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30 October 2012

Dear Andreas,

### **ELECTRICITY BALANCING SIGNIFICANT CODE REVIEW – INITIAL CONSULTATION**

Thank you for the opportunity to provide views on behalf of ScottishPower on the initial consultation on the Electricity Balancing Significant Code Review (SCR) addressing electricity cash-out.

Our responses to your consultation questions are in the attached Annex. We set out below three broad areas of concern in relation to the SCR:

- the inappropriateness of sharper cash out prices as a means of addressing future security of supply, as compared to the proposed EMR capacity mechanism;
- the lack of robust evidence that inefficiencies in current cash out arrangements are increasing balancing costs and therefore consumer bills – and the risk that more marginal pricing (including ‘pay-as-clear’) may in fact increase distortions;
- the process for taking the SCR forward – in particular the need for further consultation and impact assessment before Ofgem reaches a ‘minded to’ position.

#### **Incentivising generation investment and an efficient level of security of supply**

The EMR process has established a clear case for intervention to incentivise generation investment and address future security of supply risks, and we agree that this is an important objective. However, we do not believe that sharper cash out signals are an appropriate means of addressing this issue, particularly when compared with the superior capabilities of a well designed capacity mechanism.

Prospective investors in new generation capacity will place far more weight on the capacity mechanism than on sharper price signals in electricity balancing activities, particularly in terms of the bankability and certainty of the revenue stream (regular payments versus infrequent price spikes), and the perceived risk of subsequent intervention to dampen such price spikes when they occur. It is also unclear to us that the necessary market mechanisms exist to allow sharper cash out prices to propagate efficiently through to spot and futures markets – as would be required if an efficient signal is to be given to investors. Finally, we are concerned that the likely approach to sharpening cash out prices may itself create distorted signals.

#### **Efficiency of electricity balancing**

One of the motivations for launching the SCR was a concern that that inefficiencies in current cash out arrangements could potentially increase balancing costs and hence consumer bills.

We have seen little evidence in the course of the SCR discussions to date to support this proposition, and in fact the results of the P217A review point to a balancing market which is becoming more efficient and effective (lower spreads and also lower imbalance volumes).

As noted above, we are concerned that a move to more marginal pricing (one of the main means by which signals would be sharpened) could in the context of the current GB market introduce new distortions and hence inefficiencies. This is because balancing actions are not homogeneous: those with a faster speed of response are typically more expensive than those with a slower response. Hence, if the marginal cost for the purpose of cash-out is based on the most expensive (fast response) balancing action – as would be the case in GB where there are no sub-markets for balancing actions – this may over-state the marginal cost of addressing a more steady-state imbalance.

This could result in inefficient price signals and potentially increased costs – not least the cost of achieving UK carbon targets, given the particular exposure of intermittent renewables to imbalance costs. We believe the existing partially marginal calculation of the main price (PAR 500MWh) and the market-based calculation of the reverse price represent a pragmatic approach to setting an efficient cash out price - as borne out by the recent P217A review. Participants are not better off by paying or receiving the cash-out price than trading ahead of gate closure, and thus receive the correct signal ahead of time to self balance.

We would therefore urge Ofgem to use the opportunity of the SCR to conduct a rigorous Impact Assessment of the impact of departing from the PAR 500MWh approach, and to use the results of such an assessment (together with other feedback from the SCR process) to inform the UK position in respect of European proposals to move towards a pay-as-clear model.

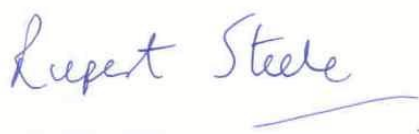
### **SCR timeline and approach**

In regards to both the timing and content of this consultation, it is clear that any reform will have a strong interaction with both the EMR capacity mechanism and the ongoing activity leading up to the implementation of the Europe wide Target Model. Given the multiple interactions and overlapping timescales between the SCR and these separate processes, it is difficult to envisage how the proposals can be implemented in a manner which achieves the stated objectives from this review whilst delivering cohesive and enduring market arrangements.

