National Grid House
Warwick Technology Park
Gallows Hill, Warwick
CV34 6DA

All Shippers & Interested Parties

Chris Logue
Market Change Development Manager

chris.logue@nationalgrid.com
Mobile +44 (0) 7880 784888

www.nationalgrid.com

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Dear Industry Participant

Notice of Revised NTS Entry Capacity QSEC Reserve and Step Prices

The next annual auctions for Quarterly System Entry Capacity (QSEC) will be held in March 2018. National Grid is publishing this notice of revised NTS transportation charges two months in advance of the next QSEC auction, consistent with our Licence and Uniform Network Code (UNC) obligations.

Our Transportation model has been updated to reflect changes in demand levels, the pipeline network, supply patterns, and the cost of investment through the expansion constant, all of which may affect the charges. Step prices have been recalculated in accordance with the methodology set out in the latest approved **Entry Capacity Release Methodology Statement (ECR)**[1].

Attached is an update to Appendix D of the NTS Gas Transportation Charges Statement 1 October 2017, which details the reserve and step prices for use in the March 2018 QSEC auction and replaces any previous versions of this appendix. **Table 1** below summarises the change in reserve prices at each NTS Aggregate System Entry Point (ASEP).

The main points to note compared to the QSEC 2017 are as follows:

- Forecast peak day demand has increased slightly by 0.3%. We have continued to use the 'Updated Forecast' data given in the Gas Ten Year Statement 2017, which is National Grid's shorter term view of the current trajectory of energy supply and demands.

- Total gas supply has been increased to match demand using the supply balancing rules detailed in the UNC Section Y Charging Methodologies 2.5.1 (c).

- The expansion constant, which represents the average cost of investment in pipe and compression, has been updated in line with inflation forecasts and has increased by 3.3%. Those ASEPs furthest away from centres of demand are more sensitive to changes in the expansion constant as an increase in supply from these ASEPs would require greater investment in order to transport gas to demand.

[1] https://www.nationalgrid.com/uk/gas/charging-and-methodologies/methodologies

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- In general, ASEPs have seen a decrease in their reserve price. Forecast supply and demand changes have resulted in lower adjustment factors. The average Exit costs have decreased and so the adjustment factor that is used to achieve a 50:50 split of equal costs between Entry and Exit users, has decreased on the Entry side.

- Barrow and St. Fergus have seen an increase in their Long Run Marginal Costs (LRMC) causing the reserve prices to increase. For instance, although there is an increase in supplies from St. Fergus terminal, a forecast reduction in demand in Scotland, mainly at power stations, means that the flows from St. Fergus terminal have to move further into the system to meet demand and hence an increase in the LRMC compared to last year. This has caused the reserve price to increase.

For all Entry points an **Estimated Project Value** (£m) has also been calculated for each Incremental Capacity level and this information has been added to this notice. This is also available in Appendix E of the Transportation Charging Statement. The net present value (NPV) of the revenues from incremental bids is required to be at least 50% of the estimated project value in order to trigger the release of incremental obligated Entry Capacity (as given in Chapter 6 of the ECR Methodology Statement).

Please note that details of the **NTS Entry Capacity retention charge** are available in the Transportation Charging Statement and remain unchanged. The statement can be found on our website at https://www.nationalgrid.com/uk/gas/charging-and-methodologies/transmission-system-charges.

If you have any questions or feedback relating to this notice, or NTS charges in general, please contact Karin Elmhirst on 01926 655540 or karin.elmhirst@nationalgrid.com.

