

Administered top-up and spill price.

Introduction

1. This paper sets out the agreed arrangements for imbalance prices between Scottish Power Energy Retail Limited, SSE Energy Supply Limited and Ofgem from NETA 'Go-Live' on 27 March 2001 until 31 March 2004.
2. An explanation of the methodology used in the calculation of the Scottish wholesale price (SWP) can also be found on Ofgem's web site at:
www.ofgem.gov.uk/scotland/wholesale_price_indices.htm.

Background: Administered pricing arrangements

3. In Scotland the administration of wholesale and imbalance prices is necessary because there are no market arrangements providing transparent market prices. Prior to NETA, prices in Scotland for wholesale trades and imbalances were set by reference to England & Wales Pool related prices. These acted as surrogates for competitive market prices in Scotland. The introduction of NETA in England & Wales required price markers to replace the Pool prices.
4. The Scottish pricing arrangements require Scottish Power Energy Retail Limited and SSE Energy Supply Limited, to agree with Ofgem, a price cap for wholesale electricity trades between the hosts and independent suppliers (the SWP cap). The three parties also agree the price that each host can charge when it provides top-up services, and the price to be paid by the host to purchase spill, from independent generators and suppliers.
5. Top-up and spill imbalances arise when:
 - ◆ an independent generator's output differs from his contracted volume; and/or
 - ◆ an independent supplier's aggregate of customer demand differs from his contracted volume.

6. In May 2001¹, Ofgem published the administered pricing arrangements to apply in Scotland from 27 March 2001 to 26 May 2001. This followed earlier consultations on Scottish administered pricing arrangements in August 2000², February 2001³ and March 2001⁴. Final proposals for the period from 27 May 2001 to 31 March 2002 were published in June 2001⁵. Further proposals for the period from 1 April 2002 to 31 March 2004 were published in January 2002⁶.

Top-up price from 27 March 2001 to 31 March 2004

7. Scottish Power Energy Retail Limited, SSE Energy Supply Limited and Ofgem agreed that, for the period 27 March 2001 to 31 March 2004, the top-up price will be the England & Wales system buy price (SBP) plus NGC's BSUoS supplier charge minus a residual cash flow reallocation (RCRC) ⁷ term.
8. It is important to note that there is a slight difference in the application of the top-up price formula between Scottish Power Energy Retail Limited and SSE Energy Supply Limited, however, this difference has no commercial effect.
9. In its calculation of the top-up price, Scottish Power Energy Retail Limited apply the following formula:

- ◆ SBP plus BSUoS minus RCRC.

10. In its calculation of the top-up price SSE Energy Supply Limited apply the following formula:

- ◆ SBP plus BSUoS plus a negative RCRC term.

These differences are due to the way in which information flows are delivered to each company. In both cases the outcome is the same.

¹ Ofgem letter dated 4 May 2001: "Scottish Wholesale Price and Imbalance Prices for an 8 week period from 27 March 2001" Available from the Ofgem website.

² Interim proposals for the reform of Scottish trading arrangements: BETTA, Ofgem, August 2000

³ Revised Scottish administered pricing arrangements: proposals document, Ofgem, February 2001.

⁴ Scottish administered pricing arrangements from 1 April 2001, Ofgem, March 2001, available from the Ofgem library.

⁵ Scottish administered pricing arrangements for period 27 May 2001 to 31 March 2002, Ofgem, June 2001.

⁶ Scottish administered pricing arrangements from 1 April 2002.

⁷ Residual cash flow reallocation (RCRC) is in most cases, paid to suppliers by NGC and as such is a reduction in the price. RCRC however, can have a positive value in which case is an addition to the price.

Capped top-up price

Background

11. The introduction of NETA arrangements gives generators, traders and suppliers in England & Wales the opportunity to trade through a greater choice of markets. The new settlement process in England & Wales provides more accurate cost targeting and sharper cost incentives to manage risks. Similar risk management tools are not available in Scotland because of the absence of willing buyers and sellers and an independent balancing mechanism.
12. In light of these differences Scottish Power Energy Retail Limited, SSE Energy Supply Limited and Ofgem agreed to cap the half-hourly top-up price at the SWP.
13. The June 2001 document stated that for the period from 27 March 2001 to 26 May 2001, the half-hourly top-up price will be capped at the SWP plus 0 per cent, with a four weekly reconciliation⁸.
14. In this document Ofgem acknowledged that the delay in announcing these interim administered pricing arrangements affected the ability of independent parties to contract effectively during the interim period to the end of May 2001. The delay in publishing these arrangements raised concerns that the host may get a windfall benefit in the form of higher top-up prices than originally envisaged. Ofgem thus considered a fair and equitable solution to be an extension to the grace period until 30 June 2001. Thereafter the cap is SWP plus 5 per cent, with a four weekly reconciliation.
15. The 5 per cent premium was included to incentivise parties to contract and to bring in some of the price signals from England & Wales markets.
16. This approach provides top-up prices that are consistent with price signals in England & Wales but reduces some of the price volatility, although it does not entirely remove it.
17. The operation of the cap is explained below.

