Consultation on conflicts in the Distribution Losses Incentive Mechanism and data to be used in calculating its components

To:

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From:

SP Energy Networks

SP Manweb plc and SP Distribution Ltd

CONSULTATION RESPONSE: Executive Summary

A. Cap and Collar/Interaction Conflict

The consultation correctly sets out that there is an unforeseen conflict between the Interaction component of the DPCR5 Losses Incentive calculations laid out in Final Proposals and the Cap/Collar on the value of the DPCR5 Losses Incentive.

The consequence of this conflict is that if no action is taken, DNOs may receive a very large up-front reward or penalty payment whereas the interaction adjustment is intended to exactly offset their starting position in DPCR5 relative to the DPCR5 target (the reward/penalty the DNO would receive if there was no improvement in losses in DPCR5 relative to 09-10 performance).

As the final proposals stand, the up-front payment is apparently uncapped, whereas the position it is intended to offset is subject to the agreed Losses cap/collar. We agree with Ofgem's assertion is paragraph 2.4 that this outcome was never intended by DPCR5 Final Proposals.

Our preferred means of correcting this is Option 3 in the Consultation Document.

Option 3 seeks to measure the DPCR5 losses relative to 2010-11 losses performance.

This preference is qualified. The option as laid out in the Consultation Document will not fully address the issue.

We identify the additional changes required to fully realise the objective of Option 3

If these changes are not accepted, our preference is Option 2.

Option 2 seeks to eliminate the interaction payment and explicitly measure the DPCR5 losses relative to 2009-10 losses performance.

B. Restated vs Non-restated Losses

Some DNOs will restate 09-10 losses to correct the DPCR4 incentive for abnormal supplier activity.

The default position is that for the purposes of the DPCR5 Incentive, non-restated losses will be used.

Ofgem seek views as to whether restated losses should be used instead for the purposes of the DPCR5 incentive.

It is SP's view that there is no justification for a change from the default position and that the non-restated losses should be used for DPCR5. In principle the use of restated data would link DPCR5 targets to a 'normal' period in during DPCR4 where the definition of 'normal' is explicitly identified for the purpose of making a like for like comparison with a DPCR4 target. The DPCR4 targets were in turn set using ten-year average historical data. As such, DPCR5 targets would bear no conceivable relation to recent losses performance. Further, in practice any DNO who requires to have 2009/10 reported losses restated would find themselves at or close to the uncapped maximum penalty in year 1 of the DPCR5 period with no plausible opportunity to break even by the end of the DPCR5 period. As a result the incentive is removed (at maximum penalty) from day 1.

C. Other Concerns

In this consultation response we discuss in detail our view on how the issues associated with the Losses Incentive Mechanism in its current form can be best addressed. Regrettably these are second best solutions. We fully understand that Ofgem seek to incentivise the reduction in carbon emissions associated with network losses and SP fully support this loss reduction objective.

However we, like most stakeholders, believe that given this risk of unearned rewards or penalties arising from potential ongoing Supplier corrections, the lowest risk option for consumers would be to suspend the DPCR5 incentive entirely and task DNOs with piloting a more robust mechanism, which focuses on technical losses, in preparation for full implementation during RIIO-ED1.

At the recent RIIO-ED1 Losses Stakeholder's conference we have already seen alternative approaches for a losses mechanism and believe that these may represent the best option for stakeholders.

We observe that the lasting impact of supplier activity (and consequently the correct approach to incentivising losses reduction in DPCR5) will only be clear with hindsight, if at all. Continuing with a financial losses incentive for DPCR5 whose parameters are set *ex ante* will present significant unavoidable risk to both DNOs and consumers.

D. Substation Units

We note a concern that the Final Proposals regarding the treatment of Substation Consumption are insufficiently clear.

CHAPTER 1

1.1. Ofgem ask no specific questions in Chapter 1

1.2. We agree that the two issues of either direct conflict or uncertainty which Ofgem have identified within the DPCR5 Final Proposals must be addressed.

1.3. The relationship between "interaction adjustment" and the DPCR5 cap and collar (forming the substance of Chapter 2) is an unintended conflict within the DPCR5 final proposals.

