**March 2001**

# Scottish Administered Pricing Arrangements

**From 1 April 2001**

# Executive Summary

This paper sets out the agreed pricing arrangements for the Scottish wholesale energy price, balancing services and imbalance prices to apply in Scotland from the introduction of New Electricity Trading Arrangements ('NETA') in England & Wales until 31 March 2002. This paper assumes NETA will 'go live' on 27 March 2001.

These arrangements were agreed with ScottishPower and Scottish & Southern Energy on 13 March 2001 and have been informed by responses to earlier consultations undertaken by Ofgem[1].

The present administered pricing arrangements use Pool price markers as a surrogate for competitive market prices in Scotland.  These arrangements lapse on the introduction of NETA in England & Wales. New markers are therefore necessary to facilitate trades between generators and suppliers in Scotland NETA 'go live'.

This paper sets out the agreed arrangements between ScottishPower, Scottish & Southern Energy and Ofgem from NETA 'go live' until 31 March 2002 for:

- a Scottish wholesale price cap. Assuming, liquid power exchange products emerge in England & Wales then the cap will be an appropriate half hourly power exchange price plus NGC's BSUoS charge less 1.5 per cent. Initially, for an eight week period from NETA 'go live', a daily power exchange price will be used and shaped onto a half hourly basis by applying a profile derived from the 2000/01 half hourly PSP values;

- a top-up price being the England & Wales system buy price plus BSUoS on a half hourly basis, supplemented by a capping arrangement;

    - for the first eight weeks the cap on system buy price plus BSUoS will be the Scottish wholesale price; and

[1] Paper 2, Administered Prices in Generation: 'Interim proposals for the reform of Scottish Trading Arrangements: British Electricity Trading and Transmission Arrangements (BETTA) Ofgem,  August 2000; and
'Revised Scottish Administered Pricing Arrangements' Proposal Document, Ofgem February 2001

- for the 10 month period thereafter, the cap will be set at 5 per cent above the Scottish wholesale price.

- a spill price being the England & Wales system sell price; and
- prices for energy generated by existing 2 MW generators being the power exchange price component of the Scottish wholesale price.

Independent generators and suppliers will now have a price incentive to put in place firm MW contracts with ScottishPower and Scottish & Southern Energy plc in order to reduce their exposure to imbalances.

The agreed arrangements, in comparison to the present arrangements, are summarised in the table below.

| Time Period | Wholesale Energy Price | Balancing Services | Scottish Wholesale Price Cap | Top-Up & Spill Arrangements |
|---|---|---|---|---|
| Until NETA 'go-live' or 31 March 2001 | PSP | Transmission Uplift | PSP + TU - 1 per cent subject to a NEA cap | Top-up = SWP<br>Spill = average (PPP + SRO + zero) tranches |
| NETA 'go-live' for 8 weeks | PEx* price scaled by a PSP half-hour shape | BSUoS – supplier charge only | (PEx* price scaled by a PSP shape + BSUoS) - 1.5% | Top-up = SBP plus BSUoS capped at Scottish wholesale price<br>Spill = SSP |
| NETA + 8 weeks | PEx* half-hourly price maker | BSUoS – supplier charge only | (PEx* half hourly price maker + BSUoS) - 1.5 % | Top-up = SBP plus BSUoS capped at (SWP *1.05)<br>Spill = SSP |

* SWP - Scottish wholesale price
* PEx - Power Exchange

ScottishPower, Scottish & Southern Energy and Ofgem have agreed the duration of these arrangements for one year from 27 March 2001 to 31 March 2002, with a review after 6 months.

In the unlikely event that NETA is delayed beyond 27 March 2001, the present arrangements will be extended, with the least possible changes.

These arrangements have not defined the power exchange products that will be used as price markers from NETA ‘go live’. Ofgem, ScottishPower and Scottish & Southern Energy will shortly bring forward proposals for discussion with licensees and other interested parties.

