SP ENERGY NETWORKS

Regulation & Commercial

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Your ref

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Date
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Dear Maxine

RIIOED1 Engineering Benchmarking issues – SP Distribution (SPD) and SP Manweb (SPM)

The commitments that we received at our GEMA meetings on 15th May and 4th September 2014 are important given the Ofgem Draft Determination on our ED1 plans. In particular the commitments from your Chairman and CEO that the ED1 draft determination is not the final position, and that Ofgem will work with us to take into account valid arguments and evidence in assessing the ED1 Final Determinations, will be critical if we are to achieve an outcome that my board can accept behalf of our customers and stakeholders.

David Gray's recognition that GEMA, before setting allowances in the Final Determination, needed to satisfy itself that any apparent efficiency gap from Ofgem's modelling was not in fact actually a justifiable difference to other DNOs.

With this in mind I thought that it would be helpful to follow up our recent meetings with the detail of some material issues with the ED1 Draft Determination that we have identified to date.

Of particular importance to us at this stage is that Ofgem's cost assessment models do not reflect differences in the SP Manweb investment cycle to other DNOs and is providing an unacceptable outcome for this business, its customers and its stakeholders. These models identify an apparent efficiency gap for SP Manweb of £178m even before application of Ofgem's new policy developments on Real price Effects (RPEs) and smart grids push this apparent inefficiency to £320m.

This outcome for SPM is not credible 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 are managed applying 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.

You may recall that we previously provided your team with a report on DNOs' asset health and criticality information that clearly demonstrated that SPEN was no more risk averse than any other DNO. In addition to this we have previously presented proposals from our economic consultant NERA to Ofgem's Cost and Outputs team to improve the totex benchmarking by including health index movements in order to reflect DNOs' differing investment cycles. Unfortunately actual asset health information and other key information such as Cost Benefit

Analysis (CBAs) deployed to minimise overall costs to customers, seem to have played little part in the cost assessment for the Draft Determination. Correcting for this in the Final Determinations is a key task for our teams in the next month.

At our bilateral with your Cost and Outputs team on the 27th August we received an undertaking from Chris Watts, subject to approval, to a series of substantial bilateral meetings to address areas of key concern, involving Ofgem's engineering consultants where appropriate. It is of critical importance that the Cost and Outputs team are supported to deliver this commitment and are adequately supported by expert engineering consultants making decisions in a transparent manner. Following our cost and outputs bilateral on the 19th September I will write to you regarding the effectiveness of this meeting and also Ofgem's issue logging and resolution process.

Please note that we have written separately to your team regarding Ofgem's new policy developments on smart grid/smart meter benefits[1], and the consequences of both this and the other new policy on real price effects for the balance of risk and financeability[2], including:

- the procedural concerns of introducing such material policy changes with no prior consultation;
- material errors in the application of the new policies;
- the disproportionate effect on normal track companies compared to WPD, both in terms of assessing efficient costs and application of the IQI incentive;

Our analysis of the extensive models supporting Ofgem's draft determination, and communication with your teams will continue through to our consultation response (due by 26th September). Our expectation is that Ofgem's Final determination will address all of the valid concerns that we set out.

We believe that there are significant improvements in Ofgem's normal track assessment compared with the fast track assessment, and this is demonstrated clearly the assessment of SP Distribution's plan as the most efficient in the industry (including the fast track companies) with an efficiency score of 94.5% (before upper quartile, smart grid and RPE adjustments)[3] and recognition that there is a need for a Manweb regional adjustment.

Since the publication of the draft determination we have answered questions from institutional investors and city analysts questioning the credibility of SPD being assessed the most efficient in the industry, whilst SPM is placed 13th, only ahead of one of the WPD companies. These stakeholders do not understand how two networks managed by one team can have such a divergent outcome. We have explained that we agree that this outcome is not credible, that this is a feature of the cost benchmarking not dealing with justifiable differences between companies (particularly in investment cycle), and we expect that the Ofgem team will now make reasonable adjustments to account for this.

I do not think that it would be productive to cover old ground in setting out the clear weaknesses of the ED1 fast track process. However, there are lessons that must be learned from this and remembered for ED1 mid period reviews, and any future fast track assessments. There are also elements of the fast track decision which must be applied consistently in the Normal Track cost assessment to ensure proportionate and non-discriminatory treatment of normal track DNOs in the Final Determinations.

