

Modification Proposal

MP No: 74
(mandatory by BSCCo)

Title of Modification Proposal (mandatory by proposer):

Single Cost-reflective Cash-out Price

Submission Date (mandatory by proposer): 04 April 2002

Description of Proposed Modification (mandatory by proposer):

Where Total System Energy Imbalance Volume (TQEI) is positive then all Account Energy Imbalances will be settled at the prevailing System Sell Price. Where Total System Energy Imbalance is negative then all Account Energy Imbalances will be settled at the prevailing System Buy Price. In the unlikely event that Total System Energy Imbalance Volume is zero, then the default Settlement Price will be the arithmetic mean System Buy Price and System Sell Price.

Description of Issue or Defect that Modification Proposal Seeks to Address (mandatory by proposer):

On several measures, the 2-price cash-out regime is leading to economic inefficiency. This is unduly discriminating against embedded generators, non-portfolio generators and smaller suppliers.

1. The 2-price cash-out regime is delivering asymmetric risks into the market, with a significant risk of exposure to very high buy prices for accounts that go short. This risk is not cost-reflective in relation to the costs of balancing the system, which leads to discrimination against smaller and embedded participants. The rational position of consumption accounts is to over-contract by at least 1 standard deviation to avoid these system buy prices as is demonstrated in the supporting analysis (see Annex). In reality, the best estimate is that this figure has been exceeded.

Nevertheless, there is a clear bias built into the system towards supplier over-contracting rather than towards balance. In the supporting analysis, the cost of this to the Transmission company over the winter period (a period which is not affected by pre-Mod 18A effects) is estimated. The calculation is consistent with the methodology used for calculating the System Operator Incentive, which incorporates a Net Imbalance Volume Adjustment (NIVA). While the long market has ensured low BSUoS charges, the estimated BSUoS net of NIVA has been considerably higher. If the Transmission Company is not entitled to "profit" from the long market, then it must be considered that generators have earned the profit. The consumer cost of this long market has therefore been under-estimated.

2. The potential size of the buy-sell spread is leading to inefficient traded markets. The only ways for participants to trade out of imbalance risk is via consolidation services. Although the rule restrictions that applied to such services have been reduced, the risks in provision of consolidation services remain dependent on the size of the consolidator portfolio, which means that only the incumbent large suppliers can offer efficient consolidation services (which they were always able to offer anyway), which fails to protect the parties wishing to be consolidated from the market power of such incumbents.

There is no financial instrument that can be efficiently offered on the system because any counter-party to such an instrument will always be on the wrong side of prices. A primary aim of NETA was to create appropriate incentives for participants to contract bilaterally and, to this end, liquid spot and forward markets were expected to develop. For this to occur there must be a connection between spot prices and the imbalance prices that participants seek to avoid by contracting. However, in a persistently long market, spot prices have collapsed to close to system sell price, which has compressed the premium that shaped energy would command in an efficient balanced market. Suppliers have responded by going exceptionally long during periods of lower demand, relying on lower-priced flat energy contracts and not seeking to more closely balance because the net cost of over-contracting is outweighed by the risk of exposure to SBP. The extent of this is estimated in the supporting analysis.

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3. In a predominantly over-supplied market, efficient peaking capacity is not being utilised because the predominant balancing action is to de-load part flexible coal plant. This has contributed to an increase in emissions of carbon, SOX and NOX, estimates of which are given in the supporting analysis.
4. Because of the continuing risk of SBP price spikes, portfolio generators have an incentive to carry their own reserve by operating several plant at part load rather than relying on just the least cost plant and relying on the market to provide reserve. This is done so that replacement plant can respond rapidly to any plant failure. The extent of the additional part loading of plant has contributed to an increase in emissions of carbon, SOX and NOX as is further estimated in the supporting analysis.
5. The cost of imbalance borne by participants is not reflective of the costs incurred by the System Operator in managing those imbalances. This is reflected by the estimated transfer of funds under TRC compared to actual BSUoS costs. The supporting analysis uses estimated data because half-hourly TRC and account imbalance totals are not publicly available figures. Nevertheless, they are realistic interim figures that show that the cost of NGC purchases of imbalance energy was considerably lower than participant imbalance payments and that NGC revenues from sales of imbalance energy were also considerably less than was paid out to parties for their spill energy, thus distorting the competitive position of market participants.

Impact on Code *(optional by proposer):*

Impact on Core Industry Documents *(optional by proposer):*

Impact on BSC Systems and Other Relevant Systems and Processes Used by Parties *(optional by proposer):*

Impact on other Configurable Items *(optional by proposer):*

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Justification for Proposed Modification with Reference to Applicable BSC Objectives (mandatory by proposer):

The dual cash-out price regime has significantly distorted the market by failing to be cost-reflective of the costs of balancing leading to undue risks on parties that cannot fully control their balance position. The parties most disadvantaged are embedded generators – who are unduly penalised for the potential intermittency of their output and smaller suppliers who lack the portfolio effects that larger incumbents enjoy. Because no suppliers can precisely control their balance they have responded by going long rather than balance. Because the price risk of going short is not cost-reflective, portfolio generators have responded by carrying significantly more reserve than would be the case in an efficient market (and considerably more reserve than was carried previous to NETA) on part-loaded plant, which has led to a significant deterioration in environmental standards.