Yours sincerely

Chris Logue
Market Change Development Manager

Table 1 - Change in Reserve Price by ASEP compared to QSEC 2018

p/kWh/day	QSEC17	QSEC18	Change
Avonmouth	0.0001	0.0001	0.0000
Bacton Terminal UKCS	0.0114	0.0090	-0.0024
Barrow	0.0001	0.0037	0.0036
Barton Stacey	0.0001	0.0001	0.0000
Burton Point	0.0001	0.0001	0.0000
Canonbie	0.0040	0.0030	-0.0010
Caythorpe	0.0134	0.0116	-0.0018
Cheshire	0.0001	0.0001	0.0000
Dynevor Arms	0.0010	0.0087	0.0077
Easington &Rough	0.0139	0.0142	0.0003
Fleetwood	0.0027	0.0001	-0.0026
Garton	0.0159	0.0125	-0.0034
Glenmavis	0.0138	0.0133	-0.0005
Hatfield Moor	0.0052	0.0032	-0.0020
Hole House Farm	0.0001	0.0001	0.0000
Hornsea	0.0126	0.0138	0.0012
Isle of Grain	0.0093	0.0071	-0.0022
Milford Haven	0.0255	0.0226	-0.0029
Partington	0.0001	0.0001	0.0000
St Fergus	0.0487	0.0514	0.0027
Teesside	0.0101	0.0093	-0.0008
Theddlethorpe	0.0140	0.0126	-0.0014
Wytch Farm	0.0001	0.0001	0.0000

Appendix D QSEC Step Prices 2018

Below are the Entry Capacity reserve prices together with the price steps for each level of Incremental Capacity for use in the auction of Quarterly System Entry Capacity (QSEC).

Pence/kWh/day

	Bacton Terminal UKCS	Barrow	Cheshire	Canonbie	Easington &Rough	Fleetwood	Garton	Isle of Grain	Milford Haven	St Fergus	Teesside	Theddlethorpe
Obligated Level	0.0090	0.0037	0.0001	0.0030	0.0142	0.0001	0.0125	0.0071	0.0226	0.0514	0.0093	0.0126
2.5%	0.0091	0.0038	0.0002	0.0031	0.0143	0.0017	0.0126	0.0072	0.0227	0.0523	0.0094	0.0127
5.0%	0.0092	0.0044	0.0029	0.0032	0.0144	0.0029	0.0127	0.0073	0.0228	0.0530	0.0095	0.0128
7.5%	0.0095	0.0045	0.0044	0.0033	0.0145	0.0030	0.0128	0.0074	0.0229	0.0539	0.0096	0.0129
10.0%	0.0096	0.0046	0.0052	0.0034	0.0157	0.0031	0.0129	0.0076	0.0232	0.0541	0.0097	0.0130
12.5%	0.0097	0.0047	0.0053	0.0035	0.0158	0.0050	0.0130	0.0077	0.0233	0.0567	0.0098	0.0131
15.0%	0.0098	0.0048	0.0054	0.0036	0.0159	0.0051	0.0131	0.0078	0.0234	0.0570	0.0099	0.0134
17.5%	0.0099	0.0060	0.0055	0.0042	0.0164	0.0052	0.0132	0.0079	0.0237	0.0571	0.0100	0.0141
20.0%	0.0100	0.0061	0.0056	0.0049	0.0165	0.0053	0.0133	0.0080	0.0238	0.0572	0.0101	0.0142
22.5%	0.0101	0.0062	0.0057	0.0055	0.0173	0.0055	0.0134	0.0082	0.0239	0.0573	0.0110	0.0154
25.0%	0.0102	0.0072	0.0058	0.0059	0.0174	0.0057	0.0135	0.0083	0.0240	0.0574	0.0112	0.0165
27.5%	0.0103	0.0073	0.0059	0.0060	0.0175	0.0058	0.0136	0.0084	0.0241	0.0575	0.0118	0.0167
30.0%	0.0104	0.0074	0.0060	0.0061	0.0176	0.0059	0.0137	0.0085	0.0250	0.0576	0.0121	0.0168
32.5%	0.0105	0.0075	0.0061	0.0062	0.0177	0.0060	0.0138	0.0086	0.0251	0.0577	0.0122	0.0169
35.0%	0.0106	0.0076	0.0062	0.0063	0.0178	0.0061	0.0139	0.0087	0.0252	0.0578	0.0123	0.0170
37.5%	0.0107	0.0077	0.0063	0.0064	0.0180	0.0067	0.0140	0.0088	0.0256	0.0579	0.0124	0.0171
40.0%	0.0108	0.0094	0.0069	0.0065	0.0181	0.0068	0.0141	0.0096	0.0259	0.0580	0.0125	0.0172
42.5%	0.0109	0.0095	0.0070	0.0089	0.0192	0.0069	0.0142	0.0097	0.0262	0.0581	0.0151	0.0173
45.0%	0.0110	0.0096	0.0071	0.0090	0.0193	0.0074	0.0143	0.0098	0.0284	0.0582	0.0152	0.0174
47.5%	0.0111	0.0097	0.0072	0.0091	0.0195	0.0075	0.0144	0.0102	0.0285	0.0583	0.0153	0.0175
50.0%	0.0115	0.0098	0.0073	0.0092	0.0197	0.0076	0.0145	0.0103	0.0286	0.0584	0.0154	0.0176
Obligated Level (GWh/d)	485.6	340.01	542.7	0	1407.15	350	420	699.68	950	1670.7	445.09	610.7