Our particular concern relates to the process by which Ofgem intends to take the SCR forward. We understand the next step is for Ofgem to publish draft policy decisions on electricity balancing in Spring 2013, with a view to concluding the process in early 2014. Given the need for clearer justification of the economic rationale for change and the importance of understanding interactions with other policy instruments under development, we believe it is premature for Ofgem to move straight to 'minded to' policy positions in early 2013. Instead we suggest that the next stage should be for Ofgem to publish a more focused consultation on specific policy options, supported by economic impact assessments. This would allow time for proper scrutiny of the economic rationale and would allow parties to assess the optimal direction in light of further information, particularly in relation to capacity mechanism design.

Our responses to the detailed questions in the consultation are set out below. Should you wish to discuss any of these points further then please do not hesitate to contact Alex MacKinnon, Trading Arrangements Manager, on 0141 614 3011, or get in touch with me.

Yours sincerely,



**Rupert Steele**  
Director of Regulation

## **Electricity Balancing Significant Code Review (SCR) Initial Consultation – ScottishPower response**

### **Approach**

#### **Question 1: Do you agree with the approach and the proposed stakeholder engagement throughout the SCR?**

Whilst we appreciate Ofgem's efforts to engage realistically and practically with industry and stakeholders, we are concerned that Ofgem is planning that the next step of engagement will be the publication of a draft 'minded to' policy decision in Spring 2013 with a view to concluding the process in early 2014.

Given the need for clearer justification of the economic rationale for change and the importance of understanding interactions with other policy instruments under development, we believe it is premature for Ofgem to move straight to 'minded to' policy positions in early 2013.

Instead, we suggest that the next stage should be for Ofgem to publish a more focused consultation on specific policy options, supported by economic impact assessments. This would allow time for proper scrutiny of the economic rationale and would allow parties to assess the optimal direction in light of further information, particularly in relation to capacity mechanism design.

#### **Question 2: Do you have any evidence that you would like to submit that may be relevant for any aspect set out in this document?**

The preliminary analysis of the impact of P217A (which provided for certain system actions to be flagged to reduce their impact on cash out pricing) has shown that over the two year period from April 2010 to March 2012 cash-out prices have become less spiky and imbalance volumes have reduced. In periods where P217A had a significant impact System Buy Price reduced by 5% and System Sell Price increased by 8%. Gross imbalance volumes reduced by 7% compared to 2008/09 despite the fact that the increase in intermittent generation in 2010/11 and 2011/12 compared to 2008/09 would have made it more difficult to forecast generation volumes.

These statistics show evidence of an improving balancing market and the SCR should recognise the dangers of introducing changes to balancing arrangements which may negate these recent benefits. The statistics from the P217A review also indicate that the current incentives to self balance are adequate; the reduction in sharpness of balancing signals arising from P217A has not led to poorer self balancing by market participants.

#### **Question 3: What is your view on the interactions between our considerations and aspects of the EU target model?**

One of our key concerns with the EU Target Model relates to ACER's Framework Guidelines on Electricity Balancing, and the 'minded to' position in favour of "pay as clear" which is likely to mean more marginal pricing (marginality is not defined). In the context of the GB market, we believe PAR 500MWh (or a similar mechanism) should remain the chosen methodology, as should the changes introduced through P217A to deal more appropriately with system actions. The current methodology reflects the fact that actions taken in the balancing mechanism are not homogenous in that the marginal plant is likely to exhibit very fast physical ramping

characteristics against others called to simply supply energy or to turn down over the half hour period.

Adopting a pay-as-clear marginal price based on the most expensive (fast response) balancing action risks sending distorted price signals, with a risk of increased costs – not least the cost of reaching UK carbon targets, given the high exposure of intermittent renewables to imbalance costs. The approach taken by Ofgem in exploring additional potential options for reform specific to intermittent renewables recognises these concerns. ACER has suggested in their guidelines that generation units from intermittent renewable energy sources do not receive special treatment for imbalances. This consideration is therefore important in considering the overall future design for all generation technologies.

We would encourage Ofgem to take an active role in influencing the outcome of the European process, especially where outcomes may not be aligned with the current UK and future UK market design.

## **Primary considerations**

### **Question 4: Do you feel there are any further alternatives to the reform options presented under our primary considerations?**

No, we believe the current arrangements are delivering appropriate incentives: customers are currently receiving a satisfactory level of (short term) security of supply, and balancing is carried out efficiently. It is a key principle of current electricity market design that participants are appropriately incentivised by the cash-out arrangements to balance their positions through bilateral contracting and trading, leaving the system operator to resolve the remaining imbalance.

