Pricing Consultation Paper PC 71

NTS Transmission Asset Owner Charges

SUMMARY

Ofgem has published final proposals for the next price control period, starting in April 2002. It is proposed that the National Transmission System (NTS) and Local Distribution Zones (LDZs) should be treated separately with a further division between the NTS Transmission Asset Owner (TO) and System Operator (SO). Transco has accepted the final proposals with respect to the LDZ and NTS TO components of the new price control.

Transco proposes to amend its Transportation Charging Methodology to reflect the proposed new regulatory framework and other developments. This paper proposes a number of changes to the methodology that relate to the TO only; proposals related to SO are dealt with separately in PC70. The proposed changes are that:

- NTS capacity charges are based on 100% of the target TO revenue rather than 65% of target NTS revenue.
- the NTS TO target revenue be split 50:50 between revenue from entry capacity charges and exit capacity charges.
- terminal specific CVs should be used in the calculation of LRMC per unit of energy.
- in the derivation of entry and exit charges from the LRMC route costs, the entry charge at Bacton should no longer be fixed.

In addition, Transco would welcome views on whether the present basis of the LRMC calculations continues to be appropriate in the light of Ofgem's proposals for the TO Price Control and the continuing development of the NTS capacity regime.

1. Introduction

Ofgem's Final Proposals for Transco's Price Control propose that Transco should have separate forms of control on various parts of its existing business from April 2002. It is proposed that the National Transmission System (NTS) and Local Distribution Zones (LDZs) should be treated separately with a further division between the NTS Transmission Asset Owner (TO) and System Operator (SO). Transco has accepted the final proposals with respect to the LDZ and NTS TO components of the new price control.

In order that Transco's Transportation Charging Methodology reflects the new regulatory framework and other developments, this consultation paper brings forward a number of proposals to amend the present methodology. The paper restricts itself to charging issues relating to the TO; those related to the SO are dealt with in a separate paper, PC70.

2. Target Level of Capacity Charges

At present NTS charges are set such that 65% of target revenue should be derived from capacity charges, with the remaining 35% being derived from commodity charges, although this may not be achieved in practice as a result of the auction outcomes. Under Ofgem's price control proposals, Transco's allowed revenue relating to the NTS will be split between that relating to the TO and that relating to the SO. The TO's costs relate principally to the provision of the outputs as set out in the proposed Price Control, primarily entry and exit capacity. It is considered appropriate therefore that the TO revenue should be recovered solely through capacity charges. If and when NTS Linepack is separately offered for sale in due course, it may then be appropriate to recover some revenue through Linepack charges.

Based upon Transco's interpretation of Ofgem's proposals, reflected in the indicative charges, the split of total NTS revenue between the target levels for the TO and SO is 78.5%:21.5%.

3. Entry Exit Split

At present there is no pre-determined split in Transco's Transportation Charging Methodology between the target revenue from entry and exit charges. Although it has tended in the past to be close to 50:50, there is no guarantee that this would continue to be the case. The split is determined from the fitting of entry and exit charges to the underlying LRMC matrix of costs for all entry to exit routes, with the potential for year on year variation.

Previously (prior to PC61) MSEC floor prices had been set based upon a 50:50 distribution of income between entry and exit charges. This requirement was dropped in PC61 since it was regarded as confusing, being inconsistent with the setting of the

exit charges, and had only a minor effect at the time i.e. the entry/exit split was already close to 50:50.

It is now proposed that the 50:50 target distribution of income between entry and exit be set at the initial stage of determining the exit charges and administered entry charge levels underlying the entry auction floor prices. This change will give greater stability to the charges and floor prices, and give consistency in the setting of exit charges and entry floor prices.

If the charges were determined without this requirement then the indicative split of target entry/exit revenue from March 2002 would be 45:55. Variations of this magnitude and greater from a 50:50 split, possibly in different directions from year to year, are likely, under present entry arrangements and potential exit arrangements, to lead to volatile levels of under- or over-recovery against target revenue from year to year, giving rise to charging instability and issues of equitability, as shipper portfolios change from time to time. Having a pre-determined split of target entry/exit revenue should reduce the potential for this volatility.

