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Data analysis | Economic regulation | Competition law

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Response to Ofgem consultation on SP Energy Networks' proposed modifications to its distribution use of system charging methodology to implement the G3 approach

1. The G3 group of electricity distribution network operators asked us to review Ofgem's consultation of 17 June 2008 on proposed modifications entitled "Implementation of G3 Use of System Charging Methodology" proposed by SP Energy Networks ("SPEN") to the use of system charging methodology for the SP Distribution and SP Manweb distribution networks.[1]

2. This paper responds to the consultation and addresses the following questions:

   (a) What are the relevant tests for distribution charging methodology modifications?

   (b) Do the G3 proposals pass the relevant tests?

   (c) Does Ofgem's consultation suggest that the G3 proposals would not better achieve the relevant objectives?

3. The discussion of the third question is detailed in an appendix which examines the points raised in Ofgem's consultation about the G3 proposals, and whether these points highlight shortcomings of the G3 proposals.

[1] Ofgem (2008) Consultation on SP Energy Networks' G3 proposals, http://www.reckon.co.uk/item/dd3c61ab.

SUMMARY

4. We find that the standard distribution licence conditions specify a two-step test for Ofgem to apply when it receives a modification proposal:

   (a) Step 1: Ofgem considers whether it could make a reasoned decision that the proposed modification "would not better achieve the relevant objectives".

   (b) Step 2: If Ofgem considers that it could make a reasoned decision that the proposed modification would not better achieve the relevant objectives, then it needs to decide whether to use its power to prohibit the modification.

5. If the outcome of step 1 is that Ofgem cannot make a reasoned decision that the proposed modification would not better achieve the relevant objectives, then Ofgem has no power to prohibit the modification and step 2 is not invoked.

6. We find no basis on which we could reach a reasoned view that the G3 proposals would not better achieve the relevant objectives in the distribution licence. Our starting point for the review of Ofgem's document is therefore that the G3 proposals will, unless Ofgem's document shows otherwise, succeed in step 1 of the test. Step 2 will not need to be considered unless Ofgem can identify grounds to suspect that the proposed modification would not better achieve the relevant objectives.

7. We consider each of the points raised in Ofgem's paper. Where the drafting in Ofgem's document left a degree of doubt over the point being made, we have tried to identify as much potential criticism of the G3 proposals as we could. Despite this, we could not find anything that would cast doubt on our starting point that the G3 proposals succeed in step 1.

8. We therefore conclude that:

   (a) The G3 proposals do not fall under the conditions specified in the standard distribution licence conditions to allow Ofgem to prohibit their implementation.

   (b) Ofgem has not in any sense consulted on a proposed decision that the proposals would not better achieve the relevant objectives. If, against our view of the substantive issues, Ofgem were to make a prohibition decision, the element of that decision that finds that the G3 proposals would not better achieve the relevant objectives would seem to have been reached by an unfair process.

9. On our analysis of Ofgem's consultation document and of the tests specified in the distribution licence, a conclusion on SPEN's G3 proposals can be reached without the need for comparisons with other methods. This paper does not rely on our previous findings that the G3 companies can legitimately reject some forms of long run marginal incremental cost methods on account of their competition law compliance risks (but these findings remain part of the background to the G3 proposals).[2]

[2] Reckon report to G3 dated 1 February 2008 (http://www.reckon.co.uk/item/dabdb712) and materials for presentation to DCMF on 19 June 2008 (http://www.reckon.co.uk/item/d50da169).

WHAT ARE THE RELEVANT TESTS FOR DISTRIBUTION CHARGING METHODOLOGY MODIFICATIONS?

Licence conditions

10. Clause 13.3 of the standard distribution licence conditions reads:

> 13.3 The Relevant Objectives in relation to the Charging Methodology are:
>
> (a) that compliance with the methodology facilitates the discharge by the licensee of the obligations imposed on it under the Act and by this licence;
>
> (b) that compliance with the methodology facilitates competition in the generation and supply of electricity, and does not restrict, distort, or prevent competition in the transmission or distribution of electricity;
>
> (c) that compliance with the methodology results in charges which reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its Distribution Business; and
>
> (d) that, so far as is consistent with sub-paragraphs (a), (b), and (c), the methodology, as far as is reasonably practicable, properly takes account of developments in the licensee's Distribution Business.

11. The process for Ofgem's examination of proposals to change a charging methodology is specified in clauses 13.6 and 13.7 of the standard licence conditions:

> 13.6 The licensee may not make a modification of the Charging Methodology if, within 28 days of receiving the licensee's report under paragraph 13.4, the Authority has either:
>
> (a) directed the licensee not to make the modification; or
>
> (b) notified the licensee that it intends to consult and then within three months of giving that notification has directed the licensee not to make the modification.
>
> 13.7 A direction given by the Authority under paragraph 13.6(a) or (b) must include:
>
> (a) a decision that the licensee's proposed modification would not better achieve the Relevant Objectives; and
>
> (b) the Authority's reasons for that decision.

The two-step test

12. The distribution licence cannot place any obligations on Ofgem. The effect of the requirement in the licence that a modification proposal can only be prohibited if it would not better achieve the relevant objectives is therefore to create a two-step process for Ofgem.

13. The first step is for Ofgem to find out whether it can make a reasoned decision in accordance with clause 13.7 that the proposal does not better achieve the relevant objectives. Then:

(a) If Ofgem thinks that it can make a reasoned decision that the proposal does not better achieve the relevant objectives, then it has reached the view that it has a power under the distribution licence to prohibit the modification. It must then decide whether to exercise that power.