1.4. The substance of Chapter 3 arises from the effect on DPCR5 target-setting of the likely restatement of losses by DNOs to correct for a period of abnormal data cleansing by suppliers.

1.5. These two DPCR5 issues are independent.

1.6. The two issues relate in their entirety to the DPCR5 losses incentive, although Ofgem have sought to deal with them at the same time as the final close-out of DPCR4.

1.7. It follows from this that the "PPL Term", defined in the licence as the amount of the residual distribution losses incentive (DPCR4) arising between 1 April 2005 and 31 March 2010 to be recovered in the current price control, does not depend on either of these issues, but simply accounts for the final position of the DPCR4 losses roller (PPL is nowhere defined algebraically). [Normal brackets if we intend to make this statement]

1.8. We believe that inclusion of the interaction term in "the DPCR4 LRRM" calculation in Paragraph 1.9 of the Consultation Document has caused confusion. The interaction adjustment is intended to offset a starting penalty or reward **under the DPCR5 incentive**. It is calculated relative to the **DPCR5 target**, and to ensure that it claws back the correct amount, it must be applied using the **DPCR5 incentive rate**. As such it is more helpful to consider this component to be part of the DPCR5 incentive.

1.9. We further note that the effect of this interaction adjustment is (to a high degree of approximation) to make the **total position under the DPCR5 incentive** (interaction + rolling mechanism) **independent of the DPCR5 Target**. Instead, a DNO's position under the DPCR5 mechanism is determined by 5 x the difference between 2009-10 losses and 2014-15 losses, reported under the DPCR5 methodology (with a small adjustment for movements in units distributed). The algebra demonstrating this forms Appendix 1 of our response.

1.10. This means that, as intended by Final Proposals, DNOs will not receive any temporary windfall benefit or penalty under the DPCR5 losses roller (although this would have disappeared anyway under normal operation of the roller, as the final penalty would have been determined solely by the relationship between 2014-15 losses and the target as was the case in DPCR4).

1.11. We do not agree with the assertion in Para 1.20 of the Consultation Document that the Final Proposals are silent on asymmetrical revenue exposure.

In fact we believe that Ofgem make explicit that the cap and collar are intended to be absolutely symmetrical around zero reward/penalty. Paragraph 6.25 and Table 6.3 of Final Proposals: Incentives and Obligations quantify this symmetrical risk as 97 basis points of pre-tax RoRE, which corresponds to ±£22.3m for SP Distribution and ±£20.9m for SP Manweb.

2. CHAPTER 2

QUESTIONS
Question 1: Which of the strengths and weaknesses we have suggested are most important to you as we consider options to resolve the conflict?
Question 2: Are there any strengths weaknesses we have missed?
Question 3: What is your assessment of the options we have suggested? In providing your response, please consider the extent to which any option moves away from the original intention of the DPCR5 settlement.
Question 4: Which is your preferred option for resolving the conflict and why?
Question 5: Are there any other options we should consider?

Question 1: Which of the strengths and weaknesses we have suggested are most important to you as we consider options to resolve the conflict?

2.1. It is of primary importance that the total exposure under the DPCR5 Losses Incentive (including any interaction adjustment) does not exceed the existing DPCR5 cap/collar. As Paragraph 6.25 of the Incentives and Obligations Final Proposals makes clear, the cap and collar values were explicitly calibrated in terms of RORE. Consequently, to preserve the financeability of the overall price control package, any increase in the risk to DNOs RORE would need to be compensated by an appropriate increase in the allowed Cost of Equity.

2.2. For this reason we believe that Options 4 and 5 are unacceptable since they introduce either asymmetric revenue exposure and/ or alter the absolute exposure of DNO's and customers. Unlike Options 1,2 & 3 we see this as a fundamental departure from the intend of the DPCR5 Final Proposals.

2.3. In general (subject to 2.1 above), it is vital that any options remain aligned to the overall intent of the price control settlement

2.4. We believe that it is important that the incentive should not offer the opportunity for unearned revenue loss or gain.

2.5. We believe that Options 1 – 3 all achieve this.

2.6. We believe that the extent and persistence of the impact of supplier data cleansing, with the possibility of similar activity in the future is likely to impact the settlement data on which losses will be reported but this has no bearing of the strengths of options 1, 2 & 3.