4. Use of Terminal Specific CV

At present, Long Run Marginal Costs (LRMCs) are calculated based on a constant volumetric increment. A standard CV is used to convert the LRMCs into costs per unit of energy rather than using a terminal specific CV. The CV of gas entering the NTS varies from terminal to terminal and the lower the CV the higher the cost of transportation per unit of energy. The introduction of projected terminal specific CVs to the methodology would thus increase cost reflectivity.

The introduction of this change is considered to be a preferable alternative to an explicit mixing charge for low CV gas since all variations in average CV between the terminals are automatically handled through the methodology and the additional costs of administering a separate mixing charge are avoided.

The largest impact of the proposed change is for Barrow entry terminal where the latest LRMC-reflective administered entry charge increases by 4.5% with the application of projected terminal specific CVs.

5. Calculation of LRMC reflective entry and exit charges

The procedure to derive entry and exit charges from Long Run Marginal Costs relies on a calculation procedure which resolves the costs for all routes into a single charge for each entry point and each exit point. Previously it was necessary to fix at least one entry or exit charge, as a starting condition, in order to achieve a unique solution. The Bacton entry charge was selected to be fixed on the basis that it was expected to be the entry point with the cheapest route costs.

However the procedure for fitting the entry and exit charges (now undertaken using the optimisation feature within Excel) no longer requires a fixed point, since the non-negativity constraints on the charges impose a single optimal solution. In the recent past, the retention of fixing the Bacton entry charge has had little impact since it

would always have been the major entry terminal with the lowest entry charge even if unconstrained. However the latest LRMC results suggest that Bacton should no longer be the cheapest major entry terminal, due to the tightening supply position there in the peak day supply/demand forecast. It is therefore proposed, in order to improve cost reflectivity, to drop the requirement to fix the Bacton entry charge initially.

The effect of this proposed change is that, based upon the latest cost-reflective 2001 LRMCs, the administered entry charge for Bacton would be higher than for some other major entry terminals. The impact of this change is potentially muted by the smoothing procedure for the determination of the applicable exit (and administered entry) charges which takes accounts of the past two years' LRMC results (see Appendix B).

6. Balance and Level of Charges

Based on these proposals the average level of indicative NTS capacity charges is 24.7% higher than the October 2000 charges, that is before the 15% reduction in June 2001. This increase is due primarily to the increase in the proportion of target NTS revenue recovered through capacity charges (up from 65% to 78.5%), along with a small increase in the target level of total NTS revenue.

It should be noted that the indicative capacity charges have been determined on the assumption that the proposed level of the price control for the TO is consistent with the application of the present exit regime, i.e. that the price control level is consistent with exit capacity charges being paid for transportation to firm exit loads only, and that the present exit regime continues in operation.

The details of the proposed rebalanced charges are shown in Appendix B.

QUESTIONS FOR CONSULTATION

Transco seeks views on the following proposed changes to its Transportation Charging Methodology relating to NTS capacity charges that:

- NTS capacity charges are set based on 100% of the target TO revenue rather than 65% of target NTS revenue.
- the NTS TO target revenue be split 50:50 between revenue from entry capacity charges and exit capacity charges.
- terminal specific CVs should be used to calculate the LRMC per unit of energy.
- in the derivation of entry and exit charges from the LRMC route costs, the entry charge at Bacton should no longer be fixed.

In addition, Transco would welcome views on whether the present basis of the LRMC calculations continues to be appropriate in the light of Ofgem's proposals for the TO Price Control and the continuing development of the NTS capacity regime.

APPENDIX A: BASIS OF LRMC CALCULATIONS

The indicative NTS capacity charges reflect, in part, the latest LRMC-related entry and exit charges, after the standard smoothing process specified in the Transportation Charging Methodology which takes account of the last two sets of LRMC-related charges along with restrictions on the degree of change from the present charges.