(b) If Ofgem does not think that it can make a reasoned decision that the proposal does not better achieve the relevant objectives, then it has identified no power to prohibit and has no further question to consider.

14. If Ofgem thinks that it can make a reasoned decision that the proposal does not better achieve the relevant objectives, then Ofgem has an additional discretion to consider whether or not to prohibit the modification. That discretion is not constrained by the wording of the distribution licence: instead it is a matter on which Ofgem must take a decision based on its statutory duties.

15. This two-step test is apparent from the wording of the distribution licence quoted above. It is a sensible and appropriate approach to the relevant regulatory issues. It provides confidence to network operators that proposals which do not have any detrimental impact on the relevant objectives cannot lawfully be blocked or delayed. At the same time, it gives a broad discretion to Ofgem to consider all relevant factors and its wider duties whenever there are some aspects of a proposal that would not better achieve the relevant objectives.

Features of the step 1 comparison

Choice of baseline for comparison

16. The word "better" in the phrase "would not better achieve" implies a comparison between methods.

17. We think that what is meant in the licence is a comparison between the existing method (in force when the proposal is submitted) and the proposed method (that would result from the proposal).

18. In some policy development contexts, a comparison between doing nothing and doing one particular thing is rightly considered to be an inadequate basis on which to justify a policy decision. In the light of this analogy, we have had to consider whether good policymaking demands that the test should be construed as a comparison between the proposed method and the best method that the network operator (or a hypothetical network operator in the same position) could have been expected to think of.

19. We think that within the context of the licence and the two-step test, there are no legitimate concerns to be had about treating step 1 of the test as a comparison with the existing method. This is because:

(a) Licensees have a continuing duty to identify and propose improvements. It would not therefore be necessary or proportionate for Ofgem to reject a proposal that has no adverse effects (on the relevant objectives) simply because something even better could have been done: in those hypothetical circumstances, it is appropriate for Ofgem not to have the power to prohibit the change, and for the

company to have a duty to go further. All that Ofgem needs to do is explain the opportunity to improve further: there was no need to disrupt a desirable change with a tactical prohibition decision.

(b) In cases where the proposal has some adverse effects on the relevant objectives, Ofgem has the power to prohibit under our interpretation of the step 1 test. In deciding whether to exercise this power (the second step), Ofgem can take account of all appropriate scenarios and is not constrained by the view that the step 1 is limited to a comparison with the existing method. Thus the use of a comparison with the existing method in step 1 is consistent with the reasonable policy requirement that Ofgem should be able to prohibit a change that has some adverse effects (even if narrow) on the basis of a broad assessment of the merits of the proposal compared to realistic alternatives, unconstrained by the existing method.

20. Ofgem's document does not appear to shed light on Ofgem's views on the question of which baseline is used for the "would not better achieve" comparison. It casts no doubt on our views as explained above.

Nature of the comparison

21. We do not think that the step 1 comparison involves a balancing between positive and negative aspects of a proposal. Such balancing is properly a matter for the second step, to be made by Ofgem under its statutory duties in cases where it has to make a discretionary decision.

22. It is appropriate that a determination by Ofgem under the licence should not involve such broader considerations, but instead be limited to the more directly testable question of whether any aspect of the proposal would not better achieve any of the relevant objectives.

23. As we understand the licence condition, a proposal that has good and bad aspects (compared to the existing method) would not be cleared in step 1. It would therefore need to be considered in step 2, where it might, or might not, at Ofgem's reasonable discretion, be prohibited or not.

24. In short, our understanding of the licence conditions is that they specify a narrowly defined safe haven (step 1), for cases where Ofgem cannot find any way in which the proposal would not better achieve the relevant objectives, and then a broad regulatory discretion (step 2) for other proposals.

25. The licence conditions must be taken to have been precisely drafted. It is important that decisions made under them should use consistent and precise terminology. We reject the notion that Ofgem can or should use a "better meets" test under which the positive and negative aspects of a proposal would be balanced within the confines of the four relevant objectives. No such test is specified by the licence for Ofgem to use: the phrase "better meets" does not appear in the licence, and the only positive references to better achieving the relevant objectives are in clauses 13.2 and 13.11, which specify what the licensee should do. Instead of a "better meets" test, the tests to be applied by Ofgem are either narrower (the step 1 test, which requires no

balancing between good and bad features) or broader (the step 2 test with balancing of all of Ofgem's duties, not just the relevant objectives in the licence). Whether a proposal better meets the clause 13.3 relevant objectives on balance (however that might be judged) is not the applicable test for Ofgem to apply, however tempting the shorthand might appear.

26. The test set out in the licence is, of course, subject to wider legal obligations. Thus, obligations imposed by law on a network operator need to be taken into account, even if they are not expressly captured in standard licence condition 13. For example, as Ofgem has previously highlighted (although that reference seems to be missing in the present consultation), compliance with competition law needs to be taken into account. The way in which this affects the tests is that it would be wrong and/or unreasonable for Ofgem to prohibit a proposed modification that was necessary for a distribution network operator to comply with its legal obligations.

DO THE G3 PROPOSALS PASS THE RELEVANT TESTS?

Benefits of the G3 proposal against the relevant objectives

27. The G3 proposal introduces locational variation in charges at the EHV level, and a recognition through lower or negative charges of the possible contribution of distribution generation to the deferral of network investment. These features are intended to achieve the relevant objective 13.3(c) (cost reflectivity). The G3 proposal may also contribute to the achievement of relevant objective 13.3(d) by reflecting geographical differences in demand growth rates or generation connection opportunities in the charging methodology.