A single cash-out price would lead to a more efficient market. This will occur because spot market prices will better reflect the potential costs of imbalance in both directions. The economic rationale for this is more fully explained in the Annex but can be summarised as follows:

- If the value of spill is potentially the system buy price, then generators will not offer it to suppliers in the spot market at a price that does not reflect this possibility;
- Because the spot price is a better reflection of the risk of exposure to SBP as well as SSP, suppliers who over-contract will do so at a higher cost and will therefore have an incentive to seek to balance rather than spill;
- A spot market more reflective of shortfall costs will incentivise generators to sell into such a market, promoting liquidity;
- Because, the cost of generator trip is no longer always exposure to SBP, there is reduced incentive on parties to carry reserve, which will reduce the extent of part loading and will make the extra capacity available in forward markets instead;
- An increased possibility of NGC buying in the balancing market will lead to more competition from generators to offer their reserve to NGC rather than holding onto it purely against the risk of trip.

The extent to which the proposal better facilitates the Applicable BSC Objectives is explained more fully in the supporting analysis in the Annex to this proposal. Therefore, in the following paragraphs, a summary of the justification is presented.

1. *The efficient discharge by the Transmission Company of the obligations imposed under the Transmission Licence*

- 1.1. As the Annex more fully proves, the proposal improves the incentive on participants to balance rather than spill. This reduces the extent of balancing required by the Transmission Company, which enhances safe and secure operation in accordance with the Transmission Company's Licence.
- 1.2. By improved cost-targeting rather than over-recovery the imbalance charging regime is more cost reflective in accordance with the Transmission Company's Licence.
- 1.3. An imbalance regime that does not excessively penalise small-scale participants and intermittent generation reduces undue discrimination against new entrants and embedded generators, which is in accordance with the Transmission Company's Licence Obligation against undue discrimination.

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2. *The efficient, economic and co-ordinated operation by the Transmission Company of the Transmission System*
 - 2.1. A single price regime will improve incentives to balance rather than to spill such that the volume of SO balancing actions will be reduced, improving efficient and economic operation of the Transmission System.
 - 2.2. Participants have improved incentives to follow their FPNs more closely because there is reduced risk of tripped generators facing SBP and so reduced incentive for portfolio generators to replace the energy after gate closure. Although this effect is reduced by a shorter gate closure (Modification P12), it is not removed. In addition, even if there is a reduced incentive to place ex ante notified contracts (as has been suggested because CfDs based on ex post volumes can be effectively offered to suppliers in a single cash-out price regime), generators will notify physical volumes consistent with their expected generation including any ex post contracts made off the system because they have no reason not to notify.

Generators have a reduced incentive to slightly over-deliver in order to avoid SBP exposure on inaccurate FPNs (an effect that will be increased due to gearing if zonal loss factors are applied).

Therefore, because notification accuracy will be improved, balancing actions taken by the Transmission Company will be reduced, which will improve efficient and economic operation of the Transmission System.
 - 2.3. The Annex demonstrates that the price signals offered in a single-price market, will be more rational because spot markets will better reflect the value of energy needed to avoid imbalance risk (a by-product of improved incentive to balance). This will therefore better target the costs of imbalance positions, giving the Transmission Company correct signals for contracting in the forward markets, and thereby providing residual balance at an economically efficient cost. This is further supported by the rationale used in applying the Net Imbalance Volume Adjustment (NIVA) to the SO transmission services incentive scheme.
3. *Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity*
 - 3.1. As the cost of supplier error in a single-price regime is no longer dependent on the size of the supplier portfolio, this reduces the cost of new entry for supply businesses, thus promoting effective competition in the supply of electricity.
 - 3.2. The risk-adjusted cost of trip for a single-site generator is reduced where the penalty is not automatically SBP, which reduces the penalty of operation outside a portfolio. This facilitates competition in generation.
 - 3.3. Under a single cash-out price, the value of embedded generation to a supplier increases to above the existing spill price, incentivising contracts at higher prices, which thereby facilitates competition in generation.
 - 3.4. As demonstrated in the Annex, improved cost targeting of imbalances under a single-price cash-out regime will provide better market signals to participants, which facilitates effective competition in both generation and supply.
 - 3.5. By allowing traders (who will no longer always face adverse prices when they assume imbalance risk) to offer effective risk management products on the system, the management of participant imbalance will be more efficient, which will lower the risk of generation and supply, thus facilitating effective competition in generation and supply.

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4. *Promoting efficiency in the implementation and administration of the balancing and settlement arrangements*
- 4.1. By utilising existing information and calculation systems, the cost of implementation will be low.
- 4.2. The requirement for parties to register consolidation and sharing arrangements to avoid imbalance risk will be reduced, improving the efficiency of administration of the balancing and settlement arrangements.

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Attachments: YES

If Yes, Title and No. of Pages of Each Attachment:

Supporting Analysis to the Single Cost-reflective Cash-out Price Modification Proposal – [xx] pages. N.B. This paper will be issued week commencing 8 April 2002.