2.7. We do not believe that the weakness identified for Options 2 and 3 that only one year's losses are taken into account is unique to these options. It is a feature of the DPCR5 losses mechanism. As noted in Para. 1.9 and demonstrated in Appendix 1, the interaction adjustment means that only 09-10 and 14-15 performance determines the overall DPCR5 incentive.

Question 2: Are there any strengths weaknesses we have missed?

2.8. No

Question 3: What is your assessment of the options we have suggested? In providing your response, please consider the extent to which any option moves away from the original intention of the DPCR5 settlement.

2.9. SP believe that in addressing the unforeseen conflict between components of the Losses Incentive Mechanism within the settled limits (the overall cap and collar), Options 1, 2 and 3 meet the original intention of the DPCR5 settlement.

2.10. In seeking to change the total incentive exposure, Options 4 and 5 conflict directly with the original intention of the DPCR5 settlement.

2.11. Option **1**

2.11.1. Option 1 would deal with the Cap/Collar Conflict issue with a relatively simple modification to the licence condition.

2.11.2. The process would still require a historic losses target which would in turn require a consistent set of DPCR5 losses data. Given the uncertainty as to what this should be consistent with (i.e. how DPCR5 will turn out), target setting by this route is problematic.

2.11.3. We do not regard Option 1 as a major departure from the original intention of the DPCR5 settlement.

2.12. **Option 2**

2.12.1. Option 2 would again deal with the Cap/Collar Conflict issue with a relatively simple modification to the licence condition, but by setting the interaction payment to zero has the additional strength of more intuitively linking reported performance with financial consequences.

2.12.2. Replacing the DPCR5 target with the 09-10 actual performance ensures that the target is at least approximately determined on a basis consistent with the current losses position. We deem this an important advantage over Option 1, although it offers no guarantee of a target consistent with the basis on which 2014-15 will be reported.

2.12.3. Removing the interaction adjustment by this method arguably makes the operation of the incentive more transparent as it clarifies the dependency of the final penalty on the 09-10 losses position which is inherent in Final Proposals (and which we demonstrate in Appendix 1).

2.12.4. Unlike Option 1, there is no disconnect between the target-performance gap and the total reward/penalty. For example, the target could be 6.2% under Option 1 and 09-10 performance 7.1%. Assuming losses remain constant, the total net penalty under Option 1 would be zero but consist of a non-zero interaction adjustment (positive) followed by a DPCR5 "5 times E" penalty. Under Option 2 both Interaction Adjustment and "5 times E" would be zero.

2.12.5. We do not regard Option 2 as a major departure in principle from the original intention of the DPCR5 settlement.

2.13. **Option 3**

2.13.1. Option 3 would again deal with the Cap/Collar Conflict issue but would require slightly greater modification to the licence condition. Although this is in principle less desirable than the minimal changes associated with Options 1 and 2, our reservations are outweighed by the considerations detailed below.

2.13.2. Replacing the DPCR5 target with the 10-11 actual performance ensures that the target is even more closely determined on a basis consistent with the current losses position than via Option 2. We deem this a further improvement over Option 2, although again it offers no guarantee of a target consistent with the basis on which 2014-15 will be reported.

2.13.3. This effectively switches off the incentive for 2010/11. We believe that this is justifiable, given the lack of intelligence on the extent to which supplier data cleansing has continued since 2009-10, or on the persistence of abnormalities associated with such data cleansing activities. Our most recent losses data included as Appendix 2 shows that losses in 2010/11 compared to those in 2009/10, unrestated but on a comparable DPCR5 basis) have reduced slightly in both of SP's DNOs. Although we have no hard evidence we believe that this is consistent with our expectation that Supplier data cleansing impacting our DNO's has now passed their peak levels. In our response to Question 10 later we explain why we agree with Ofgem that unrestated data must be used for DPCR5 target setting and the interaction adjustment. We believe that 2010/11 losses may be more representative of losses in future that 2009/10. As such, option 3 in combination with the use of unrestated data is preferable to option 2 in that in all probability it errs in favour of the customer.