28. The wording of relevant objective 13.3(c) makes no reference to forward-looking costs or avoided costs: the only reference to costs is to "costs incurred". It could be argued that the G3 method takes too much account of future costs. However, in the light of Ofgem's policy documents, we have assumed that the correct construction of relevant objective 13.3(c) is a broader economic concept of cost-reflectivity, and that incentive considerations and avoided cost concepts are to be taken into account as costs.

29. The positive contribution of the G3 proposal to the relevant objectives is not in doubt. Ofgem acknowledges this contribution. But that does not answer the applicable test: whether the proposal would (in some way) not better achieve the relevant objectives.

Is there a basis to argue that the G3 proposals would not better achieve the relevant objectives?

30. We now examine the "would not better achieve" test by comparing the G3 proposal with the existing method. This is step 1 of the test to be applied under the licence conditions as we have analysed them above.

31. Our report of 1 February 2008 stated that the locational variation in charges under a G3 method might in some cases be less than the locational variation in costs. This could underpin a criticism of the G3 method. That criticism could only bite if

accompanied by a competition-law-compliant method that is demonstrably more cost-reflective than the G3 proposals — something that we have not seen so far.

32. In any event, such a criticism, even if it existed, would not amount to a finding that the G3 proposal would not better achieve the cost-reflectivity objective. The argument would remain that compared to the existing method, the G3 method reflects costs to a greater extent; it cannot therefore be accused of not better achieving the objective of reflecting costs.

33. We are not aware of any other grounds that might point towards a finding that the G3 method would not better achieve the relevant objectives than the existing method. If no such points are found in the Ofgem document, then the G3 proposal must "pass" the step 1 test, and Ofgem has no power under the licence to prohibit it.

DOES OFGEM'S CONSULTATION SUGGEST THAT THE G3 PROPOSALS WOULD NOT BETTER ACHIEVE THE RELEVANT OBJECTIVES?

First relevant objective (discharge of obligations)

34. Nothing in the Ofgem document points to any argument that the proposal would not better facilitate the discharge by the licensee of the obligations imposed on it under the Act and by the licence.

35. The obligations to be discharged by the licensee probably include, in addition to the matters expressly referred to in the licence, compliance with general applicable law. In particular, we take it that the first relevant objective includes that compliance with the methodology should facilitate compliance with competition law.

36. Competition law includes, amongst other things, prohibitions on exclusionary abuse of a dominant, prohibitions on discriminatory abuse of a dominant position, and prohibitions on exploitative abuse of a dominant position.

37. We consider the prohibition on exclusionary abuse alongside the second relevant objective below.

38. The prohibition on discriminatory abuse (which overlaps with the prohibition on undue discrimination in the licence) does not appear to be affected by the modification proposal. It does not affect any questions of fairness between generation and demand: unfairness in this regard would not be discrimination in the sense given to that term in competition law; for example, a policy of ignoring some costs for generation but not for demand cannot be said to place some customers of the distribution network operator at a competitive disadvantage to others.

39. The prohibition on exploitative abuse is relevant to the first relevant objective. As explained in our presentation to DCMF on 19 June 2008, the G3 proposal better achieves that element of the objective that some of the other methods that SPEN could have considered as alternatives. We have not seen any evidence or sign that the G3 method does not better achieve this element of the objective than the existing

method — instead, the greater degree of cost-reflectivity in the G3 method is expected to help mitigate the risk of inadvertent abuse by ensuring that charges are closer to a level that can be objectively justified.

Second relevant objective (competition)

40. The Ofgem document expresses doubts about the charging of IDNOs in SPEN's original proposal.

41. If SPEN's earlier IDNO charging proposal is approved, and if SPEN were proposing to reverse that change through the G3 proposal, then this could provide a basis on which to find that the G3 proposal does not better achieve the objective of not restricting, distorting or preventing competition in the transmission or distribution of electricity. But in fact, and as put beyond doubt by SPEN's combined proposal,[3] SPEN's G3 proposal does not propose any such reversal.

42. On that basis, nothing in the Ofgem document, and nothing that we can think of, points to any argument that the proposal would not better achieve the relevant competition objectives.

Third relevant objective (cost-reflectivity)

43. Most of Ofgem's points have some potential relevance to cost-reflectivity.

44. We have considered for each point raised in Ofgem's consultation document whether it might be developed into an argument that the G3 proposal would not better achieve the third relevant objective, and concluded that it could not.

Fourth relevant objective (developments in the distribution business)

45. As regard the relevant objective to take account of developments in the distribution business, we think that the only potentially relevant points in Ofgem's document are those labelled Q4 and Q5 in the appendix, about the test size generator method.

46. The G3 companies have identified different cost drivers and scale of development for generation and demand. The G3 proposal better achieves the fourth relevant objective by reflecting these differences through different modelling methods, for example the use of a test size generator and probability method for generation and of an annual percentage growth assumption for demand.

47. None of the points in Ofgem's document seems capable of being developed into an argument that the G3 proposal would not better achieve the fourth relevant objective.

Adequacy of the information provided in Ofgem's consultation

48. As we note on several occasions in our detailed review, there are some respects in which Ofgem's document contains almost nothing to inform respondents about

[3] SP Energy Networks (2008) Implementation of 'G3' Use of System Charging Methodology, including IDNO tariffs, http://www.reckon.co.uk/item/7a50ae21.

Ofgem's approach to SPEN's proposal. This means that respondents cannot address (e.g. confirm or refute) the points that Ofgem might be thinking to rely on in its proposed decision.

