STOR Market Information Report: Tender Round 20
(Short-Term Operating Reserve)

Introduction

This market report is produced after each tender round and is designed to give existing and potential STOR participants an overall view of the tenders received in tender round 20 (TR20). The report provides details of tendered utilisation and availability prices and National Grid's consequent forward contracted position; together with further details on the type and dynamics of the tendered plant. For further information regarding this product, frequently asked questions, or how and when to tender please consult the tender and reports section found on the National Grid Balancing Services information website:

http://www.nationalgrid.com/uk/Electricity/Balancing/services/STOR/

Furthermore, information on the use of the STOR service can be seen at monthly resolution in the Monthly Balancing Services Statement or annually in the Procurement Guidelines Report, found on the National Grid Balancing Services information website:

http://www.nationalgrid.com/uk/Electricity/Balancing/Summary/

http://www.nationalgrid.com/uk/Electricity/Balancing/transmissionlicencestatements/PG/

In assessing the benefit of a STOR tender, the value and costs of that tender are considered. The forecast cost of an accepted tender will reflect expected availability costs and utilisation costs which incorporate the Minimum Non Zero Time (MNZT) of the unit and Minimum Utilisation Period (MUP) for non-BM providers. The tender assessment further considers the response time, the location and the reliability of the tendered unit. The latest assessment principles can be found on the STOR section of the Balancing Services website:

http://www.nationalgrid.com/NR/rdonlyres/7B8CA1AB-4964-4965-B5A2-126C8C202A11/40677/STOR_Assessment_Principles.pdf

This report is divided into two sections:

- Section 1 provides a summary of tendered and accepted volumes and price information across STOR seasons in 2013/14 (Year 7) and 2014/15 (Year 8). The data is broken down by response time and flexible or committed service providers.
- Section 2 provides an overview of the total contracted position for each season in Years 7 and 8 from TR20 and previous tender rounds.

Section 1.1 Submitted and Accepted Volumes

As National Electricity Transmission System Operator (NETSO), National Grid maintains an Operating Reserve Requirement (ORR) from 4 hours ahead of time to real time, to take account of demand forecast errors, plant losses and market imbalance. The ORR is met by headroom on market synchronised machines, additional actions taken by National Grid via the Balancing Mechanism (BM) and contracted reserve products. STOR is a contracted reserve product and as such STOR tenders can make up a finite proportion of the ORR. The amount of contracted STOR required is determined by the size of the ORR which changes due to forecast market length, market provided headroom, volume of intermittent generation and demand forecast errors. The proportion of the ORR met by STOR is determined by considering the technical system requirements and also the forecast cost of alternatives versus the cost of the tendered STOR units.

The tenders are assessed in accordance with the STOR Assessment Principles[1], which, amongst other things, consider availability prices (£/MW/h), utilisation prices (£/MWh), response times and geographical location. The accepted tenders are selected such that the total costs of maintaining the ORR and operating the system are lower than without the selection of those tenders.

STOR Volumes Procured by National Grid – New Approach Going Forward

In July 2013, National Grid published a document 'The Statement of the Energy Balancing Cost Target Modelling Methodology'[2]. The document describes how National Grid's target costs will be calculated for the proposed Balancing Services Incentive Scheme and Ofgem have subsequently published their decision to modify the NGET Licence[3] to reflect the new scheme. These changes will come into affect on 31st August 2013 and calculations will be backdated to cover energy balancing costs incurred since 1st April 2013.

The new Balancing Services Incentive Scheme (BSIS) has necessitated a review of how National Grid procures STOR as this is the first tender round it has been a factor. The new scheme will have an influence on the quantity of STOR volumes that are procured for the seasons and year ahead, from one tender round to the next. However, the economic assessment of STOR tenders will remain unchanged.

Prior to the inauguration of the new BSIS, National Grid aimed to procure a minimum of 1800MW of STOR throughout the STOR seasons (subject to sufficient economics). The daily and seasonal optimal STOR MW level varied due to real time and seasonal pressures on the system, but National Grid had typically engaged in having approximately 2300MW of STOR with a response time of 20 minutes or less, when available. The optimal STOR volumes (2300MW) could be supplemented by STOR units that had a long notice response time (greater than 20 minutes) where economics were sufficient.

The optimal STOR MW level is what National Grid expects to manage on a daily basis, over and above the minimum of 1800MW. National Grid examines historic availability profiles from committed and flexible providers to help determine the amount of STOR MW to procure, such that the contracted STOR MW would yield the optimal STOR MW to be available on a daily basis, allowing for economics and pressures on the system.

Under the new BSIS, National Grid will continue to procure a minimum of 1800MW of available STOR and seek to procure up to the optimal STOR MW level throughout the STOR seasons (subject to sufficient economics). Going forward, the MW from STOR units with a long notice response time will contribute to the optimal STOR MW level. However, for the avoidance of doubt with long notice MW now forming part of the optimal STOR MW level, a unit's tendered response time and price remain key factors in the assessment of STOR tenders.

Tenders Received in TR20

On Market Day for TR20 (31st May 2013), National Grid received tenders from 47 companies, totalling 190 units, for STOR contracts in 2013/14 and 2014/15. This included 9 units that had not tendered before from existing providers and four new providers entered the market with 5 units. These new tendered sites, from the

[1] http://www.nationalgrid.com/NR/rdonlyres/7B8CA1AB-4964-4965-B5A2-126C8C202A11/40677/STOR_Assessment_Principles.pdf
[2] http://www.nationalgrid.com/NR/rdonlyres/A56B9497-EC8D-4D27-B2A2-8F0ED3D548F5/61362/201315EnergyModellingMethodology_FinalJuly2013.pdf
[3] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=346&refer=MARKETS/WHLMKTS/EFFSYSTEMOPS/SYSTOPINCENT

four new providers, represent a potential maximum 550MW of new capacity if they were all fully available at the same time.

This tender round was the final tender opportunity for seasons 7.3 and 7.4, 61 and 66 units were tendered for these seasons respectively. This represents a potential maximum 1111MW for season 7.3 and 1146MW for Season 7.4 in addition to the 2999MW and 3012MW already contracted for the respective seasons. Three units with a response time greater than 20 minutes tendered for seasons 7.3 and 7.4, the remaining tenders were for response times of 20 minutes or less.

A potential maximum of 2517MW was submitted for seasons in STOR Year 8 (2014/15) from 147 units. This included tenders from six companies with indexations on their submitted prices. The indexations are to adjust the availability price with respect to Retail Prices Index change, and to adjust the utilisation prices with respect to gasoil price.

The STOR Marketplace Continues to be Competitive and Heavily Subscribed

The maximum volume of MW tendered for STOR has reached new highs for seasons 7.3 and 7.4 with the increase driven by both existing and new participants offering new volume to the STOR market.

The amount of contracted STOR used to maintain the ORR[4] continues to be consistent. Allowing for seasonal influences and any one-off events, the proportion of contracted STOR that will actually contribute to the ORR is expected to drop slightly following season 7.5 onwards to reflect that MW from any Long Notice STOR unit(s), if contracted, will contribute to the optimal STOR MW level.

Looking ahead to the next tender round (TR21), participants should give consideration to their tendering strategy going forward with regard to unit availability. It remains National Grid's preference that the optimal STOR MW level is made available for all daily STOR windows, this is particularly relevant over the winter periods.

Owing to the highly competitive nature of the STOR market, when tendering in for future tender rounds, it is recommended that STOR providers consider optimising their tendered technical parameters, where appropriate.

Successful Tenders in TR20 and Outlook for STOR Year 7 (2013/14)

For the remaining seasons in Year 7, the combined capacity of tenders in TR20 along with the STOR already procured in previous tender rounds would result in having a level of STOR availability that would be greatly in excess of the ORR. Thus, the tenders that were accepted in TR20 were those that demonstrated the most beneficial combination of tendered prices and the selected tenders would be able to provide sufficient MW to fulfil the optimal level of STOR.

The volume of rejections to flexible STOR units, that are made available, on a week to week basis will continue to be influenced by a number of factors such as wider contracted STOR unit availability and the market surplus at the week ahead stage. However, flexible units that are rejected at the week ahead stage may be utilised subject to economics and where still available via Standing Reserve Dispatch (SRD).

The Long Notice STOR tenders have contributed to the total accepted MW figure in this tender round, due to the strength of their economics.

The location of a tender has not been a factor in rejecting tenders.

The unsuccessful Year 7 tenders in this tender round have been rejected on grounds of weaker economics.

The optimal STOR level is expected to be unchanged for seasons 7.5 and 7.6, therefore in the next tender round (TR21) there is scope, though on a minor scale, for National Grid to add to the contracted STOR volumes for these seasons. It remains National Grid's intention to procure on an economic basis to meet the optimal STOR MW level across all of the STOR windows.

[4] Ignoring the impact from one-off events that led to larger than usual volumes of unsynchronised contracted reserve being requested. Such volumes were procured by accepting greater than usual volumes of Flexible STOR MW via the week-ahead assessment

Outlook for STOR Year 8 (2014/15)

Looking ahead to STOR Year 8 (2014/15), the economics[5] of the tenders received has resulted in the acceptance of a number of STOR tenders, yet there are sufficient volumes of STOR MW to be procured in future tender rounds.

The unsuccessful Year 8 tenders in this tender round have been rejected on grounds of weaker economics. For some tenders, the stipulation of the 'All or Nothing' condition, or requesting indexation to be applied to its tender, or both, had a detrimental impact on the tender's economics.