2.13.4. However, we do not believe that this Option as described will turn off the interaction adjustment by default, as intended and asserted in Para 2.16 of the Consultation Document. Further algebraic change is required to Final Proposals. It is essential that the definition of the interaction adjustment be changed to

$$Int = 5\,.\,IR\,.\,(ACL2_{1011} - TL_{DPCR5})$$

2.13.5. This has the effect of setting the interaction adjustment to zero. If this is not done, Option 3 is simply a modified Option 2 (there will be a non-zero interaction payment arising from the difference between 09-10 and 10-11, and a "five times E" amount arising from the difference between 10-11 and 14-15. Total incentive still determined by 14-15 relative to 09-10)

2.13.6. As the incentive is now only effective for 4 years, the 5x multiplier should be replaced by a 4x multiplier. *There can be no enduring improvement to losses during 10-11, so there should be no reward.*

2.13.7. The annual cap should remain as Total Cap ÷ 5. To do otherwise would systematically raise the risk in each of the 4 effective years by 25 basis points of RORE.

2.13.8. While we believe that the exceptional uncertainty justifies switching off at least one year of the DPCR5 incentive, we do not believe that this justifies increasing the risk in the remaining incentive years.

2.13.9. Overall, we do not believe that Option 3 is a major departure from the original intention of the DPCR5 settlement.

2.14. **Option 4**

2.14.1. We believe that Option 4 moves unacceptably far from the DPCR5 settlement, as this options increases DNOs revenue exposure beyond the agreed cap/collar.

2.14.2. By applying separate cap/ collar to the interaction adjustment and the roller (five times E), Option 4 could allow a situation where the interaction penalty is collared at (say) £20m and the DNO subsequently sees a £20m penalty via the roller mechanism.

2.14.3. As an example, using restated losses for 09-10 only we know that SPD's interaction adjustment would claw back £34m (capped to £22m). If losses remained at their present level (7%), SP would be liable for a further penalty under the DPCR5 LRRM of £67m (capped to £22m). The total penalty would then be £44m, double the capped amount.

2.14.4. This exposure applies symmetrically to a possible reward situation.

2.14.5. This doubles the risk to which the DNO is exposed to 194 basis points of RORE. We believe that this is an unacceptable departure from the DPCR5 Settlement.

2.15. **Option 5**

2.15.1. We believe that Option 5 moves unacceptably far from the DPCR5 settlement, as this option directly increases DNOs revenue exposure beyond the agreed cap/collar.

Question 4: Which is your preferred option for resolving the conflict and why?

2.16. We prefer Option 3 (with the qualifications noted in Para. 2.13.4) for the following reasons:

- An average target (as implicit in Option 1) could only be calculated (a) on either a mixture of normal and abnormal years (un-restated) or (b) with abnormal years restated. (a) is unacceptable on grounds of consistency and (b), while consistent would in no way represent the current (and likely future) DPCR5 losses

- The 2010-11 losses performance will be a better indicator of the likely DPCR5 closing position than an average target for DPCR4 (adjusted or not)

- The 2010-11 losses performance will be a better indicator of the likely DPCR5 closing position than the 2009-10 losses performance.

- This minimises the amount by which losses might deviate from the target[1] simply due to the slow unwinding (or persistence) of abnormal settlement effects.

[1] The effective target (i.e. the 2009-10 losses performance under Option 1 or 2, the 2010-11 losses performance under SP's interpretation of a correct Option 3), not TL.

2.17. If the conditions laid out under option 3 are not followed it simply becomes a more complex and flawed implementation of Option 2. We would then prefer Option 2 for simplicity.

Question 5: Are there any other options we should consider?

