

# **Proposals for DCC's role in developing a Centralised Registration Service and penalty interest proposals**

**DCC Response**

**22 January 2016**

**DCC Public**



# 1 Executive Summary

1. Smart DCC Ltd, known as the Data and Communications Company or DCC, welcomes the opportunity to respond to the consultation 'DCC's role in developing a Central Registration Service and penalty interest proposals'<sup>1</sup>, released on 28 July 2015.
2. DCC holds the licence, granted by the Department of Energy and Climate Change (DECC), to establish and manage the data and communications network to connect smart meters to the business systems of energy suppliers, network operators and other authorised users of the network.
3. DCC is committed to contributing to the successful and timely delivery of the Switching Programme and we support Ofgem's proposed amendments to the licence in relation to the Centralised Registration Service (CRS). However, there are a few areas of proposed legal drafting where further clarification is required.
4. Chapter 3 of the consultation proposes some fundamental amendments to the regulatory framework which we consider require some careful thought. DCC considers that the move to ex ante price control overall is the right approach, however we have concerns with the proposal to introduce an ex ante price control arrangement for procurement costs in the switching programme's transitional phase. We consider that this transition should take place when DCC services are more stable. We suggest Ofgem review this proposal.
5. DCC broadly supports Ofgem's proposed amendments to the licence in relation to introducing the penalty interest rate regime. However, to ensure the proposed licence drafting reflects the policy intent, we have identified some amendments, which are set out in our response to question 9.
6. DCC's response to the questions raised in the consultation are set out in the sections which follow.
7. If you have any questions regarding any part of this response please contact Bushra Ali (Bushra.ali@smartdcc.co.uk).

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<sup>1</sup> <https://www.ofgem.gov.uk/publications-and-updates/final-proposals-dcc-s-role-developing-centralised-registration-service-and-penalty-interest-proposals>

## 2 DCC responses

### 2.1 Registration and switching arrangements

#### **Question 1: Do you agree with our proposed changes to LC15?**

DCC agrees with the proposed changes to LC15, subject to the following considerations:

- Condition 15.4 (c) (i) states that the Relevant Service Capability procured should reflect the design of a CRS which has been designated by the Authority, including any amendments to that designated design. It is not clear in the proposed drafting if the term “amendment” is used in relation to changes to design which are to be designated before the service is procured, or whether the intent is that the design can be amended after the service is procured and that the procured service must be capable of being changed to meet the amended requirements of the designated design.
- Condition 15.4 (c) (ii) states that the Relevant Service Capability “if executed” is to give effect to an efficient, economical and secure CRS. It is not clear in the current drafting how the term “executed” is to be interpreted. This could mean procured (but without contracts signed), contracted or implemented. DCC would welcome clarification on the intent of the drafting.
- Within Condition 15.8 (1), DCC considers that Ofgem should update the drafting to allow for ‘exclusions’ from the design of future switching arrangements. As drafted the condition allows for scope that “includes (but is not limited to) the provision of services equivalent....” DCC considers that allowing for ‘exclusions’ will give Ofgem more flexibility to make design decisions which will support efficient implementation of new switching arrangements and the CRS.
- The following proposed definitions in condition 15.8, “Electricity Distribution Licence”, “Master Registration Agreement”, “Supply Point Administration Agreement” and “Uniform Network Code” are also provided in condition 21.12. We note that while there is some variation in the wording used, the underlying meaning is the same. We suggest that in order to avoid confusion only one set of definitions is used in the licence.

#### **Question 2: Do you agree with the proposed considerations that we would expect DCC to take into account when seeking to meet its new objectives?**

DCC broadly agrees with the proposed considerations that DCC is expected to take into account when seeking to meet its objectives set out in LC15.

DCC welcomes Ofgem’s position that the list of considerations is not exhaustive, and that new requirements may emerge as the Switching Programme progresses. We consider that this approach will provide flexibility for Ofgem to respond to risks and opportunities in the execution of the Programme.

Consideration 2.19 states that DCC should transpose the CRS requirements identified into a “technical specification” for the purpose of procuring the CRS. DCC considers that there will be other requirements, such as those relating to the operation of the service, which will need to be specified for the purpose of the procurement and should therefore be referenced in the considerations document when it is updated.