49. When this occurs, we feel that the fairness of the consultation process would be destroyed if Ofgem was to make a decision that rests on a point that had not been subjected to an informed consultation.

50. The English courts have taken a similar view. In the words of the Court of Appeal in the case R (Coughlan) v North & East Devon Health Authority,[4] which involved a dispute over a consultation process, a consultation document must contain "sufficient reasons for particular proposals to allow those consulted to give intelligent consideration and an intelligent response" (paragraph 108 of the judgment).

51. We think that the limitations of Ofgem's consultation document correspondingly limit the basis on which Ofgem could make an adverse decision about SPEN's proposal. Specifically, as we have found nothing in Ofgem's consultation that could be said to amount to sufficient reasons for a decision that SPEN's proposal would not better achieve the relevant objectives, we do not think that those consulted have been enabled to give an intelligent response about such a decision.

52. This confirms our view that SPEN's proposal passes the step 1 test outlined at the beginning of this document, and that Ofgem's does not have power under the distribution licence to prohibit its implementation.

APPENDIX: EXAMINATION OF OFGEM'S POINTS

What points about the G3 proposals are raised in Ofgem's consultation?

Overview of Ofgem's consultation document

53. We found it hard work to understand the questions or issues that Ofgem's document was raising.

54. Six different lists of issues or questions appear in the course of the 39-page document:

(a) Page 3, under "initial assessment", has a list of five "initial concerns".

(b) Pages 3–4, under "views sought", have a list of nine points.

(c) Page 6, a contents page, has a list of four headings under "issues", referring to pages 13–19 (but the headings in the contents page differ from the headings used on pages 13–19).

(d) Page 13 has a hierarchical list of four headings and nine sub-points (these points do not match the nine points on pages 3–4).

[4] R (Coughlan) v North & East Devon Health Authority [1999] EWCA 1871, http://www.reckon.co.uk/item/d975412e.

(e) Pages 13–19 have a discussion following the same structure as outlined on page 13, but using different text for some of the headings. The discussion includes 20 unnumbered paragraphs in a bold italic font.

(f) Pages 38–39 (schedule 7) headed "consultation questions", has 17 numbered paragraphs in a bold italic font. These have some overlap with the bold italic paragraphs on pages 13–19, but are not all the same. They come under different headings again.

55. Overall, there are 21 unique bold italic paragraphs in Ofgem's document, and we think that they represent a comprehensive list of the points raised by Ofgem.

56. We refer to each of them using the numbering on pages 38–39 prefixed by the letter Q for those that appear on pages 38–39, and the numbers Q7A, Q7B, Q10A and Q10B (chosen to preserve ordering as far as possible) for the four bold italic paragraphs which appear on pages 13–19 but not on pages 38–39.

Points raised in Ofgem's consultation document

57. Not all the bold italic paragraphs are drafted in a way that stands alone. For example, Q12, "Do respondents consider that SP's approach is appropriate", makes little sense when shown with no context. Q11 is similar. Even when the text seems at first to be self-contained, its actual meaning when used out of context is sometimes obscure (e.g. Q5) or becomes too general (e.g. Q1).

58. It is therefore necessary to identify the relevant context of each point in order to ascertain its meaning.

59. We now go through each of the points in turn and try to identify its meaning in Ofgem's document.

Q1. The extent to which SP's approach to EHV demand charging is an acceptable trade off between cost reflectivity and stability

60. From the discussion at paragraphs 2.5–2.7 on page 14, we infer that this point relates to the calculation of uniform charges at EHV level within each network group.

61. Paragraph 2.6 misrepresents our report of 1 February 2008 by implying that it commented on network group aggregation. It did not. In addition, our report compared the G3 proposals with other potential charging methodologies, not with the existing methodology. The point made by Ofgem here is both wrong and irrelevant.

62. Paragraph 2.7 contains the only reference to a trade-off between granularity of locational signals, which Ofgem might associate with cost reflectivity (although this is not an accurate association), and "unpredictability", which Ofgem might see as the opposite of stability (although again this seems an inaccurate characterisation).

63. What seems clear is that Q1 relates to the issue of network group level calculations and not to any other aspect of the G3 proposals. The point could have been formulated as:

> Q1 simplified: Can charges calculated at the network group level reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred by the licensee?

Q2. The extent to which the use of network group aggregation and separate increments are equitable and capable of producing economic signals which can lead to more efficient use of the system.

64. The point about network group aggregation seems to be the same as in Q1.

65. The phrase "separate increments" is explained in paragraph 2.8 on page 14. At first sight, this appears to relate to the fact that differences in demand growth for different network groups are recognised in the G3 methodology, both through the use of a percentage growth assumption (rather than an absolute MVA number) and through the use of different percentage growth rates for different network groups.

66. Paragraph 2.8 on page 14 refers to Schedule 2 for illustrations showing some differences between network groups. The final part of Schedule 2 contains a chart showing the value of 1 per cent of demand capacity for different network groups, and a paragraph recalling that the G3 method uses a 1 per cent granularity in load values when conducting load flow modelling to identify future investment requirements.

67. We are unsure whether Ofgem is referring to differences between network groups in the level of granularity applied to limit the number of load flow modelling runs to be computed, or to differences between network groups in the amount of load growth assumed.

68. The word equitable does not appear to be explained in Ofgem's document.

69. The reference to economic signals and more efficient use of the system in this context does not appear to be explained in Ofgem's document.

70. The fact of "separate increments", whether in relation to load growth or computational granularity, is not in doubt; but we cannot see any connection to equity or economic signals that would make this fact a topic on which comments could be invited.