We consider that security of supply is likely to be under pressure in the near future (2015/2016), not least because of the removal of the free carbon allowances that have acted as a *de facto* capacity mechanism in recent years. In order to resolve this, we believe the best approach is to deliver alternative incentives through a well designed capacity mechanism that would work alongside the existing arrangements.

Attempts to address the missing money problem through cash-out reform are in our view likely to fail; sharper cash-out incentives might be manifested in sharper price spikes, but it is unclear whether these will be sufficiently reliable to support investment, or whether a perception of possible political intervention would deter investors from relying on them. A well designed capacity mechanism would not only address 'missing money' concerns but should also remove undesirable volatility of this nature. The design of the capacity mechanism should consider the balance of risk of meeting security of supply versus the ability to invest in the market in setting an appropriate level of penalties and the associated capping of overall liability.

### **Question 5: What other benefits or drawbacks can you identify for each of our primary considerations? Please provide any evidence you may have to support your position.**

#### **Consideration 1: More Marginal Pricing**

As noted in response to Question 3, we believe PAR 500MWh should remain the chosen methodology; this methodology reflects that actions taken in the balancing mechanism are not homogenous. Moving to a more marginal price risks introducing distorted price signals and hence inefficient costs - not least increased costs in reaching UK carbon targets. Given that the balancing products offered exhibit different characteristics it is appropriate to continue to compensate plant on a pay-as-bid basis.

## **Consideration 2: Single Cash-Out Price**

We support the argument highlighted that electricity is not like other commodities and that “short imbalance” and “long imbalance” are different products: it is generally cheaper to turn the system down than to turn it up. This will remain to be true, in general, for the foreseeable future despite higher penetration of wind generation as most “turn down” actions will not involve wind and actual wind generation will be determined by the weather not cash-out..

It appears that some suppliers that are faced with these asymmetric risks position their notifications (within the confidence intervals of their forecasts) accordingly. This is evident in the fact that the system is long ~70% of the time. Under a single cash out price, suppliers which are not contracting (not buying energy for their customers) may benefit even further. Increased volatility with potentially higher System Buy Prices is likely to result in the system being long on more occasions and overall more out of balance. Further impact analysis is essential before making a decision in this area.

## **Consideration 3: Single Account**

The ability to consolidate all flows into one account will allow Parties the opportunity to continue managing their imbalance position much closer to gate closure than is possible today. The current, implicit, contract notification cut-off point means that Parties are unnecessarily exposed to imbalance that they may well be able to deal with under these new arrangements. Such self-balancing would help the SO to manage the system more efficiently, leading to a reduction in the amount of balancing actions required. We believe that Party self-balancing will lead to a more efficient system operation. A similar outcome may be achieved through introducing post gate closure trade notification, participation in which however would depend on individual company appetite.

## **Consideration 4: Pay-as-Bid versus Pay-as-Clear**

Since actions taken in the GB balancing mechanism are not homogenous, given that the products offered exhibit different characteristics, it is appropriate to award plant on a paid as bid basis. (See our response to Question 3.)

## **Consideration 5: Including non- priced Actions and VOLL**

Exposing generating parties to VOLL prices during systems events (without capping liabilities), coupled with an outlook of low load factors is likely to lead to a poor investment outlook and security of supply concerns. As highlighted in our previous communications, we understand that, in theory, a greater penalty for non-delivery could affect prices in spot markets with a ripple-out effect across the curve to forward trading. However, the efficiency of that effect is at best uncertain. Furthermore, the following points need to be considered:

- Forward products are traded over long durations, and it is unclear whether the market will be able appropriately to value highly volatile, spiky and uncertain prices in a few hours or days across the value and duration of these products. Indeed, market participants might consider that trading the forward products has become too risky and attempts to benefit from spiky spot markets could result in reduced forward liquidity. In particular, if cash-out prices rose too high, market participants might hold more volume back (as the margin premium becomes high) so that it is available in the balancing mechanism.
- In addition, if there were significantly higher penalties throughout the year then companies might take out insurance against these by investing in additional back-up generation. This would then have the effect of reducing the occurrence of such high penalties and the market would start to compete close to SRMC once again. The result could therefore be a cyclical effect rather than any systematic improvement in the supply margin.

