that Ofgem request information from the remaining DNOs that have not reported these asset volumes, and following confirmation that they have not recorded these assets elsewhere in their asset register (e.g. low voltage cables) Ofgem should include Pilot Wire assets in their MEAV calculation for Totex modelling.

7.39 If Ofgem cannot obtain this information from WPD and UKPN, then it would be more proportionate and fair to leave the 4 other groups (out of 6) existing volumes in the MEAV than to exclude these. We note that Ofgem have requested information in this area.

<u>Overall outcome for SPEN and conclusion</u>

7.40 The effect of this is that an incorrect MEAV is used as a driver for Ofgem's disaggregated model. This aspect of Ofgem's modelling, therefore is based on a significant misstatement of SPEN's MEAV and therefore leads to an erroneous efficiency assessment. The consequential efficiency decisions made by Ofgem are taken on the basis of material errors of fact.

7.41 The adjustment disproportionately affects SPEN and is discriminatory and unfair.

Ofgem's approach is unfair in a further sense. It is detrimental to SPEN, which has provided the relevant data (as expected by Ofgem). This does not meet "best regulatory practice".

Costs that should be excluded from the totex modelling: ESQCR

7.42 Ofgem must exclude ESQCR costs from the totex modelling as the plans of 3 individual licensees represent 75% of the entire industry expenditure in this area.

7.43 Ofgem have excluded a number of costs from the Totex modelling. We agree with this approach to deal with costs that are unusual and for which a small number of DNOs bear the costs in question disproportionately.

7.44 Ofgem provide an analysis of ESQCR costs at Table 8.4 of the Expenditure Assessment, page 65.

7.45 SPEN accounts for ca.55% of the GB forecast for ESQCR expenditure but has only 14% of GB customers which is clearly disproportionate.

7.46 The data demonstrates that:

- 7.46.1 Out of fourteen DNOs, seven propose no expenditure.
- 7.46.2 Four DNOs represent almost 90% of spending in this area.
- 7.46.3 Three DNOs (EPM, SPM and SPD) represent over 76% of the spending in this area.
- 7.46.4 SPD and SPM in aggregate represent over 54% of the proposed expenditure.

7.47 SPENs forecast ESQCR expenditure is deemed 100% efficient in the disaggregated model however the totex modelling effectively penalises both SPD and SPMW for this activity which is necessary to meet our mandatory public safety obligations.

7.48 Ofgem have confirmed to SPEN that ESQCR costs were not excluded from the totex modelling as these costs overlap with activities that some other DNOs have recorded as a different cost category.

7.49 We believe that the Regulatory Instructions and Guidelines were clear and that all such costs should have been recorded as ESQCR costs. However, SPEN have separately sent Ofgem analysis that demonstrates that these other DNOs ESQCR costs can be identified and also excluded from the analysis.

7.50 The impact of including these other DNOs equivalent costs is that the plans of the 3 DNOs referenced above still represent 60% of the industry ESQCR expenditure.

7.51 The result is that SPD and SPM's totex is assessed on an inflated basis, and it is not compared on a basis which is consistent with the other DNOs. The consequence is that SPD and SPM are assessed as inefficient on an erroneous factual basis.

7.52 As noted above, Ofgems general approach is to exclude costs that are unusual and for which a small number of DNOs bear the costs in question disproportionately. However, Ofgem has failed to apply this approach in failing to disapply ESQCR spend. This is inconsistent.

7.53 SPEN believes that the evidence clearly supports this cost category being excluded from the totex analysis.

Company specific adjustment for unique SP Manweb network design

7.54 We have identified and logged with Ofgem a number of material errors and issues with the assessment of the SPM regional factors (made in both the totex and disaggregated models), and proposed solutions to resolve these. More detail on these is provided in SPENs response to Ofgem's Business Plan Expenditure consultation document Chapter 4 Question 2 and appendix 5.

7.55 At past reviews the additional SPM network costs have been dealt with through the disaggregated modelling and recognition of different unit costs.

7.56 This meant that no Regional Adjustment was necessary at DPCR5, but the quantum of the additional costs was similar to that set out in the SPM ED1 Regional Adjustment.

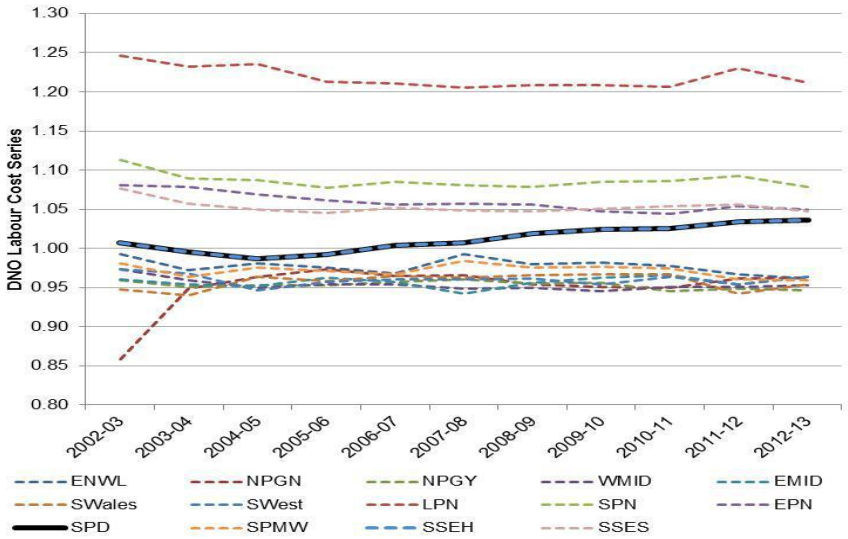
Regional wage adjustments

7.57 We have logged with Ofgem our concerns that the approach adopted to Regional Wage Adjustments (made in both the totex and disaggregated models) is arbitrary, and is discriminatory against Scottish companies.

7.58 In the last 10 years SPD and SHEPD have faced increasing challenges in retaining and recruiting specialist staff who have opportunities within the oil and gas industry and also within the rapidly growing Scottish renewables sector. Proximity to Edinburgh and Aberdeen pushes up the cost of skilled labour in SPD's region.

7.59 The Office of National Statistics (ONS) data used to demonstrate the need for an adjustment to DNOs in the South East of GB, and to calibrate that adjustment, also clearly demonstrates that a similar adjustment is merited for Scottish companies based on the evidence of the last 10 years of ONS data.

7.60 More detail on this is provided in SPENs response to the Ofgem's Business Plan Expenditure consultation document Chapter 4 Question 1 and is supported by a report from our expert consultant NERA (appendix 4).



DNO Regional Labour Cost Indices Using 2nd Level SOC Codes

7.61 The detrimental financial impact on SPD is £27m[7], but a normalisation would have to be applied to SPM of (-£1m).[8]

7.62 Ofgem's decisions must not be based, wholly or partly, on errors of fact. Ofgem's proposed decision is based on errors of fact about the labour market in SPD's area. Further, Ofgem must take into account all relevant considerations in this respect (as to regional variations in wage rates) before finalising its decision. Ofgem has suggested that there is not sufficient evidence to support applying a differential for each region of the UK, given the mobility of the labour market. SPD has supplied such evidence.

7.63 In any event comparison of SPD's position with that of SPN, EPN and SSES shows that SPD's labour costs have converged. Ofgem proposes to make an adjustment for the higher costs of such DNOs. SPD's costs have converged with such DNOs. A failure to make a similar adjustment for SPD would be discriminatory and unfair.

[7] On a pre-upper quartile and IQI adjustment basis
[8] On a pre-upper quartile and IQI adjustment basis

8. CHAPTER 4, QUESTION 1: DO YOU AGREE WITH OUR DISAGGREGATED BENCHMARKING?

8.1 SPEN believes there are a number of aspects of the disaggregated benchmarking, and treatment of the outputs of that modelling, that require refinement in order that Ofgem can set appropriate levels of totex at the Final Determination.

8.2 No one company sets the frontier for the disaggregated model and SPEN believe that cherry picking is evidenced by the fact that the disaggregated model output (post upper quartile adjustment) identifies no DNO with any apparent efficiency, as discussed above.

8.3 The disaggregated model identifies £1,316m of apparent inefficiency across all 14 DNOs, i.e. every DNO is deemed to be inefficient, including the Fast Track companies, upper quartile companies and SP Distribution as the frontier company.

8.4 This evidence points to the disaggregated benchmarking being skewed, perhaps by systematic cherry-picking, and calls into question the validity of an upper quartile adjustment in setting allowances, a further step which is justified by Ofgem on the basis that the modelling is calibrated using industry median costs.

8.5 Median unit cost benchmarking is also inappropriate where there are relatively low volumes of activities and relatively wide scope of works across the industry. For example this is demonstrated by wide standard deviations (ranging 200% to 400%) around median unit costs at higher voltage levels.

8.6 SPEN has identified a number of material errors and issues, we have logged these and proposed solutions with Ofgem for resolution through their formal issues log process, including:

- 8.6.1 Inappropriate use of industry median costs for certain cost categories
- 8.6.2 Qualitative Volume Reductions
- 8.6.3 Regional adjustment for SP Manweb
- 8.6.4 Regional wage adjustments
- 8.6.5 Incremental investments supported by stakeholders

Inappropriate use of industry median costs for certain cost categories

8.7 There are a number of areas where unit cost benchmarking is used extensively to identify the relative efficiency of DNOs. In general we agree with this approach however upon review the information it is clear that there are a number of areas where unit cost benchmarking is not a valid option.

8.8 This is particularly the case where there is considerable variance in scope of works across the industry for an activity and is particularly prevalent in Refurbishment activity and in the modernisation of 132kV assets.