71. Overall, Q2 adds nothing to Q1 simplified.

Q3. The appropriateness of the charge pricing function.

72. Paragraph 2.9 on page 14 is about the time profiling of the allocation of future investment costs over the previous 10 years under the G3 method. It is limited to reporting some points made in Frontier Economics' paper. The implication of Frontier Economics' point is that, whilst G3 has not established a fully robust basis for this system of allocation of future investment costs, there is no basis on which this system can be considered to be unreasonable.

73. Ofgem's document offers no basis or line of reasoning that could lead to the conclusion that the G3 method might be inappropriate in this respect, or that is would not better achieve the relevant objectives than its existing method.

74. Q3 can be simplified as follows:

> Q3 simplified: Are there ways in which SPEN's proposal to recover future investment costs from customers using the G3 charge pricing function would not better achieve the relevant objective of cost-reflectivity?

Q4. We ask for views on the extent to which the use of the test size generator represents an appropriate trade off between a forward looking, cost reflective methodology and a methodology which produces predictable, stable prices.

75. Paragraphs 2.10–2.13 on page 15 describes the G3 method for making projections of generation load growth, using notional test size generators connecting with notional probabilities.

76. The term trade-off is not explained in Ofgem's document. We cannot see any trade-off.

77. Frontier Economics' report examined the G3 method in this respect and found it to be a transparent and simple solution to a complex area. Nothing in Ofgem's document detracts from this view. Ofgem's document does not suggest any alternative or anything that might reasonably be traded-off against anything else.

78. We are unable to formulate this point in a way that makes any sense as a consultation question. All it seems to say is:

> Q4 simplified: Does the use of a test size generator and notional probability mean that SPEN's proposals would not better achieve the relevant objectives?

Q5. We ask respondents to consider the fact that EHV demand growth is also likely to be lumpy. Respondents may also wish to consider the anticipated growth of small scale distributed generation which is likely to flatten any 'lumpy' connection of generation.

79. The impression given is that Ofgem is asking those consulted to criticise the G3 method for using different growth forecasting methods for generation and demand.

80. Paragraphs 2.10–2.13 on page 14 acknowledge the basis for the G3 method for generation. Ofgem's document does not seem to identify any grounds not to use an annual percentage growth rate for demand, other than in the first sentence of Q5.

81. We cannot make much sense of the second sentence of Q5, and it is not explained in Ofgem's document.

82. Perhaps it suggests that, instead of a test size generator, SPEN could realistically have used another basis for forecasting generation load growth at lower voltages. There is no doubt that SPEN could have used other methods in this area, as in many other areas. But there is nothing in Ofgem's document to explain why this particular alternative is relevant to the consultation, or why it should be considered worthy of an indirect mention.

83. Q4 already addresses the appropriateness of the test size generator method. The only additional point raised here relates to load. Although this is somewhat of a stretch to

see so much in Ofgem's text, the only additional point that we can detect from Q5 is therefore:

> Q5 simplified: Is SPEN's proposal use of a percentage growth assumption for EHV demand (instead of a test size load method similar to its proposals for generation) acceptable?

Q6. We welcome views on the extent to which it is appropriate for generator charges to go up when smaller generation connects to the network, and down when larger scale generation connects to the network.

84. This point is explained in Schedules 1 and 2 of Ofgem's document. What Ofgem's analysis shows is that charges tend to be higher if the same expected amount of generation load growth (30 per cent of demand load) is modelled as a higher probability of a smaller test size generator than a lower probability of a larger test size generator. This finding relies on the assumption that the reinforcement costs imposed by the larger test size generator are the same as the ones imposed by the smaller test size generator. We have not checked Ofgem's calculations but the end result seems plausible and unsurprising.

85. The word "when" in Q6 is misleading, since the comparison is about different scenarios for future generation within the modelling, rather than different scenarios for actual generation on the ground.

86. Paragraph 2.16 on page 15 states that these results "appear to be counter-intuitive". This view appears to be based on confusion between the size of the test size generator and a notion of increment. The expected increase in connected generation is, of course, the test size generator multiplied by the probability, and this amount — the expected generation load growth — is kept constant across the various scenarios. All that is being changed is the composition of that increase in connected generation.

87. The last few words of Schedule 1 show Ofgem's mistake most clearly: "a counter intuitive result that greater generation growth on the network drives lower generation network charges". But what Ofgem's calculations had assumed was not greater generation growth, but simply a bigger test size generator with a lower probability, amounting to the same expected generation growth. And Ofgem had assumed that the bigger test size generator would not cost more to accommodate than a smaller one — therefore we cannot be surprised when the expected cost is lower when a bigger test size generator with a lower probability is used.

88. Ofgem's surprise at the result seems to rest on its own abnormal assumptions, or on a form of intuition that we do not understand. Even if Ofgem was surprised, the document does not explain the relevance of that subjective feeling to the issues that Ofgem has to determine under the distribution licence.

89. We are unable to extract any relevant point from Q6.

Q7. We also welcome views on whether the substantial differences between test size generators at different voltage levels may influence connection decisions i.e. a generator may connect at 33kV rather than 132kV.

90. Paragraphs 2.14–2.16 on page 15 do not explain what Ofgem is asking about.

91. Schedules 1 and 2 do not seem to consider comparisons of generator charges between voltage levels.

92. Although it might not be relevant to the questions that Ofgem has to determine, we would expect that it might be possible to construct a hypothetical example in which the G3 method could plausibly be accused to give inadequate incentives when a generator has a choice of connection voltage (although a proper analysis of that issue would require consideration of connection charges). But Ofgem has not attempted to do that.