Pence/kWh/day

Hole House Farm		Hornsea		Partington		Avonmouth		Barton Stacey	
Obligated Level	0.0001	Obligated Level	0.0138	Obligated Level	0.0001	Obligated Level	0.0001	Obligated Level	0.0001
5.1%	0.0002	6.4%	0.0139	7.0%	0.0002	8.4%	0.0002	8.7%	0.0002
10.1%	0.0003	12.9%	0.0140	14.0%	0.0004	16.7%	0.0003	17.4%	0.0004
15.2%	0.0004	19.3%	0.0141	20.9%	0.0005	25.1%	0.0004	26.1%	0.0005
20.2%	0.0006	25.7%	0.0142	27.9%	0.0006	33.5%	0.0005	34.8%	0.0006
25.3%	0.0009	32.2%	0.0143	34.9%	0.0007	41.8%	0.0006	43.5%	0.0007
30.3%	0.0015	38.6%	0.0144	41.9%	0.0008	50.2%	0.0007	52.1%	0.0010
35.4%	0.0016	45.0%	0.0145	48.8%	0.0009				
40.5%	0.0034	51.5%	0.0146	55.8%	0.0010				
45.5%	0.0053								
50.6%	0.0054								
Obligated Level (GWh/d)	296.6		233.1		215		179.3		172.6

Appendix D QSEC Step Prices 2018 (cont)

Pence/kWh/day

	Burton Point	Caythorpe	Dynevor Arms	Glenmavis	Hatfield Moor	Wytch Farm
Obligated Level	0.0001	0.0116	0.0087	0.0133	0.0032	0.0001
10%	0.0002	0.0117	0.0088	0.0148	0.0033	0.0002
20%	0.0003	0.0127	0.0089	0.0182	0.0034	0.0003
30%	0.0004	0.0128	0.0090	0.0187	0.0035	0.0004
40%	0.0005	0.0139	0.0091	0.0189	0.0036	0.0005
50%	0.0006	0.0140	0.0092	0.0192	0.0037	0.0006
Obligated Level (GWh/d)	73.5	90	49	99	25.3	3.3