⁸ These interim arrangements are outlined in section 1.43 of the June 2001 document.
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- ◆ Over a 28 day period, when the average half hourly SWP (plus any premium) exceeds the average half-hourly uncapped top-up price then the uncapped top-up price is used for each half-hour in the settlement day.
- ◆ Over a 28 day period, when the average half-hourly SWP (plus any premium) is less than the average half-hourly uncapped top-up price then each half-hourly uncapped top-up price the settlement day is multiplied (and reduced) by the resultant ratio. This ratio is the average SWP over the period divided by the average uncapped top-up price over the same period.

18. Scottish Power Energy Retail Limited and SSE Energy Supply Limited have adopted a capping ratio approach to effect the operation of the Scottish wholesale price cap.

Capping ratio

19. The methodology adopted is to use a rolling 28-day price cap. This uses an average of the most recent 28 days of half-hourly SWP and half-hourly uncapped top-up price⁹ to calculate a capping ratio for each half-hour in each settlement day.
20. The capping ratio will be determined by calculating the average half-hourly SWP (plus any premium) for the most recent 28-day period prior to and including the settlement day, divided by the average uncapped half-hourly top-up price for the same 28-day period.
21. If the resulting ratio is greater than one, then the capping ratio is set to one. This indicates that the average half-hourly SWP (plus any premium) exceeds the average half-hourly uncapped top-up price for the 28 day period.
22. Where the resulting ratio is less than one, then the average half-hourly SWP (plus any premium) is less than the average half-hourly uncapped top-up price for the 28 day period.
23. Once the ratio is calculated, whenever the half-hourly top-up price is used in the settlement day, the half-hourly uncapped top-up price will be multiplied by the ratio calculated above.

⁹ Participants should note the system prices used in the calculation of half-hourly SWP and uncapped top-up price are those reported in the Initial Settlement (SF) run available 15 working days after the day traded.
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24. Under this approach independent suppliers and generators will be invoiced on a half-hourly basis at the capped top-up price¹⁰.

25. SWP is defined as the sum of the energy component and BSUoS supplier charge less 1.5 per cent¹¹ of the total.

27 March 2001 to 23 April 2001

26. During the first four weeks of NETA, there will not be a full 28 days of the initial settlement ("SF") run data available for the calculation of the capping ratio. The methodology adopted is to use the capping ratio calculated on 23 April 2001 for each of the 28 days up to and including that day i.e. the same ratio will be applied to each of the 28 days during the period from 27 March 2001 to 23 April 2001.

27. Thereafter, the capping ratio will be calculated using the most recent 28 days SF run data, varying each time it is calculated. In other words, the capping period will roll forward for each subsequent day it is calculated.

28. For the period after 30 June 2001 the cap will be SWP plus 5 per cent. If the 28 days of data used in the ratio calculation spans the period after 30 June 2001, then the premium of 5 per cent is only applied to dates after the 30 June 2001.

29. This methodology ensures that the most recent 28 days are used to set the price cap.

Reconciliation runs

30. The data used in the above process will be updated on each reconciliation run from prices in England & Wales and volumes in Scotland.

31. If the values change in subsequent settlement runs, these updated values will be picked up in the Scottish settlement process and invoices will be raised for the difference.

RCRC

32. Ofgem recognises the risk that four weekly reconciliation's can result in cash flow benefits to Scottish Power Energy Retail Ltd and SSE Energy Supply Ltd. In order to

¹⁰ All imbalance prices are subject to England & Wales settlement with volumes subject to Scottish settlement runs.

¹¹ These arrangements are outlined in the administered price document and accompanying spreadsheet

give consistency with England & Wales prices and remove perverse trading incentives Ofgem has agreed with Scottish Power Energy Retail Ltd and SSE Energy Supply Ltd that the SBP will be reduced by the RCRC term.