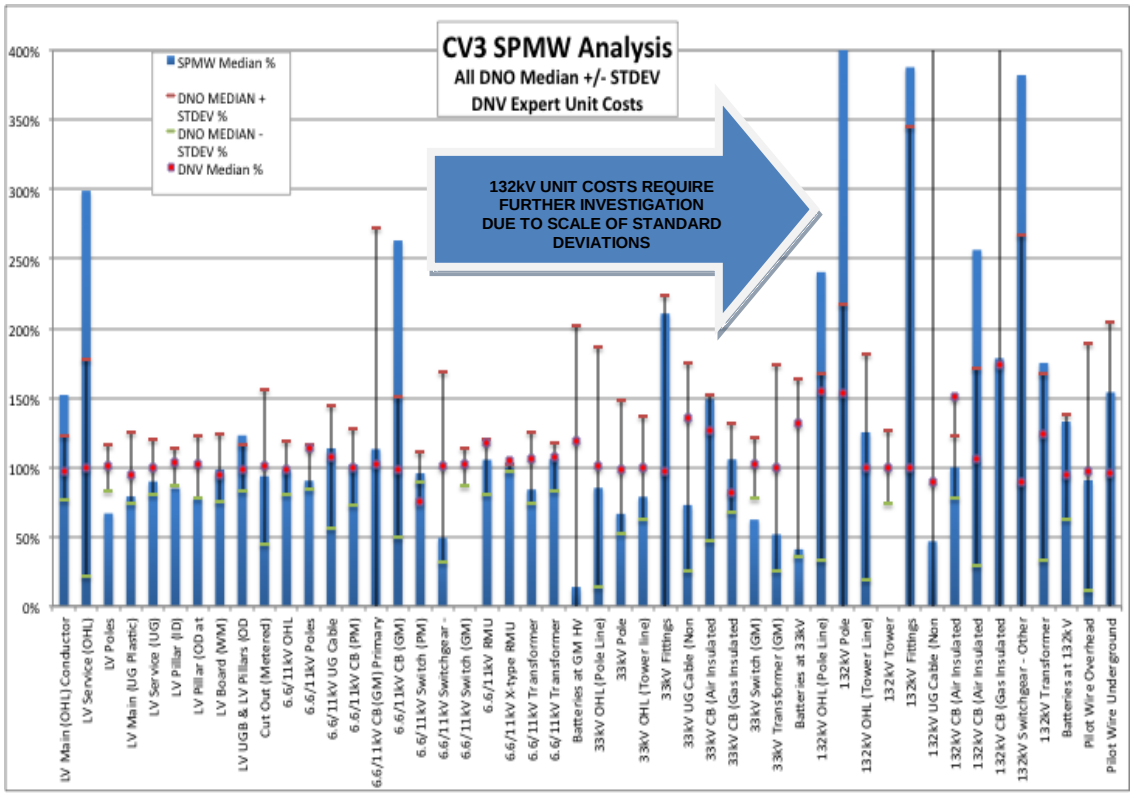
8.9 We accept that across the industry there are activities where DNOs will be more or less efficient and that the model adequately seeks to account for that. This does not hold however when the variance in unit cost is 400-500% above the standard deviation of the median. It has been our recommendation throughout the RIIO ED1

negotiations that these assets/schemes should be considered on their own merits and cannot simply be benchmarked though an industry median when the scope of works vary to this extent.

8.10 The analysis supporting the graphs below has been provided to Ofgems cost and outputs team.

8.11 This demonstrates that there are some areas where SPENs unit costs are atypically low but are offset by atypically high unit costs for associated assets (e.g. LV/HV conductor and LV/HV poles). SPEN believe this is simply caused by differences in categorisation of costs between DNOs. The approach adopted by Ofgem to provide a credit for atypically lower than benchmarked unit costs deals with this categorisation issue.

8.12 This analysis also clearly demonstrated the need for focussed further technical investigation by Ofgem's engineering consultants in the areas of 132kV asset replacement, refurbishment and civils costs, as at RIIO-T1.



6.46 More detailed and comprehensive unit cost analysis is provided in section XXX of our response to Ofgems ED1 Expenditure Assessment Consultation.

Qualitative volume reductions

8.47 Ofgem's engineering consultants have made qualitative volume adjustments to a number of investment areas, not as a result of the asset replacement modelling but as a result of them not believing that forecast year on year volume increases were credible during the DPCR5 period and moving into the ED1 period. Reductions of this nature have been applied to 11kV OHL conductor, and 33kV and 11kV cable replacement programmes.

8.48 With regards to 11kV OHL, our actual 2013/14 delivery data demonstrates that the consultants' delivery concerns were unfounded as we have outperformed our 2014 forecast. DNV stated that "2014 forecasts were not credible as they were more than double historic", yet SPD actually delivered 10% more than that forecast for 2014.

8.49 Whilst in other areas SPEN has a very strong track record of working effectively with suppliers and contractors to deliver new and increasing programmes of investment activity. For example, in TPCR5 SPT delivered a total of 80 circuit-kilometres of 132kV overhead line renewal across 5 years. In RIIOT1 we planned a programme of 100 circuit-kilometres per annum, a more than 5 fold increase. Our actual delivery for the first year of RIIOT1 is almost 120 circuit-kilometres.

8.50 However, our primary concern with the approach adopted for the Draft Determination is that the nature of the RIIOED1 outputs contract means that any volume delivery risk sits with SPEN, so if SPEN fails to deliver then SPEN will be penalised and our customers will be compensated.

8.51 These volume reductions are not consistent with the RIIO framework, are not in customers best interests, and should be reversed.

Company specific adjustment for SP Manweb unique network design

8.52 We have identified and logged with Ofgem a number of material errors and issues with the assessment of the SPM regional factors (made in both the totex and disaggregated models). More detail on these is provided in SPENs response to Ofgem's Business Plan Expenditure consultation document Chapter 4 Question 2.

Regional Wage Adjustments

8.53 We have logged with Ofgem our concerns that the approach adopted to Regional Wage Adjustments (made in both the totex and disaggregated models) is arbitrary, and is discriminatory against Scottish companies in particular. More detail on this is provided in SPENs response to the Ofgem's Business Plan Expenditure consultation document Chapter 4 Question 1 and is supported by a report from our expert consultant NERA, attached as appendix 4.

Substation Electricity

8.54 Substation electricity is benchmarked using a cost per substation basis (using all ground mounted substations) resulting in a driver that has little or no relationship to the actual cost driver. Typical secondary substations use negligible amounts of energy, whilst primary and grid substations have heating systems, battery chargers

for protection systems and fans and pumps that are used to manage the temperature of transformer insulating oil.

8.55 A more appropriate cost driver would be to use 33kV and 132kV substations only. This could be further improved by correcting for known weather differences that are evidenced by higher customer consumptions in the north of GB relative to the south.

Workforce Renewal Costs

8.56 Ofgem have adopted an industry median approach to assessing companies costs in this area. SPEN and all other DNOs have provided plans that are backed up with detailed expected workforce retirement information. Ofgem should take account of these facts in assessing the efficient levels of expenditure in this area. This is set out in more detail in our response to Ofgems Expenditure Assessment consultation Chapter 10 Question 2.

Qualitative benchmarking and engagement with engineering consultants

8.57 The qualitative benchmarking adjustments carried out by DNV – DL resulted in a significant improvement from the Fast Track determination. However we believe this could have been further improved by being revised in the light of more detailed information from DNOs. In particular, DNOs should be asked to provide information as to their rationale for volume increases/decreases or new programmes. We appreciate that were encouraged to provide information as part of the slow track submission however it is not realistic to anticipate every possible question that a detailed engineering review may identify.

8.58 Ofgem explained (at a bilateral with SPEN on 18th September) that Ofgem's plan and still current intention was that the Draft Determination would be set primarily using the outputs of the econometric modelling and the period between publication of that document and concluding the final determination would be used to deploy Ofgem's expert engineering consultants to review in detail areas of companies plans where the modelling showed significant apparent inefficiency.

8.59 Ofgem confirmed that the purpose of this is to determine to Ofgem and also GEMA's satisfaction whether any negative variance to models is, on closer analysis, real inefficiency or simply results from justifiable differences between DNOs. In the case of the second reason then Ofgem's intention is to correct the outputs of the econometric modelling to reflect the specific facts.

8.60 As set out in this consultation response and various letters to Ofgem during August and September 2014, this stage is critical to ensuring that the outcome of the Final Determination is fair, based on facts, and delivers a high quality outcome for customers. SPEN is committed to working with the Ofgem team and their engineering consultants to help them understand the facts behind any apparent inefficiency in the SPEN plans.

Stakeholder supported activities

8.61 It appears that Ofgem have taken no account of incremental activities that were requested by stakeholders and supported by customers through comprehensive willingness to pay surveys. This represents c£30m of incremental investment in SPENs plans associated with storm resilience and smart network future proofing.

8.62 In order that the integrity of the RIIO process can be retained it is essential that Ofgem ensure that the levels of expenditure supported by this process are held whole, and are not affected inappropriately by the cost benchmarking. Of equal importance is that this is done in a fully transparent manner so that DNOs can communicate the success of the stakeholder engagement process to stakeholders.

9. CHAPTER 2: QUESTION 3: DO YOU AGREE WITH OUR FORECAST OF RPES?

9.1 We do not agree with Ofgem's new approach to forecasting RPEs which proposes to treat slow track DNOs in a distinctly different manner than the Fast Track DNOs.

9.2 We believe that Ofgem have substantially under-estimated the extent to which our costs will increase above the RPI, due to factors outside our control.

9.3 For RIIO-ED1, Ofgem have proposed an unprecedented reduction in RPEs. However, at RIIO-T1 Ofgem: "excluded the last two years of data from the long-term average because the impact of the global recession over these years could result in an historical trend which understates the expected growth over the longer term". Table 9.1 below shows the significant impact of Ofgem's emergent approach has on key input indices in comparison to RIIO-T1.

Table 9.1 - RIIO-ED1 and RIIO-T1 long-term annual average, 'steady state' RPEs

Input category	Ofgem RIIO-ED1	Ofgem RIIO-T1	Change
General labour	0.4%	1.3%	(0.9%)
Specialist labour	1.0%	2.2%	(1.2%)
General materials	1.3%	1.5%	(0.2%)
Specialist materials	0.8%	2.2%	(1.4%)
Plant and equipment	(1.3%)	(0.7%)	(0.6%)
Transport	(0.4%)	0%	(0.4%)
Other	(0.4%)	0%	(0.4%)

9.4 Nevertheless, for RIIO-ED1, Ofgem's calculates long-term steady rate averages that include data from 2010/11 to 2013/14. Consequently, Ofgem is now projecting future RPEs using a long-term average that include data from a period of unprecedented recession. Furthermore, Ofgem use linear projections which do not allow for reversion to the underlying long-term trend.

9.5 Two features stand out from table 9.2 below. First, observed RPEs during periods of normal economic growth are noticeably higher than observed RPEs during periods of recession. Second, as a consequence, taking full-period averages over both types of economic conditions produces benchmark RPEs that sit somewhere in the middle of the growth-period RPEs and recession-period RPEs.