Future Tender Rounds Covering STOR Year 8 and Onwards

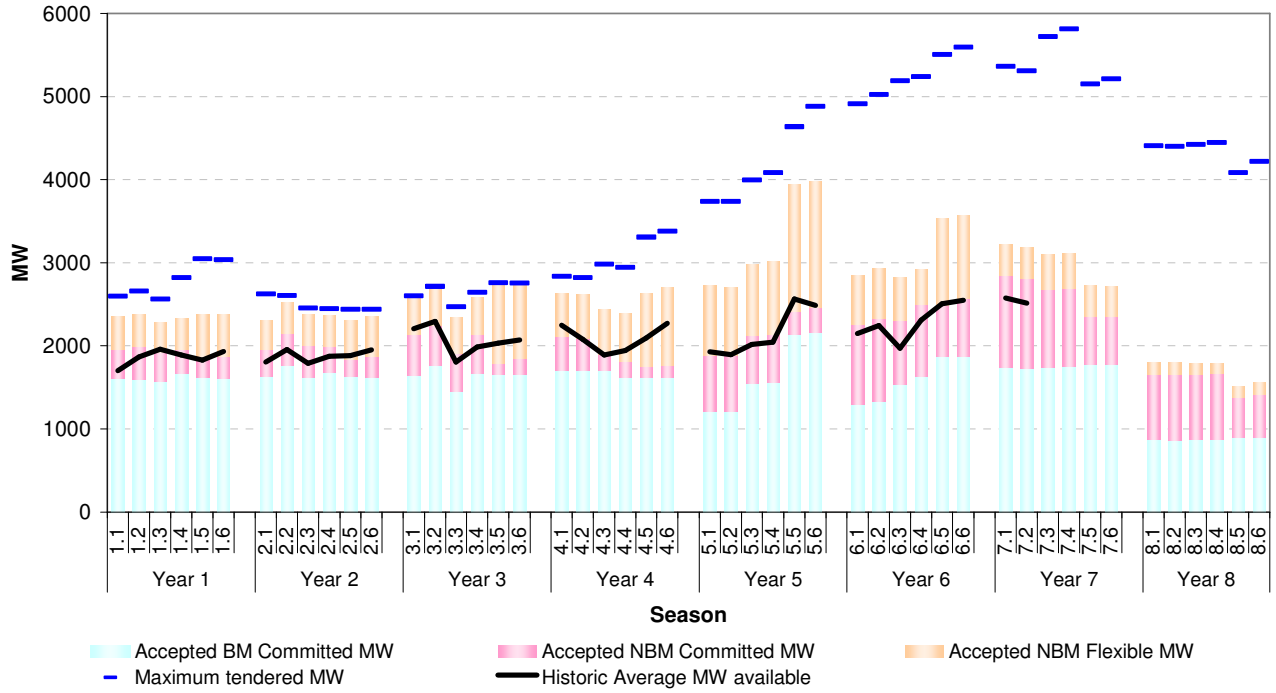
In current market conditions the impact of the new BSIS could potentially result in National Grid accepting an increasing volume of tenders closer to real time at the last tender round opportunity. As a result tenderers are advised to review their tendering strategy with regard to choosing the 'All or Nothing' condition.

Figure 1 gives a breakdown of the accepted flexible and committed MW per season since the start of the STOR service. The blue line represents the sum of the maximum tendered MW from unique units from any tender round for each season. For seasons with tender rounds still to come, this figure will increase if units that thus far have not tendered for that season, tender in. The black line on the chart represents the outturn average availability for each season (where available).

Please note this chart contains data from previous tender rounds up to and including TR20.

Figure 1

Breakdown of Accepted Flexible and Committed MW per season



[5] Based on National Grid's assessment of future margin costs

Tables 1 and 2 show the total number of MW rejected or accepted together with their respective volume weighted availability and utilisation prices for Year 7 and Year 8. The table is split into Flexible or Committed units with response time less than or equal to 20 minutes, and units (Flexible or Committed) with response time greater than 20 minutes.

Please note these tables contain data from previous tender rounds up to and including TR 20.

Table 1 Year 7 Summary

Season		7.1			7.2			7.3			7.4			7.5			7.6		
Service Type		C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C
TR 10 Rejected MW		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TR 10 Accepted MW		68	0	0	68	0	0	68	0	0	68	0	0	68	0	0	68	0	0
TR 11 Rejected MW		231	0	0	227	0	0	229	0	0	231	0	0	438	0	0	438	0	0
TR 11 Accepted MW		116	0	0	116	0	0	116	0	0	116	0	0	116	0	0	116	0	0
TR 12 Rejected MW		587	0	0	583	0	0	585	0	0	587	0	0	589	0	0	589	0	0
TR 12 Accepted MW		276	0	0	274	0	0	275	0	0	276	0	0	277	0	0	277	0	0
TR 16 Rejected MW		2110	19	19	2108	19	19	2018	19	19	2096	19	19	2099	19	19	2099	19	19
TR 16 Accepted MW		31	10	0	31	10	0	31	10	0	31	10	0	21	10	0	21	10	0
TR 17 Rejected MW		1246	133	0	1244	133	0	1156	133	0	1252	133	0	1168	228	0	1167	228	0
TR 17 Accepted MW		939	9	0	937	9	0	937	9	0	936	9	0	939	9	0	939	9	0
TR 18 Rejected MW		1058	128	0	1042	128	0	1054	128	0	970	136	0	870	239	0	915	195	0
TR 18 Accepted MW		640	273	0	633	270	0	658	265	0	668	257	0	592	348	0	587	348	0
TR 19 Rejected MW		753	122	0	724	129	0	728	82	0	809	82	0	640	155	0	663	155	0
TR 19 Accepted MW		600	84	175	587	86	166	509	37	84	518	37	86	347	0	0	346	0	0
TR 20 Rejected MW		0	0	0	0	0	0	670	199	140	698	202	140	447	333	140	624	246	140
TR 20 Accepted MW		0	0	0	0	0	0	0	18	84	0	18	88	0	0	0	0	0	0
sub Total Rejected MW		5985	402	19	5928	409	19	6440	561	159	6643	572	159	6251	974	159	6495	843	159
sub Total Accepted MW		2670	376	175	2646	375	166	2594	339	168	2613	331	174	2360	367	0	2354	367	0
Total Accepted MW		3221			3187			3101			3118			2727			2721		
Average Rejected Availability Price (£/MW/h)	TR 10	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 11	£ 16.08	£ -	£ -	£ 15.97	£ -	£ -	£ 16.02	£ -	£ -	£ 16.08	£ -	£ -	£ 19.12	£ -	£ -	£ 19.12	£ -	£ -
	TR 12	£ 12.26	£ -	£ -	£ 12.25	£ -	£ -	£ 12.26	£ -	£ -	£ 12.26	£ -	£ -	£ 12.27	£ -	£ -	£ 12.27	£ -	£ -
	TR 16	£ 7.58	£ 7.88	£ 9.30	£ 7.58	£ 7.88	£ 9.30	£ 7.56	£ 8.19	£ 9.30	£ 7.58	£ 8.19	£ 9.30	£ 7.58	£ 8.58	£ 9.30	£ 7.58	£ 8.58	£ 9.30
	TR 17	£ 7.35	£ 7.77	£ -	£ 7.36	£ 7.77	£ -	£ 7.34	£ 7.77	£ -	£ 7.35	£ 7.77	£ -	£ 7.34	£ 7.44	£ -	£ 7.34	£ 7.44	£ -
	TR 18	£ 6.33	£ 6.17	£ -	£ 6.33	£ 6.18	£ -	£ 6.36	£ 6.18	£ -	£ 6.34	£ 6.22	£ -	£ 6.16	£ 6.38	£ -	£ 6.15	£ 6.57	£ -
	TR 19	£ 5.19	£ 5.11	£ -	£ 5.11	£ 5.05	£ -	£ 4.87	£ 5.42	£ -	£ 5.25	£ 5.42	£ -	£ 4.84	£ 4.39	£ -	£ 4.88	£ 4.38	£ -
	TR 20	£ -	£ -	£ -	£ -	£ -	£ -	£ 3.55	£ 2.40	£ 12.60	£ 3.51	£ 2.35	£ 12.60	£ 3.51	£ 2.75	£ 12.60	£ 3.39	£ 2.60	£ 12.60
Average Accepted Availability Price (£/MW/h)	TR 10	£ 7.00	£ -	£ -	£ 7.00	£ -	£ -	£ 7.15	£ -	£ -	£ 7.15	£ -	£ -	£ 7.45	£ -	£ -	£ 7.45	£ -	£ -
	TR 11	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -
	TR 12	£ 11.50	£ -	£ -	£ 11.50	£ -	£ -	£ 11.50	£ -	£ -	£ 11.50	£ -	£ -	£ 11.50	£ -	£ -	£ 11.50	£ -	£ -
	TR 16	£ 7.30	£ 7.22	£ -	£ 7.30	£ 7.22	£ -	£ 7.30	£ 7.22	£ -	£ 7.30	£ 7.22	£ -	£ 6.97	£ 7.22	£ -	£ 6.97	£ 7.22	£ -
	TR 17	£ 5.64	£ 7.90	£ -	£ 5.63	£ 7.90	£ -	£ 5.63	£ 7.90	£ -	£ 5.63	£ 7.90	£ -	£ 5.63	£ 7.90	£ -	£ 5.63	£ 7.90	£ -
	TR 18	£ 6.14	£ 6.10	£ -	£ 6.15	£ 6.15	£ -	£ 6.11	£ 6.15	£ -	£ 6.10	£ 6.18	£ -	£ 6.20	£ 5.87	£ -	£ 6.20	£ 5.87	£ -
	TR 19	£ 3.43	£ 3.90	£ 1.20	£ 3.43	£ 3.87	£ 1.20	£ 3.56	£ 4.49	£ 1.50	£ 3.68	£ 4.49	£ 1.50	£ 3.70	£ -	£ -	£ 3.70	£ -	£ -
	TR 20	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ 0.00	£ 0.80	£ -	£ -	£ 0.80	£ -	£ -	£ -	£ -	£ -	£ -
Average Rejected Utilisation Price (£/MWh)	TR 10	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 11	£ 220	£ -	£ -	£ 222	£ -	£ -	£ 221	£ -	£ -	£ 220	£ -	£ -	£ 191	£ -	£ -	£ 192	£ -	£ -
	TR 12	£ 222	£ -	£ -	£ 222	£ -	£ -	£ 222	£ -	£ -	£ 222	£ -	£ -	£ 222	£ -	£ -	£ 222	£ -	£ -
	TR 16	£ 229	£ 278	£ 175	£ 229	£ 278	£ 175	£ 230	£ 278	£ 175	£ 229	£ 278	£ 175	£ 229	£ 278	£ 175	£ 229	£ 278	£ 175
	TR 17	£ 184	£ 172	£ -	£ 184	£ 172	£ -	£ 184	£ 172	£ -	£ 185	£ 172	£ -	£ 185	£ 177	£ -	£ 184	£ 177	£ -
	TR 18	£ 178	£ 183	£ -	£ 178	£ 182	£ -	£ 178	£ 183	£ -	£ 181	£ 181	£ -	£ 180	£ 188	£ -	£ 180	£ 190	£ -
	TR 19	£ 160	£ 153	£ -	£ 162	£ 153	£ -	£ 163	£ 159	£ -	£ 161	£ 159	£ -	£ 173	£ 158	£ -	£ 174	£ 158	£ -
	TR 20	£ -	£ -	£ -	£ -	£ -	£ -	£ 167	£ 111	£ 235	£ 168	£ 111	£ 270	£ 171	£ 152	£ 270	£ 165	£ 167	£ 270
Average Accepted Utilisation Price (£/MWh)	TR 10	£ 350	£ -	£ -	£ 350	£ -	£ -	£ 350	£ -	£ -	£ 350	£ -	£ -	£ 360	£ -	£ -	£ 360	£ -	£ -
	TR 11	£ 224	£ -	£ -	£ 224	£ -	£ -	£ 224	£ -	£ -	£ 224	£ -	£ -	£ 224	£ -	£ -	£ 224	£ -	£ -
	TR 12	£ 206	£ -	£ -	£ 206	£ -	£ -	£ 206	£ -	£ -	£ 206	£ -	£ -	£ 206	£ -	£ -	£ 206	£ -	£ -
	TR 16	£ 187	£ 190	£ -	£ 187	£ 190	£ -	£ 187	£ 190	£ -	£ 187	£ 190	£ -	£ 193	£ 190	£ -	£ 193	£ 190	£ -
	TR 17	£ 242	£ 139	£ -	£ 242	£ 139	£ -	£ 242	£ 139	£ -	£ 242	£ 139	£ -	£ 242	£ 139	£ -	£ 242	£ 139	£ -
	TR 18	£ 151	£ 140	£ -	£ 151	£ 140	£ -	£ 151	£ 141	£ -	£ 152	£ 140	£ -	£ 150	£ 151	£ -	£ 149	£ 151	£ -
	TR 19	£ 161	£ 118	£ 120	£ 160	£ 120	£ 120	£ 164	£ 115	£ 120	£ 170	£ 115	£ 120	£ 190	£ -	£ -	£ 190	£ -	£ -
	TR 20	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ 91	£ 90	£ -	£ 91	£ 90	£ -	£ -	£ -	£ -	£ -	£ -