Appendix E Estimated Project Value, £m

£m

	Bacton Terminal UKCS	Barrow	Cheshire	Canonbie	Easington &Rough	Fleetwood	Garton	Isle of Grain	Milford Haven	St Fergus	Teesside	Theddlethorpe
Obligated Level												
2.5%	3.88	1.12	0.05	1.60	17.75	0.98	4.66	4.41	19.07	77.62	3.68	6.84
5.0%	7.77	2.66	2.80	3.20	35.50	3.35	9.33	8.83	38.15	157.32	7.35	13.67
7.5%	12.29	3.99	6.36	5.12	53.25	5.02	13.99	13.24	57.22	239.99	11.27	20.51
10.0%	16.57	5.32	10.03	6.82	78.50	6.70	18.66	18.90	78.32	321.17	15.03	27.78
12.5%	20.71	6.65	12.54	8.53	98.13	14.44	23.32	23.93	97.90	420.76	18.78	34.72
15.0%	24.85	7.97	15.04	10.23	119.25	17.32	27.98	28.72	117.47	507.58	22.54	43.62
17.5%	28.99	12.69	17.55	15.67	143.50	20.21	32.65	33.50	140.01	593.21	26.29	53.55
20.0%	33.13	14.50	20.06	20.89	165.00	23.56	37.31	38.29	160.01	677.96	30.05	61.20
22.5%	37.27	16.31	23.00	26.38	194.63	28.58	41.97	45.87	180.01	764.04	39.14	75.19
25.0%	43.57	21.75	26.03	31.45	217.50	32.91	46.64	50.97	200.01	848.93	44.28	89.51
27.5%	47.93	23.92	28.64	34.59	239.26	36.20	51.30	56.06	223.72	935.46	51.32	99.66
30.0%	52.28	26.10	34.13	38.38	261.01	39.50	55.97	61.16	253.18	1020.50	57.41	108.72
32.5%	56.64	28.27	36.98	42.96	282.76	42.79	60.63	66.26	274.27	1105.54	62.71	118.48
35.0%	61.00	30.45	39.82	46.27	309.76	46.89	65.29	71.35	295.37	1190.58	67.53	127.60
37.5%	65.35	32.62	43.39	49.57	337.51	58.03	71.08	81.11	324.07	1275.62	72.36	136.71
40.0%	69.71	45.43	53.22	52.87	360.01	61.90	82.98	95.47	349.72	1363.04	79.08	145.83
42.5%	74.07	48.27	56.55	80.64	408.01	65.77	88.80	101.44	375.88	1450.75	101.50	154.94
45.0%	81.53	51.11	59.88	85.39	432.01	76.91	94.02	107.40	431.41	1536.09	107.47	164.05
47.5%	86.06	53.95	63.20	90.13	463.13	81.19	99.25	120.46	455.38	1621.43	113.44	173.17
50.0%	99.22	56.78	66.53	94.87	492.51	86.61	104.47	126.80	482.72	1706.77	119.41	182.28
Obligated Level (GWh/d)	485.6	340.01	542.7	0	1407.15	350.0	420.0	699.7	950.0	1670.7	445.09	610.7

£m

Hole House Farm		Hornsea		Partington		Avonmouth		Barton Stacey	
Obligated Level		Obligated Level		Obligated Level		Obligated Level		Obligated Level	
5.1%	0.05	6.4%	7.36	7.0%	0.05	8.37%	0.11	8.7%	0.11
10.1%	0.11	12.9%	14.71	14.0%	0.43	16.73%	0.21	17.4%	0.43
15.2%	0.16	19.3%	22.07	20.9%	0.64	25.10%	0.32	26.1%	0.64
20.2%	1.28	25.7%	29.64	27.9%	0.85	33.46%	0.43	34.8%	0.85
25.3%	2.40	32.2%	37.04	34.9%	1.07	41.83%	0.53	43.5%	1.07
30.3%	4.80	38.6%	44.45	41.9%	1.28	50.20%	2.24	52.1%	3.20
35.4%	5.60	45.0%	51.86	48.8%	1.49				
40.5%	14.50	51.5%	59.27	55.8%	1.71				
45.5%	25.42								
50.6%	28.25								
Obligated Level (GWh/d)	296.6		233.1		215.0		179.3		172.6

Appendix E Estimated Project Value, £m (cont)

£m

	Burton Point	Caythorpe	Dynevor Arms	Glenmavis	Hatfield Moor	Wytch Farm
Obligated Level						
10%	0.03	3.71	1.52	5.21	0.29	0.001
20%	0.05	8.12	3.03	12.81	0.58	0.002
30%	0.08	12.28	4.54	19.74	0.86	0.004
40%	0.10	17.78	6.06	26.60	1.15	0.005
50%	0.13	22.23	7.57	33.77	1.62	0.006
Obligated Level (GWh/d)	73.5	90.0	49.0	99.0	25.3	3.3