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[1] *Scott Mathieson letter to Maxine Frerk dated 26th August 2014, regarding smart metering and smart grid benefits*

[2] *Scott Mathieson's letter to Maxine Frerk dated 28th August 2014, SP DISTRIBUTION & SP MANWEB UNDERLYING INTEREST EXPENSE*

[3] *SPDs fast track score was 114%, with totex only 10% higher driven only by higher forecast volumes*

Concerns identified with the Ofgem normal track cost assessment

The attached appendices (1 to 4) highlight some errors and inconsistencies we have identified to date and communicated to the relevant Ofgem teams. As requested we are using the Ofgem Issues Log process to raise errors and inconsistencies we have identified and we expect that your team will resolve each of these as part of the final track assessment.

However, it is important to note that even if all these errors and issues were resolved then the models would still determine that SP Manweb had a significant efficiency gap, which we believe evidence shows is in fact a difference in investment cycle.

You will recall that we raised this with GEMA on the 4th September, and that David Gray conceded that in setting the Final Determinations for RIIO-ED1 that GEMA had an obligation to satisfy themselves that an apparent efficiency gap was in fact driven by efficiency rather than by justifiable differences between companies.

In this regard the major concerns identified with Ofgem's Draft Determination include:

a) The totex modelling taking no account at all of differences in DNOs' investment cycles;
b) The disaggregated modelling taking no account of differences in scope arising from differences in DNOs' investment cycles;
c) Ofgem's engineering consultants making little or no qualitative adjustments to our 132kV plans to reflect the comprehensive engineering evidence presented.
(Note that our critique of the SP Manweb special case assessment in appendix 3 provides evidence that questions the nature of engagement of Ofgem's consultant)
d) There being no qualitative adjustments to reflect the incremental investments in our plans that stakeholders and customers had requested that we include (>£30m of incremental smart grids future proofing and storm resilience investments)

These failings in the statistical cost models, combined with weaknesses in the engineering assessment, penalise SP Manweb simply because it is in a different phase of investment cycle than other DNOs. It is clear that the models cannot deal with this complexity, and that it is highly unlikely that the models can be refined to reflect this fairly before the Final determinations. As a consequence Ofgem and SPEN will need to agree a solution to work around this.

The best and most material example of this relates to SP Manweb's 132kV programme (more detail in Appendix 4) where the disaggregated modelling proposes a reduction of more than £100m of a £198m programme, including:

- 67% of our overhead line plans
- 55% of our switchgear plans and 25% of our transformer replacement plans
- 75% of our black start resilience plans (simply specified to meet DECC's requirements)

Note that our proposed 132kV plans then suffer significant further reductions as a result of the totex modelling taking no account of justifiable differences in DNO investment cycles.
One key element of Ofgem's reductions in the disaggregated model arises from the use of median unit costs.

At lower voltage levels there are generally sufficient volumes of activities by individual DNOs and across the industry that means that median cost benchmarking can be appropriate, with the notable exceptions of asset refurbishment and civils costs where median cost benchmarking clearly cannot deal with the wide variety of scope of works across the industry.

With regard to 132kV activities, all DNOs 132kV programmes include a relatively small number of very specific projects that have unique cost characteristics and cannot be fairly compared via median unit cost benchmarking. We set out this problem in greater detail at GEMA and our bilateral with your Cost and Outputs team on the 27th August as it results in much of the identified apparent inefficiency in our plan.

There is clear evidence from the DPCR4 and DPCR5 Regulatory Reporting Packs and the ED1 plans that there is a wide variance of investment approaches resulting in a differing investment profiles across all DNOs, e.g. more regular 'light' refurbishment of overhead lines versus infrequent 'heavy' refurbishment.

Our planned investments in the SPM 132kV network have been based upon a thorough process and robust evidence so that the plan reflects the condition of our network and chooses the investment timing and option that delivers the lowest lifetime costs to customers.

You will recall that we raised this issue at our GEMA meeting on 15th May 2014. We explained that given the small number of these large projects that they justified a thorough scheme by scheme engineering assessment similar to that performed at RIIOT1, in order to ensure proportionality and non-discrimination. Unfortunately the engineering assessment commissioned by the Ofgem cost assessment team with their consultants has not satisfied this reasonable expectation and the Ofgem Draft Determination seems to take little account of this comprehensive set of evidence.