## **2.2 Recovery of costs**

DCC’s response to questions 3, 4 and 5 is in two parts:

- DCC general comments on the proposal that an ex ante price control is applied to DCC costs relating to the procurement of a Centralised Registration Service (CRS).
- Detailed responses to the questions posed in Chapter 3.

### **2.2.1 General comments on Ofgem’s proposed approach**

#### **Background**

The introduction of reforms to enable faster and reliable switching offers substantial potential benefits for the consumer and the energy industry.

Within this, the Centralised Registration Service (CRS) will be a fundamental part of the new market arrangements. DCC will play<sup>2</sup> an essential role in the effective, timely and efficient delivery of these changes through the execution of its obligations to support design, procure, implement and then operate the CRS.

DCC is fully committed to the timely and cost-effective delivery of an effective CRS that delivers the maximum value for the consumer. As such we have commenced work with Ofgem’s Switching Programme whilst ensuring that our contribution does not distract from delivery of the Smart Metering Implementation Programme.

In light of the comments set out below, we hope that Ofgem will look again at its position concerning the application of ex ante arrangements to CRS procurement costs. We will be happy to work with you and industry to identify arrangements which will meet Ofgem’s objectives and support successful delivery of the Switching Programme.

#### **Price Control arrangements**

DCC is currently regulated under an annual ex post price control framework, submitting its incurred costs for each regulatory year for scrutiny and determination by Ofgem

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<sup>2</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2015/02/fast\\_and\\_reliable\\_switching\\_decision\\_final.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2015/02/fast_and_reliable_switching_decision_final.pdf)

DCC recognises that Ofgem is considering alternative forms of price control arrangement<sup>3</sup> to ensure that DCC services continue to be carried out in an efficient and economic manner. We understand that ultimately Ofgem wants to move DCC's price control arrangements to an ex ante model.

DCC accepts that this is the right direction; however we consider that this transition should take place once DCC services are being delivered on stable and more predictable footing. Transition to an ex ante arrangement will be a substantive undertaking which will require extensive engagement between DCC, Ofgem and industry to ensure that the right balance is struck to meet the short and longer-term interests of the consumer.

In this context, DCC still<sup>4</sup> considers that there are a number of significant drawbacks relating to the introduction of an ex ante price control arrangement for DCC costs relating to the procurement of a CRS<sup>5</sup>.

These are as follows:

- (i) Applying an ex ante approach to CRS procurement risks placing a disproportionate focus on the cost of the procurement exercise. We consider that a successful procurement exercise should balance three key considerations:
  - a. costs
  - b. timeliness
  - c. quality.
- (ii) While an ex ante regime could provide more certainty to industry around costs, we note that the proposals in the consultation do not propose any specific incentives relating to quality or to timely delivery. It is important that any new regulatory framework balances these three considerations to ensure that the procurement activity delivers long-term value for money for the consumer and aligns with programme objectives.
- (iii) A key feature of ex ante price control is the long term nature of forecasting which allows the regulated company to explore options for securing long-term value for money. However, the proposed approach is limited only to one cost category and is limited by time, which may hamper the incentive to take a long-term view. For example, alternative solutions, delivery models, contractual and commercial arrangements could be identified which could change the way DCC might wish to conduct procurement activity which may secure long term benefits. We are concerned that the proposed ex ante arrangements for procurement costs could limit flexibility as it would encourage DCC to persist with the pre-planned approach to procurement rather than allowing DCC the flexibility to capitalise upon opportunities to achieve increased long-term value as they arise.

<sup>3</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2015/02/1502\\_dcc\\_decision\\_final\\_0.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2015/02/1502_dcc_decision_final_0.pdf) and