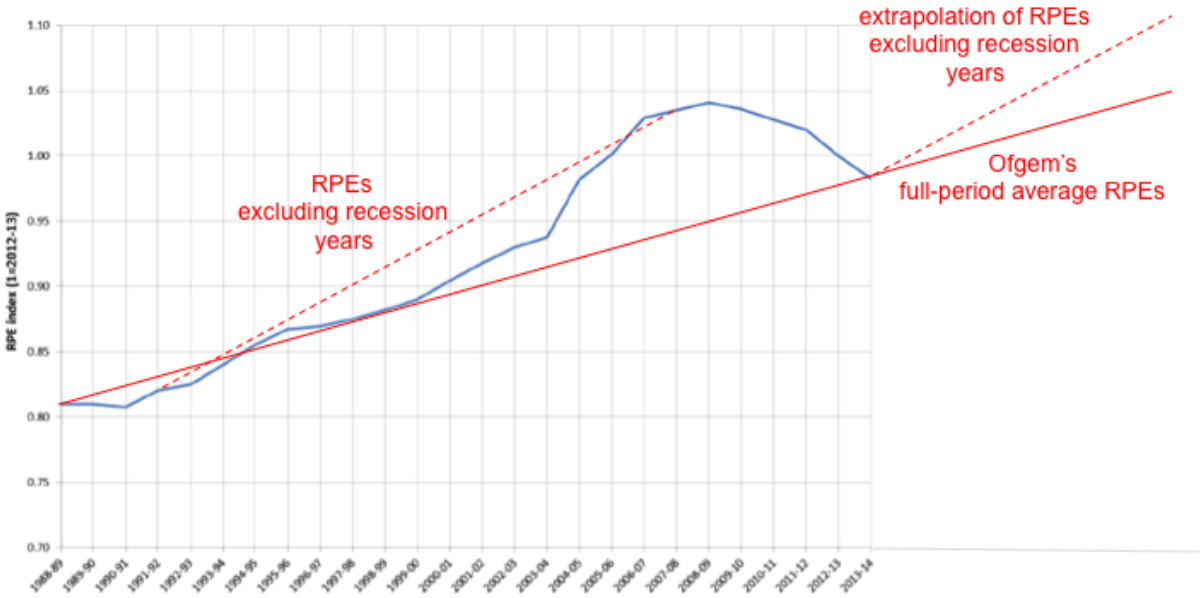
Table 9.2 Disaggregation of Ofgem's long-term historical averages

	pre-1992	1992-2008	2008-14		Full period
General labour	n/a	1.1%	(1.8%)		0.4%
Specialist labour	0.2%	1.8%	(1.3%)		0.8%
General materials	n/a	1.1%	1.6%		1.3%
Specialist materials	n/a	1.3%	(0.5%)		0.8%
Plant and equipment	(1.2%)	(1.0%)	(0.9%)		(1.1%)

Source: First Economics

9.6 The same point is illustrated graphically in the figure below.

Ofgem's extrapolation of RPEs



Source: First Economics[9]

9.7 We note that Ofgem consciously states in its draft determination document that "our methodology does not involve selecting historical periods that we believe to be representative of the future". Quite apart from the about-turn that this represents from the position that Ofgem took in the RIIO-T1 review, we would suggest that the table and figure above show that this methodological approach cannot be justified in its own right. The benchmarking that Ofgem is carrying out in its RPE analysis needs to be like-for-like: insofar as Ofgem requires an estimate of the RPEs that the DNOs will encounter during a period of trend economic growth, Ofgem ought, as a minimum, to collect data from historical periods that have seen the same sort of expansion, as is generally predicted for the relevant period over which RIIO-ED1 will operate.

[9] First Economics (2014), "RIIO-ED1: Real Price Effects", Prepared for SP Energy Networks and SSE Power Distribution, Figure 1, p4, 26 August. Appendix 16.

9.8 Ofgem needs to assess a broader range of wage data when determining RPEs in 2013/14. There are well documented limitations with the ONS average earnings index growth. In similar circumstances, in the recently completed Competition Commission (CC) inquiry into NIE's price control, the CC placed considerable weight on union wage settlements and annual wage increase data from ONS when calculating out-turn labour RPEs for completed financial years. The table below present relevant data for the last year.

Annual wage increase by ONS occupation code, 2013

SOC code	Annual increase in median gross weekly pay
Engineering professionals (212)	+4.0%
Electrical engineers (2123)	+3.4%
Electronics engineers (2124)	+8.9%
Electrical/electronics technicians (3112)	-1.6%
Engineering technicians (3113)	+1.3%
Building and civil engineering technicians (3113)	+7.6%
Skilled metal, electrical and electronic trades (52)	+2.5%
Electricians and electrical fitters (5241)	+1.3%
Electrical and electronic trades (5249)	+3.2%
Skilled construction and building trades (53)	+2.3%

Source: ONS.

9.9 We therefore conclude that the labour RPEs for 2013/14 should be revised from the negative figures of -0.9% and -1.1% that appear in the draft determination.

9.10 In addition, NERA have identified[10] a number of shortcomings in Ofgem's implementation of its methodology for RPE allowances which would result in an increase of £25.5m for SP Distribution and £25.7m for SP Manweb. These are summarised in the table below:

Summary of errors in the Ofgem RPE analysis: impact on forecast RPEs

Issue	Impact on RPEs
Short-term wage forecasts	+0.2% on General Labour in 2014/15-15/16 +1% on Specialist Labour in 2014/15-15/16
Estimation window	+0.4% on Specialist Labour from 2016/17
Estimation approach	0.29% (on average) on Totex in each forecast year from 2014/15
RPI adjustment	Around +0.25% on Totex each year +0.4% on Transport/Other Costs each year

Source: NERA

[10] NERA, "Review of Ofgem's Draft Determination of Real Price Effects for RIIO-ED1", Prepared for the Energy Networks Association, 3 September 2014. Appendix 15.

9.11 Ofgem's 40bps adjustment to the RPI over-estimates the apparent step change in the RPI in 2010, which is attributed to the improvement in the way the ONS collected clothing prices. However, the upper bound is given by the difference between the RPI and RPIJ (Jevons) which is 30bps. Moreover, both the CPI and RPI have been subject to frequent methodological changes. It is unduly selective to focus on a single change, as Ofgem have done. Nevertheless, we consider a more reasonable estimate would be to adjust for half of the upper bound value of the 2010 change of 30bps, giving a net adjustment of only 15bps.

9.12 The ENA asked Frontier Economics to determine what the standard-tracked DNOs' RPE allowances would have been, if Ofgem had used the approach that the CMA in its NIE inquiry. Frontier Economics' analysis[11] shows that the industry-wide RPE allowance would increase by £175m. They also undertook several sensitivities which are summarised in the table below:

Industry total RPE allowances

Approach	Industry total RPE allowances (£m)	Difference to Ofgem draft determination (£m)
Ofgem draft determination	-77.9	0
Headline result – CMA approach (i.e. DNO specific weights)	97.2	+175.1
CMA input indices, and industry average weights	87.4	+165.3
CMA approach, with adaptation to its estimation of RPI forecasts	265.5	+343.4
CMA approach, with 2014/15 wage settlements	173.0	+250.9
CMA approach, with NIE's materials split	138.2	+216.1
CMA approach, with adjustment to OBR's RPI forecast	369.3	+447.2

Source: Frontier Economics

9.13 In conclusion, we believe that Ofgem have substantially and manifestly under-estimated the extent to which our costs will increase above the RPI, due to factors outside our control

[11] Frontier Economics, "CMA RPEs methodology in the NIE inquiry – Application of CMA input indices to GB DNOs, September 2014. Appendix 17.

10. CHAPTER2 QUESTION 4: DO YOU AGREE WITH OUR ASSESSMENT OF POTENTIAL SMART SAVINGS?

10.1 We are pleased that Ofgem has recognised the importance of the transition to a smarter grid. However, we are disappointed that Ofgem's approach to smart benefits has emerged very late in the process and, consequently, there is an unjustified difference between the fast-track and the slow-track processes.

10.2 SPEN thoroughly appreciates and supports the significant benefits of smart grids. SPEN will deliver significant efficiencies, already included in our business plan, as a result of smart grids. Savings and customer benefits associated with our plan amount to ca.£190m (that accrues to customers via lower totex and connections charges).

10.3 Ofgem assessment states that we are expected to deliver £129m of benefits, but only recognises ca.£40m of the smart benefits that our plan delivers. We do not agree with Ofgems assessment of potential smart savings, or the approach to allocate potential smart savings across the industry.

10.4 Therefore we do not accept the validity of the £89m stretch that has been added to our plans:

- 10.4.1 The assessment does not recognise all of the smart savings that are already included in our plans (including benefits that will accrue to connecting customers)
- 10.4.2 1% p.a. compounding efficiency embedded in our plans includes smart technology benefits and £38m is double counted
- 10.4.3 Totex reductions are not sufficiently supported by evidence or robust modelling
- 10.4.4 Incorrect application of smart metering benefits
- 10.4.5 Incorrect allocation of benefits across the industry
- 10.4.6 Other errors identified in Ofgem's analysis

10.5 Within the analysis supporting the Draft Determination incorrect assumptions have been made about the level and timing of total industry benefits within the RIIO-ED1 period. In addition, Ofgem's analysis ignores some benefits already built into our plans. As a result, some of the incremental benefits assigned to DNOs in the draft determination are a duplication of benefits already included elsewhere.

10.6 Over the course of DPCR5 we have developed a range of innovative solutions and engaged with other DNOs to understand their projects which are now being embedded within our business. These make up a significant proportion of our ED1 plans and we have included learning from the two LCNF Tier 2 projects we have undertaken; ARC which is allowing us to connect generators faster, and Flexible Networks which has demonstrated the use of dynamic rating and flexible network control which maximises the capacity of existing assets thus reducing our load related investment. We have also adopted the learning from a number of other DNOs LCNF projects and included this in our smart grid benefits such as the adoption of High Voltage Stat-coms to address voltage problems as demonstrated by WPD and the deployment of automation to re-configure the network's running arrangements as demonstrated by ENW as two examples.

The assessment does not recognise all of the smart savings that are already embedded in our plans (including benefits that will accrue to connecting customers)

10.7 In total we have identified more than £72m of savings for customers from the application of innovation which is new for ED1, as quoted within our published Main Business Plan (Section 7b) and Innovation Strategy. Ofgem appear to have blurred the lines between innovation and smart grid, by regarding some innovation as smart grid but not others. In particular, reference is made to innovative benefits quoted by ENWL, but have ignored others including our own innovation benefits which do not relate to load related investment. Ofgem's analysis has only considered £39m of the £72m we quote, as we referred to the remainder as being innovation benefits rather than smart grid. As a result of different definitions, Ofgem have excluded this significant saving, but not comparable savings from other DNOs where the benefits accrue to cost areas other than reinforcement.

10.8 The SP Manweb network also operates on a very different arrangement to most other networks and offers a higher level of service as well as asset utilisation by being extensively interconnected/ meshed. As a result, one of the most common and low cost smart grid solutions of network meshing (temporary or permanent) is not available to SP Manweb. We believe that we have thereby been unfairly penalised for having a system of this design as the benefit has already been achieved. Through comparing the SPM interconnected (meshed) network with a comparable network of radial design (like SP Distribution and most other HV/LV networks) we believe that we have an inbuilt benefit ca.£25m which should be accounted for.

10.9 The forecast for our customer initiated reinforcement is built up on the same basis as our general reinforcement with the same proportion of smart grid solutions. This means that benefits of smart grid solutions will accrue to connecting customers in both cost and time to connect. Ofgem's analysis assumes that all benefits will accrue to DNOs and result in reduced totex. The analysis should recognise that some of these benefits will accrue to connecting customers and these will not reduce DNOs totex requirements. Our forecast of these benefits, provided to Ofgem, is more than £50m.

10.10 Ofgem's analysis does not recognise that we have set our smart metering data costs post 2020 to £0. This has been done on the basis that the forecast costs will be offset by £8m of smart metering benefits which will be shared with customers through the Efficiency Incentive Rate (EIR) mechanism. Ofgem analysis does not recognise this approach and effectively double counts the available benefits.