### *Rationale*

The Authority has a statutory responsibility to exercise its duties in a manner best calculated to protect customers and consistent with that, a duty to promote competition. In the absence of a market mechanism to determine Scottish electricity prices, the Authority caps the wholesale energy prices which ScottishPower and Scottish & Southern Energy can charge to independent suppliers purchasing generation to supply their customers in Scotland. Similarly, the Authority regulates the price ScottishPower and Scottish & Southern Energy charge for providing balancing services and top-up and spill.

### *Comment*

Comments on any of the issues raised in this paper are welcome and should be sent in writing or e-mailed not later than Monday 26 March 2001 to:

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Respondents are free to mark their responses as confidential although we would prefer, as far as possible, to be able to place responses to this document in the Ofgem library. Unless clearly marked 'confidential', responses will be published by placing them in the Ofgem library.

If you wish to discuss any aspect of this document, please contact Joyce Craig (telephone 0141 331 2737) who will be pleased to help.

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# Scottish Administered Pricing Arrangements

### *Introduction*

1.1 This paper sets out the prices to apply in Scotland from NETA 'go live' until 31 March 2002. These were agreed with ScottishPower and Scottish & Southern Energy on 13 March 2001 and have been informed by responses to earlier consultations undertaken by Ofgem[2].

1.2 This paper assumes NETA ‘go live’ will be 27 March 2001. Paragraphs 32 to 34 set out how the present arrangements will be extended in the unlikely event that NETA is delayed beyond 27 March 2001.

### *Background*

1.3 Under Condition 23, Part V of their composite licences, Scottish & Southern Energy plc (Scottish & Southern Energy) and Scottish Power plc (ScottishPower) have an obligation to have in place 'relevant second tier supply arrangements' which are agreed with the Authority. These arrangements are necessary because there are no competitive trading arrangements in Scotland.

1.4 The present arrangements lapse on the earlier of NETA 'go live' or 1 April 2001 and encompass prices for the following services.

- The Scottish wholesale price cap, being the maximum price at which ScottishPower and Scottish & Southern Energy are required to make energy available to second tier suppliers. The current level is Pool selling price (PSP) plus the transmission component of uplift, less a discount of one per cent to reflect the lower incidence of constraints on the transmission system. This value is capped at £26.93/MWh. If the Scottish wholesale price exceeds this value then British Energy will contribute 50 per cent of the costs incurred by ScottishPower and Scottish & Southern Energy, as a result of the operation of the cap.

[2] Paper 2 Administered Prices in Generation of ‘Interim proposals for the reform of Scottish Trading Arrangements: British Electricity Trading and Transmission Arrangements (BETTA) Ofgem August 2000; and ‘Revised Scottish Administered Pricing Arrangements’ Proposal Document Ofgem February 2001

- Arrangements for top-up and spill. At present top-up is charged at the Scottish wholesale price. Spill volume, equivalent to 10 per cent of Scottish second tier market demand is paid at Pool purchase price; spill volume, equivalent to the next 10 per cent of Scottish market demand is paid at the SRO reference price; with spill volumes above 20 per cent of Scottish market demand receiving no payment.

- Arrangements to require ScottishPower and Scottish & Southern Energy to purchase the output of existing generators under 2 MW at a Pool purchase price.

### *Scottish wholesale price cap*

1.5 The Scottish wholesale price cap currently comprises three elements being:

- an energy term;

- a transmission services term; and

- a discount to reflect differences in constraints in Scotland.

### *Energy term from NETA 'go live' to 31 March 2002*

1.6 ScottishPower, Scottish & Southern Energy and Ofgem have agreed that from NETA 'go live' until 31 March 2002, the energy term will be an appropriate England & Wales half hourly price marker. It is still not possible to identify power exchange prices that will have sufficient liquidity to use as a price marker. ScottishPower, Scottish & Southern Energy and Ofgem will work together to identify a representative half hourly price marker to apply from NETA 'go live' and bring this potential solution to a meeting of licensees later in March 2001. The parties will also develop thinking on possible contingencies in the event that no transparent, liquid price marker emerges in England & Wales.