The latest LRMC calculations have been undertaken in the standard manner using the latest forecast peak supply demand match and forecast network for 2002/3 as the starting position. The only change from previous calculations is the use of a discount factor of 6.25%, rather than the previous 7%, in line with the cost of capital for the NTS assumed in Ofgem's proposals for the TO price control.

Ofgem's proposals for the TO are based upon output measures which include entry and exit capacity. The proposed exit capacity output measures have been determined on the basis of 1 in 20 peak day firm demands. The determination of exit charges derived from LRMC calculations which also relate to 1 in 20 peak day flows is considered to remain appropriate under the present exit arrangements.

The entry capacity measures proposed by Ofgem have been determined on the basis of the maximum physical entry capacity at each entry point, with each entry point considered individually. These terminal capacities are therefore not expected to be available simultaneously. This basis is very different from the 1 in 20 peak day scenario underlying the LRMC calculations. The LRMC calculations will tend to be lower, potentially significantly lower, than LRMC calculations relating to the maximum physical entry capacity. In the former case (as done at present) there may be some "spare" capacity for terminals, relative to the forecast peak flows, due to either the lumpiness of investment (it being inefficient to install capacity in small increments) or forecast reductions in peak flows over future years at some terminals giving spare capacity. This spare capacity is taken into account in determining the cost of coping with the capacity increment applied to each route as part of the LRMC process.

If the LRMC calculation were assessed relative to the maximum physical capacities at each entry terminal then there would, by definition, be no spare capacity at any terminal since the maximum would already be in use. The LRMCs derived from such analysis would therefore be higher than those derived at present since reinforcement costs would always be required for the whole of the LRMC increment.

Since the present LRMC-derived administered entry charges would, under the proposals here, be scaled to a target level of 50% of the capacity revenue, their continued use for determining MSEC floor prices may still be considered reasonable. However entry charges derived on this basis should not be taken as indicating the level of cost involved in providing actual additional capacity over and above that already provided or assumed to be provided in future years.

In addition, it should be noted that the LRMC calculations have been determined on the basis of investment necessary to meet the forecast 1 in 20 planning requirement in future years from the baseline of the present network, and hence take no account of investment for summer flexibility purposes.

APPENDIX B: NTS TO CAPACITY CHARGE RE-BALANCING

B1. Introduction

This appendix presents the proposed re-balancing of Transco's NTS TO capacity charges. These charges have been calculated using Transcost in conjunction with the Long Run Marginal Cost (LRMC) methodology described in Transco's Transportation Charging Methodology. The methodology changes described in the main paper have been incorporated into the derivation of these indicative capacity charges.

Smoothed rebalancing enables Transco to improve the cost reflectivity of capacity charges, in line with the Gas Transporters' Licence requirements, but attempts to avoid changes which might be reflective of only one year's LRMC results. The process has been carried out in line with the methodology used in previous years in that two sets of LRMCs from consecutive years are considered. Capacity charges are re-balanced only when a consistent change is demonstrated by both sets of LRMCs. Within this constraint re-balancing has been capped to a maximum increase of 30% and maximum decrease of -30%.

The general level of capacity charges has risen by 24.7% when compared with that of October 2000. This increase is due primarily to capacity charges now being set to recover 78.5% of target NTS revenue rather than 65%, as was previously the case, along with a small increase in the target level of NTS revenue.

Although entry capacity has been allocated by means of monthly auctions since October 1999, there remains a need to update the administered charges on the previous basis because they are used to set auction floor prices. In any case there is a need to set exit capacity charges from April 2002.

B2. Transcost

Transcost is an economic model developed by Transco to support the setting of capacity charges for transporting gas on the NTS. Transcost is designed to provide LRMCs and entry and exit charges that the whole industry can scrutinise. Transcost is also capable of estimating LRMCs for alternative supply and demand patterns relatively quickly and easily.

A free copy of Transcost, supporting documentation and the data used to calculate the 2002 LRMC reflective charges can be obtained by calling Transco on 0121 623 2340.

B3. LRMC Reflective Charges

The 2002 LRMC reflective charges have been scaled to recover the forecast TO allowed revenue, based upon the forecast 2001/02 peak day flows.