1% p.a. compounding efficiency embedded in our plans includes smart technology benefits and £38m is double counted

10.11 We have proposed an ongoing 1% annual efficiency improvement within our plan to continue to position ourselves as the most efficient DNO group. We have applied this saving across our plan as an overall efficiency stretch at a Totex level and will be delivered through a variety of means. A number of independent documents identify this as being challenging including:

10.11.1 Our Annex on ongoing efficiency gains by Reckon who reference EU KLEMS data which supports empirical and theoretical research in the area of economic growth, such as study of the relationship between skill formation, investment, technological progress and innovation on the one hand, and productivity, on the other. EU KLEMS data set accounts for

productivity growth through ICT and non-ICT capital improvements i.e. Smart Grid, as being a component of this efficiency improvement (Provided as annex to March 2014 SPEN RIIO ED1 Business Plan)

10.11.2 CEPA report from 2003, commissioned by Ofgem, suggested ranges between 0.5% and 1.7% per annum for DNOs, and that this included technological changes

(i) "Placing greater weight on the performance over the last five years, we have then assessed whether there are any reasons to believe that the trend in TFP performance up until 2010 will differ significantly from the recent trend. Such reasons could include changes in technology." (https://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR4/Documents1/4720-background_cepa_report_and_efficiency_dpcr300903.pdf)

10.11.3 Oxera's June 2013 report commissioned by ENWL to inform ED1 identified a 0.7% (midpoint) pa efficiency rate for DNOs, which included the use of new, innovative technology

(i) "Oxera examines the potential for electricity distribution network operators (DNOs) to improve their efficiency over the RIIO-ED1 period through ongoing efficiency improvements or frontier shift (ie, technological change or new working practices)." (Executive Summary (page i)) (http://cdn2.enwl.co.uk/Annex_15-The_potential_for_frontier_shift_in_electricity_distributionFINAL.pdf)

10.12 All of these sources identify ongoing efficiency improvements as being partly achieved through changes in technology which in our view will manifest itself in ED1 through smart grids. We have further considered our 1% efficiency stretch against each cost category and can identify that that of our total totex saving of £146m:

10.12.1 £16m relates to load related investment

10.12.2 £15m for fault costs

10.12.3 £1m for smart metering

10.12.4 £6.4m for CAI associated with the above categories.

10.13 We are of the view that this subset of our efficiency stretch, totalling £38m will be achieved through smart grids (see appendix 6). This saving is a strategic stretch which we have applied across all cost categories and the individual solutions which will deliver these benefits will be developed and implemented over the course of ED1. As these savings are applied across our plan and are implemented as a strategic initiative, they do not correspond to any single smart grid solutions. As this saving is embedded into our plan, the onus lies on SPEN to implement solutions which deliver our plan. For this reason, any further reduction should not be applied which overlaps with this saving of £38m already embedded.

10.14 We have provided further detail of these benefits referenced above as an appendix to this response and separately to Ofgem for inclusion in their calculations to ensure that any proposed change is an accurate and consistent reflection of what we have already included in our plan as savings for customers.

Totex reductions are not sufficiently supported by evidence or robust modelling

10.15 We strongly disagree with the assessment and application of such a significant cut to slow tracked DNO plans for smart grids which has emerged very late in the process, the supposed grounds for which are not made clear.

10.16 The approach that has been adopted for Smart Grid and Smart Metering benefits is distinctly different to other areas of the cost assessment and appear are not grounded on any substantiated evidence or robust and transparent modelling, and rather, seem to be based on high level global assumptions that are largely, if not entirely, unjustified.

10.17 Ofgem's assessment of potential smart grids used two metrics to attempt to inform the level of reduction which has been applied; a high level view of the proposed savings achievable from LCNF Tier 2 projects and the use of the Transform model. Both of these appear to be reasonable indicators; however the approach taken in their application is fundamentally flawed in a number of ways.

10.18 Ofgem claim £2Bn of benefits have been identified through the application of the learning derived from LCNF Tier 2 projects. As these projects are for demonstration purposes, an assumption that only 50% will be successful would appear to be reasonable, thus reducing the level of benefits to £1Bn which can be achieved. We do not believe that sufficient consideration has been given to the phasing of the learning of projects which will allow the savings to be realised. Any solution will only be applicable once a project is complete and a network operator has had the opportunity to review and implement this learning. Given the phasing of the LCNF projects and track record of delivery of some of the major projects, we do not believe that elements of these benefits will be achievable until half way through the ED1 period. As a result, the benefits should be further reduced by a further 50% to account for this timing delay which would create total benefit of c. £0.5Bn. Of the £0.5Bn, we would expect that a substantial proportion will be benefits which accrue to connecting customers. For example, within our own Tier 2 project Accelerating Renewable Connections, the business case clearly highlights that a large proportion of the benefits will be for connecting customers by reducing the cost of the connection and allowing them to connect faster. This will also be the case for a number of other projects including Flexible Plug and Play (UKPN) and Low Carbon Hub (WPD).

10.19 Benefits achieved within LCNF projects do not solely accrue to load related investment, yet Ofgem have considered 'other DNO benefits' in addition to this which we believe to be a major double count. Examples of this includes ENWL's own trials of the smart fuse and development of automatic LV auto-reclosers which have been demonstrated as part of LCNF yet this has been assumed to be additional to the LCNF benefits which you reference.

10.20 The use of the Transform model as a further cross-check appears to be well intentioned, however Ofgem have used the Transform model from our fast track submission which utilises our fast track LCT projections which do not reconcile with our slow track plans. By using the incorrect version of the Transform model, a higher level of saving will be determined which is not applicable. All of the DNOs commissioned an independent report by EA Technology which they have shared with

Ofgem (DNO ED1 Business Plan Smart Grid Related Expenditure Assessment) to consider the application of the Transform model. This report highlights:

10.20.1 "The modelled benefits completed for the GB Smart grid Forum using the Transform Model show that benefits are highly dependent on: the scenario being modelled, the investment strategy chosen, the timeline over which the CBA is performed and numerous other factors".

10.21 In addition to this, the Transform model only considers LCT reinforcement. The proposed level of saving has been incorrectly assumed to be applicable to the entire reinforcement plan as an indicator of the level of savings, yet this is not the information that the Transform model is actually indicating. Again, EA Technology have highlighted in their report that this is incorrect:

10.21.1 *"It is the opinion of EA Technology that the clarification document does not demonstrate with sufficient transparency the methodology employed by Ofgem. There still appears to be a lack of clear process and consistency in how the 25% figure has been arrived at. Furthermore, the use of the Transform Model to validate this figure is somewhat questionable. Indeed, EA Technology suggests that the application of a factor of proportionality, inferred by Ofgem through the Transform Model, to ALL forms of distribution network reinforcement is not coherent with the scope, applicability and use of the Transform Model."*

The incorrect application of Smart Metering Benefits

10.22 The application of Smart Metering data in ED1 is undoubtedly going to help change the way the network operates and we have therefore set out an extensive Smart Metering strategy as part of our Business Plan. We have noted reference to both the DECC Impact Assessment as well as the ENA Smart Metering benefits analysis as being references for the potential benefits to customers. The ENA analysis identified a value of benefits which could be achieved by the DNOs to be substantially lower than that quoted by the DECC IA which has been independently informed by DNV Kema, Baringa Redpoint and EA Technology. The DECC IA is based on a number of assumptions which are incorrect such as the timing of when benefits will be achievable. Given the comprehensive analysis which has been applied to the ENA analysis, we believe this is a more robust reflection and should be used in place of the DECC analysis. We have also drawn upon the experiences within the wider Iberdrola Group where we have installed more than three million smart meters across Spain and the USA.

10.23 The draft determination also refers to the varying levels of smart metering benefits which have been assumed by DNOs. The benchmarking suggests that SPEN have not included the associated benefits within our plan. However, we would like to highlight that we have not included the corresponding costs that we will incur post 2021 to realise those benefits. Within the narrative of our plan, we clearly set out that we had not included any costs to fund data charges post 2020, thus customers will not be funding the DCC charges and as such we will look to benefit from the IQI mechanism which allows for these costs to be recovered whilst sharing the benefit with customers. Should all benefits be included within the Business Plan, we would be unable to take full advantage of the data generated from smart meters as we would have no funding mechanism to cover data costs. As outlined in our smart

metering strategy, we are expecting to make full use of the data available and any benefits would be shared through the IQI mechanism in the longer term.

10.24 We believe that this cut for Smart Grids and Smart Metering is not justified; double counts savings we have already embedded, and will result in increased risk to the security and safety of the network. No detail has been provided by Ofgem as to how they would expect these cuts to be realised.

Incorrect allocation of benefits across the industry

10.25 From the Ofgem analysis, we have noted that the benefits which Ofgem have judged to be applied to DNOs for Load related investment has been allocated on the basis of the proposed LRE investment rather than the allowed LRE including real price effects.

10.26 We believe that this is logically inconsistent and that any allocation of benefits should be made on the basis of the final cost allowance rather than the proposed allowance as this is consistent with the application of other mechanisms. This allocation should also take place following the application of RPEs as these are a cost component which will contribute to the level of achievable benefits.

Other Errors identified in Ofgem's analysis

10.27 In Ofgem's analysis they have inadvertently used SPENs Fast Track load tables and TRANSFORM model from our July 2013 plans.

10.28 In response to feedback from Ofgem at Fast Track we adopted a lower Low Carbon Technology uptake scenario and reduced our costs accordingly for our March 2014 updated plans. This represented a significant proportion of the reduction in our plans between fast and slow track.

10.29 We have formally logged this issue with Ofgem and asked that they now correctly use our latest load tables and latest, revised TRANSFORM model in any equivalent analysis for the Final Determination.

11. CHAPTER 2 - QUESTION 5: DO YOU AGREE WITH OUR APPROACH TO COMBINING THE COST ASSESSMENT MODELS?

11.1 **We disagree with the approach that Ofgem has adopted for a number of reasons:**

11.1.1 We do not understand why model weightings have changed from fast track

11.1.2 Incorrect application of a net to gross ratio to the SPM special case costs

11.1.3 Application of a further upper quartile efficiency stretch

We do not understand why model weightings have changed from fast track

11.2 We broadly agree with the approach to combining the cost assessment models. However there are unanswered questions regarding the significant variance (for a number of DNOs) between the outputs of the three models, and it has not been explained why the weightings have changed from Fast Track.

11.3 The two totex models are inherently not capable of accounting for varying investment cycles and other legitimate differences between DNOS.

11.4 The disaggregated model has greater powers to deal with differences in investment cycles, although as we have highlighted it has weaknesses in relation to unit costs associated with scope of works and potential systematic bias against DNOs.

11.5 SPEN overall is relatively unaffected by the percentage weightings used but it is logical to use the more capable disaggregated model, and we have seen no evidence that supports the move to 50% weightings that has been applied in the draft determination.

Incorrect application of a net to gross ratio to the SPM special case costs

11.6 The statistical benchmarking utilised by Ofgem establishes an efficient gross efficient cost for each DNO before then applying a gross-to-net cost adjustment to take acount of expected direct customer contributions for activities such as connections and diversions.