Average Prices are Weighted by MW Volume and Hours Tendered

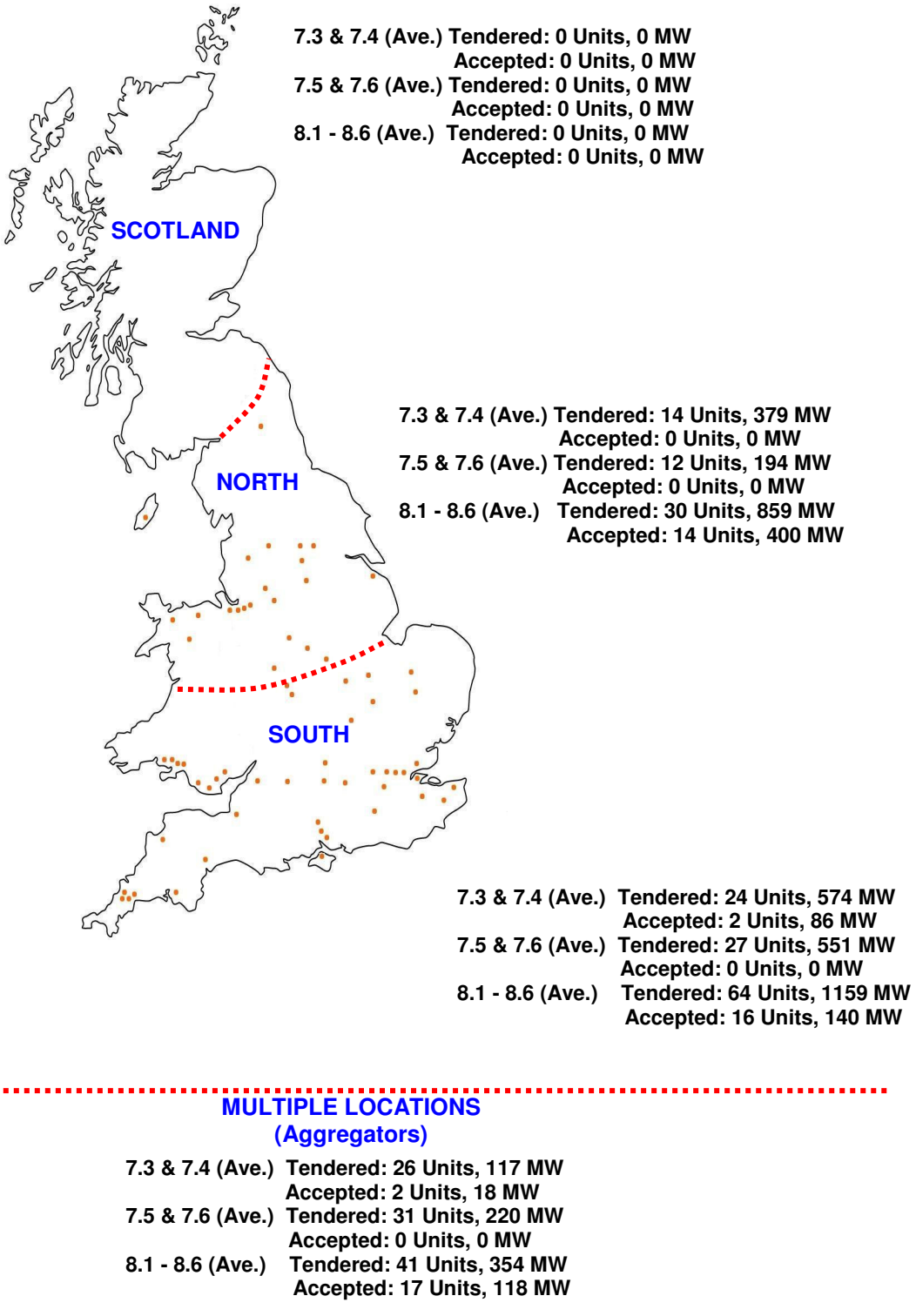
Table 2 Year 8 Summary

Season		8.1			8.2			8.3			8.4			8.5			8.6		
Service Type		C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C	C <20mins	F <20mins	>20mins F or C
TR 10 Rejected MW		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TR 10 Accepted MW		68	0	0	68	0	0	68	0	0	68	0	0	68	0	0	68	0	0
TR 11 Rejected MW		424	0	0	420	0	0	422	0	0	424	0	0	426	0	0	426	0	0
TR 11 Accepted MW		116	0	0	116	0	0	116	0	0	116	0	0	116	0	0	116	0	0
TR 12 Rejected MW		587	0	0	583	0	0	585	0	0	587	0	0	589	0	0	589	0	0
TR 12 Accepted MW		273	0	0	271	0	0	272	0	0	273	0	0	274	0	0	274	0	0
TR 16 Rejected MW		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TR 16 Accepted MW		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TR 17 Rejected MW		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TR 17 Accepted MW		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TR 18 Rejected MW		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TR 18 Accepted MW		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TR 19 Rejected MW		1638	134	0	1638	134	0	1617	134	0	1632	134	0	1357	238	0	1467	214	0
TR 19 Accepted MW		591	0	0	577	0	0	582	0	0	580	0	0	605	14	0	602	14	0
TR 20 Rejected MW		1676	35	0	1681	35	0	1735	35	0	1665	35	0	1370	223	0	1630	163	0
TR 20 Accepted MW		612	141	0	626	143	0	626	121	0	628	121	0	318	127	0	362	123	0
sub Total Rejected MW		4325	169	0	4322	169	0	4359	169	0	4308	169	0	3742	461	0	4112	377	0
sub Total Accepted MW		1660	141	0	1658	143	0	1664	121	0	1665	121	0	1381	141	0	1422	137	0
Total Accepted MW		1801			1801			1785			1786			1522			1559		
Average Rejected Availability Price (£/MW/h)	TR 10	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 11	£ 19.32	£ -	£ -	£ 19.28	£ -	£ -	£ 19.30	£ -	£ -	£ 19.32	£ -	£ -	£ 19.33	£ -	£ -	£ 19.33	£ -	£ -
	TR 12	£ 12.26	£ -	£ -	£ 12.25	£ -	£ -	£ 12.26	£ -	£ -	£ 12.26	£ -	£ -	£ 12.27	£ -	£ -	£ 12.27	£ -	£ -
	TR 16	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 17	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 18	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 19	£ 5.63	£ 6.73	£ -	£ 5.63	£ 6.73	£ -	£ 5.64	£ 6.73	£ -	£ 5.64	£ 6.73	£ -	£ 5.55	£ 6.28	£ -	£ 5.58	£ 6.28	£ -
	TR 20	£ 4.16	£ 3.23	£ -	£ 4.16	£ 3.23	£ -	£ 4.20	£ 3.23	£ -	£ 4.28	£ 3.23	£ -	£ 4.35	£ 4.35	£ -	£ 4.33	£ 3.99	£ -
Average Accepted Availability Price (£/MW/h)	TR 10	£ 7.00	£ -	£ -	£ 7.00	£ -	£ -	£ 7.15	£ -	£ -	£ 7.15	£ -	£ -	£ 7.45	£ -	£ -	£ 7.45	£ -	£ -
	TR 11	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -	£ 11.00	£ -	£ -
	TR 12	£ 11.51	£ -	£ -	£ 11.51	£ -	£ -	£ 11.51	£ -	£ -	£ 11.51	£ -	£ -	£ 11.52	£ -	£ -	£ 11.52	£ -	£ -
	TR 16	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 17	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 18	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 19	£ 4.00	£ -	£ -	£ 3.99	£ -	£ -	£ 3.99	£ -	£ -	£ 3.98	£ -	£ -	£ 3.98	£ 4.00	£ -	£ 3.99	£ 4.00	£ -
	TR 20	£ 3.86	£ 3.59	£ -	£ 3.90	£ 3.59	£ -	£ 3.90	£ 3.63	£ -	£ 4.38	£ 3.63	£ -	£ 5.00	£ 3.74	£ -	£ 5.07	£ 3.65	£ -
Average Rejected Utilisation Price (£/MWh)	TR 10	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 11	£ 187	£ -	£ -	£ 185	£ -	£ -	£ 186	£ -	£ -	£ 187	£ -	£ -	£ 190	£ -	£ -	£ 191	£ -	£ -
	TR 12	£ 222	£ -	£ -	£ 222	£ -	£ -	£ 222	£ -	£ -	£ 222	£ -	£ -	£ 222	£ -	£ -	£ 222	£ -	£ -
	TR 16	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 17	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 18	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 19	£ 198	£ 155	£ -	£ 199	£ 155	£ -	£ 199	£ 155	£ -	£ 199	£ 155	£ -	£ 208	£ 152	£ -	£ 204	£ 152	£ -
	TR 20	£ 207	£ 198	£ -	£ 207	£ 198	£ -	£ 206	£ 198	£ -	£ 210	£ 198	£ -	£ 216	£ 158	£ -	£ 210	£ 165	£ -
Average Accepted Utilisation Price (£/MWh)	TR 10	£ 350	£ -	£ -	£ 350	£ -	£ -	£ 350	£ -	£ -	£ 350	£ -	£ -	£ 360	£ -	£ -	£ 360	£ -	£ -
	TR 11	£ 224	£ -	£ -	£ 224	£ -	£ -	£ 224	£ -	£ -	£ 224	£ -	£ -	£ 224	£ -	£ -	£ 224	£ -	£ -
	TR 12	£ 206	£ -	£ -	£ 206	£ -	£ -	£ 206	£ -	£ -	£ 206	£ -	£ -	£ 206	£ -	£ -	£ 206	£ -	£ -
	TR 16	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 17	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 18	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 19	£ 162	£ -	£ -	£ 163	£ -	£ -	£ 163	£ -	£ -	£ 163	£ -	£ -	£ 162	£ 168	£ -	£ 163	£ 168	£ -
	TR 20	£ 152	£ 135	£ -	£ 151	£ 134	£ -	£ 151	£ 130	£ -	£ 151	£ 130	£ -	£ 143	£ 136	£ -	£ 139	£ 138	£ -

Average Prices are Weighted by MW Volume and Hours Tendered

Figure 2 presents the number of units and the total MW tendered and accepted, averaged either for a pair of seasons or for all six seasons in the case of year seven, with respect to the location in Great Britain. For instance, in the north of England region for seasons 8.1 & 8.6, an average of 30 units were tendered offering an average total of 859MW of capacity, of which an average of 14 units were accepted which represents an average total of 400MW of capacity. The orange dots on the map indicate the location of the tenders (not including sites located in more than one region).