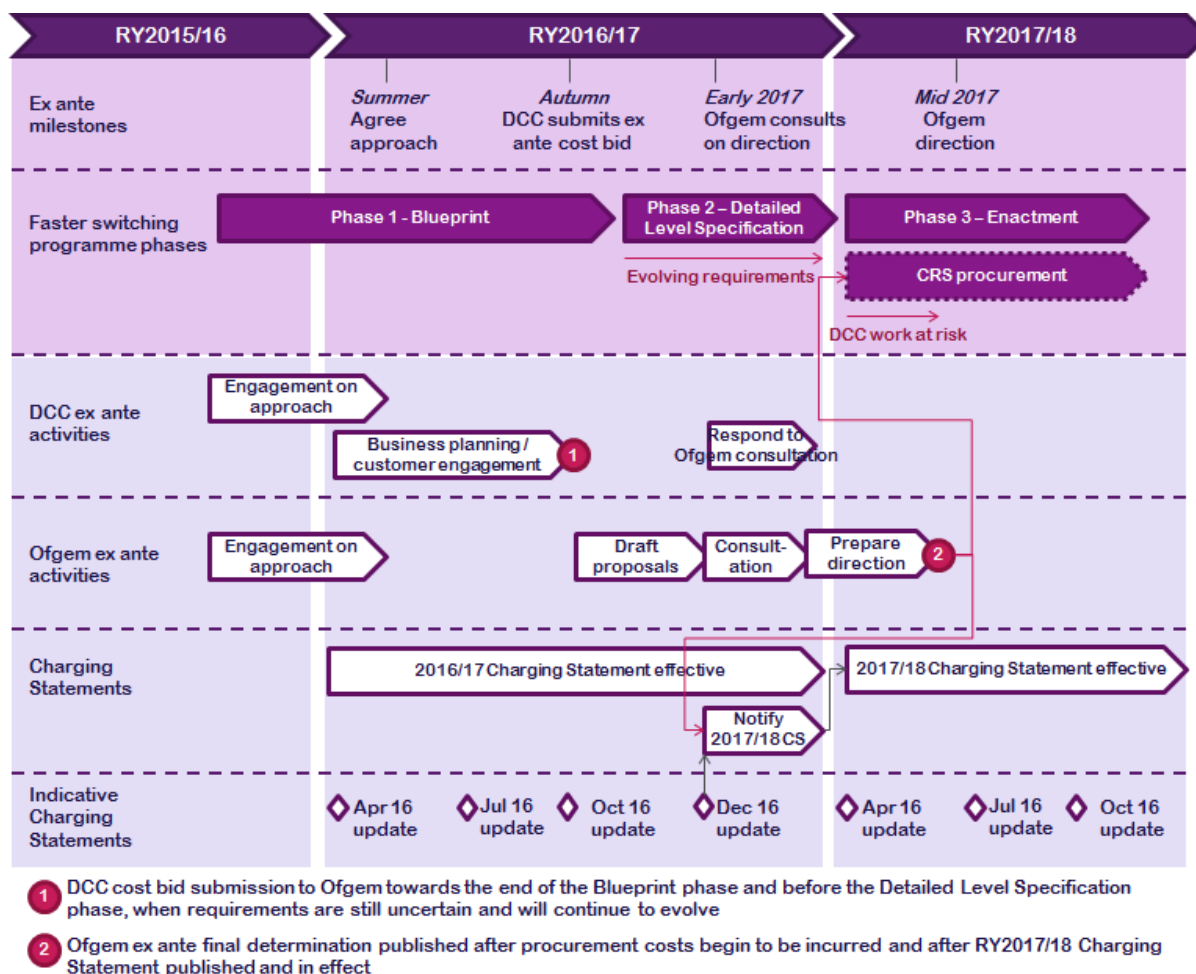
[https://www.ofgem.gov.uk/sites/default/files/docs/2015/07/crs\\_dcc\\_licence\\_consultation\\_final3.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2015/07/crs_dcc_licence_consultation_final3.pdf)

<sup>4</sup> [https://www.smartdcc.co.uk/media/334565/crs\\_consultationresponse\\_dcc\\_220915fv2.pdf](https://www.smartdcc.co.uk/media/334565/crs_consultationresponse_dcc_220915fv2.pdf)

<sup>5</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2015/07/crs\\_dcc\\_licence\\_consultation\\_final3.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2015/07/crs_dcc_licence_consultation_final3.pdf)