11.7 The timing of this adjustment in the process set out by Ofgem means that this reduces the SPM regional adjustment by a further 21%. This appears to be an unintentional adjustment as 100% of the SPM regional factor costs are borne by SPM with no customer contributions.

11.8 To resolve this, the efficient SPM special case costs should be added back to the modelled efficient costs post the gross-to-net adjustment.

Application of a further upper quartile efficiency stretch

11.9 Unlike the totex models, that identify levels of both positive variation and negative variation across the industry, the disaggregated model output (post upper quartile adjustment) identifies that no DNO has a positive variation. This model identifies £1,316m of apparent inefficiency across all 14 DNOs, including the Fast Track companies and SP Distribution as the frontier company.

11.10 This evidence points to the disaggregated benchmarking being skewed against companies, perhaps by systematic cherry-picking, and calls into question the validity of an upper quartile adjustment in setting allowances, a further step which is justified by Ofgem on the basis that the modelling is calibrated using industry median costs.

11.11 One aspect contributing to this is that median unit costs are an inappropriate benchmark for activities with relatively low volumes and relatively wide range of scope. SPEN believe that the scale of the standard deviation of unit costs around the median provides evidence that Ofgem need to do more detailed assessment of unit costs in the areas of 132kV asset replacement, asset refurbishment and civils costs.

12. CHAPTER 2 - QUESTION 6: DO YOU AGREE WITH OUR DESIGN OF THE IQI?

12.1 The IQI calibration mechanism remains more punitive than those applied at RIIOT1 and RIIOGD1, despite the fact that in areas such as smart benefits and RPEs the uncertainty is much greater.

12.2 For example at RIIO-GD1 the frontier company with an efficiency score of 106.1% achieved 1.5% of totex as an IQI reward, whilst at RIIO-ED1 it is proposed that the frontier company SPD with a better efficiency score of 104% (even after smart and RPE adjustments) will receive a lower 1.09% of totex IQI reward.

12.3 As calibrated, the rewards available for Fast Track go far beyond the 2.5% totex in lieu of IQI rewards that were consulted on for Fast Track, and as such are disproportionate to those available to the frontier company. This outcome is not in wider interests of customers, as it is the frontier company that drives the wider industry efficiency targets, and it likely to encourage unintended behaviours which run counter to public interest.

12.4 SPEN do not agree that company's efficiency scores should include apparent inefficiencies arising directly from changes on approach to RPEs and smart grid/metering benefits, given both of these items are by their very nature highly uncertain and difficult to predict. The purpose of the IQI mechanism is to reward to penalise companies for accuracy of costs that are controllable and for which they can forecast with a relatively high degree of certainty.

12.5 The IQI assessment is determined by Ofgem's view of the efficiency of a DNO's totex forecast. Therefore the robustness of the benchmarking methodology applied, which will underpin the efficiency assessment, is of critical importance. Benchmarking has a subjective element. It is, therefore, essential that Ofgem continues to ensure the assessment is transparent, objective and statistically robust. An error in the standard track benchmarking which may result from placing reliance on regressions with omitted variables, or other mis-specifications, would likely lead to a systematic difference, which equity holders will be exposed to for a period of eight years. Earlier in this chapter we have detailed variables we believe Ofgem have omitted from their analysis.

12.6 A standard track DNO's RoRE and financeability is sensitive to this efficiency assessment and its direct implications on the IQI incentive mechanism.

12.7 We have re-performed this analysis based on the draft determination and continue to find the IQI incentive has a material impact on credit ratings as explained in more detail in chapter 5 Assessment of efficient finance.

12.8 This mechanism is of considerable risk to standard track equity holders who would be called upon to inject equity if the IQI penalty adversely impacts financeability.

PART D – CHAPTER 5 – (ASSESSMENT OF EFFICIENT FINANCE)

13. CHAPTER 5 - QUESTION 1: DO YOU AGREE WITH OUR COST OF EQUITY PROPOSALS?

13.1 We do not agree with Ofgem's proposal for a cost of equity of 6.0%

13.2 Our own analysis and that of our expert economic advisers, NERA, continues to support a cost of equity of at least 6.4% for RIIO-ED1, which runs to 2023.

13.3 The proposed 40bps reduction in the cost of equity, from that recently set for WPD, is disproportionate, is discriminatory and unfair. This difference is neither supported by changes in capital market conditions nor other empirical evidence.

13.4 Ofgem's Draft Determination puts severe downward pressure on the allowed cost of equity, which has been reduced to 6.0% post-tax, real. Nevertheless, Ofgem have not provided the necessary supporting analysis and empirical evidence to justify such a marked reduction. Instead, in their Draft Determination documents, Ofgem apparently seek to rely on a flawed "translation" of the CMA's (formerly CC's) cost of equity decision for NIE, which is a price control that ends in 2017, across to the DNOs for RIIO-ED1, which runs to 2023.

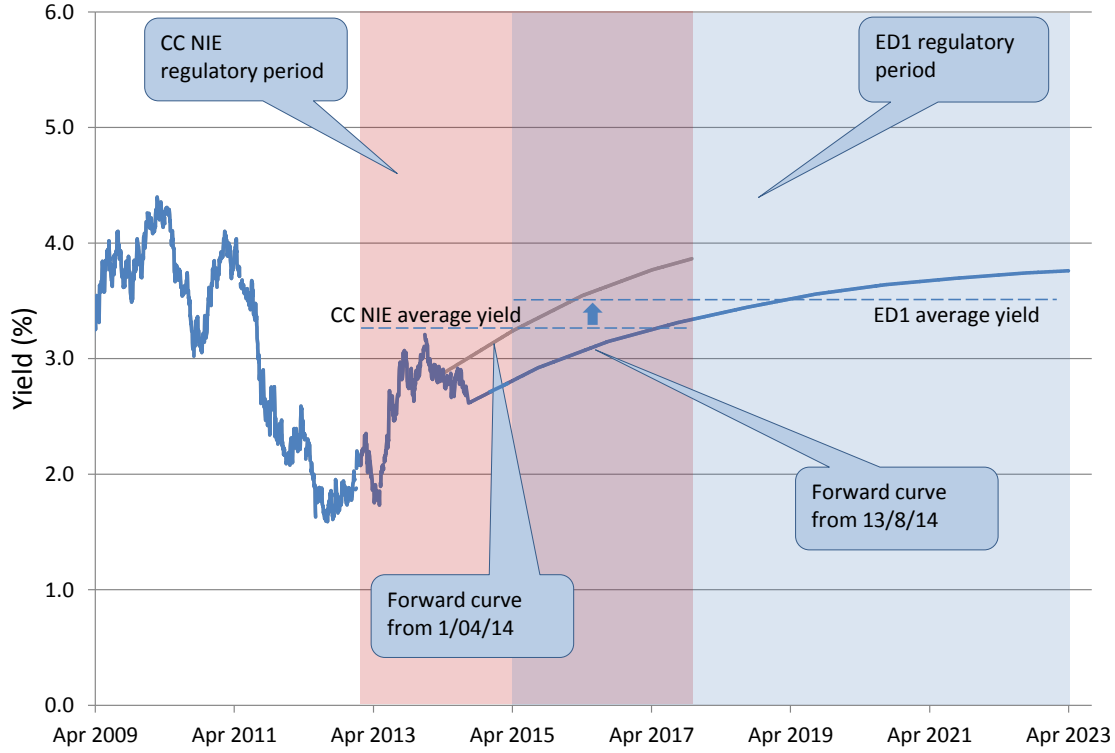
13.5 Ofgem should reassess its "translation" of the CMA's cost of equity decision. We consider that if the methods and principles in the CMA's decision are properly applied they will lead to the setting of an allowance of 6.4%. This is supported by advice from our economic consultants NERA[12].

13.6 Ofgem applies the same estimate of the Total Market Return (TMR) for the 2015-2023 RIIO-ED1 period that the CMA applied to the January 2013 to October 2017 NIE regulatory period. It also affirms its decision to follow the CMA in using more forward-looking evidence in determining the appropriate cost of equity. In applying the CMA's estimate unadjusted, Ofgem ignores that the RIIO-ED1 regulatory period runs for six more years than NIE's, instead essentially assuming that the current low interest rate environment will continue unabated for a further decade. This assumption:

- 13.6.1 Ignores that conditions over the RIIO period are expected to be significantly closer to "normal" than for the NIE regulatory period; and
- 13.6.2 Implies that – despite the fact the RIIO-ED 1 period is substantially longer and thus prospects are more uncertain - there is a significantly smaller "margin for error" in Ofgem's TMR estimates should rates rise faster than expected.

[12] NERA, "A Response to Ofgem's Cost of Equity Estimates in the RIIO-ED1 Draft Determination", 22 August 2014. Appendix 11.

Development of UK gilt yields from 2009 to 2023



Source: Bloomberg, Bank of England, NERA calculation[13]

13.7 Ofgem's TMR decision for RIIO-ED1 therefore significantly reduces the available "margin for error" to account for the potential for rising interest rates, and the widely expected return to more normal economic conditions experienced over the long term.

13.8 Using a smaller "margin for error" for the RIIO-ED1 decision relative to the NIE decision appears implausible, given that that the RIIO-ED1 period will finish more than eight years from now while the end of the remaining NIE regulatory period was less than even the full 5-year price control period away, when the CMA made its decision.

13.9 By contrast, it is generally accepted that the need for "margin for error" increases as forecasts become more uncertain over time, for example, as illustrated in the Bank of England's fan charts for GDP and inflation.

13.10 Ofgem assumes a debt beta of 0.1 for the DNOs, which is higher than the CMA's assumption of 0.05 debt beta for NIE. Furthermore, this is inconsistent with the CMA's de-gearing of the empirical equity beta estimates, which used a debt beta of 0.05. Moreover, this is inconsistent with Ofgem's assumption of a higher credit rating (A/BBB) for DNOs than the CMA assumed for NIE (BBB+).In practice this set of assumptions is flawed, as empirically companies with weaker credit ratings exhibit

[13] NERA, "A Response to Ofgem's Cost of Equity Estimates in the RIIO-ED1 Draft Determination", Figure 2.3, p8, 22 August 2014. Appendix 11.

higher debt betas. It is therefore inconsistent for Ofgem to use both a higher credit rating and higher debt beta relative to the CMA.

13.11 In addition, other recent UK regulatory precedent on debt beta, such as Ofwat's recent decision on debt beta for water companies of 0, is not consistent with Ofgem's assumption of 0.1 for DNOs.

13.12 Ofgem uses an asset beta of 0.38 for the DNOs, which is below the CMA's assumption of 0.4 for NIE. The RIIO framework is less proven than RPI-X and RIIO-ED1 has a longer duration. Furthermore, the untested operation of the mid-term review increases uncertainty. In our view, 0.4 would be an equally applicable asset beta to use in the "translation" of the CMA's calculation.