### **Consideration 6: Improved allocation of reserve costs**

Any solution that facilitates this could prove to be quite convoluted for very little gain; a further cost benefit analysis is required. Availability fees for short term operating reserve and payments for constraint management services contracts can be incurred across a prolonged period in order to reduce potentially high costs and cash-out prices in particular half-hours. Provided this is the most economic option there is no need to reflect such costs in the cash-out prices for the peak half hours for which these costs have been incurred.

### **Consideration 7: Balancing Energy Market (BEM)**

Discussions at associated workshops highlighted difficulties in understanding how this proposal would operate in practice alongside the existing market. It remains an Ofgem action to produce "a day in the life analysis" of a Balancing Energy Market so that the proposal and practicalities can be better understood.

### **Consideration 8: Renewables and Aggregation**

In our opinion it remains debateable if centralised or decentralised forecasting would produce better forecasts, driven by innovation. The SO taking responsibility for fluctuations after gate closure is an interesting concept but it is difficult to envisage how this would work contractually – for example, who would bear the risk of errors due to forecasts or technical malfunctions. For this reason, we believe that it is right that each player pays its own balancing cost.

### **Question 6: Which of the reform options considered under each of our considerations do you believe would provide the most efficient balancing incentives and why?**

As per previous answers, we believe current arrangements lend themselves well to efficient balancing. One area where we see a positive benefit from reform is moving to a single account. This will enable participants to continue managing their imbalance position much closer to gate closure than is possible today, increasing the overall efficiency of the balancing process. (A similar outcome may be achieved through introducing post gate closure trade notification, participation in which however would depend on individual company appetite.)

We believe if cash-out were to become more marginal it is correct to be concerned about the impact this would have on intermittent renewable investment. In this respect it is correct to continue to explore options that the GB market could introduce at a national level to manage such a risk whilst minimising market distortion.

### **Question 7: Alongside this initial consultation we have published preliminary analysis of the last modification to the cash-out arrangements, P217A. Do stakeholders agree with the initial findings of this analysis?**

We agree with the key finding that P217A has improved the extent to which cash-out prices reflect the cost to the SO of energy balancing by reducing the influence of system balancing actions on the cash-out price, particularly in periods where the SO took action to resolve constraints on the system.

The key change implemented through P217A was the introduction of ex-ante flagging by the SO of Bid-Offer Acceptances and Balancing Services Adjustment Actions that were taken to resolve system imbalances and transmission constraints. The preliminary analysis has concluded that this flagging has been implemented to a high degree of accuracy by the SO.

Over the 2 year assessment period used in the preliminary analysis around 28% of the volume of all balancing actions were flagged or tagged. Tagged actions are removed completely from the cash-out price calculation and the price of flagged actions only impacts on the cash-out price if these actions are considered 'in-merit' as they are less expensive than the most expensive unflagged action. Flagging and tagging of balancing actions under P217A has had a significant impact on cash-out prices through reducing pollution from system actions.

The preliminary analysis has also concluded that the new treatment of Balancing Services Adjustment Actions under P217A is also likely to have significantly improved the cash-out price calculation. These actions are now subject to flagging and tagging on the same basis as other balancing actions in the price calculation and this change could have impacted on the main cash-out price in around 43% of periods.

P217A has been assessed as having removed volatility caused by pollution of the cash-out price. This has benefited all market participants but particularly small suppliers and generators with reductions in System Buy Price and increases in System Sell Price. We agree that with less spiky cash-out prices it would be expected that the gross imbalances of parties would increase with the expectation of facing less sharp cash-out prices for their imbalances. However, the analysis has shown the opposite with gross imbalances of parties reducing following the implementation of P217A. This suggests that undue sharpening of the cash-out rules may not necessarily improve the incentives for market participants to balance or their ability to do so.

We agree that it is difficult to compare imbalance volumes across different time periods as other factors, such as changes in generation mix, would undoubtedly have affected imbalance volumes over the periods being compared.