- (iv) The introduction to DCC of an entirely new set of price control arrangements for procurement costs will require significant levels of senior management and regulatory attention in both DCC and Ofgem. We are concerned that this will be disproportionate given the proposed scope.
- (v) It is unclear whether the application of ex ante arrangements on procurement costs would support an appropriate allocation of key risks associated with the CRS procurement exercise between DCC and other parties. Many of the drivers of DCC procurement costs will be affected by factors outside of DCC's control. These include: changes to scope and requirements at the culmination of the Blueprint Phase and during the Detailed Level Specification phase; changes to the regulatory framework against which the contractually procured CRS must align and changes to overall programme timescales. Under the proposed arrangements, DCC would bear the risks of unexpected changes in these areas. This risk would need to be accounted for through forecast contingency.
- (vi) The practical implementation of an ex ante arrangement within the timescales proposed by Ofgem would mean that:
  - a. DCC would be required to submit its procurement plan and costs (autumn 2016) prior to the completion of the Blueprint phase. At this point in the Switching Programme, there will still be considerable uncertainty about the baseline requirements of the programme. Given this uncertainty, we consider that there would be limits on the degree to which DCC could establish an accurate ex ante allowance.
  - b. CRS requirements are likely to continue to evolve during the Detailed Level Specification phase, which will take place after DCC would have submitted its planned costs in the proposed timetable. This would mean that the basis of DCC's final cost bid is likely to change following submission in autumn 2016 and during the consultation period during early 2017, further limiting the accuracy and merit of DCC's submission.
  - c. DCC would not know Ofgem's final decision on allowed CRS procurement costs (mid 2017) until some months after the procurement exercise had commenced (early 2017) thereby exposing DCC to risk on its incurred costs.
  - d. Either we would be required to recover costs through an adjustment at the end of the regulatory year, which could result in a cash flow impact on DCC; or DCC would be required to make a mid-year amendment to its RY2017/18 Charging Statement (set in December 2016) on the basis of Ofgem's final decision on allowed CRS procurement costs (mid 2017). While CRS procurement costs will only make up a small proportion of our charges, DCC seeks where possible to avoid changing its charges so as to provide certainty for its Users to inform their own planning.
  - e. To take account of costs before publishing our 2017/18 Charging Statement we would need to know Ofgem's final decision before December 2016. This would require the timetable to be further compressed, which would exacerbate the issues

relating to cost uncertainty as described above. Our concerns relating to the proposed timetable are summarised in the diagram below<sup>6</sup>:



(vii) The proposed shape and form of an ex ante arrangement requires further clarification, including the role of uncertainty mechanisms and performance incentives and how these would align to the overall objectives of the Switching Programme. We would need to understand the requirements of the procurement in more detail before we can conclude on the best approach to deliver a high quality procurement outcome.

(viii) Further clarity would be required on the scope of what is termed 'procurement costs'. This could be limited to dedicated procurement specialist resources or could include the much wider range of resources who may be involved in the end-to-end procurement process, such as design advice, financial modelling resource, and portions of senior management time.

### 2.1.2 Responses to Chapter 3 questions on recovery of costs

**Question 3: Do you agree with our proposed drafting amendments to the price control formula to allow the Authority to include ex-post and direct ex-ante arrangements as well as uncertainty, and incentive mechanisms?**

<sup>6</sup> The information in the diagram is based on the information available of what may happen under an ex ante arrangement.



DCC would like to raise the following concerns relating to the proposed drafting amendments:

- Within the drafting Ofgem has included a number of undefined parameters. Within Licence Condition 36.10, CRSCA<sub>t</sub> and CRSPA<sub>t</sub> will only be updated “in accordance with provisions developed and populated by the Authority in a direction given to the Licensee following consultation with the Licensee, the SEC Panel, and SEC Parties”. To reduce regulatory uncertainty, DCC considers that further detail on process and timing should be published
- DCC plans to make applications to adjust the baseline margin values to reflect the upcoming variations to the business in relation to CRS. These applications would be made in accordance with Licence Condition 36 Appendix 1 and 2. We expect to make the first application during the 2016 application window. Under the current arrangements it could take almost two years after the variation has occurred for the baseline margin values to be adjusted (for example, if a variation occurred in spring 2015, the application could only be made in July 2016, with a decision by Feb 2017), given that this work presents an immediate change to the activities DCC is undertaking, we consider that Ofgem should look at whether the elapsed time for making changes to values is appropriate.
- If, in the future, it is decided that CRS costs should be recovered from SEC Parties in a different way, this would require a change to:
  - the Relevant Policy Objectives of the Charging Methodology (LC18, Part C)
  - the Charging Methodology (Section K of the SEC); and
  - the correction factor (Licence Condition 36 Part G),

DCC assumes that this would be addressed through work on the Charging Methodology within the Switching Programme Commercial Workstream.