93. Due to the lack of specific information in Ofgem's document, we are unable to identify any relevant point or potential criticisms of the G3 proposals from Q7.

Q7A. We welcome views on the extent to which SP's proposed scaling approach is appropriate both in terms of the 'COG' model and voltage level scaling.

94. Ofgem uses the word scaling to refer to revenue reconciliation, even when no scaling is involved in it.

95. Paragraphs 2.17–2.19 recall the reconciliation method proposed by SPEN, and Frontier Economics' worry that average cost measures could affect incentives to connect at different voltages.

96. No explanation is provided for the use of the word "appropriate".

97. It seems that Ofgem means:

> Q7A simplified: Is SPEN entitled to rely on modern equivalent asset values to allocate price control allowed revenues between voltage levels?

Q7B. We also welcome views on whether the different scaling approaches to demand and generation are appropriate.

98. Paragraph 2.19 on page 16 hints at the fact that the weighted MEAV approach used to allocate costs between voltages for demand revenue reconciliation has no counterpart for generator charges.

99. It would make little sense to apply the modern equivalent asset value approach to generation, given that the assets currently in use in that part of the business are not likely to represent the future asset mix due to fast expected growth in distributed generation. It could also raise the difficulty of identifying generation-related assets in a network that was built to meet demand. We cannot identify the benchmark for allocation of generation revenues between voltage levels that Ofgem's point implicitly rests on.

100. On that basis, it seems that if one wanted the same approach to generation and demand, it would probably have to take the form of imposing more uniform recovery of demand revenues across voltage levels.

101. Thus, Q7B adds little to Q7A simplified.

102. If it serves any purpose, Q7B is clear as drafted.

Q8. We welcome views on the extent to which the use of historical RRP data represents an appropriate trade off between cost reflectivity and simplicity, and whether this approach is transparent given that RRP data is not published.

103. Paragraphs 2.20–2.22 could be taken to imply that SPEN proposes to switch from the reliance in the distribution reinforcement model for HV/LV to rely instead on data in the annual regulatory reporting packs.

104. This is not the case: SPEN's existing method does not include the use of the distribution reinforcement model.

105. According to Ofgem, "in using historic averages to calculate current charges, the model is not forward looking". This seems to disregard too quickly the possibility that recent actual expenditure might be a better proxy for notional future expenditure than estimates from internal systems.

106. This said, Q8 as drafted does identify two plausible concerns about the accuracy and availability of regulatory reporting pack data.

Q9. We also invite views on whether a backward looking average technique is appropriate given the presence of developed forward looking models, particularly for the calculation of HV and LV reinforcement costs.

107. Q9 as drafted conveys an impression of undue bias:

(a) It uses the phrase "backward looking", which some readers may interpret as pejorative, to describe SPEN's proposed method.

(b) It seems to assert (without explanation) that that the distribution reinforcement model, which SPEN does not use at present, is "developed" compared to SPEN's proposals.

108. As to substance, Q9 adds nothing to Q8.

Q10. We welcome views on SP's use of time bands and whether it is appropriate to have time bands reflected for LV/HV charges but not at EHV.

109. Q10 is explained by paragraph 2.24 on page 17. It is clear as drafted.

Q10A. We welcome views on the extent to which SP's proposal incorporates customer coincidence to peak demand and incentivises higher utilisation of the network based on time of day and seasonal influences.

110. Q10 is explained by paragraph 2.23 on page 17. It is clear as drafted.

Q10B. We also welcome views on the extent to which SP are correct in using four time periods for HV/LV customers while only one time period for EHV customers.

111. This adds nothing to Q10.

Q11. We welcome views on table 1 and the extent to which there are substantive differences between demand and generation which warrant an asymmetric approach.

112. Table 1 on page 17 seeks to compare SPEN's proposed approaches for EHV demand and for EHV/HV generation.

113. The demand column reflects Ofgem's erroneous reference to the 1 per cent granularity used in SPEN's method to control the number of load flow modelling runs as an "increment". Otherwise, the comparison seems adequate.

114. Some of the comparisons have already been addressed by Q4, Q5, Q7B and Q8. Q11 seems to be intended as a catch-all question for any other points.

115. Ofgem does not explain why a different ("asymmetric") approach for demand and generation is relevant to the questions that it has to decide under the distribution licence. Whilst Ofgem's policy preference for a similar approach to be used for both types of customers is well established, that policy preference is not directly relevant to the question (step 1 in our analysis above) of whether the proposal would not better achieve the relevant objectives.

116. Given this, and the fact that Ofgem did not see fit to identify any specific areas of concern in relation to table 1, we prefer not to speculate about what the authors of Ofgem's document might have had in mind.

Q12. Do respondents consider that SP's approach is appropriate?

117. This overly general point can be discarded without loss of information.

Q13. We welcome views as to whether it is appropriate to only consider demand reinforcements which will occur within a ten year period. Does this represent a practical trade off between a forward looking model and a simplistic approach?

118. Paragraphs 2.27–2.28 on page 18 explain the point adequately.

119. Simplistic is often perceived to have a negative connotation. This term seems inappropriate for use to describe a proposal in a consultation by a public authority.

120. The term trade-off is odd in this context. The approach seems equally forward-looking whether it looks to 10 years or some other period.

121. Q13 can be simplified as follows:

> Q13 simplified: In calculating demand charges, is SPEN entitled to disregard reinforcements that are not expected to take place within 10 years?