13.13 Ofgem's estimate of the cost of equity of 6.0% appears to reflect a misplaced direct translation of the CC's NIE decision that fails to recognise:

13.13.1 The significantly longer regulatory period compared to NIE and the uncertainty and expected risk-free rate trajectory associated with it;

13.13.2 The impact that assuming a higher credit rating than the CC for NIE has on the debt beta; and

13.13.3 The impact that a new and untested framework has on asset beta.

13.14 Nevertheless, in a financial issues working group, subsequent to the publication of the draft determination, Ofgem raised a number of reasons why it considered there was headroom in its proposed cost of equity of 6%. NERA has provided a response[14] on behalf of the ENA. We address these points below.

13.15 First, we note, however, that the assumptions stated by Ofgem in the financial issues group result in a cost of equity of 6.325% i.e. 1.6% + 0.9 x 5.25% = 6.325%. Therefore, it still remains unclear how Ofgem derived its cost of equity of 6% for the Draft Determination. It appears that Ofgem has made a further downward adjustment of around 30bps but the basis for this further downward adjustment remains unclear.

13.16 In addition, as set out in NERA's report[15], and as Ofgem themselves have been advised[16] by Smithers and Wright, we consider that Ofgem's 40bps adjustment to the risk free rate overstates the impact of the improvement in the sampling of clothing, in 2010, to the calculation of the RPI.

13.17 As regards premia to the RAV, we note that the most recent and only transaction in the energy sector since the introduction of RIIO – in relation to CKI's acquisition of Wales & West Utilities (WWU) – shows a substantial decrease from earlier multiples

[14] NERA (2014) "A Response to Ofgem's Proposals on the Cost of Equity and Debt for RIIO-ED1", Prepared for ENA, 26 September. Appendix 13.

[15] NERA (2014) "A Review of Ofgem's Estimate of the RPI Formula Effect, A Report for Energy Networks Association, August. Appendix 14.

[16] Wright S and Smithers A (2014) "The Cost of Equity capital for Regulated Companies: A Review for Ofgem", February

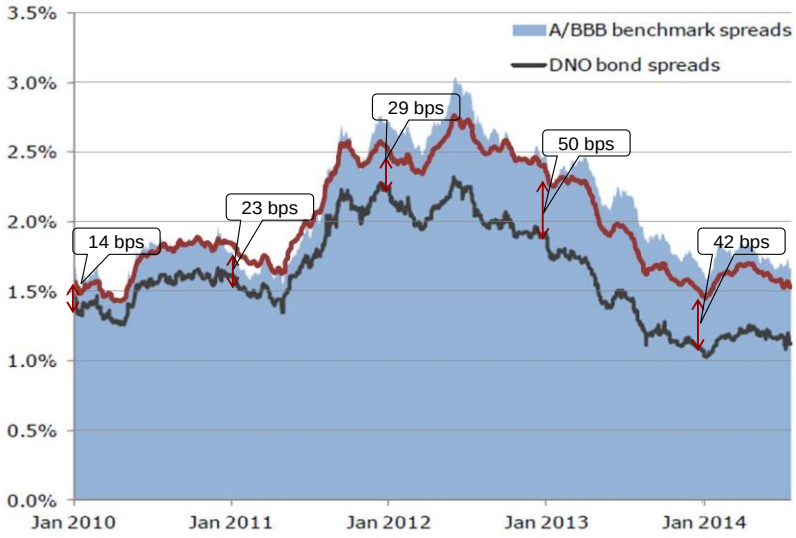
to around 1.15. However, this would have reflected the prospects for cost savings and outperformance in gas distribution, which may be more than available for RIIO-ED1.

13.18 We expect that transaction premia in the network energy sector will continue to be low, given the reductions in both the cost of debt, which is now indexed, and the cost of equity. Past premia will have been based on expectation of a higher cost of equity of c6.7% as set previously compared to the 6% as set out in the DD. Furthermore, observed premia reflect the potential for rewards from incentive mechanisms and the value of unregulated businesses. Ofgem should not rely on transaction premia which relate to the framework prior to RIIO as an indication of potential headroom in the cost of equity, as these factors no longer hold.

13.19 There is no evidence that Ofgem's proposed "trombone-like" index for the cost of debt reduces risk to the extent that there is headroom in the cost of equity. As set out in a previously submitted NERA report[17], the risk profile of a cost of debt index has a pro-cyclical component, which increases equity risk. This pro-cyclical effect increases systematic risk compared to DPCR5 and other price controls which do not index the cost of debt.

13.20 The so-called "Halo Effect", which Ofgem claims exists, substantially disappears after correcting for the tenor mis-match (i.e. the tenor of the DNOs' bonds differs from the tenor of the bonds included in the index) and concavity of the yield curve.

Correcting for the Tenor and Concavity Effects Substantially Eliminates Ofgem's "Halo Effect"



Source: NERA Analysis[18]

[17] NERA (2014) "The Cost of Equity for Scottish Power's Distribution Network Operators at RIIO-ED1", A report for Scottish Power, Appendix E, March 2014 business plan

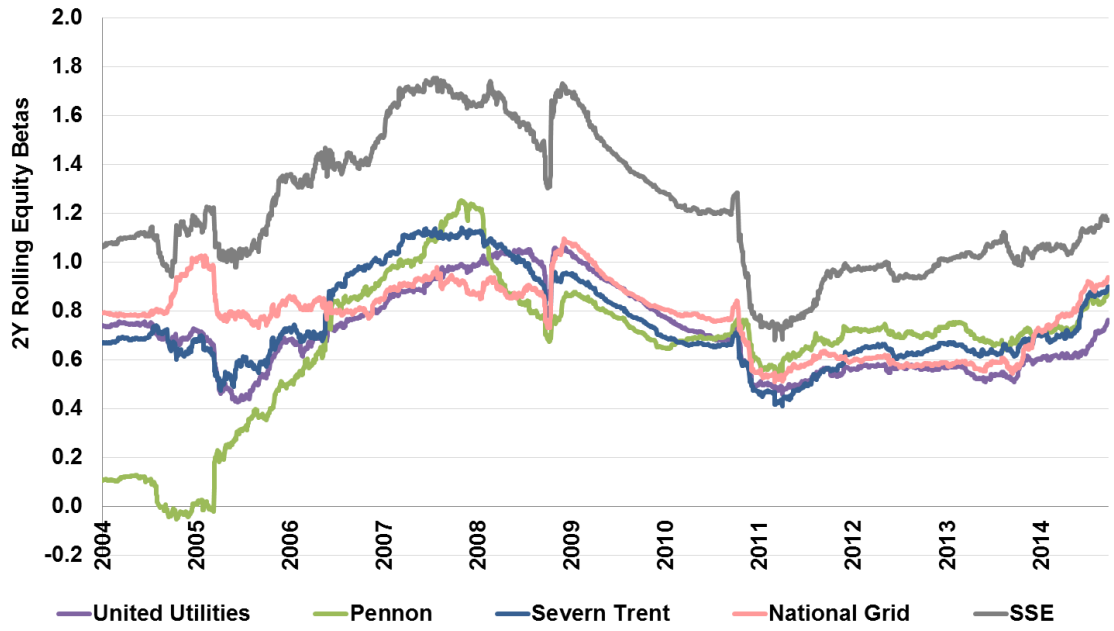
[18] NERA (2014) "A Response to Ofgem's Proposals on the Cost of Equity and Debt for RIIO-ED1", Prepared for ENA, Figure 3.5, p12, 26 September. Appendix 13.

13.21 We do not agree that comparison of the 6% cost of equity, with the range inferred from the CMA report on NIE, implies that there is headroom in the cost of equity. Ofgem should not read directly across the CMA's decision on the total market return (TMR), as the RIIO-ED1 price control period starts three years later and finishes six years later than that for NIE. In any case, UK regulators, including Ofgem at previous price controls, have decided that the cost of equity should be set towards the top end of the range, in view of the asymmetric costs of setting a rate of return which is too low relative to one that is high.

13.22 The Dimson, Marsh, Staunton (DMS) hypothesis that the past history of equity returns may be higher than expected future returns remains contentious and is not accepted by Ofgem's own advisers Smithers and Wright, among others. Furthermore, Ofgem have not previously relied on the views of DMS, which can be traced back to 2001.

13.23 NERA estimate that the current estimates of the two year (levered) betas for network comparators are in the range of 0.76 to 1.17 with an average of 0.93, which is in line with Ofgem's allowance of 0.9.

Two year rolling beta estimates at notional gearing of 65%



Source: NERA analysis[19]

13.24 In our view, it is implausible that a persistent low risk free rate would provide headroom in Ofgem cost of equity estimate, as Ofgem's approach appears to be to

[19] NERA (2014) "A Response to Ofgem's Proposals on the Cost of Equity and Debt for RIIO-ED1", Prepared for ENA, Figure 3.7, p16, 26 September. Appendix 13.

use long run data, although it may have made a downward adjustment of around 30bps, and the expected risk free rate will be higher over the RIIO-ED1 period than NIE's price control period. This is illustrated in the chart following paragraph 13.6.

Comparison of Ofgem's draft determination to CMA's cost of equity for NIE

	Lower	Upper	Mid
Gearing	65%	65%	65%
Risk free rate	1.50%	1.50%	1.50%
Equity risk premium	5.00%	5.00%	5.00%
Asset beta	0.38	0.40	0.39
Debt beta	0.1	0.05	0.075
Equity beta	0.9	1.05	0.98
Cost of Equity	6.00%	6.75%	6.38%

13.25 The conclusion that we draw from the above table is that one would have to take a distinctly slanted reading of the CMA's report to conclude that Ofgem is not allowing the DNO a less generous cost of equity than the CMA allowed for NIE. An objective interpretation of the CMA's findings is that the CMA's parameters point Ofgem towards a higher cost of equity than it is allowing in its draft determination. We observe that our Business Plan submission is based on a cost of equity of 6.4% (real, post-tax), which falls within the middle of the range in the above table.

13.26 Moreover, there have been a number of changes to Ofgem's position since the publication of the RIIO-ED1 Strategy Decision in March 2013, which has further increased uncertainty surrounding the operation of the RIIO framework. In particular, we are unable to reconcile Ofgem's claim that there is headroom in the 6.0% cost of equity used in the Draft Determination, with the range of 6.0% to 7.2%, which Ofgem set in March 2013.

13.27 By assuming a cost of equity of 6.0%, Ofgem have chosen an estimate that does not allow any margin for error (so-called headroom) over the RIIO period, which therefore cannot provide any buffer against under-recovery on other elements, such as the cost of debt.

13.28 Furthermore, we see a number of problems with Ofgem's proposal to set different values for the cost of equity across DNOs, including:

13.28.1 The cost of equity should reflect the opportunity cost of capital available from investing in companies of equivalent risk. Any adjustments to the cost

of equity, even those which could be deemed to be reward or penalties, will lead to inefficient investment decisions.

13.28.2 Adjusting the allowed cost of equity, outside of the CAPM framework, is inconsistent with best practice as applied previously by Ofgem, other UK regulators and the Competition Commission.