This outcome is not proportionate or justified and we expect that the Ofgem team will now make reasonable adjustments to account for the weaknesses inherent in the current statistical models. Specifically we expect that Ofgem will commission consultant engineers to perform a detailed assessment of our 132kV programme, and:

Within the disaggregated model:

- A qualitative adjustment should be made to SPM 132kV unit costs to reflect differences in scope
- A qualitative adjustment should be made to volumes where there is clear engineering evidence backing the volumes of activity despite these being higher than the calculated industry average
- A qualitative adjustment should be made to our costs to reflect valid cost benefit analysis

For the two totex models:

- A proportion of our 132kV programme costs (equivalent to the adjustments above) should be set aside from the totex models to reflect the significantly higher needs case than the industry.

We recognise that there is limited time to perform these assessments, however we are confident in our asset data and the needs case underpinning our investment plans, and that any reduction to these is unjustified.

Given that Ofgem has introduced a new Licence obligation for all DNOs to move to reporting Health and Criticality Indices on a uniform basis, the ED1 mid period review will provide an opportunity for Ofgem to satisfy itself within the ED1 period that our plans were robust and justified when our asset health and condition is compared to the industry on a like for like basis.

The alternative of deeming such proposed investments to be inefficient, and subsequently establishing that they were in fact justifiable differences, is a sub optimal outcome for our

customers and stakeholders, resulting in reductions in network resilience and higher costs for customers.

Conclusion:

Whilst the normal track cost assessment process has seen some significant improvements over the fast track process, there are material failings remaining. In particular these arise from over-reliance on statistical models, and limited scope engineering assessments being able to properly and fairly recognise differences in investment cycles between DNOs, even where backed up by a wealth of condition evidence and robust cost benefit analysis.

As a consequence, before the application of Ofgem's new and surprising policy decisions on 'smart' benefits and Real Price Effects, our plans for SP Manweb would need to be reduced in scope by £178m if the Draft Determination was to apply.

Had the normal track companies received the same treatment as WPD (apart from their properly applied 2.5% totex fast track reward) then SPM would have the benefit of a Real Price Effects allowance and a higher Cost of Equity to help offset these reductions. However, the new policy developments detailed above turn a £178m apparent inefficiency into £320m for SPM (£240m totex reduction post IQI).

This disproportionate effect of Ofgems new policy developments result in even the frontier company SPD having a £60m apparent inefficiency (£45m totex reduction post IQI).
We are confident that this outcome does not reflect the needs case nor the relative efficiency of our plans, and it is imperative that our teams work together to identify and implement a solution to this issue before the Final Determination that satisfies GEMAs obligation to recognise justifiable differences between DNOs.

Yours sincerely

Scott Mathieson
Regulation & Commercial Director

Appendix 1: Selection of errors identified
Appendix 2: Selection of issues and inconsistencies identified
Appendix 3: Selection of errors in Ofgem's assessment of the SPM Special Case
Appendix 4: SP Manweb 132kV Programme

Appendix 1: Selection of errors identified

a) The Smart Grids cost reductions provide a credit for LPN's meshed network but not SPM despite SPM having a far greater degree of meshing than LPN, and this being recognised by the industry Transform Model developed in conjunction with DECC. The LPN adjustment made is not transparent but appears to be more than £20m. It is clear that an adjustment is needed for SPM in order to avoid unjustified discrimination, and that this will be proportionately larger than LPN.

b) The Smart Grids cost reductions have been based upon our Fast Track TRANSFORM model. Our normal track plan materially reduced the forecast uptake of Low Carbon technologies (LCTs) and was supported with an updated TRANSFORM model (submitted to Ofgem 17th March 2014) that should be used for all relevant calculations.

c) The Ofgem team completing the assessment of our load plans have used tables from our fast track submission (July 2013) rather than our normal track tables (March 2014). The benchmarking has also failed to include all of the relevant capacity information, disproportionately impacting SP Manweb as its capacity information is presented in a different manner to all other DNOs. This error detrimentally affects us by more than £40m in the disaggregated modelling. We have provided our engineering consultant report quantifying the effect and proposing a resolution.

d) Ofgem benchmarking using median unit cost for activities where there is a clearly wide range of scope within a cost category. The main areas of concern are 132kV asset replacement, civils costs and asset refurbishment.

e) Ofgem's benchmarking of substation electricity has used all substations as the cost driver to establish an allowance. SPM is the only company that has significant numbers of secondary substations with a material electricity demand, as some 60% of SPMs secondary substations contain battery chargers. As a minimum improvement this cost should be benchmarked with only 132kV and 33kV substations, but could be improved further by including secondary substation battery volumes.

f) The engineering assessment of the SPM Special Case demonstrates that the engineering consultants have not had access to the appropriate business plan tables and / or do not appear to have appropriate understanding of more complex protection systems. Details provided in appendix 3.

g) 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 year on year volume increases are credible (e.g. 11kV OHL conductor, and 33kV and 11kV cable). Our actual 2013/14 delivery data demonstrates that the consultants' delivery concerns are unfounded. However, the RIIOED1 outputs contract means that volume delivery risk sits with SPEN and such qualitative adjustments are not consistent with the RIIO framework.