Changes in the balance of LRMCs and hence charges are to be expected since they reflect a changing pattern of potential capacity constraints on the pipeline system. Table 1 contains the LRMC results used in this year's rebalancing process.

The changes between the 2000 and 2001 scaled LRMCs are a result of changes in the pattern of forecast demand and supply. While the levels of both have not changed substantially the pattern of supply has. The European Interconnector is now forecast to become a major source of gas on the peak day, while St. Fergus supplies are forecast at a lower level than was previously the case. The result has been a much higher LRMC reflective entry charge at Bacton with reduced exit charges in the eastern and south-eastern areas of the network.

B4. Rebalancing

Transco proposes a re-balancing of capacity charges, in line with established practice. However, unlike in previous years when any general scaling required to recover target revenue was carried out after rebalancing, the scaling has been carried out prior to re-balancing. This is considered to be appropriate because there has been a substantial increase in the target revenue from entry and exit capacity charges. The maximum increases and decreases permitted when rebalancing have also been broadened so as to allow a greater level of rebalancing towards the most recent LRMC-reflective charges. The rules set to govern the rebalancing are as follows:

- If both scaled LRMCs are below the scaled present charge then the charge should move in a downward direction.
- If both scaled LRMCs are above the scaled present charge then the charge should move in an upward direction.
- If neither of the above is the case then the present charge should remain static.
- The maximum levels by which a charge may be re-balanced are either an increase of 30% or a decrease of -30% relative to the scaled present charge.

Table 2 shows the indicative charges effective from 1 April 2002. On average, capacity charges have risen by 24.7% reflecting the increased target revenue. The level of administered entry capacity charges has risen by 33% on average while that of exit capacity charges has increased by only 16% on average, this difference is due to the proposed equalization of entry and exit target revenue.

B5. Impact

Re-balancing will have no effect on the average level of charges. However, it will create regional variations around the average. For a domestic load in SW3, the proposed exit re-balancing along with an average entry charge (assuming auction revenue in line with the NTS target) would result in a 19.4% increase in NTS capacity charges. However, this is equivalent to only a 3.7% increase in total transportation charges to such a supply point.

Table 1 : Comparison of LRMCs Scaled to Target Revenue

		0.0001	0.0053	0.0052
		0.0030	0.0004	-0.0026
		0.0007	0.0004	-0.0003
		0.0292	0.0280	-0.0012
		0.0108	0.0047	-0.0061
		0.0032	0.0002	-0.0030
		0.0031	0.0015	-0.0016
		0.0000	0.0000	0.0000
		0.0001	0.0030	0.0029
		0.0000	0.0000	0.0000
		0.0000	0.0000	0.0000
		0.0049	0.0061	0.0012
		0.0155	0.0199	0.0044
		0.0016	0.0000	-0.0016
		0.0031	0.0007	-0.0024
		0.0120	0.0092	-0.0028
		0.0040	0.0001	-0.0039
		0.0128	0.0082	-0.0046
		0.0073	0.0059	-0.0014
		0.0017	0.0005	-0.0012
		0.0086	0.0089	0.0003
		0.0070	0.0027	-0.0043
		0.0001	0.0001	0.0000
		0.0036	0.0023	-0.0013
		0.0017	0.0005	-0.0012
		0.0001	0.0001	0.0000
		0.0027	0.0086	0.0059
		0.0234	0.0231	-0.0003
		0.0149	0.0086	-0.0063
		0.0177	0.0165	-0.0012
		0.0112	0.0153	0.0041
		0.0061	0.0111	0.0050
		0.0001	0.0001	0.0000
		0.0041	0.0026	-0.0015
		0.0013	0.0029	0.0016
		0.0121	0.0067	-0.0054
		0.0234	0.0231	-0.0003
		0.0165	0.0127	-0.0038
		0.0213	0.0249	0.0036
		0.0078	0.0057	-0.0021
		0.0117	0.0169	0.0052
		0.0307	0.0443	0.0136
		0.0102	0.0157	0.0055
		0.0168	0.0219	0.0051
		0.0072	0.0070	-0.0002
		0.0079	0.0055	-0.0024
		0.0078	0.0055	-0.0023