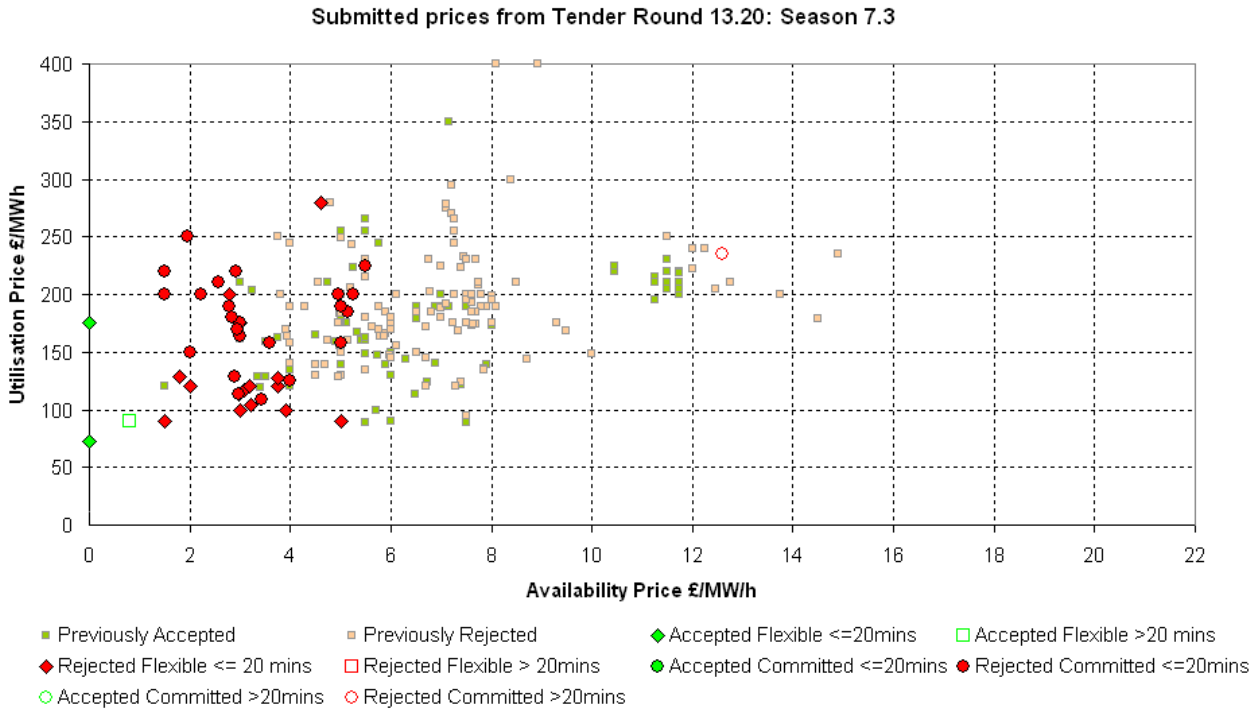
Figure 2 Map of Great Britain

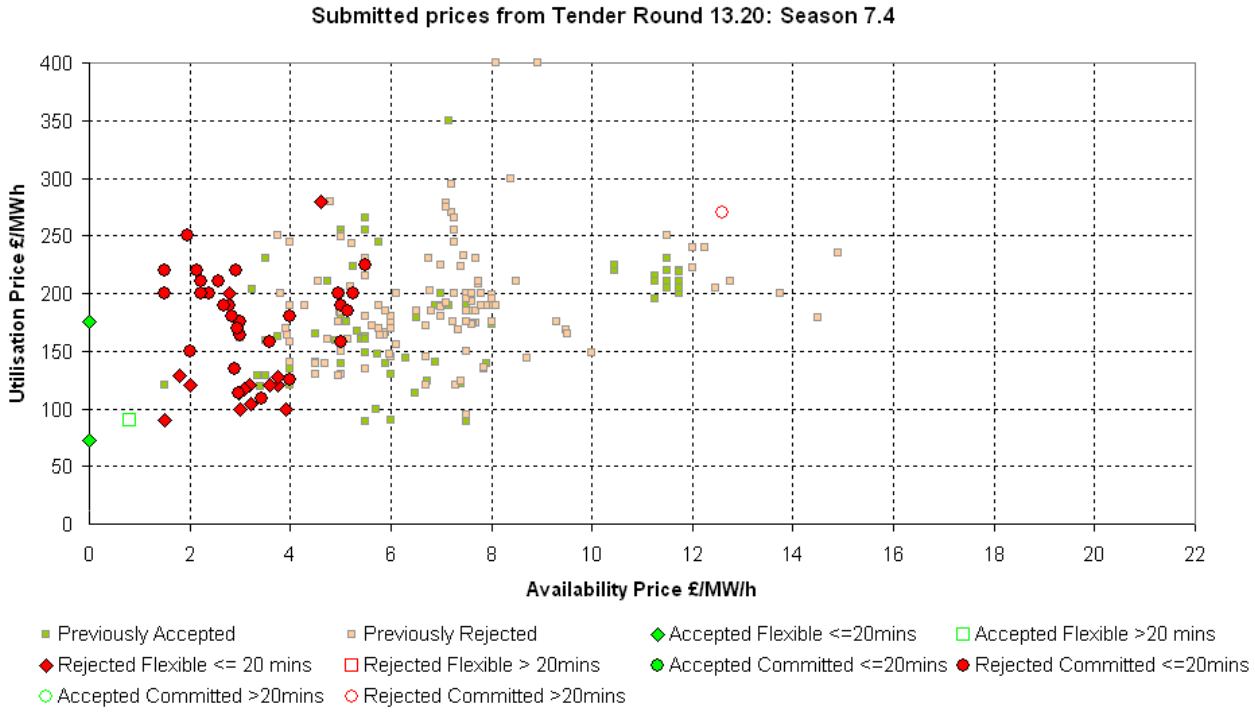


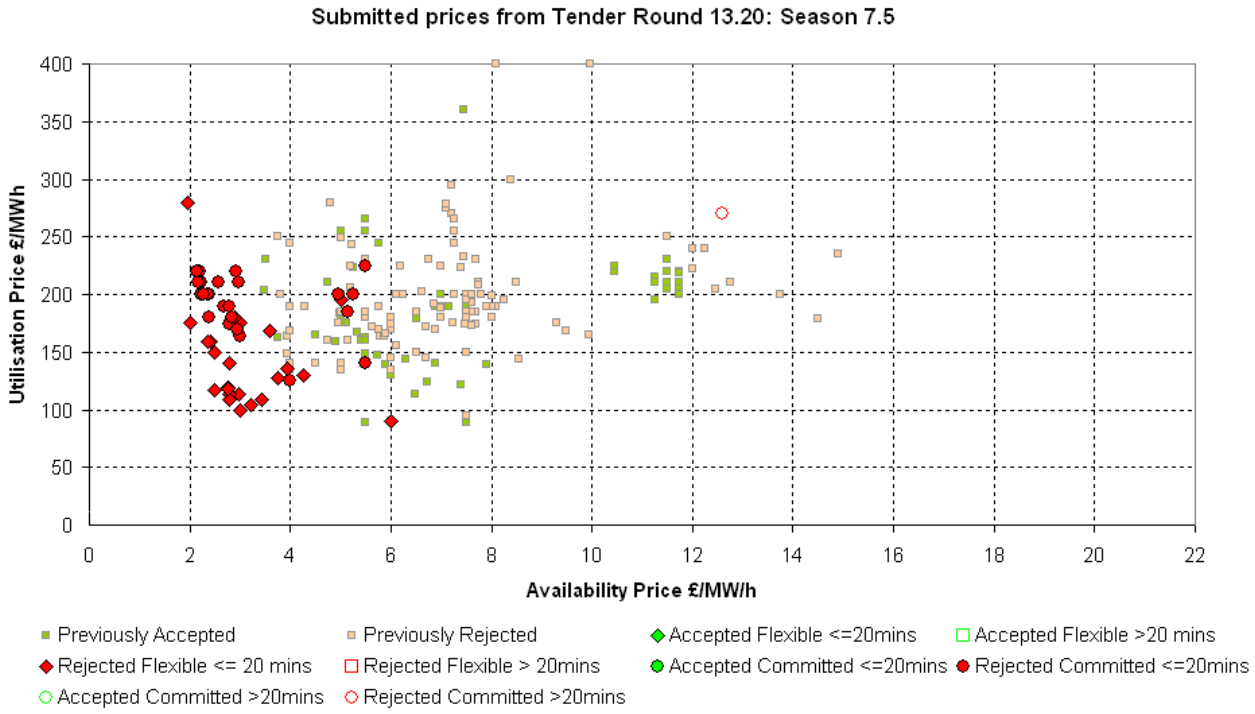
Section 1.2 Prices

Figures 3 and 4 below show scatter plots of availability and utilisation price for each tender and for each season. The data is broken down into response time groups of >20 mins or <=20 mins, flexible or committed service and accepted or rejected tenders. These charts also depict the accepted and rejected tenders from previous tender rounds.