The preliminary analysis has also assessed the impact of a more marginal price calculation on cash-out prices over the two year assessment period through varying the Price Average Reference (PAR) volume which sets the maximum volume of actions in a settlement period used to set the price. Although this is currently set at the most expensive 500MWh of actions in practice average PAR over the two years was below 300MWh. Reductions in PAR do however significantly increase price volatility with PAR reductions to 100MWh and 1MWh increasing spreads by 29% and 52% respectively when the system is short. The effect is less marked when the system is long with PAR reductions to 100MWh and 1MWh increasing spreads by 8% and 20% respectively.

Reductions in PAR can thus lead to greater volatility than was evident before P217A was implemented. We believe that such increased volatility will be damaging to the market. The fact that this higher volatility is based on energy balancing actions as opposed to system pollution will not lessen its adverse impact. The current risk of what are perceived by market participants as potentially high System Buy Prices is we believe the major reason that the system is long in around 70% of settlement periods. Increased volatility with potentially higher System Buy Prices is likely to result in the system being long on more occasions and overall more out of balance.

### **Question 8: What additional analysis could be done as part of the SCR around Modification P217A and the flagging methodology it introduced?**

The preliminary analysis of P217A has been able to use a two year assessment period and its conclusion that system pollution has been largely removed from the cash-out price bears out our experience of operating in the market in the pre and post P217A periods.

The analysis has concluded that P217A has resulted in highly accurate flagging of balancing actions taken to resolve system imbalances and transmission constraints over the two year assessment period and the SCR should continue this monitoring to ensure this accuracy is maintained.

The P217A preliminary analysis has highlighted the difficulty of assessing the impact of the sharpness of cash-out prices on gross imbalance volumes. This is an area that could benefit from further study. The threat of potentially high balancing costs will undoubtedly influence market participants' behaviour as will changes in generation and customer mix. A better understanding of the factors influencing balancing behaviour would be a valuable contribution to the SCR process.

**Question 9: Do you agree with our rationale for considering making cash-out prices more marginal?**

No - see previous answers and rationale. The likelihood of achieving some of the objectives laid out in the consultation appears very low. 'Missing money' concerns should be addressed through the capacity mechanism.

**Secondary considerations**

**Question 10: Do you agree with the circumstances we have identified in which the secondary considerations are important?**

**Improved provision of information**

We believe there is sufficient information available in the market; lack of information is not a cause of imbalance.

**Creating a reserve market**

The STOR markets may look different in the future depending on the outcome of the capacity mechanism design, and subsequent decisions. One outcome may be that STOR is contracted closer to real time and over a shorter period as the capacity mechanism should give the longer term signal that such generation technologies require.

The concept of allowing participants to contract for reserve themselves through an auction appears unlikely to succeed. A short term option of this type would appear difficult if not impossible to hedge. It may be possible that out-of-merit plant could offer into such a market for an arming fee, but the risk/reward on both sides is probably better managed through offering/being exposed to the balancing mechanism.

**Amending gate closure**

Until such times that as a Balancing Energy Market (BEM) is better explored we believe consideration should only be given to moving gate closure closer to delivery. This coupled with single account trading may allow for participants to better manage their own imbalance risks (closer to time). Ex-post trading could also assist in this area but needs to be explored further.

**Residual Cashflow Reallocation Cashflow (RCRC)**

We believe the reallocation of RCRC is sound.

**Reverse price**

We consider the current methodology for reverse price is sound.



### **Setting an information imbalance charge**

Although there is no explicit penalty for inaccurate final physical notifications (FPNs) there is still an incentive for parties who are active in the balancing mechanism to provide accurate FPNs since this is the baseline against which bids and offers to deviate are submitted.

It is inevitable that metered output from intermittent generation such as wind will have a significantly greater deviation from their FPNs than other generators who are able to control their output. As the volume of intermittent generation on the system increases such deviations are likely to necessitate additional actions by the system operator. This issue has been recognised in National Grid's consultation on 'Managing intermittent and flexible generation in the Balancing Mechanism'.

### **Question 11: Do you have any other comment on the secondary considerations presented here? Please provide any evidence you may have to support your position**

It may be important to consider if separate markets for different types of balancing services will emerge as a result of the Network Code on Electricity Balancing, and how they could operate in a GB context. A proactive approach would allow Ofgem to gather industry views on the effects this may have.

ScottishPower  
30 October 2012