Appendix 2: Selection of inconsistencies identified (to date)

a) A regional wage adjustment is applied to south east DNOs despite the ONS statistics clearly showing that a similar adjustment is appropriate and proportionate for Scottish companies. The feedback we have had to date simply references the inadequate explanation in the consultation document. We have shared the report from NERA with your team. Our economic consultant states in this report that this adjustment is arbitrary and discriminatory against Scottish companies.

b) Lack of clear criteria for exclusions from the cost modelling, for example we have presented at length to Ofgem and GEMA information on our industry leading ESQCR low ground clearance programme. SP Energy Networks represents c.55% of the industry costs in this area and as such this has similar properties to other cost categories that have been excluded from the modelling. The response we have received does not adequately explain why these costs should not be treated as an exclusion from the totex cost modelling. They are similar in nature as those costs that have been excluded. We have commissioned a report from NERA supporting this and have shared with your team.

c) The Modern Equivalent Asset Value (MEAV) used for both totex regressions is adjusted to discount assets where there is a wide range of asset volumes across DNOs. Our economic consultants (NERA) have reported that these changes do not improve the explanatory powers of the statistical models. This approach disproportionately impacts SP Manweb as a result of it having the highest volumes of assets excluded. Specifically SPM's MEAV is reduced by 10%, SPD's by 6% and all other DNOs by between 4% and WPD lowest at effectively 0%. Ironically the majority of this adjustment results in part from WPD having poor asset data (i.e. reporting zero volumes of pilot cables which are assets critical to the safe operation of any distribution network).

   If there are qualitative arguments for making such adjustments then these should be made in such a way as not to discriminate against those companies who have provided complete and comprehensive data. A more proportionate outcome would be for those companies with poor data to do more poorly in the benchmarking.

d) There is no clarity or transparency in how Ofgem's engineering consultants have established efficient unit costs in the disaggregated modelling. Some of the extremely low expert unit costs, and the fact that no DNO has a positive outcome of the disaggregated benchmarking (post upper quartile adjustments) raise significant concerns this process is cherry picking costs or have not applied Ofgem's Regulatory Instructions and Guidance.

e) We can see no adjustments to the cost models to reflect stakeholder priorities and customer willingness to pay. Our plans included c£30m of incremental expenditure that fell into this category covering such activities as overhead line conductor refurbishment to improve storm resilience.

Appendix 3: Issues identified with the Ofgem assessment of the SP Manweb special case

It is clear that Ofgem now accept the principle of a SP Manweb Regional adjustment. However, set out below are some of our queries regarding the assessment and application of the SP Manweb regional adjustment.

These question either the capability of the engineering consultant or their access to relevant data, and undermine Ofgem's 85% efficiency assessment of the SPM special case (£20m reduction). Further, the way the Ofgem model functions unintentionally reduces this by another 10%.

a) The Ofgem engineering consultants have demonstrated that they do not understand the SPM network design or have access to the asset data tables that the Ofgem cost team has. Specifically the consultant has demonstrated a flawed and superficial logic applied to several cost areas:

   Consultant statement regarding pilot cables: 'We consider that this is somewhat high, and that typical radial networks would have pilot network assets of similar extent to SP Manweb.'

   This statement demonstrates that the engineering consultant:

   - does not understand that SP Manweb has pilot cables running between many secondary substations where this would be highly unusual for all other DNOs
   - has not had access to the asset volume records in the business plan tables that Ofgem has, that demonstrate this difference clearly

b) The engineering consultant has used the same statement above to justify a reduction in SPM's special case in relation to BT21CN costs.

   These costs relate to BT switching over an existing telecoms platform to a lower speed alternative by 2018. This results in DNOs needing to replace rented telecoms circuits with a suitable alternative. As a consequence the reference to pilot cables is spurious.