Figure 3 Year 7 Availability and Utilisation price charts






Submitted prices from Tender Round 13.20: Season 7.5
Utilisation Price £/MWh
Availability Price £/MW/h
0
50
100
150
200
250
300
350
400
0
2
4
6
8
10
12
14
16
18
20
22
Previously Accepted
Previously Rejected
Accepted Flexible <=20mins
Accepted Flexible >20 mins
Rejected Flexible <= 20 mins
Rejected Flexible > 20mins
Accepted Committed <=20mins
Rejected Committed <=20mins
Accepted Committed >20mins
Rejected Committed >20mins

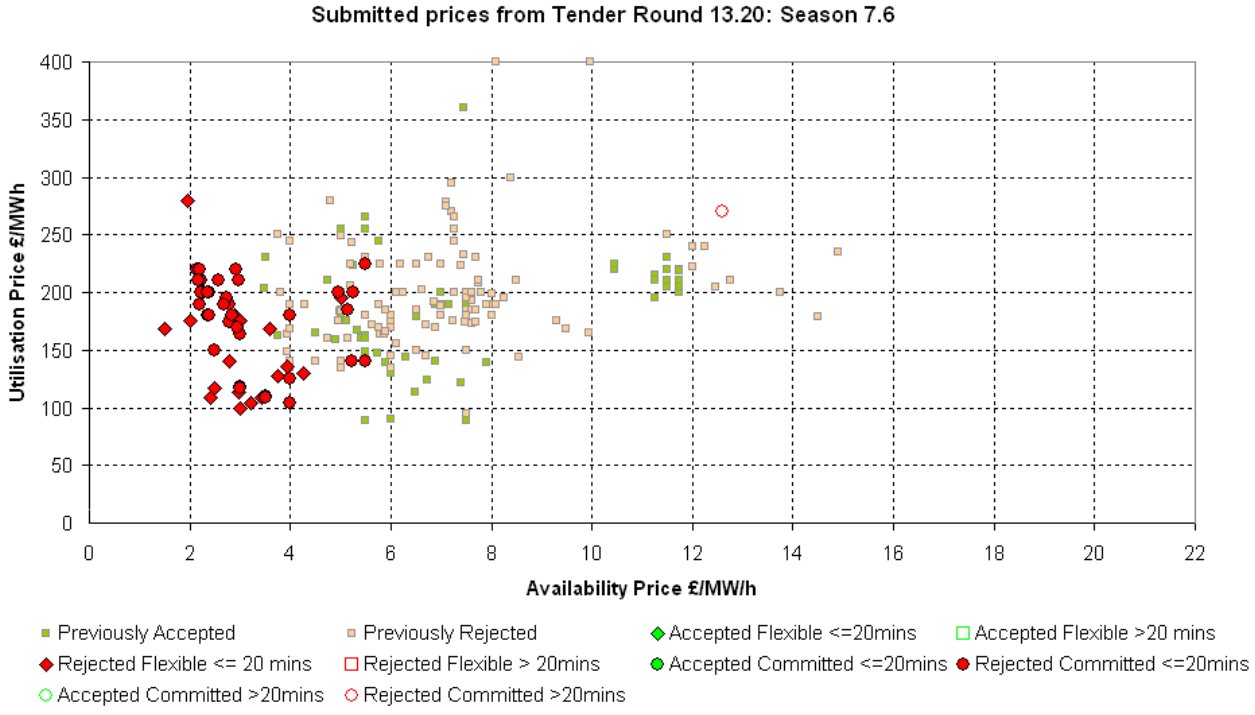
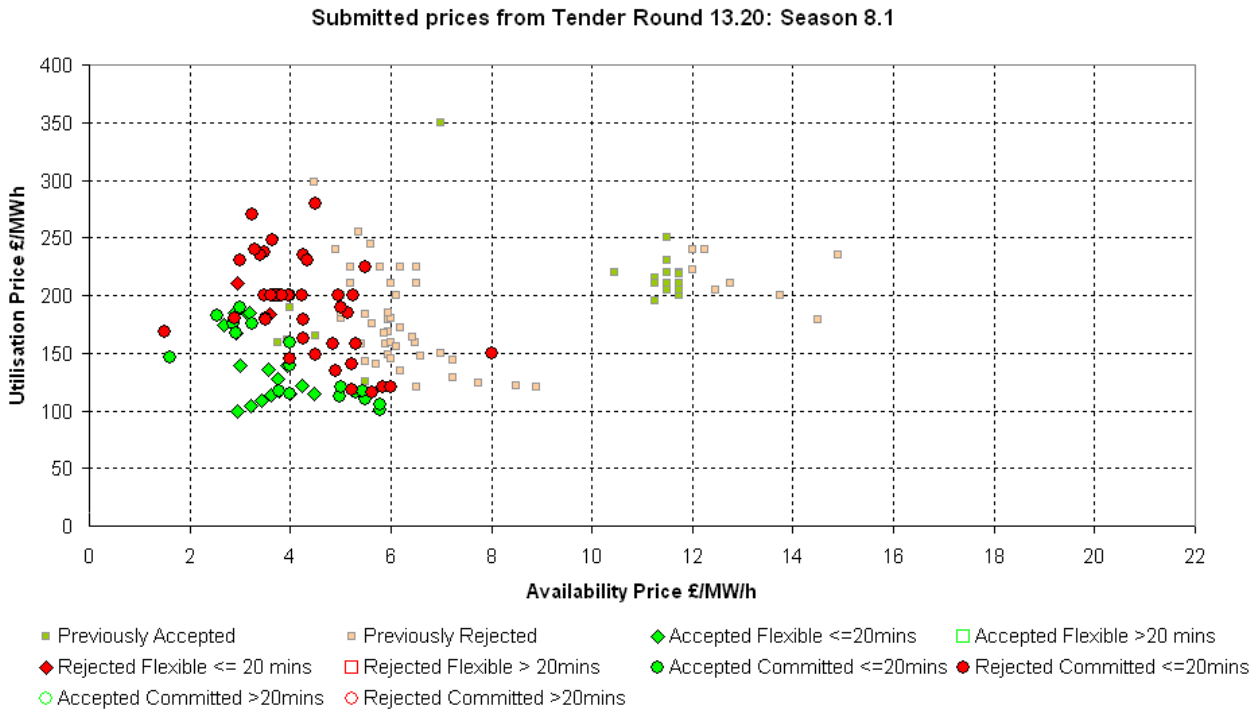
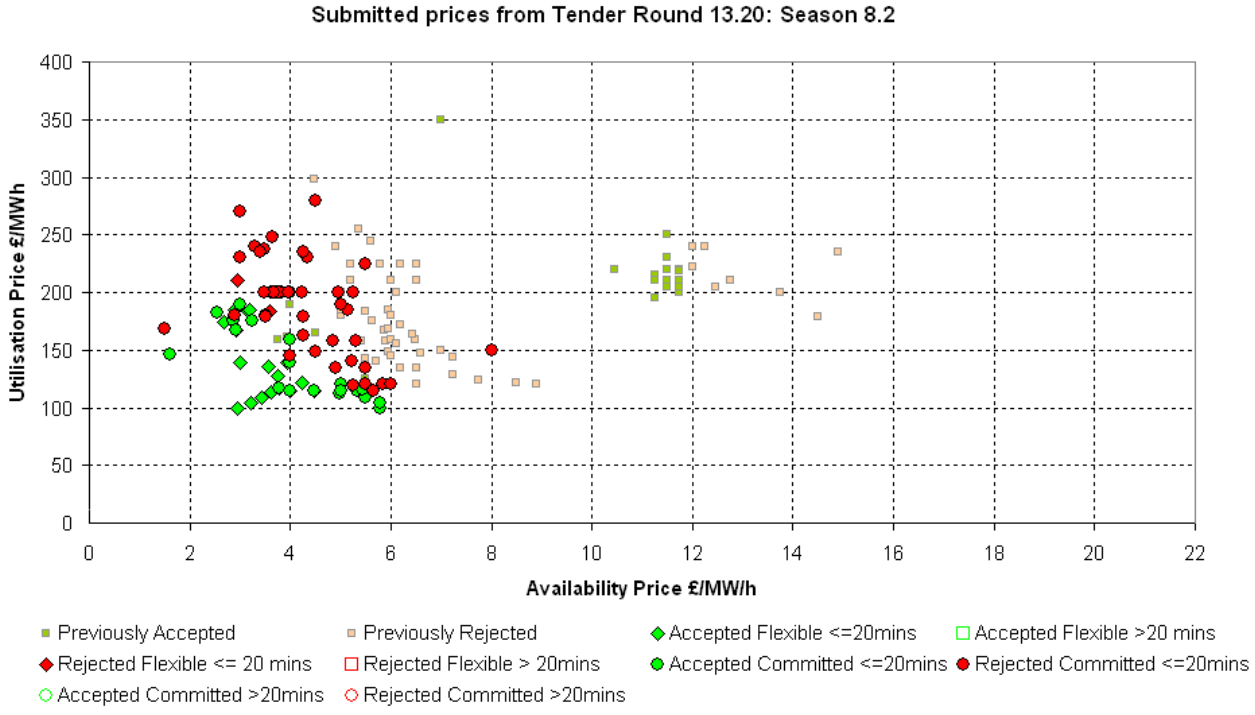
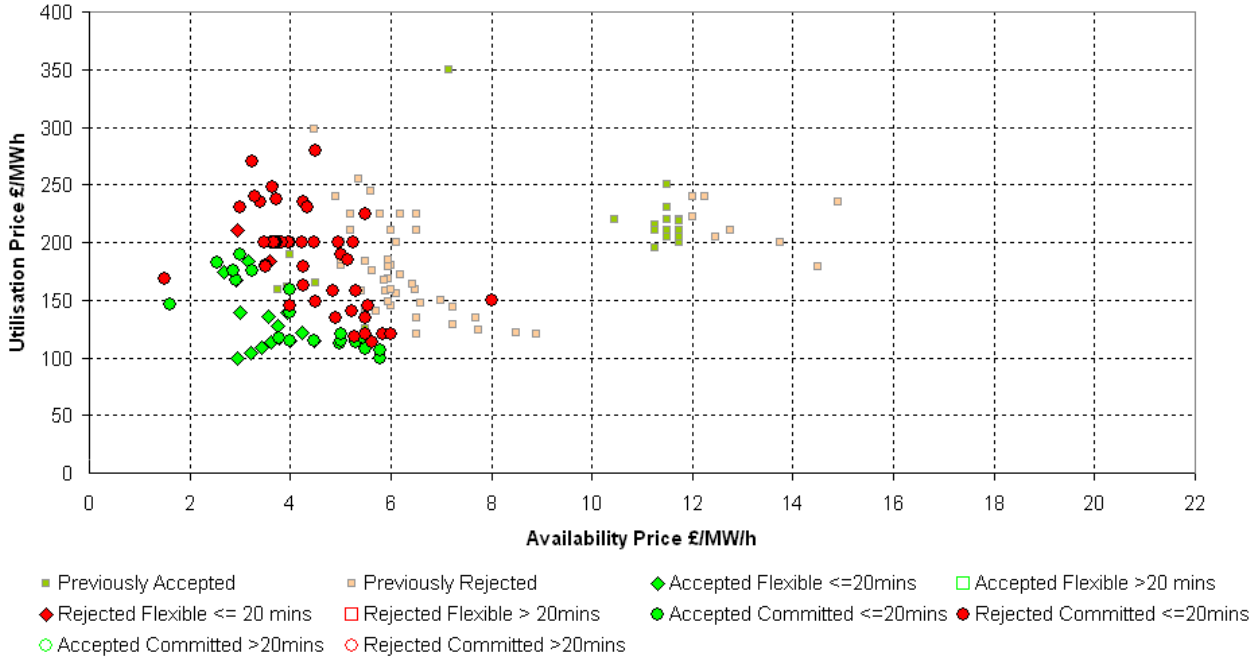