13.28.3 Within the CAPM framework, which is Ofgem's preferred framework for RIIO, we see no justification for a higher or lower cost of equity for any DNO. All the DNOs in Great Britain operate in the same jurisdiction with the same structure for their price controls and so face more or less the same systematic risks. Whether a company is fast-tracked or not has no bearing on the cost of equity it faces when raising capital.

13.28.4 Ofgem's proposed use of the allowed cost of equity to differentiate allowed revenues, according to its assessment of companies' relative efficiency, introduces significant subjectivity, and thus regulatory risk, into the determination of the allowed WACC. Ultimately, increased subjectivity and risk will raise financing costs and/or deter investment from the sector, thus raising costs to consumers.

13.29 Moreover, Ofgem's stance is inconsistent with the RIIO process and places too much reliance on the fast-track benchmarking, which has been criticised by a number of stakeholders, and

13.29.1 By proposing to provide a higher cost of equity to the fast-tracked company, Ofgem has altered the RIIO-ED1 process, without undertaking the necessary consultation.

13.29.2 The use of Ofgem's cost assessment results to set companies' allowed cost of equity places significant reliance on unreliable benchmarking methods. As set out in a previously submitted NERA report, Ofgem's fast track cost assessment entailed numerous subjective and unjustified assumptions, was not statistically robust, and was probably biased by the presence of omitted variables from benchmarking regressions. Hence, rather than awarding a higher allowed cost of equity to those companies that "make especially tough cost efficiency assumptions", there is a risk that Ofgem is penalising the companies that appear to have high costs for reasons other than "inefficiency", such as unobserved heterogeneity in the statistical models, differences in cost allocation, or data error.

13.29.3 Ofgem's proposal to allow a higher cost of equity for those companies that "make especially tough efficiency assumptions" is effectively penalising some companies twice for appearing to have relatively high costs in Ofgem's benchmarking models. The purpose of the standard track cost assessment is to set allowances (including "tough efficiency assumptions") based on Ofgem's view of "efficient costs" for each DNO. It is therefore unnecessary to claw-back perceived inefficiency from those companies that are assessed as having relatively high costs, as these companies will already receive totex allowances below their business plan forecasts.

14. CHAPTER 5 - QUESTION 2: DO YOU AGREE WITH OUR COST OF DEBT PROPOSALS?

14.1 The proposed "trombone-like" expanding of the trailing average window, for calculation the cost of debt index, is a step forward but we see no logical reason for starting at 10 years, when moving to 20 is accepted in principle.

14.2 We propose that the cost of debt index should be further refined by:

14.2.1 establishing an equitable and theoretically sound methodology for the cost of debt index by expanding the opening for the trombone index to 15 years, so the average maturity of DNO debt of c20 years is reflected in the index as soon as 20 years data becomes available.

14.2.2 calculating the cost of debt index for SPEN from the BBB iBoxx non-financial sterling corporate bond data, to ensure consistency with the credit rating, which will apply to SPEN in RIIO-ED1, consistent with Ofgem's modelling of our financial ratios;

14.3 We have consistently made the argument that the length of the cost of debt index should be extended. We are pleased the draft determination recognises the eventually need for the index to extend to 20 years consistent with the average maturity of DNO debt. We do not believe it is consistent with Ofgem's responsibilities to propose an index which fails to recover DNO's embedded debt costs[20]. We address Ofgem's justification for the proposed debt index underfunding of the DNOs based on the 'Halo effect' and head room in the cost of equity, in the sections *'Halo effect'* and *Cost of Equity* sections of this response.

14.4 However, we are of the view the most conceptually sound approach would be to extend the index to 20 years as soon as possible so it matches the tenor of DNO debt. This would mean commencing the 'trombone' index at 15 years initially and extending it to 20 years as data becomes available over the RIIO-ED-1 period. This would establish an equitable and theoretically sound methodology for the application of Ofgem's debt index policy for RIIO ED-1 and future price controls. Essentially, this would also be in the interests of customers, as it would support the raising of efficient future debt on the basis the credit agencies place a high weighting on qualitative factors, including stability and predictability of the regulatory regime.

14.5 Any outperformance by DNOs of an index as proposed above would be entirely defendable, as it only rewards and encourages efficient behaviour, which has seen DNOs raise debt efficiently at favourable times.

Halo effect

14.6 The ENA commissioned NERA to prepare an appraisal[21] of the suggestion in the draft determination that DNO debt enjoys a 'Halo effect'. This provides empirical evidence that demonstrates no debt Halo exists. We also find the assertion a Halo

[20] RIIO-ED1: Draft determinations for the slow-track electricity distribution companies Financial Issues paragraph 3.46.

[21] NERA, "Analysis of Ofgem's Cost of Debt Draft Determination for RIIO-ED1", Appendices A and B, 22 August 2014. Appendix 12.

effect exists, and especially would continue to exist, difficult to reconcile with your own assessment that the DNOs risk a one notch downgrade in their credit rating which will increase borrowing costs.

14.7 Ofgem's analysis of the 'halo' effect contains a design flaw that results in the comparison not being on a like-for-like basis

14.7.1 The Yield to Maturity (YTM) analysis looks at the *remaining* maturity of a portfolio of bonds while companies new debt costs will always be locked in at the maturity *at issuance*

14.7.2 Consequently, Ofgem's 2014 DNO benchmark has a shorter average maturity than the iBoxx index. Ofgem does not adjust for this difference, instead subtracting the same gilt yield from all bond yields.

14.7.3 Ofgem's analysis does not adjust for the concavity of the yield curve, and by including DNO bonds with maturity below the index, it results in a decrease in yield disproportionately greater than the decrease in maturity. This effect is substantial for short maturity bonds included in Ofgem's sample.

14.8 Below, by way of illustration, we show that companies cannot always issue consistently below the iBoxx index, as has been assumed. We provide details of the most recent bond issues from the two DNOs within the ScottishPower group to the external capital markets compared against the iBoxx index at issuance.

Recent debt issuances

	SP Distribution		**SP Manweb**	
	Date of pricing	Date of settlement	Date of Pricing	Date of settlement
	8 July 2011	18 July 2011	5 Sept 2012	20 Sept 2012
Coupon	5.875%	5.875%	4.875%	4.875%
All-in (Nom)	5.999%	5.999%	5.002%*	5.002%*
iBoxx index	5.507%	5.465%	4.343%	4.393%
Under recovery (Nominal)	49.2bp	53.4bp	65.9bp	60.9bp
All-in (Real)	2.701%	2.685%	2.509%	2.500%
iBoxx Real	2.225%	2.168%	1.866%	1.905%
Under recovery (Real)	47.6bp	51.7bp	64.3bp	59.5bp

* Excludes the direct costs of the rating agencies of £220,000

14.9 Finally, we reiterate that the iBoxx index is a secondary market yield not a primary one i.e. it ignores new issuance premiums required/demanded for new issuances in the primary markets.

15. CHAPTER 5 - QUESTION 3: WHAT ARE YOUR VIEWS ON OUR ASSESSMENT OF FINANCEABILITY?

15.1 From our review of financeability we believe there are a number of actions Ofgem should take, in the interest of customers, to ensure the financial resilience of SPD and SPM. These are detailed in the response to questions 1 and 2 in this chapter and include:

15.1.1 Ofgem reassess the translation of the CMA's cost of equity decision which we believe will lead to the setting of an allowance of 6.4% which, critically, will be proportionate to the fast track decision;

15.1.2 establish an equitable and theoretically sound methodology for the cost of debt index by expanding the opening for the trombone index to 15 years, so the average maturity of DNO debt of c20 years is reflected in the index as soon as 20 years data becomes available; and

15.1.3 calculate the cost of debt index for SPEN from the BBB iBoxx non-financial sterling corporate bond data, to ensure consistency with the credit rating, which will apply to SPEN in RIIO-ED1, as results from the financial ratios.

15.2 These proposals will assist Ofgem in meeting their stated intention of:

15.2.1 setting the cost of capital allowances to be consistent with maintaining comfortable investment grade credit ratings[22] ; and

15.2.2 fully considering how resilient DNOs' capital structures are to plausible downside scenarios[23].

15.3 Our over-riding objective has been to deliver an efficiently financeable plan that will offer an adequate return to investors at the lowest possible cost to customers.

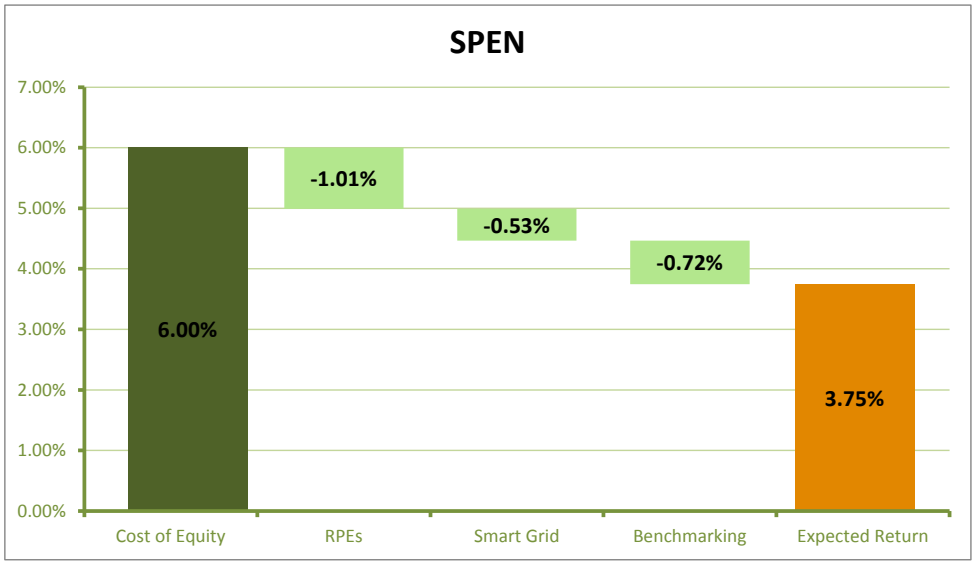
15.4 Based on our view of expenditure necessary to meet our statutory and licence requirements, we estimate our shareholders have been allowed a return on equity of only 3.75%.

15.5 Chart 1 below presents the potential return on equity our shareholders will earn in RIIO ED-1 based on the allowances provided in the draft determination and our informed view of the actual totex requirements.

[22] RIIO-ED1: Draft determinations for the slow-track electricity distribution companies Financial Issues paragraph 2.5.

[23] RIIO-ED1: Draft determinations for the slow-track electricity distribution companies Financial Issues paragraph 3.4.

Chart 1: SPEN's ED-1 return on equity forecast based on our totex forecast



15.6 Ofgem's view published in the draft determination of our totex proposals assesses our totex as being £60m and £320m too high for SPD and SPM, respectively, compared to the Ofgem view. If the allowances are set based on Ofgem's view we will have a gap between our forecast of expenditure and our allowance, after adjustment for IQI allowance setting of £45m and £240m for SPD and SPM.

15.7 We are strongly of the view that our totex forecast in the slow track submission was as efficient as possible and is all necessary. Prior to the submission, our plans underwent significant due diligence, including extensive peer review and appraisal by highly regarded consulting engineers.