Q14. We welcome views on whether it is appropriate to only assess the benefit generation can have in deferring demand reinforcements due within ten years. Does this adequately reflect the benefits which generation can provide to the distribution network?

122. Paragraph 2.29 on page 18 explains the point adequately. Q14 is clear as drafted.

Q15. We welcome views on the potential for the use of a ten year period to lead to tariff jumps as lumpy demand connection brings forward reinforcement by a number of years.

123. Paragraph 2.30 on page 18 explains the point adequately. Q15 is clear as drafted.

Q16. We welcome views on the extent to which SP are correct in using F factors to calculate the benefit LV generation can provide to the network.

124. Paragraphs 2.33–2.34 on page 19 imply that SPEN's use of P2/6 as a data source for coincidence factors is somehow inferior to unspecified methods used by unspecified other distributors' "current development work".

125. Ofgem's document could be taken to imply that SPEN's approach gives no more credit for the reinforcement deferral benefit of generators than P2/6 gives for their security of supply benefits. This would not be correct: the coincidence factors that SPEN takes from P2/6 are applied to all voltage levels for the purpose of calculating charges, whereas they would not qualify at all voltage levels for security of supply planning purposes.

126. Anyway, unspecified methods used by unspecified other distributors' "current development work" are just that. They bear no relevance to the question of whether Ofgem can decide that SPEN's actual proposal would not better achieve the relevant objectives than its existing method (which effectively sets all coincidence factors to zero).

127. Given the imprecision of Ofgem's document, we prefer not to speculate about what it might (or should) have meant.

Q17. We welcome views on the extent to which SP's proposal encourages EHV customers to make the most of their power factor as well as on their changes to HV/LV reactive power charging.

128. The only explanation provided in the Ofgem document is at paragraph 2.35 on page 19, which says little.

129. Section 9 of SPEN's proposal explains the proposal for reactive power charges. Annex 1 (pages 7–12) of Ofgem's document makes no reference to any aspect of reactive power charging.

130. In short, SPEN proposes different approaches for EHV and for HV/LV customers.

131. EHV demand customers are to be charged by kVA of capacity. The reactive power charges implied by this method is consistent with the reliance on thermal constraint as the main cost driver for EHV demand (kVA are proportional to current, which drives thermal constraints).

132. HV/LV demand customers are to charged for power and/or energy, but the modelling approach generates costs per kVA in the first place. The following rules are used to calculate reactive power charges:

    (a) Users with a power factor of 0.95 or better are not charged for reactive power.

    (b) Users with a power factor worse than 0.95 are charged a rate per kVArh based on a calculation of the marginal rate of increase in kVA (indicator of thermal capacity) per unit of kVArh consumed, multiplied by the kVA charge rate. The marginal rate of impact of reactive power is calculated at a notional power factor which is a weighted average for that customer class. On average for that customer class, the charge can be expect to be consistent with the kWh charge for active power on the assumption that thermal constraints are the relevant cost drivers.

133. Ofgem does not identify these features of SPEN's proposed approach or provide any information or discussion. We prefer not to speculate about what it could or should have said if it had addressed the issue.

Does Ofgem's consultation highlight shortcomings of the G3 proposals?

Q1, Q2: use of network group aggregation

134. As discussed above, paragraphs Q1 and Q2 relates only to the fact that calculations are made at the network group level rather than at a more disaggregated level.

135. Frontier Economics' report states that:

> More granular locational signals would, in our view, substantially increase the complexity and unpredictability of the charging regime (and also require more engineering-based judgement to derive charges) with minimal incremental benefit arising from the additional cost reflectivity that this would create.

136. Ofgem's consultation acknowledges this argument and does not suggest any line of reasoning that would run counter to this.

137. Furthermore, Ofgem's consultation does not provide any information to respondents as to what the acceptability of SPEN's proposed approach might be judged against. The risk associated with this approach to consultation is that different respondents might comment on the acceptability of SPEN's proposal against different elements of alternatives, potentially leaving Ofgem unable to be certain that it has elicited sufficient information to reach a view. We consider the failings of the consultation document in this respect in the final section of this paper.

138. It is not obvious how to modify the G3 approach to operate at a more disaggregated level than network group. Modelling of reinforcement requirements for smaller

network elements could well require a different approach to load growth modelling: for example it might be necessary to extend the test size generator and probability approach to demand. Doing so might involve an explosion of the number of load flow modelling runs that are required to estimate charges. All these things are easier said that done.

139. SPEN and Frontier Economics have made a case for the proposition that charges calculated at the network group level reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred. There has been no reply to this case.

Q3: allocation of reinforcement costs over time

140. Q3 asks about the formula for allocation of future reinforcement costs to charges in the 10 years leading up to the expected reinforcement.

141. Ofgem discloses no actual basis for any reasoned objection to that formula. The consultation document does not put forward any reasoning for a potential decision to prohibit SPEN's proposal on the grounds of its time profile, or even any suggestions for what formula might have been in any sense better.

142. Compared to the existing methodology, which allocates none of the reinforcement costs to load on a locational basis, SPEN's proposed system for allocating future reinforcement costs to users of the network group in which the reinforcement is expected to be needed, better achieves the relevant objective of having charges that reflect costs.

Q4, Q5: test size generator and probability, but nothing similar for load

143. The generator test size and probability method and the reasons for its use in the G3 proposal are examined in Frontier Economics' report.

144. Ofgem's consultation document does not contribute anything to this area of analysis, or suggest any possible alternative approach.