2.18. Suspension of the DPCR5 LRRM would:

- Ensure no windfall gain or loss to DNOs simply through inability to forecast the behaviour of Suppliers impacting settlements data.
- Avoid volatility to customers via the losses roller

3. CHAPTER 3

QUESTIONS
Question 6: Do you think that nominal or RPI-indexed values for incentives over DPCR4 should be used in the LRRM calculation? And do you have any other views on the 5 times E component?
Question 7: What are your views on the reasons why losses positions might increase, remain at 2009-10 levels or reduce? What bearing should this have on the decision about whether DNOs should use a restated or un-restated ACL2 figure? Please provide evidence or analysis you consider necessary to support your position.
Question 8: Do the options put forward for Chapter 2 have any bearing on question of whether to use a restated or un-restated ACL2?
Question 9: Should we use a restated or un-restated ACL2 for calculating the DPCR4 LRRM Interaction Adjustment?
Question 10: Do you think we should use restated or un-restated 2009-10 data for the purposes of calculating the DPCR5 target? Please consider your response to the previous question and to questions in Chapter 2 of this document in responding?
Question 11: Do you think either of these two options may successfully be used to restate units distributed in 2009-10 under the DPCR5 methodology? Can you offer an alternative method? Which method should be used for restating UD2009-10?
Question 12: Alongside your consideration of whether to use restated or un-restated 2009-10 data, we are seeking views on the degree of any departure from the DPCR5 settlement and any observations or concerns you may want to share with us.

Question 6: Do you think that nominal or RPI-indexed values for incentives over DPCR4 should be used in the LRRM calculation? And do you have any other views on the 5 times E component?

3.1. In the interest of simplicity, calculation using real values (in the incentive rate base year) with final conversion to nominal revenue is preferable

3.2. It is our understanding that the decision regarding use of restated or original losses performance in 09-10 (on a DPCR4 basis, for the purpose of calculating the DPCR4 LRRM) is outside the scope of this consultation.

Question 7: What are your views on the reasons why losses positions might increase, remain at 2009-10 levels or reduce? What bearing should this have on the decision about whether DNOs should use a restated or un-restated ACL2 figure? Please provide evidence or analysis you consider necessary to support your position.

3.3. Current evidence is that losses positions may reduce slightly from 2010/11 levels, but is likely to remain considerably above 'normal' DPCR4 levels throughout DPCR5.

3.4. This will largely be a function of the nature and extent of supplier data adjustments compared to those undertaken in 09/10. Initial evidence suggests that the extent of such adjustments has reduced slightly from the 09/10 level; but that it is still significantly higher than at the start of DPCR4. We have been unable to gather any further substantive evidence of this but our anecdotal views are informed by recent discussions with a major Supplier in the SP areas. Although we have no hard evidence we believe that this slight reduction in losses is consistent with our expectation that Supplier data cleansing impacting our DNO's has now passed their peak levels but will still impact reported losses during the remainder of the DPCR5 period. These could also be impacted by Modification P274 (which seeks to limit compensatory adjustments, including GVC).

3.5. There are longer term trends in consumption which impact the percentage losses inferred from settlement.

3.6. About 25% of technical network losses are fixed, and sales are on a falling trend. As sales decrease, the fixed losses will remain constant. The expected effect is that although total losses measured in GWh may decrease through DPCR5, losses expressed as a percentage of sales may increase.

3.7. Extrapolation of available Purchases and Sales for DPCR4 and that for that part of DPCR5 which is known confirm that this is a likely scenario.

3.8. Not only are sales falling, but the rate of decline is greater for HH-metered than for NHH customers.

3.9. This means that a greater proportion of units are distributed to lower voltage levels on the network.

3.10. For equivalent energy volumes exiting the network, this means that losses (in energy and percentage terms) will be greater.

3.11. Roll-out of smart metering may introduce further unforeseen changes in settlement patterns and perceived losses.

3.12. Taken in aggregate, once these effects are compounded over 5 years it is possible that even in the absence of abnormal supplier activity losses might increase.

Question 8: Do the options put forward for Chapter 2 have any bearing on question of whether to use a restated or un-restated ACL2?

3.13. No

Question 9: Should we use a restated or un-restated ACL2 for calculating the DPCR4 LRRM Interaction Adjustment?

3.14. The title "DPCR4 LRRM Interaction Adjustment" is misleading. The Interaction adjustment may be calculated at the time of the DPCR4 close-out, but it is part of the DPCR5 incentive (see Para. 1.8).

3.15. We should use an un-restated ACL2 consistent with Table 1 Ch 3 of the consultation document.

3.16. We believe that losses may fall slightly through DPCR5 but the present trend suggests that 2014-15 losses will be materially closer to the un-restated levels than restated.