1.7 For an eight week period from NETA 'go live', ScottishPower and Scottish & Southern Energy will use a daily England & Wales price marker. The daily price will be shaped onto a half hourly basis by applying a half hourly profile derived from the 2000/01 half hourly PSP values. For April 2001, seven half hourly daily shapes will be applied, one for each day of the week. Each daily shape will be obtained by averaging each PSP half hourly value, for that day of the week in April 2000 to derive a standard daily shape. A separate standard daily shape will be calculated for each day of the week in May. Further details of this methodology are given in Appendix 1.

1.8 Ofgem anticipates that an energy cap in Scotland will be required until the introduction of British Electricity Trading and Transmission Arrangements ('BETTA'). Ofgem will keep under review the operation of a cap based on England & Wales power exchange prices. In particular, it will be concerned to ensure that the chosen price marker is representative of wholesale energy prices in England & Wales and does not diverge significantly from Scottish generation costs.

1.9 Ofgem also notes that the Nuclear Energy Agreement ('NEA') is under re-negotiation. At present the NEA price, which applies to all nuclear output presently generated by British Energy in Scotland, is determined using England & Wales Pool prices, adjusted for relevant differences between the two systems. This is consistent with using England & Wales price markers to derive a Scottish wholesale price. If the NEA price setting process diverges from the principle of using an England & Wales price marker then Ofgem may wish to revise these Scottish wholesale price cap proposals.

***Balancing services use of system charges (BSUoS) from NETA 'go live' to 31 March 2002***

1.10 ScottishPower, Scottish & Southern Energy and Ofgem have agreed that from NETA 'go live' to 31 March 2002, second tier suppliers will pay for balancing services in Scotland on the same basis as they will pay NGC for these services in England & Wales.

***Losses from NETA 'go live' to 31 March 2002***

1.11 Currently, in Scotland, transmission losses are charged 100 per cent to suppliers, with trades taking place at the generator gate. In England & Wales, from 1 April 2001, losses will be allocated to generators and suppliers in the ratio 45:55, with trades being at a notional national balancing point.

1.12 Suppliers in England & Wales currently have their energy volumes grossed up by 100 per cent of transmission losses, typically a little under 2 per cent. From NETA 'go live' the grossing factor will reduce to 55 per cent of transmission losses, equivalent to about 1 per cent.

1.13 ScottishPower, Scottish & Southern Energy and Ofgem concur that there is insufficient time to consult, agree and implement the modifications necessary to Scottish systems to facilitate adjusting volumes onto an England & Wales basis of charging for losses from1 April 2001.

1.14 ScottishPower and Scottish & Southern Energy have agreed to reflect the effect of this reduction in supplier losses in England & Wales by reducing the Scottish wholesale energy price by 1 per cent. This is a pragmatic change to ensure prices and volumes in Scotland are on an equivalent basis to prices and volumes in England & Wales.

### *Constraints from NETA ‘go live’ to 31 March 2002*

1.15 Since April 1998, there has been a 1 per cent discount on the Scottish wholesale price to reflect the lower incidence of constraints on the Scottish system. The 1 per cent was based on the total cost of constraints plus half of the interaction component of operational outturn within uplift. Ofgem recognise that constraint costs now represent a significantly lower proportion of uplift costs in England & Wales.

1.16 ScottishPower, Scottish & Southern Energy and Ofgem have agreed to change the discount on constraints to 0.5 per cent, down from the present 1 per cent to reflect the lower level of such costs in England & Wales.

### *Scottish wholesale price cap from NETA ‘go live’ to 31 March 2002.*

1.17 In summary, the half hourly Scottish wholesale price ('SWP') cap from NETA ‘go live’, for an eight week period, will be a daily power exchange price, shaped on to a half hourly basis using a 2000/01 PSP shape plus NGC's BSUoS charge less 1½ percent. After this eight week period until 31 March 2002, the SWP will be a half hourly power exchange price plus NGC's BSUoS charge less 1½ per cent.

### *100 per cent demand contracts*

1.18 ScottishPower and Scottish & Southern Energy have agreed to continue to provide 100 per cent demand contracts to suppliers, capped at the revised Scottish wholesale price.