33. RCRC is determined in accordance with section T of the Balancing & Settlement Code (BSC) and is normally paid to suppliers, by NGC, as a result of trading changes in that settlement period.
34. Ofgem is obliged to ensure that the administered wholesale and imbalance pricing arrangements in Scotland are transparent, robust and easy to obtain and verify. However, independent parties are experiencing difficulties in validating the methodology used when invoicing for top-up prices, particularly with regard to RCRC price data (£/MWh).
35. The publication of this information will provide transparency to independent suppliers and generators in Scotland to verify prices being charged by Scottish Power Generation Ltd and SSE Generation Ltd in Scotland.
36. The half-hourly RCRC term published on this website is derived from actual data provided to Ofgem, by ELEXON, under paragraph V1.1.2 (b) of the BSC. The actual data does not belong to Ofgem and as such is not replicated on this website.
37. Whilst all due care has been taken to ensure the accuracy of this information it is intended as a guide only and should not replace billing information provided by Scottish Power Generation Ltd and SSE Generation Ltd.

Invoicing systems changes

38. Scottish Power Energy Retail Limited and SSE Energy Supply Limited recently agreed with Ofgem a change to their invoicing systems used to calculate the capping ratio. Scottish Power Energy Retail Limited and SSE Energy Supply Limited have explained that their systems have both been written to calculate the capping ratio based on the most recent 28 days data prior to the date on which the billing run is processed, rather than the settlement day.
39. Using the 28 days date prior to the billing run results in a capping ratio being displaced from the settlement date under question with each subsequent

reconciliation run. Under the present systems written by Scottish Power Energy Retail Limited and SSE Energy Supply Limited, the cap for a particular settlement day will be based on information from a later settlement run (associated with the 28 day period prior to the billing day), rather than the 28 days prior to and including the settlement day.

40. Scottish Power Energy Retail Limited and SSE Energy Supply Limited have agreed to change their software and advise this will take 10 weeks. In the period prior to the modification of the systems, Scottish Power Energy Retail Limited and SSE Energy Supply Limited will invoice on the cap determined from the 28 day period prior to and including the day on which the billing run is processed. During this period, Scottish Power Energy Retail Limited and SSE Energy Supply Limited have agreed that the dates used for the calculation of the cap will be included on all future invoices.
41. Scottish Power Energy Retail Limited and SSE Energy Supply Limited will run their settlement systems once the software is amended such that the capping ratio is calculated using data for the settlement day and the previous 27 days. Invoices for any differences will be issued in accordance with the reconciliation runs.
42. Ofgem regrets that it is necessary to make this change and acknowledges that this creates unwelcome uncertainty for participants.

Spill price from 27 March 2001 to 31 March 2004

43. Scottish Power Energy Retail Limited, SSE Energy Supply Limited and Ofgem have agreed that from 27 March 2001 to 31 March 2004, spill volumes in excess of top-up volume and up to 20 per cent of second tier area demand is priced at the England & Wales system sell price ("SSP") with a floor of £10/MWh.
44. Spill price is dependent on the market position in each half-hour, in each area, and has three tranches:-
- ◆ the first tranche being equivalent to the volume of top-up provided by the host, priced at the capped top-up price, defined in the previous section;

- ◆ the second tranche, being spill volumes in excess of top-up volume and up to 20 percent of second tier area demand, is priced at SSP with a floor of £10MW/h; and
- ◆ the third tranche, being spill volumes in excess of 20% of Scottish second tier demand, carries no remuneration¹².

45. This spill price is the average of the prices from the three tranches.

Calculation of the spill price

46. The formula for the calculation of the half-hourly spill price is as follows.

47. If the market is in net top-up (total area volume top-up is greater than total area spill volume) then all spill volumes receive the capped top-up price.

48. If the market is in net spill (the total area volume of spill is greater than the total area volume of top-up) then;

- ◆ Spill volume equal to the top-up volume receives the capped top-up price;
- ◆ Spill volume greater than top-up and up to 20% of second tier area demand receives SSP floored at £10/MWh; and
- ◆ Spill volumes greater than 20% of second tier area demand receive no remuneration.

Manifest error

49. Where a manifest error claim is raised for any half-hour under the BSC, then the Scottish companies will invoice using the published SBP and SSP values. The manifest error will then be processed under the BSC rules, with any revised SBP and SSP being applied when published in the next available Scottish settlement run.

¹² This tranche is very seldom used.
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Market data

50. Scottish Power Energy Retail Limited and SSE Energy Supply Limited provide Ofgem with the following information, for each authorised area: -

- ◆ total half-hourly second tier demand (MWh) by month;
- ◆ total half-hourly top-up volumes (MWh) by month; and
- ◆ total half-hourly spill volumes (MWh) by month.

51. This information and the RCRC term is published on Ofgem's web site at www.ofgem.gov.uk/scotland/topupspill.htm

Way forward

52. The introduction of BETTA in April 2004¹³ will provide market arrangements with transparent market prices. At this time Ofgem will re-consider the necessity for administered wholesale prices in Scotland.

¹³ This is dependant on legislation being passed during the 2002-2003 Parliamentary session.