3.17. We provide in Appendix 2 a summary of the latest available settlement data (all data which has reached at least R3 Reconciliation by end of April 2012) and associated losses. We have excluded those months after September 2011 which are at R2, R1 or SF, as these months may still be substantially revised through the later stages of the reconciliation process.

3.18. The actual losses for 2009-10 and 2010-11 derived from this dataset are shown below

	2009-10	2010-11	DPCR4 closing target
SPD	7.12%	7.00%	5.34%
SPM	7.24%	6.97%	5.32%

3.19. While a binary choice between restated and un-restated ACL2 is unlikely to be right in either case, we believe that there is significantly less risk of an extreme outcome using the un-restated losses.

3.20. If 2009-10 Units distributed were restated for the DPCR5 Incentive, then then based on performance in 2010-11 SP Distribution and SP Manweb would (before cap) be exposed to penalties of £106m and £55m respectively.

3.21. Clearly, as there would be no realistic possibility of reducing losses sufficiently to bring a penalty of this size below the capped value, there would be no meaningful incentive on SP to reduce losses. Furthermore, in principle the use of restated data would link DPCR5 targets to a 'normal' period in during DPCR4 where the definition of 'normal' is explicitly identified for the purpose of making a like for like comparison with a DPCR4 target. The DPCR4 targets were in turn set using ten-year average historical data. As such, DPCR5 targets would bear no conceivable relation to recent losses performance.

3.22. For these reasons we are strongly of the view that there is no option to move from the default position identified in Table 1 Ch 3 of the consultation document, which is to use losses (ACL2) calculated without restatement for DPCR5

Question 10: Do you think we should use restated or un-restated 2009-10 data for the purposes of calculating the DPCR5 target? Please consider your response to the previous question and to questions in Chapter 2 of this document in responding?

3.23. As described in Para. 1.9, the DPCR5 target does not determine the overall DPCR5 incentive, so the decision is only material to the profiling of the incentive and its apportionment between the interaction adjustment and the roller.

3.24. Nonetheless, the process laid out in DPCR5 Final Proposals requires a DPCR5 target. If this is not to be set using a single year (either 09-10 or 10-11) we believe that as a matter of principle un-restated data should be used for *both* 2008-09 and 2009-10 for Sp Distribution and SP Manweb (this may not be the case for DNOs with different reporting methodologies).

3.25. We have demonstrated that the previous years' reported losses are inconsistent with these two years, so it cannot be appropriate to include them in the target calculation unless they themselves can be restated on a basis consistent with the later years.

Question 11: Do you think either of these two options may successfully be used to restate units distributed in 2009-10 under the DPCR5 methodology? Can you offer an alternative method? Which method should be used for restating $UD_{2009\text{-}10}$?

3.26. We believe that restatement is inappropriate in this context. In principle, the approved methodology should be used if the need to restate DPCR5 losses for 09-10 should arise.

Question 12: Alongside your consideration of whether to use restated or un-restated 2009-10 data, we are seeking views on the degree of any departure from the DPCR5 settlement and any observations or concerns you may want to share with us.

Overall Concerns

3.27. We fully understand that Ofgem seek to incentivise the reduction in carbon emissions associated with network losses. SP fully support this loss reduction objective.

3.28. Nonetheless we are concerned about the effectiveness of the DPCR5 incentive given the uncertainty about the future path of network losses.

3.29. Supplier activities (clearly not within DNO Control) have demonstrably distorted DPCR4 reported losses. The scale of this is at least an order of magnitude greater than any change in losses which may be achieved by realistic DNO activity.

3.30. It is not yet clear to what extent these effects are transient, and to what extent the supplier error correction may result in a shift in the baseline level of reported losses.

3.31. During DPCR5, the introduction of smart metering has the potential to effect further changes to the basis on which losses are reported.

3.32. We believe that there is likely to be little correlation between DNO activity and reported losses throughout DPCR5.

3.33. Any reward or penalty for DNOs is more likely to arise from movements in the underlying data (due to new settlement effects or the unwinding of old ones) than from genuine and sustainable reductions in losses.

3.34. This weakens the incentive property of the DPCR5 Losses mechanism.

3.35. We believe that given this risk of unearned rewards or penalties the lowest risk option for consumers would be to suspend the DPCR5 incentive entirely.