145. Ofgem also seems to ask in Q5 why the use of a test size generator method was not extended to demand. We do not know whether modelling load growth using a test size load and probability approach is feasible, or sensible. It seems attractive at a superficial level, but it is not obvious how to do it: for example, it might involve an explosion of the number of load flow modelling runs that are required to estimate charges.

146. Nothing in Ofgem's consultation document enables respondents to focus on a particular option for applying the same method to generation and demand, or to consider the practical feasibility of that option. It does not allow respondents to comment intelligently on whether a test size load approach would work, or better achieve the relevant objectives.

147. Returning to the land of the demonstrably feasible proposals and the questions that Ofgem has to address, it is clear that, compared to the existing methodology, which

takes no account of locational differences in potential future reinforcement cost to accommodate new generation, SPEN's proposals, with the generator test size and probability element, better achieves the relevant objective of having charges that reflect costs. So does the generation test size load approach combined with a demand growth assumption.

Q6, Q7: Ofgem's defective intuition

148. Q6 and Q7 rest on Ofgem's errors or perhaps defective intuition. They do not raise any relevant questions, or address any of the relevant objectives.

Q7A, Q7B: use of modern equivalent asset values to allocate revenues to voltage levels

149. Revenue reconciliation necessarily involves some essentially arbitrary decisions. It must be done with a view to minimise the distortion to the incentives arising from the charging model.

150. We assume that Ofgem's document is comparing SPEN's proposed approach (which allocates price control revenue to voltage levels based on modern equivalent asset values, and then reconciles revenues at each voltage level using a fixed adder) with a method in which the fixed adder would be the same at all voltage levels.

151. SPEN states that G3 chose their approach on the basis that the amounts being allocated through revenue reconciliation could be thought of as principally depreciation and return on capital, and that spreading them across voltage levels would allocated too much cost to higher voltages.

152. Perhaps Ofgem's point is a suspicion that SPEN's proposals might reallocate costs between voltages, compared to the current method, with no good reason. But Ofgem does not provide any analysis of any such effect. Ofgem's analysis of changes in tariffs (pages 22–23 and subsequently issued correction) does not appear to be sufficiently reliable to enable a view to be reached on these questions.

153. Our main conclusion is that Ofgem's document does not contain any grounds for a proposed decision that SPEN's proposal to use voltage-specific fixed adders would not better achieve the relevant objectives than the existing method.

Q8, Q9: use of regulatory reporting pack data

154. G3's rationale for using the regulatory reporting pack includes that it increases transparency. Ofgem refutes this by stating that the regulatory reporting pack data are unpublished. Assuming that this is true, we agree with Ofgem that the claims of transparency cannot apply. It does not necessarily follow that the G3 proposals would not better achieve the relevant objectives.

155. Indeed, even with imperfect transparency, there could well be a benefit to network users of knowing that their charges are based on numbers that are available to Ofgem, if network users trust Ofgem to raise and investigate queries about the data, and to deal with complaints about charges.

156. There might also be a benefit to users of having charges based on cost data compiled according to rules specified by Ofgem, if network users trust Ofgem to specify clear, measurable and consistent cost concepts.

157. It is therefore at least arguable that the use of the regulatory reporting pack would better achieve a transparency objective than the existing method or the distribution reinforcement model. Certainly Ofgem is not consulting on a proposed decision that it would not.

158. As regards cost-reflectivity, Ofgem does not specify its criticisms of the G3 proposals. We would expect internal costing estimates to be closely related to recent experience of costs incurred, as reported in the regulatory reporting pack, and therefore there seems to be no material worsening of cost-reflectivity from using the regulatory reporting pack. Nothing in Ofgem's consultation points towards a well-founded argument that using data from the regulatory reporting pack would not better achieve the relevant objectives.

Q10, Q10A, Q10B, Q11, Q12, Q16, Q17: various issues on which Ofgem says little

159. Ofgem picks out a number of more technical aspects of SPEN's proposals on which it invites comments without identifying any issue or problem.

160. Respondent may have something interesting to say about these points. Or they may not. What seems certain is that they will not have had the opportunity of commenting on any proposed decision by Ofgem to prohibit SPEN's proposal, or on any proposed decision by Ofgem that SPEN's proposal would not better achieve the relevant objectives.

Q13, Q14, Q15: 10-year horizon

161. Ofgem's document raises several separate questions about the use of a 10-year period or cut-off.

162. What seems missing from Ofgem's analysis is a recognition of the role of the fixed forward-looking period within the G3 proposals. This is not a simple cut-off applied to a method that could have looking 100 or 1,000 years ahead: instead, it is a fixed window, specified to be 10 years in SPEN's proposals, over which reinforcement costs are recovered in the run up to a planned reinforcement. It is not possible to modify the 10-year cut-off for any one aspect of the G3 proposals without significantly affecting the entirety of the scheme.

163. One could speculate about alternatives to the G3 proposal that would not have a fixed window. But that would be irrelevant to the questions that Ofgem has to address about SPEN's proposal.

164. Ten years is not a manifestly silly period to use for the purposes of forward-looking reinforcement planning. A longer period would risk the criticism that charges are too dependent on highly uncertain speculation about future reinforcements.

165. In the absence of any further information, or alternative proposal, respondents are left to consider the question of whether SPEN's proposal, with a 10-year cut off in the calculation of locational variations in charges, would not better achieve the relevant objectives than the current approach, which gives no consideration to the geographical variation in future reinforcement needs.

166. In this regard, it would seem clearly wrong for Ofgem to decide that SPEN's proposal would not better achieve a cost-reflectivity objective than the current approach.