### *Top-up price from NETA 'go live' to 31 March 2002*

1.19 ScottishPower, Scottish & Southern Energy and Ofgem have agreed that from NETA 'go live', the top-up price will be the England & Wales system buy price ('SBP') supplemented by a capping arrangement. In addition suppliers will be charged NGC's BSUoS charge.

1.20 Ofgem has argued that there is a need to limit the exposure of independent parties to the England & Wales SBP because Scottish trading arrangements, and thus markets, are ill developed. In England & Wales, participants will be incentivised to use markets and the balancing mechanism, to balance expected generation and demand to contracted volumes, in order to avoid imbalance costs. Many of these risk management tools will not be available in Scotland because of the absence of willing buyers and sellers and a balancing mechanism.

1.21 For the first eight weeks the cap on SBP will be the SWP. For the next 10 months the cap will be the SWP plus 5 per cent. The cap on SBP has been set at 5 per cent above the SWP for the 10 months period in order to incentivise suppliers to contract efficiently. For example, if parties were able to purchase top-up under no worse terms that the price applying under a wholesale contract then there would be no incentive for parties to contract in order to avoid top-up imbalances. Such an outcome would not be consistent with orderly markets and the obligations in the Settlement Agreement for Scotland.

1.22 ScottishPower and Scottish & Southern Energy have agreed to facilitate parties who are currently contracted for 100 per cent of their demand under a residual contract to move to a wholesale contract during the first eight week period. Other parties will be able to put in place firm MW contracts with the hosts to reduce their potential volume exposure to buying top-up.

1.23 There will be quarterly reconciliations. Under this approach, independent suppliers and generators will be invoiced initially at England & Wales SBP plus BSUoS on a half hourly basis. At the end of each quarter, the quarterly half hourly time-weighted average SBP plus BSUoS will be calculated and compared to the quarterly half hourly time-weighted Scottish wholesale price plus the relevant margin (0 per cent for April and May 2001 and 5 per cent for June 2001 to March 2002). If the average SBP plus BSUoS exceeds the average adjusted (i.e. inclusive of the 0 per cent or 5 per cent) Scottish wholesale price cap then ScottishPower and Scottish & Southern Energy will make refunds to the parties.

### Spill price and tranche from NETA 'go live' to 31 March 2002

1.24 ScottishPower, Scottish & Southern Energy and Ofgem have agreed that the spill price will be the England & Wales system sell price. In order to avoid the need for a residual cash flow adjustment, spill volumes, equivalent to the market volume of top-up will be paid at the top-up price. This price will be subject to quarterly reconciliation as set out in paragraph 1.23 above.

1.25 Spill volumes in excess of 20 per cent of second tier market area demand will receive no remuneration.

### *Purchase price for 2 MW generators from NETA 'go live' to 31 March 2002*

1.26 ScottishPower, Scottish & Southern Energy and Ofgem have agreed that ScottishPower and Scottish & Southern Energy will purchase output from existing generators with under 2 MW of registered capacity at the power exchange energy price component of the Scottish wholesale price. These administered prices will not apply to contracts eligible for renewable order certificate on the introduction of the Renewables Orders in Scotland and in England & Wales.

1.27 Ofgem notes that ScottishPower and Scottish & Southern Energy are in separate discussions with non-SRO generators concerning the sharing of climate change levy which takes effect from 1 April 2001. Ofgem expects similar sharing arrangements to apply in Scotland and in England & Wales.

## Duration and review

1.28 ScottishPower, Scottish & Southern Energy and Ofgem have agreed that the duration of these arrangements will be for one year from 27 March 2001 to 31 March 2002.

1.29 ScottishPower, Scottish & Southern Energy and Ofgem, in conjunction with other interested parties will review the operation of these arrangements after 6 months. Subject to satisfactory review, these arrangements may be extended beyond 31 March 2002. This will also depend on other factors to include the timescale for BETTA.