Submitted prices from Tender Round 13.20: Season 7.6
Utilisation Price £/MWh
Availability Price £/MW/h
0
50
100
150
200
250
300
350
400
0
2
4
6
8
10
12
14
16
18
20
22
Previously Accepted
Previously Rejected
Accepted Flexible <=20mins
Accepted Flexible >20 mins
Rejected Flexible <= 20 mins
Rejected Flexible > 20mins
Accepted Committed <=20mins
Rejected Committed <=20mins
Accepted Committed >20mins
Rejected Committed >20mins

Figure 4 Year 8 Availability and Utilisation price charts

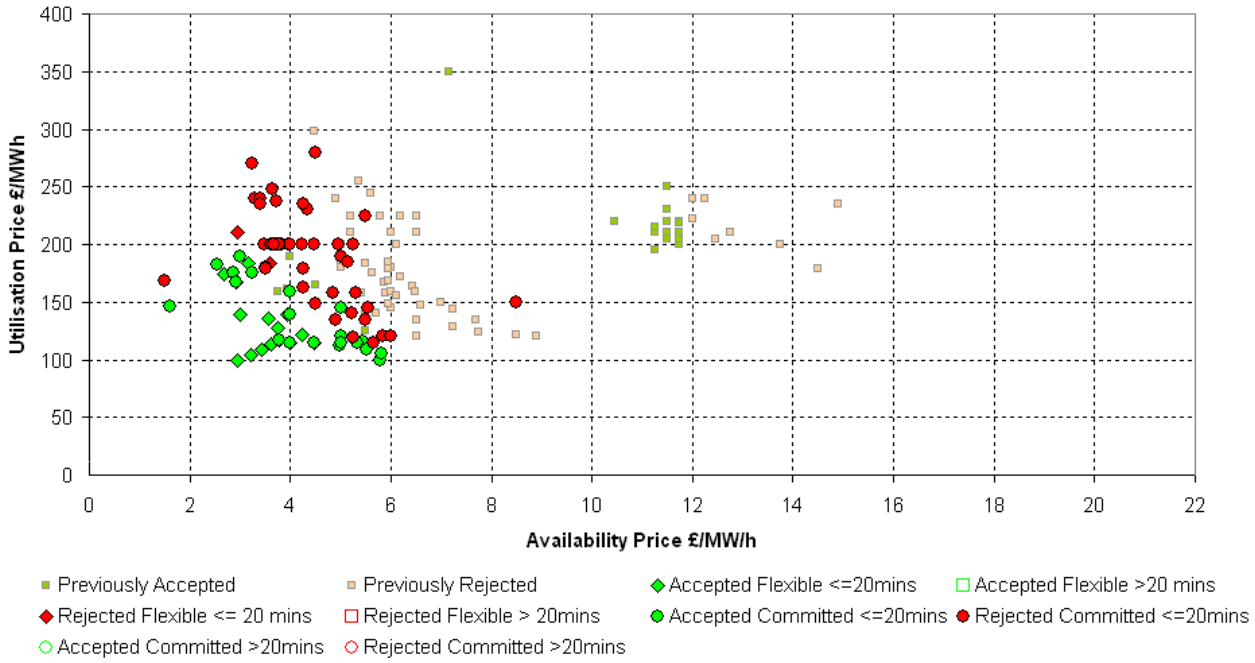




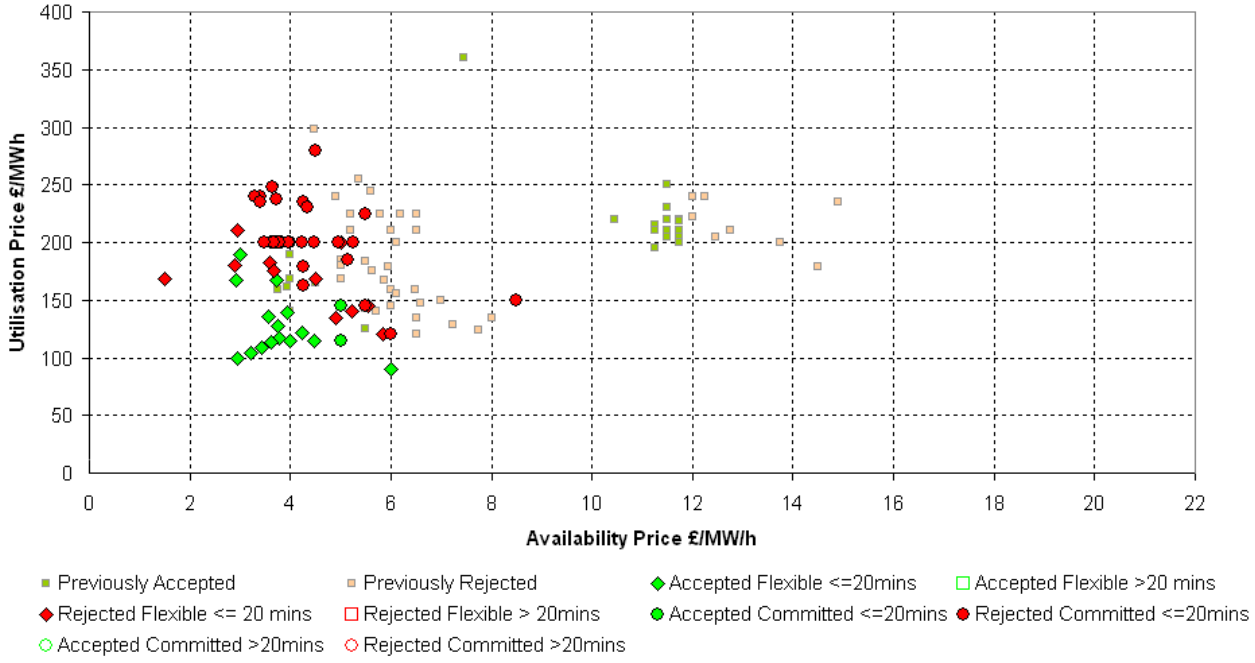
Submitted prices from Tender Round 13.20: Season 8.3



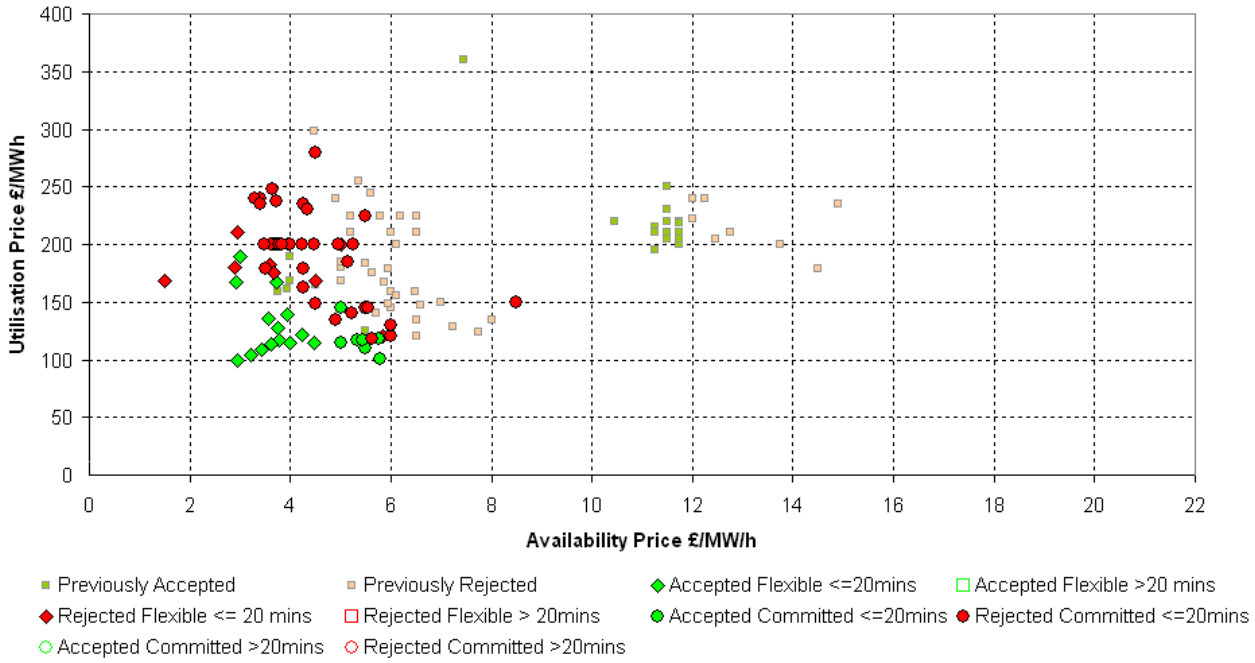
Submitted prices from Tender Round 13.20: Season 8.4



Submitted prices from Tender Round 13.20: Season 8.5



Submitted prices from Tender Round 13.20: Season 8.6



Section 1.3 MW Capacity

Figures 5 and 6 exhibit cumulative graphs. In these graphs the total accepted MW from previous tender rounds, up to and including the results from TR20, have been stacked according to two categories: **Figures 5a and 6a** illustrate the accepted MW stacked in terms of the utilisation price of a unit and **Figures 5b and 6b** illustrate the accepted MW stacked according to the response time of the unit, both sets of data are arranged in ascending order. **Figure 5a** shows that for season 7.3 there is approximately 1600MW of contracted STOR with utilisation prices of £200/MWh or less. **The utilisation prices have had indexation applied (seasonal and annual) for Year 7 only as Year 8 indexes are not currently known. Please note that the charts in Section 1.3 include MW from flexible units, which may not be available at all times. Also note that the charts contain data from previous tender rounds up to and including TR20.**