			Scaled LRMCs		
			2000	2001	Change
Exit - NTS Supply Points	I02	AM Paper	0.0046	0.0087	0.0041
	I05	Baglan Bay PG	0.0232	0.0298	0.0066
	I06	Barking PG	0.0159	0.0040	-0.0119
	I07	BASF Teesside	0.0001	0.0001	0.0000
	I08	BP Grangemouth	0.0007	0.0015	0.0008
	I09	BP Saltend (HP)	0.0014	0.0005	-0.0009
	I10	Bridgewater Paper	0.0092	0.0175	0.0083
	I11	Brigg PG	0.0012	0.0005	-0.0007
	I21	Brimsdown PG	0.0148	0.0085	-0.0063
	I13	Brunner Mond	0.0051	0.0093	0.0042
	I14	Connahs Quay PG	0.0092	0.0175	0.0083
	I15	Corby PG	0.0066	0.0026	-0.0040
	I16	Coryton PG	0.0095	0.0040	-0.0055
	I17	Cottam PG	0.0012	0.0005	-0.0007
	I18	Deeside PG	0.0092	0.0175	0.0083
	I19	Didcot PG	0.0188	0.0172	-0.0016
	I23	Great Yarmouth PG	0.0031	0.0001	-0.0030
	I24	Hays Chemicals	0.0057	0.0100	0.0043
	I25	ICI Runcorn	0.0092	0.0175	0.0083
	I26	Keadby PG	0.0009	0.0005	-0.0004
	I27	Kemira Ince	0.0092	0.0175	0.0083
	I28	Kings Lynn PG	0.0031	0.0004	-0.0027
	I29	Kingsnorth PG	0.0099	0.0044	-0.0055
	I30	Little Barford PG	0.0088	0.0046	-0.0042
	I31	Longannet PG	0.0007	0.0015	0.0008
	I32	Medway PG	0.0099	0.0044	-0.0055
	I34	Peterborough PG	0.0031	0.0011	-0.0020
	I35	Peterhead PG	0.0001	0.0001	0.0000
	I36	Phillips Seal Sands	0.0001	0.0001	0.0000
	I37	Rocksavage PG	0.0092	0.0175	0.0083
	I38	Roosecote PG	0.0042	0.0086	0.0044
	I39	Rye House PG	0.0148	0.0085	-0.0063
	I40	Saltend PG	0.0014	0.0005	-0.0009
	I58	Sappi Paper Mill	0.0118	0.0141	0.0023
	I03	Seabank PG	0.0114	0.0157	0.0043
	I41	Sellafield PG	0.0042	0.0086	0.0044
	I53	Shotton Paper	0.0092	0.0175	0.0083
	I42	South Humber Bank PG	0.0015	0.0005	-0.0010
	I44	Staythorpe PG	0.0031	0.0008	-0.0023
	I45	Sutton Bridge PG	0.0042	0.0005	-0.0037
	I46	Teesside PG	0.0001	0.0001	0.0000
	I47	Terra Billingham	0.0001	0.0001	0.0000
	I48	Terra Severnside	0.0114	0.0157	0.0043
	I49	Thornton Curtis PG	0.0015	0.0005	-0.0010
	I50	Zeneca	0.0001	0.0001	0.0000
Exit - NTS Interconnectors	I04	Bacton I/C	0.0031	0.0001	-0.0030
	I33	Moffat I/C	0.0021	0.0076	0.0055
Exit - NTS Storage	I101	Hornsea X	0.0011	0.0003	-0.0008
	I102	Isle of Grain X	0.0099	0.0044	-0.0055
	I105	Hatfield Moors X	0.0009	0.0005	-0.0004
	I107	Hole House Farm X	0.0061	0.0101	0.0040
	I108	Rough X	0.0022	0.0011	-0.0011
	I109	Avonmouth X	0.0114	0.0157	0.0043
	I110	Dynevor Arms X	0.0163	0.0220	0.0057
	I111	Glenmavis X	0.0015	0.0036	0.0021
	I112	Partington X	0.0046	0.0087	0.0041