**Question 4: Do you agree with the proposed timetable and process for agreeing the ex ante procurement costs as well any uncertainty and incentive mechanisms, were these to be used?**

#### **Procurement costs**

Notwithstanding the concerns set out above, DCC considers that that the proposed timetable for agreeing ex ante procurement costs is viable, although this approach has the following implications:

- DCC would be required to submit its procurement plan and costs (autumn 2016) prior to the completion of the Blueprint phase where the Switching Programme expects to reach a revised set of baseline requirements. This may impact the accuracy and merit of DCC’s submission.



- DCC would not know Ofgem's final decision on allowed CRS procurement costs (mid 2017) until some months after the procurement exercise had commenced (early 2017) thereby exposing DCC to risk on its incurred costs up to that point
- DCC would be required to make a mid-year amendment to its RY2017/18 Charging Statement (set in December 2016) on the basis of Ofgem's final decision on allowed CRS procurement costs (mid 2017). Whilst procurement costs are small proportionately to its overall charges, DCC seeks where possible to avoid changing its charges so as to provide certainty for its Users.

### **Uncertainty and incentive mechanisms**

DCC is unable to conclude whether the proposed timescale and process for any uncertainty and incentive mechanisms is viable as it is not sighted on the scope, scale and complexity of what these arrangements might look like.

#### **Question 5: Do you agree with the proposed changes to introduce a new defined term of Fundamental Registration Service Capability to ensure that DCC procures the CRS externally?**

DCC agrees in principle with the proposed changes to introduce a new defined term of Fundamental Registration Service Capability.

## **2.3 Licence and SEC changes**

#### **Question 6: Do you agree with the proposed changes to include CRS as a new service in the Mandatory Business Service requirement?**

DCC agrees that the provision of the CRS should ultimately be included as Mandatory Business within both the licence and the SEC.

The approach taken with existing categories of Mandatory Business pertaining to smart metering has been to define the Mandatory Business as it is ultimately intended to be delivered, rather than to explicitly refer to "preparation for". For smart metering, activities undertaken in "preparation for" is inferred as Mandatory Business through this ultimate position and through condition 13.

DCC considers that the newly drafted condition 15 plays a similar role for the CRS as condition 13 plays for smart metering. As a result, DCC considers that the definition of Mandatory Business within condition 1 and condition 6 should exclude "preparation for".

Similarly, the drafting for condition 22.20 states that "the SEC must include or make appropriate provision for... details of all the Mandatory Business Services (clearly distinguishing between... <list>... and the preparation for the Centralised Registration Service)". DCC notes that the SEC will be unlikely to ever include details of the preparation for the Centralised Registration Service, but rather the enduring arrangements.

Condition 21.3 requires DCC to “...take all appropriate steps within its power to ensure that the Smart Energy Code is maintained as a document in force under this Licence that is at all times consistent with the requirements of Condition 22.” DCC notes Ofgem’s conclusion in paragraph 2.13 whereby DCC will not lead on drafting the modifications. In light of this, it may be appropriate to include reference to the Centralised Registration Service when the related SEC modifications themselves are included for the first time.

**Question 7: Do you have any views on the proposed consequential changes to the licence?**

Notwithstanding our response to other questions in this consultation, DCC agrees with the remaining consequential changes to the licence.

## **2.4 Penalty interest proposals**

In September 2015, Ofgem consulted on its proposal to introduce a penalty interest regime for any over-recovery of charges. We responded to that consultation agreeing with the principle of the incentivising DCC to ensure its Regulated Revenue is reasonably close to the costs it incurs in a given Regulatory Year. We did not, however, consider that it would be appropriate to direct some form of penalty interest rate at this time, and instead considered that the approach should be reviewed once DCC reaches stable operations and has sufficient cost data to inform the development of a penalty mechanism<sup>7</sup>.

In December 2015, Ofgem concluded to go ahead with the penalty interest regime, opting for a ‘report and direct’ option and sought views on the proposed licence drafting to bring it into effect. The section below sets out our response to that consultation on the licence drafting.