Figure 5a: Cumulative MW by Utilisation Price for Year 7

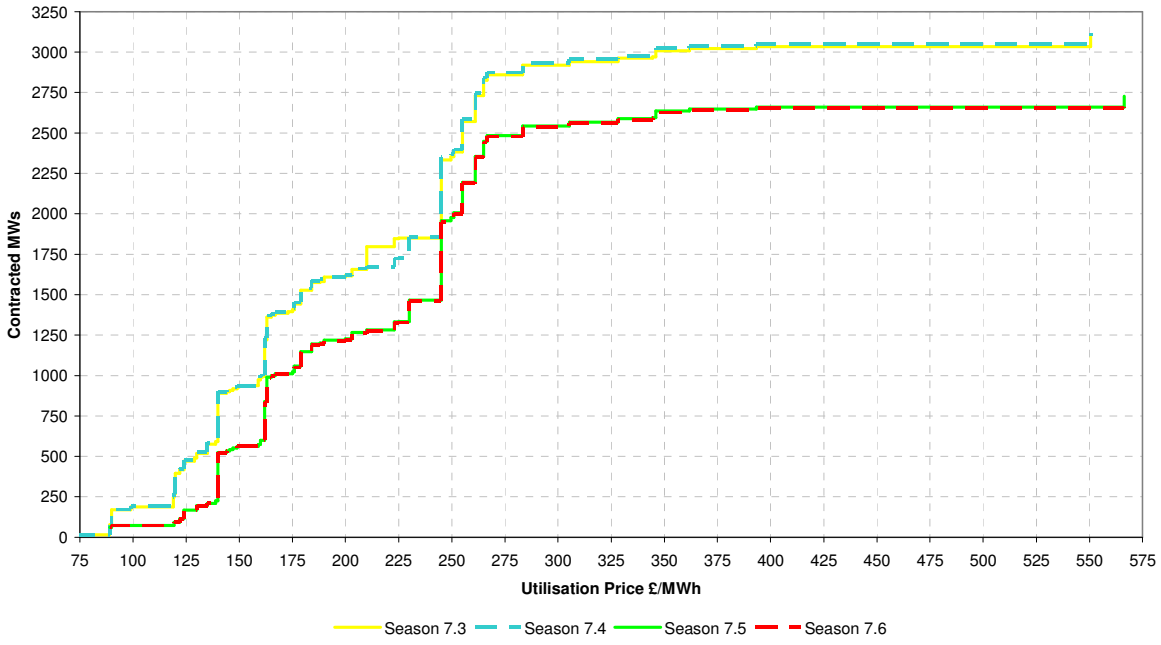


Figure 5b: Cumulative MW by Response Time for Year 7

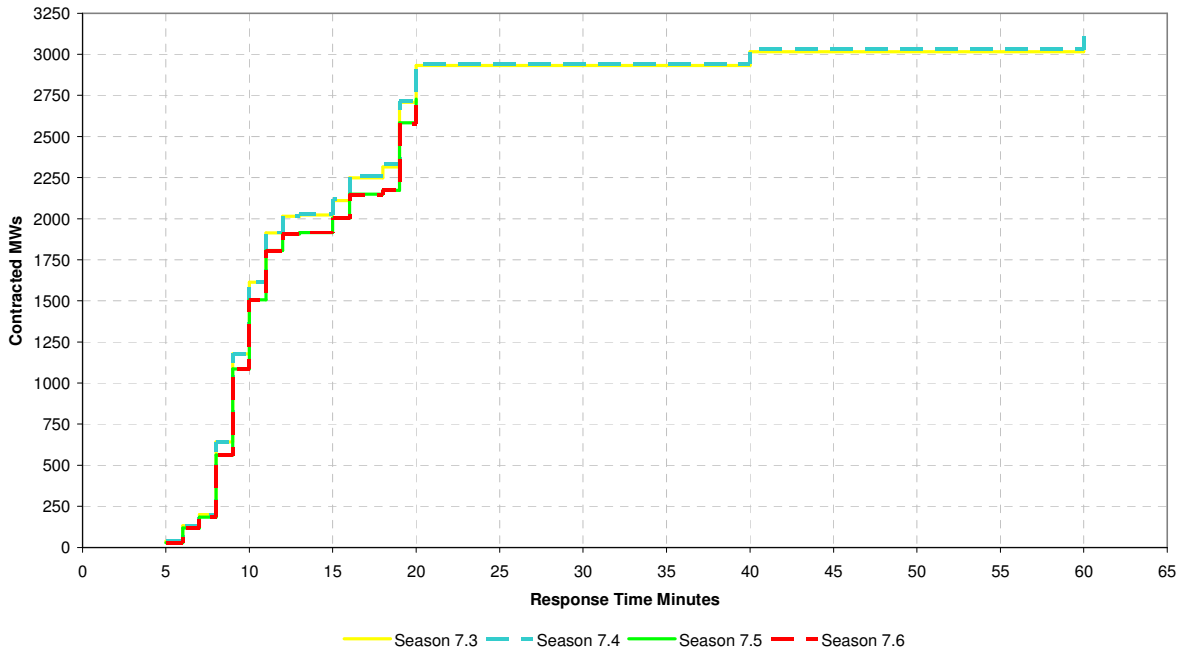


Figure 6b illustrates that for seasons 8.1 and 8.2 approximately 660MW of STOR is contracted with a response time of 10 minutes or less. **No indexation has been applied to Year 8 utilisation prices, the utilisation prices are presented according to their original base year.**

Figure 6a: Cumulative MW by Utilisation Price for Year 8

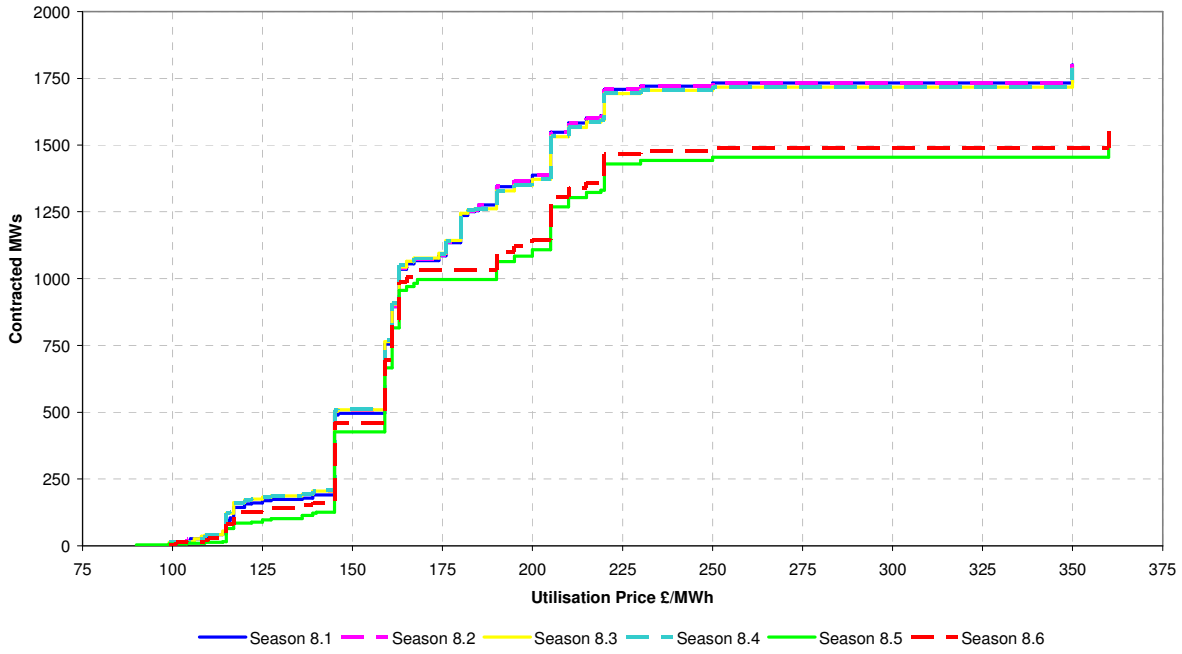
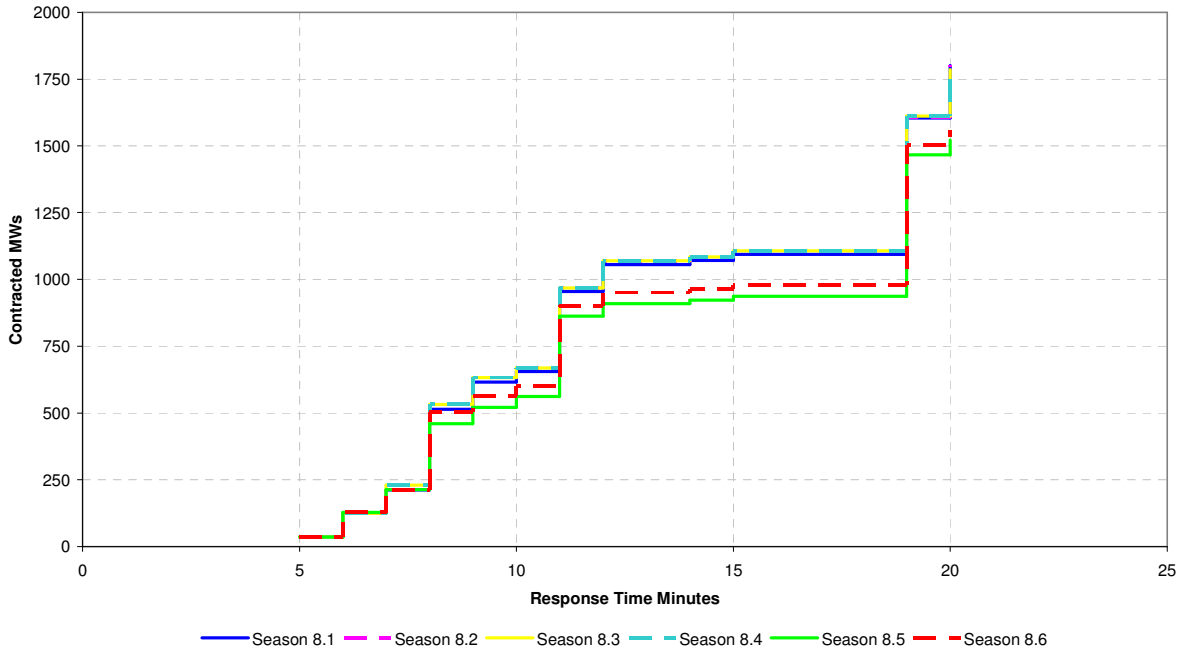