Table 2 : Comparison of October 2000 & Indicative April 2002 Charges

		Capacity Charges			
				Change	
		Oct-00	Apr-02	p/pdkwh/d	%
Entry – Beach (for information only)	Bacton	0.0007	0.0009	0.0002	29%
	Easington / Rough	0.0024	0.0031	0.0007	29%
	Theddlethorpe	0.0012	0.0011	-0.0001	-8%
	St Fergus	0.0213	0.0291	0.0078	37%
	Teesside	0.0052	0.0071	0.0019	37%
	Barrow	0.0043	0.0042	-0.0001	-2%
Entry - Onshore Fields (for information only)	Hatfield Moors	0.0024	0.0032	0.0008	33%
	Wytch Farm	0.0000	0.0000	0.0000	0%
	Caythorpe	0.0020	0.0027	0.0007	35%
	Burton Point	0.0000	0.0000	0.0000	0%
	Hole House Farm	0.0003	0.0003	0.0000	0%
Entry – Storage (for information only)	Hornsea	0.0024	0.0042	0.0018	75%
	Glenmavis	0.0083	0.0146	0.0063	76%
	Partington	0.0008	0.0011	0.0003	38%
Exit LDZ	EA1 Eastern	0.0039	0.0032	-0.0007	-18%
	EA2 Eastern	0.0096	0.0112	0.0016	17%
	EA3 Eastern	0.0044	0.0040	-0.0004	-9%
	EA4 Eastern	0.0104	0.0122	0.0018	17%
	EM1 East Midlands	0.0022	0.0034	0.0012	55%
	EM2 East Midlands	0.0007	0.0008	0.0001	14%
	EM3 East Midlands	0.0063	0.0087	0.0024	38%
	EM4 East Midlands	0.0062	0.0071	0.0009	15%
	NE1 North East	0.0001	0.0001	0.0000	0%
	NE2 North East	0.0019	0.0023	0.0004	21%
	NE3 North East	0.0010	0.0012	0.0002	20%
	NO1 Northern	0.0001	0.0001	0.0000	0%
	NO2 Northern	0.0006	0.0009	0.0003	50%
	NT1 North Thames	0.0154	0.0233	0.0079	51%
	NT2 North Thames	0.0135	0.0150	0.0015	11%
	NT3 North Thames	0.0117	0.0167	0.0050	43%
	NW1 North West	0.0061	0.0093	0.0032	52%
	NW2 North West	0.0071	0.0083	0.0012	17%
	SC1 Scotland	0.0001	0.0001	0.0000	0%
	SC2 Scotland	0.0008	0.0012	0.0004	50%
	SC4 Scotland	0.0001	0.0001	0.0000	0%
	SE1 South East	0.0114	0.0122	0.0008	7%
	SE2 South East	0.0154	0.0233	0.0079	51%
	SO1 Southern	0.0135	0.0159	0.0024	18%
	SO2 Southern	0.0187	0.0219	0.0032	17%
	SW1 South West	0.0109	0.0090	-0.0019	-17%
	SW2 South West	0.0188	0.0171	-0.0017	-9%
	SW3 South West	0.0288	0.0337	0.0049	17%
	WA1 Wales	0.0102	0.0119	0.0017	17%
	WA2 Wales	0.0175	0.0205	0.0030	17%
	WM1 West Midlands	0.0071	0.0073	0.0002	3%
	WM2 West Midlands	0.0076	0.0080	0.0004	5%
	WM3 West Midlands	0.0106	0.0087	-0.0019	-18%