3.36. **Substation Units**

3.37. We have some concern about the application of the substation adjustment term S.

3.38. It is our understanding that this is intended to address the situation where a target is set on data which treats substation consumption as losses, but losses are then reported by a methodology which treats substation consumption as units distributed.

3.39. In such circumstances a DNO may receive a reward simply due to this reassignment from losses to sales.

3.40. As both the DPCR4 and DPCR5 losses will be reported using the DPCR5 methodology for DPCR5 target-setting and reporting, both should include substation consumption in the total Units Distributed.

3.41. There is therefore no need to make a correction to avoid an apparent losses reduction between DPCR4 and DPCR5 when reported on the same methodology.

3.42. Alternatively, if it is intended that the substation consumption be excluded from parts of the calculation for some other reason, then the fixed loss associated with that substation consumption should also be excluded to preserve the relationship between purchases, sales and losses within the incentive.

Appendix 1: LRRM and Target Change True-up

Without loss of generality, we can ignore substation units (or assume they're in units distributed)

IR = DPCR5 Incentive Rate

UD_t = Units distributed in year t (under DPCR5 methodology)

$ACL2_t$ = Losses in year t (under DPCR5 methodology)

$TL_{1415} = ALP_{DPCR5}.UD_{1415}$

$TL_{DPCR5} = ALP_{DPCR5}.UD_{0910}$

ALP_{DPCR5} = DPCR5 Allowed Losses Percentage (= Target % if Substation = 0)

Let *Int* be the interaction adjustment

$$Int = 5\,.\,IR\,.\,(ACL2_{0910} - TL_{DPCR5})$$

Let L_{DPCR5} be reward/penalty under DPCR5 LRRM (the "five times E" component)

$$L_{DPCR5} = 5\,.\,IR\,.\,(TL_{1415} - ACL2_{1415})$$

$$where \quad TL_{1415} = ALP_{DPCR5}.UD_{1415}$$

Then total DPCR5 financial impact is

$$L_{DPCR5} + Int = 5\,.\,IR\,.\{(TL_{1415} - ACL2_{1415}) + (ACL2_{0910} - TL_{DPCR5})\}$$

$$= 5\,.\,IR\,.\{(ALP_{DPCR5}UD_{1415} - TL_{DPCR5}) + (ACL2_{0910} - ACL2_{1415})\}$$

$$= 5\,.\,IR\,.\{(ALP_{DPCR5}.(\,UD_{0910} + \Delta) - TL_{DPCR5}) + (ACL2_{0910} - ACL2_{1415})\}$$

(Where $\Delta = UD_{1415} - UD_{0910}$)

$$= 5\,.\,IR\,.\{\big((\,ALP_{DPCR5}.UD_{0910} + ALP_{DPCR5}.\Delta) - TL_{DPCR5}\big) + (ACL2_{0910} - ACL2_{1415})\}$$

$$= 5\,.\,IR\,.\{\big((\,TL_{DPCR5} + ALP_{DPCR5}.\Delta) - TL_{DPCR5}\big) + (ACL2_{0910} - ACL2_{1415})\}$$

$$= 5\,.\,IR\,.\{\big((\,ALP_{DPCR5}.\Delta)\big) + (ACL2_{0910} - ACL2_{1415})\}$$

$$= 5\,.\,IR\,.\{\ (ACL2_{0910} - ACL2_{1415}) + ALP_{DPCR5}.(UD_{1415} - UD_{0910})\}$$

Note that (with the exception of a small correction term due to movement in Units Distributed between 2009/10 and 2014/15) ***the overall DPCR5 Losses penalty or reward is independent of the target set***. It depends only on the difference in actual losses between 2009/10 and 2014/15.

Appendix 2: Recent Losses Data

Appendix 2 is an Excel Workbook accompanying this document ("*Appendix 2 Data supporting Cap Collar Consultation.xlsx*")

This summarises monthly purchases and sales data for both SPD and SPM to September 2011.

We have included all months which have reached at least R3 in the settlement reconciliation process.

Months at earlier stages of reconciliation (more recent) are excluded as these months are likely to be revised materially through the remainder of the reconciliation process.