Figure 6b: Cumulative MW by Response Time for Year 8

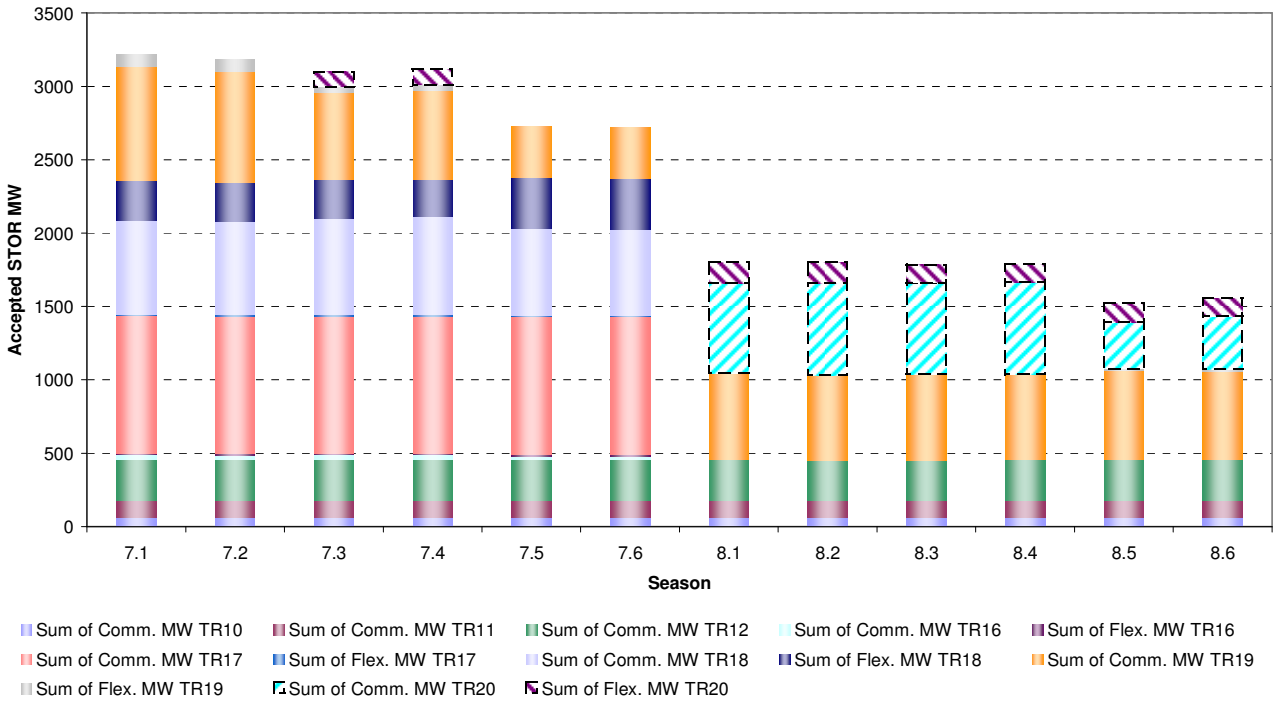


Section 2 Total Contracted Position

Figure 7 shows the breakdown of accepted volumes by committed and flexible services across the seasons of Years 6 and 7. The table accompanying Figure 7 below displays the same data in table format.

Figure 7 Year 7 and 8 summaries by tender round

Please note this figure contains data from previous tender rounds up to and including TR20.



	Season	7.1		7.2		7.3		7.4		7.5		7.6	
	Service Type	C	F	C	F	C	F	C	F	C	F	C	F
Accepted MW	TR10	68	0	68	0	68	0	68	0	68	0	68	0
	TR11	116	0	116	0	116	0	116	0	116	0	116	0
	TR12	276	0	274	0	275	0	276	0	277	0	277	0
	TR16	31	10	31	10	31	10	31	10	21	10	21	10
	TR17	939	9	937	9	937	9	936	9	939	9	939	9
	TR18	640	273	633	270	658	265	668	257	592	348	587	348
	TR19	775	84	753	86	593	37	604	37	347	0	346	0
	TR20	0	0	0	0	0	102	0	106	0	0	0	0
	Total	2845	376	2812	375	2678	423	2699	419	2360	367	2354	367

	Season	8.1		8.2		8.3		8.4		8.5		8.6	
	Service Type	C	F	C	F	C	F	C	F	C	F	C	F
Accepted MW	TR10	68	0	68	0	68	0	68	0	68	0	68	0
	TR11	116	0	116	0	116	0	116	0	116	0	116	0
	TR12	273	0	271	0	272	0	273	0	274	0	274	0
	TR16	0	0	0	0	0	0	0	0	0	0	0	0
	TR17	0	0	0	0	0	0	0	0	0	0	0	0
	TR18	0	0	0	0	0	0	0	0	0	0	0	0
	TR19	591	0	577	0	582	0	580	0	605	14	602	14
	TR20	612	141	626	143	626	121	628	121	318	127	362	123
	Total	1660	141	1658	143	1664	121	1665	121	1381	141	1422	137

Appendix 1: Terminology and Definitions

High level description of STOR:

STOR is designed to give National Grid sufficient Operating Reserve to replace sudden generation losses, or unpredictable changes in demand between four hours ahead of real time and real time and requires a large proportion of units to be available within 20 minutes. STOR also recognises that other potential reserve providers who cannot meet the 20 minute response time criteria can still be of value in meeting our reserve requirement. Hence a key aspect of the definition of the STOR product is that it extends the maximum response time to 240 minutes to allow alternative providers to participate. How value is placed on these units by National Grid is different to the sub 20 minute notice units as the longer notice units compete mainly with alternative options available in the Balancing Mechanism with equivalent response times. Location, reliability and utilisation parameters are also important elements of the STOR assessment.

The committed service applies to all providers who wish to make themselves available for all required windows nominated by National Grid. Both BM and NBM providers can tender for this service. The flexible service applies only to NBM providers and allows the provider to make the unit available or unavailable for particular windows. This availability is assessed on a week-ahead basis and providers are notified if their service is required or not. It is at the discretion of National Grid whether a unit is accepted or rejected at the week-ahead stage and this decision will be based on the same assessment principles as the main tender assessment. The increased accuracy of the week-ahead forecast means that some factors may have more importance such as location if specific constraint issues are forecast. Both Services attract an availability payment paid on a £/MW/h basis when available within defined windows and an utilisation payment on delivery of STOR MW when instructed by National Grid paid on a £/MWh basis.

A summary of the STOR service can be found on our website at the following link:

http://www.nationalgrid.com/NR/rdonlyres/083D0D9C-1A33-4336-8FA3-1A69DCC1C903/60303/TR20_General_Description.pdf

Appendix 2:

Accepted and Rejected Tenders TR20: A list of information containing prices, response time, location and unit type of all accepted and rejected tenders from this tender round, previously found in the appendix to the market information reports, can now be downloaded, in spreadsheet format, from the tender and reports section of the National Grid Balancing Services webpage:

http://www.nationalgrid.com/uk/Electricity/Balancing/services/STOR/

Appendix 3: Season Reference

The following tables summarise the season information for the current year (Year 7) and the following year (Year 8).

Seasons 2013/14

Season	Dates	WD		NWD		Hours/Day Type		Total
		Start Time	End Time	Start Time	End Time	WD	NWD	
1	05:00 on Monday 1st Apr 2013 - 05:00 on Monday 29th Apr 2013	07:00	13:30	10:00	14:00	218.5	32.5	251
		19:00	22:00	19:30	22:00			
2	05:00 on Monday 29th Apr 2013 - 05:00 on Monday 19th Aug 2013	07:30	14:00	09:30	13:30	1081	126	1207
		16:00	18:00	19:30	22:30			
		19:30	22:30					
3	05:00 on Monday 19th Aug 2013 - 05:00 on Monday 23rd Sep 2013	07:30	14:00	10:30	13:30	348	36	384
		16:00	21:30	19:00	22:00			
4	05:00 on Monday 23rd Sep 2013 - 05:00 on Monday 28th Oct 2013	07:00	13:30	10:30	13:30	330	32.5	362.5
		16:30	21:00	17:30	21:00			
5	05:00 on Monday 28th Oct 2013 - 05:00 on Monday 3rd Feb 2014	07:00	13:30	10:30	13:30	931.5	127.5	1059
		16:00	21:00	16:00	20:30			
6	05:00 on Monday 3rd Feb 2014 - 05:00 on Tuesday 1st Apr 2014	07:00	13:30	10:30	13:30	539	60	599
		16:30	21:00	16:30	21:00			
						3448	414.5	3862.5

Season	WD	NWD
1	23	5
2	94	18
3	29	6
4	30	5
5	81	17
6	49	8

Total Hours	3862.5

Seasons 2014/15

Season	Dates	WD		NWD		Hours/Day Type		Total
		Start Time	End Time	Start Time	End Time	WD	NWD	
1	05:00 on Tuesday 1st Apr 2014 - 05:00 on Monday 28th Apr 2014	07:00	13:30	10:00	14:00	209	32.5	241.5
		19:00	22:00	19:30	22:00			
2	05:00 on Monday 28th Apr 2014 - 05:00 on Monday 18th Aug 2014	07:30	14:00	09:30	13:30	1081	126	1207
		16:00	18:00	19:30	22:30			
		19:30	22:30					
3	05:00 on Monday 18th Aug 2014 - 05:00 on Monday 22nd Sep 2014	07:30	14:00	10:30	13:30	348	36	384
		16:00	21:30	19:00	22:00			
4	05:00 on Monday 22nd Sep 2014 - 05:00 on Monday 27th Oct 2014	07:00	13:30	10:30	13:30	330	32.5	362.5
		16:30	21:00	17:30	21:00			
5	05:00 on Monday 27th Oct 2014 - 05:00 on Monday 2nd Feb 2015	07:00	13:30	10:30	13:30	931.5	127.5	1059
		16:00	21:00	16:00	20:30			
6	05:00 on Monday 2nd Feb 2015 - 05:00 on Wednesday 1st Apr 2015	07:00	13:30	10:30	13:30	550	60	610
		16:30	21:00	16:30	21:00			
						3449.5	414.5	3864

Season	WD	NWD
1	22	5
2	94	18
3	29	6
4	30	5
5	81	17
6	50	8

Total Hours	3864