**Question 8: Do you agree with our proposed amendment to the definition of Regulated Revenue in LC35?**

DCC agree with the proposed amendment to the definition of Regulated Revenue.

**Question 9: Do you agree with the proposed drafting for the penalty interest rate and that it reflects the policy intent?**

DCC broadly agrees with the proposed drafting for the penalty interest rate, however we have a number of concerns.

### **Policy intent**

In paragraph 5.29 of the consultation document, Ofgem states the following:

*“Following consultation responses, we are also now proposing to modify the licence to let the Authority apply the penalty interest rate to only the portion of the over-recovery above*

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<sup>7</sup> It also important to note that DCC is currently engaged with delivering a number of projects over and above the implementation of the core service (e.g. the Enrolment and Adoption of SMETS1 meters and early work on the introduction of dual band communications hubs) which are at a different stage of delivery and face significant uncertainties relating to activities and associated costs

*the threshold which DCC did not justify through its reporting requirements. This accommodates the possibility that some portion of the over-recovery may be justified.”*

DCC considers that the proposed drafting of Part G, condition 36.15 and 36.17 does not reflect the above policy intent. We request clarification on whether the proposed correction factor formula is intended to apply the penalty interest rate to the portion of over-recovery which has exceeded the 110 percent threshold, and which DCC did not justify, or whether it should apply to the entire over-recovery i.e. Regulated Revenue less Allowed Revenue.

DCC considers that the penalty interest rate should be applied to the portion of the over-recovery above the 110 per cent threshold only. The core DCC programme is currently in the implementation phase which brings with it a level of uncertainty and un-planned change. To reflect the margin of uncertainty faced by DCC, we consider that any penalty interest rate should be set at a level that does not present a disproportionate financial impact on us. In addition all interest on Regulated Revenue (including any over-recovery, whether subject to penalty interest or not), is returned in full to parties each year. The Licence states that this is at the ASR (the average value of the Official Bank Rate of the Bank of England during the period), however DCC's approach is to apply the greater of the ASR or the actual interest accrued at the prevailing rate attributable from our banking arrangements. Therefore we consider that a tolerance of 10% over-recovery which is not subject to penalty interest is reasonable.

#### **Timing of commencement of regime**

DCC notes that Ofgem intend to bring the penalty interest regime into legal effect prior to 31<sup>st</sup> July 2016 and as a result it would apply to DCC's reporting for 2015/16. DCC notes that when we set charges for 2015/16 (in December 2014), the introduction of a penalty interest rate regime had not yet been proposed. Similarly, when DCC set the charges for RY 2016/17, the regime had not yet been concluded. Notwithstanding that DCC has an obligation to take all reasonable steps to secure that Regulated Revenue does not exceed a prudent estimate of Allowed Revenue, DCC recommends that the regime is implemented at a later date, and suggests that it applies to reporting for RY 2016/17 at the earliest.

#### **Suggested amendments to the proposed licence drafting**

DCC has identified some amendments to the proposed legal drafting of condition 36.15, 36.16 and 36.17:

- (i) DCC agrees with the approach to apply the proposed penalty interest on the amount 'not justified' only. However, we do not consider that the proposed formula captures this position accurately. This is because the proposed formula applies  $INT_t$  to the entire over-recovery (i.e.  $(AR_{t-1} - RR_{t-1} - BDC_{t-1})$ ). We suggest introducing a new factor ' $F_t$ ' to ensure that the formula allows for the approach above.
- (ii) In the scenario where Ofgem has not directed a penalty interest rate, we do not consider that the current drafting accounts for this accurately. We note that in condition 36.17 (b), the proposed drafting states: "if the Authority has not directed the Licensee to apply any value to  $INT_t$ , it will take the value of 1". We consider that this should read "if the Authority has not directed the Licensee to apply any value to  $INT_t$ , it

will take the value of 0". Setting this to 1, would have the effect of applying an additional<sup>8</sup> 1% interest to the entire over-recovery.