### *Transparency of Scottish market information*

1.30 ScottishPower and Scottish & Southern Energy have provided Ofgem with information on the monthly volume of total top-up and total spill and the prices for the same, for each authorised area. Ofgem will be publishing this information on its website in the week beginning 12 March 2001. Half hourly information on top-up and spill volumes and prices for the period from 1 January 2001 will be published on the Ofgem website on 19 March 2001.

### *Delay to NETA 'go live' beyond 27 March 2001*

1.31 In the unlikely event that NETA is delayed beyond 27 March 2001, Ofgem proposes that the present administered pricing arrangements are extended, with the least possible changes.

1.32 The wholesale energy price cap will continue to be PSP but with no cap. The top-up and spill arrangements will continue unaltered. These revised arrangements will continue until NETA 'go-live'.

1.33 Supplier charges for transmission services will be identical to those adopted by NGC for suppliers in England & Wales. Losses will also be treated consistently.

# Appendix 1

## *Modification of average Pool prices*

This appendix illustrates the adjustment of historic half-hourly Pool prices by a power exchange product. As explained, Ofgem proposes that for an eight week period from NETA's implementation the Scottish wholesale price will be derived from a formulaic approach using a daily power exchange price marker, shaped by historic Pool prices.

As stated previously, concerns have been raised with regard to the use of an EFA price marker. General concerns of respondents to the August paper surrounded the liquidity and transparency of the EFA price market due to the number of traders involved and the possibility of price manipulation.

In response to these concerns Ofgem has continued discussions with market participants and revised the administered pricing proposal which will be applied for the period from NETA 'go-live' for a period of eight weeks. Under this approach, each average half-hourly PSP would be multiplied by the ratio of a pre-defined daily power exchange price divided by the historic daily average Pool price. This formulaic approach is applied to historical Pool price for the period from April to June 2000/01.

This proposal would scale prices using the formula set out below:

$$\textbf{Average half-hourly PSP} \quad \frac{\textbf{Daily Power Exchange price}}{\begin{array}{c}\textbf{Daily average PSP for each of the 7 days of the week}\\ \textbf{(a) for month (m)}\end{array}}$$

Where:

PSP is the Pool Selling Price; and

(a) is the daily average Pool price of all half-hourly values for each trading day (i.e. Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday) in that month.
(m) is the relevant month (i.e. either April, May or June 2000).

The illustration below is for a hypothetical day being Monday 2 April 2001. It assumes that the daily time weighted average of the power exchange price marker for Monday 2

April 2001 is £32.67/MWh. It applies this value to the actual demand weighted average half-hour PSP of the four Mondays in April 2000. Thus a half-hourly shape for the first Monday in April 2001 will be obtained by averaging each half-hour of the four Mondays in April 2000. A worked example is included in the table below.

| Hh | Average half hourly 'Monday' PSP (April 2000*) | Daily Power Exchange Price (£/MWh) | Scaler (32.67 / 38.44) | Price (£/MWh) |
|---|---|---|---|---|
| 1 | 10.80 | | 0.85 | 9.18 |
| 2 | 10.18 | | 0.85 | 8.65 |
| 3 | 11.86 | | 0.85 | 10.08 |
| 4 | 13.86 | | 0.85 | 11.78 |
| | | | | |
| 45 | 16.50 | | 0.85 | 14.02 |
| 46 | 13.82 | | 0.85 | 11.75 |
| 47 | 13.46 | | 0.85 | 11.44 |
| 48 | 11.51 | | 0.85 | 9.78 |
| | Daily Average 'Monday' price (April) | Average power exchange daily price | | Output price (£/MWh) |
| | 38.44 | 32.67 | | 32.67 |

* The daily average Monday price for April 2000 incorporates half-hourly values from 3 April, 10 April, 17 April and 24 April.

The application of this monthly daily average of Pool prices to the above power exchange produces an identical daily average price equivalent to the observed power exchange price of £32.67/MWh.

A major advantage of this approach is that it would remove the potential for exposure to individual Pool price spikes, whilst retaining the appropriate seasonal shape.

In conclusion, it can be seen from this simple example that the value of the derived output price is identical to the daily average power exchange price.