15.8 Our analysis shows that SPD and SPM after the inclusion of the totex the business requires to spend in ED-1, to deliver our outputs and, importantly, ensure that we meet our licence and statutory obligations regarding safety and continuity of electricity supply, will lead to the business not being sufficiently securely funded. Under the totex incentive mechanism as proposed for SPEN only 46% of the anticipated overspend will be recoverable, over 45 years, with the remaining 54% being treated as a penalty and increasing our cash outflows with no associated income.

15.9 Our equity shareholders will be required to fund this expected totex in excess of the allowance. We estimate the cashflow requirement will be c.£160m for our forecast expenditure over allowance (£380m reduced by 46% efficiency incentive rate less amortisation) in RIIO ED-1.

15.10 In addition, the mean outcome of our risk analysis, described in more detail below, incorporating our forecast expenditure, indicates that an equity injection of £235m will be required in 2017 for SPM to remain investment grade during ED-1.

15.11 An equity injection from shareholders is in addition to the £575m (SPD £260m; SPM £315m) nominal interest payments in excess of the real interest allowance we forecast shareholders are required to finance in ED-1.

15.12 Using Ofgem's notional economic model we have modelled the impact on financeability of our expected requirement to spend in line with our forecast and consequently overspend our draft determination allowance. In the draft determination in paragraph 3.16, Ofgem acknowledges the DNO will likely experience a one notch down grade principally through worse PMICR ratios. Ofgem's modelling of the PMICR is before the DNOs actual totex expenditure forecast flows through the model which will further impair this ratio.

15.13 We note Ofgem states all DNOs are currently rated no worse than BBB+ (Standard & Poor's and Fitch)[24]. As SPD and SPM are rated at BBB we believe they are materially more exposed to downwards pressure on their PMICR ratios than other DNOs.

15.14 We believe for a price control to be in the long run interest of customers and shareholders it should ensure that the expected overall credit rating ('overall' meaning including non-financial ratio components) for a notional average distribution business will be solidly within the A to Baa (Moody's) range of credit rating, with only a small probability that under realistic adverse combination of external outcomes this rating might drop to a level inconsistent with the allowed Cost of Debt. To be financeable the company needs to be able to raise the required financing in the financial markets in order to deliver its Licence commitments and expected expenditure.

15.15 To perform this assessment we have incorporated into Ofgem's economic model a simulation of the individual and aggregate credit metrics based on Moody's rating methodology[25] for regulated electric and gas networks.

15.16 Consistent with Ofgem's analysis, we found that PMICR for SPEN was poor. So, we have focused our analysis and comparison on PMICR. The results from our model show our ratios become severely stretched. In particular the PMICR ratio further declines when our view of totex is flowed through the financial models and the efficiency incentive rate is applied to the expenditure in excess of allowances.

15.17 We have a genuine concern, therefore, that the rating agencies will seek to lower our rating due to the persistent weakness in our forecast PMICR ratio.

15.18 We note that a new ratio, PMICRg, has been introduced by Ofgem into their financeability assessment at the draft determination stage. Figure 3.1 in paragraph 3.12 of the Financial issues element of the March 2013 Strategy decision document (26d/13) set out the BBB and A ranges that the rating agencies have advised should be used for PMICR when assessing regulated electric and gas networks. The rating agencies do not utilise PMICRg in their assessment. It is a material concern if

[24] RIIO-ED1: Draft determinations for the slow-track electricity distribution companies Financial Issues paragraph 3.16
[25] Moody's Investors Service (2009), "Regulated Electric and Gas Networks", Rating Methodology, August

Ofgem assess financeability differently from rating agencies as ultimately it is the agencies credit assessment and rating that allows us access to debt markets.

15.19 We note Moody's published on the 15th September a paper "UK Electricity Networks: RIIO-ED1 Draft Determinations" which on page 8 dismisses the merits of a PMICRg ratio.

15.20 It is our understanding the economic model for ED-1 is assessing the appropriateness and financeability of the ED-1 base revenues and costs. We believe the inclusion of prior period issues including rebates and legacy issues is not appropriate because these revenues have nothing to do with assessing revenues required for ED1 in isolation. For example the 21 March 2014 DR4 losses decision should have occurred in DPCR5. The reimbursement of the £5 rebate from the acceleration of reductions in household energy bills is a cash flow that relates to the DPCR5 period and is part of the revenues relating to the funding of the costs in the DPCR5 period; it has nothing to with the funding of the ED1 costs which Ofgem's economic model should assess in isolation. The modelling of ED1 revenues should not be fettered by cash flows which relate to different regulatory periods; In most cases the prior period issues had associated costs incurred in prior periods which are not being matched against these delayed revenues. This undermines the integrity of Ofgem's financeability assessment.

15.21 Inclusion of these prior period issues is misleading for investors and analysts regarding the ED1 contract. We recognise the DR5 Legacy adjustments (e.g. the RAV rolling incentive revenue adjustment) have always been recognised as justifiable adjustments that would occur in ED1 and correctly impact ED1 revenues and therefore should rightly be included as part of the ED1 financeability assessment. ED1 costs cash flows (plus the justifiable DR5 Legacy adjustments) should be assessed in isolation to determine the ED1 base revenues and not be influenced by costs/revenue adjustments funded in previous periods.

15.22 In addition to our analysis based on Ofgem's economic model we have, consistent with our business plan, tested the robustness of our financial plan utilising a risk model we have constructed with the assistance of NERA.

15.23 The cost of debt exposure is forecast using an approach developed by NERA, which is a simplified version of the widely used Heath-Jarrow-Morton (HJM) framework for modelling interest rate uncertainty. In this approach the cost of debt is determined by the interest rate of embedded and new debt and the amounts of debt outstanding. The model accounts for uncertainty around both the interest rate and the amount of debt issued over ED1.

15.24 Our modelling shows, at the DNO's forecast expenditure level, SPD remains in investment grade, with the mean credit rating position being in the range to Baa2/Baa3. For SPM at the mean its credit rating will drop below investment grade by 2018. This would trigger the need for a £235m equity injection in 2017 to ensure SPM maintains an investment grade rating. Therefore, based on our view of the totex required to meet our commitments, and the normal operation of the ED-1 incentives, our current base expectation for ED-1 is an equity injection will be required from our shareholders to ensure an investment grade rating is maintained.

15.25 This demonstrates the need for Ofgem to consider the proposed adjustments to their draft determination assessment of efficient expenditure and financeability as detailed earlier in this response to ensure the financial resilience of SPD and SPM.

15.26 A CoE assumption of at least 6.4%, consistent with the fast track DNO, will be necessary to attract the additional equity to maintain an investment grade credit rating.

16. CHAPTER 5 - QUESTION 4: DO YOU AGREE WITH OUR PROPOSALS TO MODIFY THE THREE FINANCIAL POLICIES?

16.1 **Capital Allowance Pools**: We welcome the revised roll forward of tax pools on a notional basis from ED1 to ED2. This is consistent with proposals we made previously. We also consider the use of company specific tax pool allocations to be appropriate.

16.2 **Directly remunerated services:** We have no objections to the proposals for directly remunerated services.

16.3 Ofgem have previously provided guidance "The new category of DRS8 is intended to encourage DNOs to seek new revenue streams from innovative use of network assets". With reference to both DRS8 and the current DPCR5 category ES7, if the full amount of the revenue received by the DNO is subject to adjustment to the RAV, there is no reward for carrying out such activity and therefore this discourages rather than encourages DNOS to seek new revenue streams as intended

16.4 **Disposals:** We have no objection to Ofgem's proposed change, we recognise it is in customers interest, that proceeds or fair value of asset disposals will be treated as deductions from totex for the calculation of the efficiency incentive.

PART E – CHAPTER 6 (UNCERTAINTY AND RISK)

17. CHAPTER 6 Question 1: Do you agree with our acceptance of the DNO specific uncertainty mechanisms

17.1 We agree with Ofgem's acceptance of the DNO specific uncertainty mechanisms.

18. CH6 Question 2: Do you agree with our proposal to give all DNOs an uncertainty mechanism for rail electrification?

18.1 We agree that this is an acceptable proposal and addresses the relative uncertainty of the rail electrification programmes that affect all DNOs across the 8 year period of ED1.

PART F – TABLE OF EXAMPLES OF ERRORS AND ISSUES LOGGED WITH OFGEM

19. Examples of errors and issues logged with Ofgem

19.1 This table is an extract of the errors and issues SPEN have raised formally with Ofgem through Ofgem's RIIO-ED1 issues log process. This is not the complete list of all issue and errors that have been registered.

Area	Examples of Errors and Issues Registered with Ofgem (extracted from issues log – not complete list)
132kV investment plans	We can see no qualitative adjustments for CBAs or actual health information driving large differences in scope. We were told that assessment of our CBAs was not within engineering consultants scope
Load	Ofgem has used fast track business plan tables in error; Ofgem has missed substation group capacities. Penalises SPM which reports capacity at this level.
Totex model	Ofgem excludes some assets from MEAV used for regressions as WPD and UKPN have incomplete data;
Totex model	Ofgem has not excluded ESQCR costs from totex benchmarking despite 3 companies representing 75% of costs
Regional Wage Adjustments	Ofgem has not made adjustments for Scottish companies despite the ONS data used to justify south east companies supporting this
SPM special case	Engineering consultant has made reductions to special case that are not merited on basis of engineering evidence (e.g. actual numbers of rented BT circuits, reported lengths of pilot cables) Benchmarking methodology incorrectly applies further reductions.
Stakeholder engagement	Stakeholder driven activity appears not to be accounted for in modelling, despite stakeholder requests and customer willingness to pay.
Volume adjustments	Qualitative volume adjustments have been made to asset replacement volumes based on historic DR5 3yr delivery (values exclude 132kV activities that are included above). This does not reflect actual reported performance in 2014 and is not consistent with the ED1 framework.
Asset refurbishment	Industry median unit cost has been used for Refurbishment activities with wide and incomparable scope of works across the industry, demonstrated by wide range of standard deviation around median.
Civil Works	No recognition of scope or works or health information, e.g. linking to asset replacement activities that drive some of these costs. Inappropriate use of median unit costs demonstrated by wide range of standard deviation around median. We can see no adjustments to reflect SPENs civils health index.

Substation electricity	Benchmarked on all ground mounted substations when most secondary substations have negligible demand. Should be benchmarked on higher voltage substations with material loads only and recognise weather patterns driving higher demand in the North of GB.
Work force renewal	Benchmarked on industry median despite all DNOs providing detailed information on staff types and contractual retirement dates. Ofgem appear not to have used the available facts.
	Changes to Ofgem's approach for fast track
RPEs	Errors in inputs used and approach does not allow for reversion to underlying long term trends
Smart	New smart grids and smart meter benefits do not recognise all smart benefits already in and associated with our plans. Has also used incorrect version of SPENs TRANSFORM model to calculate benefits. There are errors in the allocation of benefits across DNOs (e.g. applying based on totex bid not allowed totex)