			Capacity Charges			
					Change	
			Oct-00	Apr-02	p/pdkwh/d	%
Exit - NTS Supply Points	I02	AM Paper	0.0025	0.0038	0.0013	52%
	I05	Baglan Bay PG	0.0175	0.0234	0.0059	34%
	I06	Barking PG	0.0107	0.0125	0.0018	17%
	I07	BASF Teesside	0.0001	0.0001	0.0000	0%
	I08	BP Grangemouth	0.0001	0.0001	0.0000	0%
	I09	BP Saltend (HP)	0.0009	0.0010	0.0001	11%
	I10	Bridgewater Paper	0.0093	0.0109	0.0016	17%
	I11	Brigg PG	0.0005	0.0006	0.0001	20%
	I21	Brimsdown PG	0.0115	0.0134	0.0019	17%
	I13	Brunner Mond	0.0025	0.0038	0.0013	52%
	I14	Connahs Quay PG	0.0093	0.0109	0.0016	17%
	I15	Corby PG	0.0043	0.0051	0.0008	19%
	I16	Coryton PG	0.0106	0.0096	-0.0010	-9%
	I17	Cottam PG	0.0005	0.0006	0.0001	20%
	I18	Deeside PG	0.0093	0.0109	0.0016	17%
	I19	Didcot PG	0.0124	0.0174	0.0050	40%
	I23	Great Yarmouth PG	0.0039	0.0032	-0.0007	-18%
	I24	Hays Chemicals	0.0025	0.0038	0.0013	52%
	I25	ICI Runcorn	0.0095	0.0111	0.0016	17%
	I26	Keadby PG	0.0001	0.0001	0.0000	0%
	I27	Kemira Ince	0.0095	0.0111	0.0016	17%
	I28	Kings Lynn PG	0.0036	0.0031	-0.0005	-14%
	I29	Kingsnorth PG	0.0097	0.0100	0.0003	3%
	I30	Little Barford PG	0.0052	0.0061	0.0009	17%
	I31	Longannet PG	0.0001	0.0001	0.0000	0%
	I32	Medway PG	0.0097	0.0100	0.0003	3%
	I34	Peterborough PG	0.0036	0.0031	-0.0005	-14%
	I35	Peterhead PG	0.0001	0.0001	0.0000	0%
	I36	Phillips Seal Sands	0.0001	0.0001	0.0000	0%
	I37	Rocksavage PG	0.0095	0.0111	0.0016	17%
	I38	Roosecote PG	0.0017	0.0026	0.0009	53%
	I39	Rye House PG	0.0115	0.0134	0.0019	17%
	I40	Saltend PG	0.0009	0.0010	0.0001	11%
	I58	Sappi Paper Mill	0.0061	0.0093	0.0032	52%
	I03	Seabank PG	0.0188	0.0159	-0.0029	-15%
	I41	Sellafield PG	0.0017	0.0026	0.0009	53%
	I53	Shotton Paper	0.0093	0.0109	0.0016	17%
	I42	South Humber Bank PG	0.0009	0.0010	0.0001	11%
	I44	Staythorpe PG	0.0036	0.0031	-0.0005	-14%
	I45	Sutton Bridge PG	0.0018	0.0021	0.0003	17%
	I46	Teesside PG	0.0001	0.0001	0.0000	0%
	I47	Terra Billingham	0.0001	0.0001	0.0000	0%
	I48	Terra Severnside	0.0197	0.0163	-0.0034	-17%
	I49	Thornton Curtis PG	0.0005	0.0006	0.0001	20%
	I50	Zeneca	0.0001	0.0001	0.0000	0%
Exit - NTS Interconnectors	I04	Bacton I/C	0.0039	0.0032	-0.0007	-18%
	I33	Moffat I/C	0.0001	0.0001	0.0000	0%
Exit - NTS Storage	I101	Hornsea X	0.0009	0.0010	0.0001	11%
	I102	Isle of Grain X	0.0097	0.0100	0.0003	3%
	I105	Hatfield Moors X	0.0001	0.0001	0.0000	0%
	I107	Hole House Farm X	0.0025	0.0038	0.0013	52%
	I108	Rough X	0.0010	0.0012	0.0002	20%
	I109	Avonmouth X	0.0188	0.0159	-0.0029	-15%
	I110	Dynevor Arms X	0.0175	0.0205	0.0030	17%
	I111	Glenmavis X	0.0001	0.0001	0.0000	0%
	I112	Partington X	0.0025	0.0038	0.0013	52%