- (iii) To reflect the two points above, we suggest the following amendments to the proposed drafting for licence conditions 36.15, 36.16 and 36.17 (shown in bold):

$$K_t = \left[ (AR_{t-1} - RR_{t-1} - BDC_{t-1}) \times \left( 1 + \left( \frac{ASR_t}{100} \right) \right) \right] + [ ((AR_{t-1} - RR_{t-1} - BDC_{t-1}) \times F_t) \times \left[ \left( \frac{INT_t}{100} \right) ]]$$

36.16 In the formula for the K term above:

$AR_{t-1}$  means the amount of Allowed Revenue in Regulatory Year t–1.

$BDC_{t-1}$  means the contribution to bad debt within the Licensee's Internal Costs in Regulatory Year t–1, and will be zero except where the Licensee has failed to comply fully with its obligations under or pursuant to the SEC in relation to the management of SEC Parties' credit cover and the recovery of bad debt, in which event it will have such value as may be determined by the Authority.

$RR_{t-1}$  means the Regulated Revenue in Regulatory Year t–1.

$ASR_t$  means the Average Specified Rate, as defined in Condition 35 (Definitions for the Price Control Conditions), in Regulatory Year t.

**$F_t$  means the factor calculated in accordance with paragraph 36.17**

$INT_t$  means the interest rate adjustment in Regulatory Year t made in respect of the relevant amount of over-recovery of Regulated Revenue as determined in accordance with paragraph 36.17.

36.17 The value of the interest rate adjustment  $INT_t$  and  **$F_t$**  is determined as follows:

- a. if, in respect of Regulatory Year t–1,  $RR_{t-1}$  exceeds the threshold of 110 per cent of  $AR_{t-1}$ , the Licensee must, by no later than 31 July of the Regulatory Year t, explain and demonstrate to the Authority in writing why that event is justified. After considering the explanation provided and after consulting with the Licensee and SEC Parties, the Authority may direct the Licensee to apply the value of 3 to  $INT_t$  for any proportion ( **$F_t$** ) of the difference between  $RR_{t-1}$  and  $AR_{t-1}$  that the Authority determines has not been justified by the Licensee; or

<sup>8</sup> Additional to  $ASR_t$

- b. if the Authority has not directed the Licensee to apply any value to  $INT_t$ , it will take the value of 0; and
- c. the Authority may adjust the threshold percentage and the value of the interest rate adjustment  $INT_t$  that are set out in paragraph (a) above in respect of any Regulatory Year by direction, after consulting with the Licensee and SEC Parties.

### Worked examples

We have provided two worked examples to illustrate how the proposed formula above would work in practice. All figures are illustrative for the purposes of this worked example only.

Assumptions:

- $AR_{t-1} = 100$
- $RR_{t-1} = 120$
- $BDC_{t-1} = 0$
- $ASR_t = 2$
- Threshold level = 110%
- $INT = 3$
- 30% of over-recovery is 'not justified'

### Example 1: application of penalty interest rate

This worked example demonstrates how the formula that we have suggested would work in practice.

Threshold check

Under this scenario we know that the threshold will have been breached because:

$$\left(\frac{120}{100}\right) \times 100 = 120 > 110$$

Formula application

$$K_t = (100 - 120 - 0) \times \left(1 + \frac{2}{100}\right) + \left((100 - 120 - 0) \times 0.3\right) \times \left(\frac{3}{100}\right)$$

$$= -20.58$$

So  $K_t = -20.58$

In the absence of the new term  $F_t$ , the value would have been -21.

**Example 2: value of penalty interest rate**

This worked example demonstrates why the value in paragraph 36.17(b) should be set to 0. The example is based on the same assumptions as above.

$$K_t = (100 - 120 - 0) \times \left[1 + \left(\frac{0+2}{100}\right)\right]$$

Where  $INT_t = 0$  (as we have proposed),  $K_t = -20.4$ , this is the same value that would be calculated under the current licence drafting:  $K_t = (100 - 120 - 0) \times \left[1 + \left(\frac{2}{100}\right)\right]$ .

$$K_t = (100 - 120 - 0) \times \left[1 + \left(\frac{1+2}{100}\right)\right]$$

Where  $INT_t = 1$  (as set out in the proposed licence drafting),  $K_t = -20.6$ . This has the net effect of uplifting the over-recovery by an interest rate which is greater than what would currently be applied in the absence of a penalty interest rate (see above).