   These costs are related to a specific list of circuits rented from BT and we know from Ofgem's disaggregated benchmarking analysis that our unit costs are efficient.

c) The statistical benchmarking utilised by Ofgem establishes an efficient gross cost for each DNO before then applying a gross-to-net cost adjustment. 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.

Appendix 4 – SP Manweb 132kV Programme

Early major concerns identified with Ofgem's cost benchmarking include:

- The totex modelling taking no account at all of differences in DNOs' investment cycles;
- The disaggregated modelling taking no account of differences in scope arising from differences in DNOs investment cycle;
- Ofgem's engineering consultants making little or no qualitative adjustments to reflect the comprehensive engineering evidence presented.
  (Note that our critique of the SP Manweb special case assessment in appendix 3 provides evidence that questions the capabilities and/or nature of engagement of Ofgem's consultant)
- There being no qualitative adjustments to reflect the incremental investments in our plans that stakeholders and customers had requested that we include (>£30m of incremental future proofing and storm resilience investments)

These failings in the statistical cost models, combined with weaknesses in the engineering assessment, penalise SP Manweb simply because it is in a different phase of investment cycle than other DNOs.

It is clear that the models cannot deal with this complexity, and that it is highly unlikely that the models can be refined to reflect this fairly before the Final determinations. As a consequence Ofgem and SPEN will need to agree a solution to this problem facing us.

The best and most material example of this relates to SP Manweb's 132kV programme where the disaggregated modelling proposes a reduction of more than £100m of a £198m programme, including:

- 67% of our overhead line plans
- 55% of our switchgear plans
- 25% of our transformer replacement plans
- 75% of our black start resilience plans (simply specified to meet DECC's requirements)

Our proposed plans then suffer significant further reductions through the totex modelling.

You will recall that we raised this issue at our GEMA meeting, and explained that given the small number of these large projects that they justified a thorough scheme by scheme engineering assessment similar to that performed at RIIOT1, in order to ensure proportionality and non-discrimination. Unfortunately the engineering assessment commissioned by the Ofgem cost assessment team with their consultants cannot be described as thorough or proportionate.

There is clear evidence from the DPCR4 and DPCR5 Regulatory Reporting Packs and the ED1 plans that there is a wide variance of investment approaches resulting in a differing investment profiles across all DNOs, e.g. more regular 'light' refurbishment of overhead lines versus infrequent 'heavy' refurbishment.

Our planned investments in the SPM 132kV network have been based upon a robust process:

- Assets physically surveyed by expert engineering consultants to establish condition (including 100% of overhead lines helicopter surveys)
- Detailed and comprehensive scheme solutions developed
- Cost effectiveness of solutions thoroughly tested and demonstrated through comprehensive Cost Benefit Appraisals that consider life cycle costs and risks of alternative solutions

The Ofgem disaggregated model assessment of this comprehensive set of evidence appears to:

- Ignore any detailed assessment of needs case and hence differences in scope of works
- Assume all DNOs have similar investment cycle and scope so uses industry median unit costs
- Make no adjustments to reflect comprehensive cost benefit analysis supporting investment in ED1 to avoid higher future costs and consequently customer bills in ED2 and ED3 (e.g. overhead lines needing to be restrung rather than pulled through whilst the old conductor still has sufficient tensile strength.)

This outcome is not proportionate or justified and we expect that the Ofgem team will now make reasonable adjustments to account for the weaknesses inherent in the current statistical models. Specifically we expect that Ofgem will commission consultant engineers to perform a detailed assessment of our 132kV programme, and:

Within the disaggregated model:

- A qualitative adjustment should be made to SPM 132kV unit costs to reflect clear differences in scope to the industry
- A qualitative adjustment should be made to volumes where there is clear engineering evidence backing the volumes of activity despite these being higher than the calculated industry average
- A qualitative adjustment should be made to our costs to reflect valid cost benefit analysis

For the two totex models:

- A proportion of our 132kV programme costs (equivalent to the adjustments above) should be set aside from the totex models to reflect the significantly higher needs case than the industry.

We recognise that there is limited time to perform these assessments, however we are confident in our asset data and the needs case underpinning our investment plans, and that any reduction to these is unjustified.

However, given that Ofgem has introduced a new Licence obligation for all DNOs to move to reporting Health and Criticality Indices on a uniform basis, the ED1 mid period review will provide an opportunity for Ofgem to satisfy itself within the ED1 period that our plans were robust and justified when our asset health and condition is compared to the industry on a like for like basis.