STOR Market Information Report: Tender Round 19
(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 19 (TR19). 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 TR19 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

Throughout the STOR seasons National Grid aims to procure a minimum of 1800MW of STOR (subject to sufficient economics). The daily and seasonal optimal STOR MW level varies due to real time and also seasonal pressures on the system, but National Grid has typically engaged in having approximately 2300MW of STOR, when available. Going forward, the optimal STOR MW level is expected to be similar to the optimal STOR MW level experienced currently, however if the ORR changes, then the optimal STOR MW level will also change.

The optimal STOR MW level is what National Grid expects to manage on a daily basis. 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.

It is only STOR units that have a response time of 20 minutes or less, that are able to contribute to the optimal STOR MW level as these units are able to help manage system security during any unforeseen event. STOR units with a long notice response time (a response time greater than 20 minutes) do not contribute to the optimal STOR MW level, yet they are kept as reserve for system flexibility and can be used to manage planned events that occur on the system.

Where economics are sufficiently strong, National Grid may procure long notice STOR over and above the optimal STOR MW level in order to ensure the Control Room's operational resilience.

Tenders Received in TR19

At the close of TR19, National Grid received tenders from 51 companies, totalling 186 units, for STOR contracts in 2013/14 and 2014/15. This included 21 units that had not tendered before from existing providers and seven new providers entered the market with 20 units. These new tendered sites, from the 7 new providers, represent a potential maximum 137MW of new capacity if they were all fully available at the same time.

This tender round was the final tender opportunity for seasons 7.1 and 7.2, 92 and 93 units were tendered for these seasons respectively. This represents a potential maximum 1734MW for season 7.1 and 1692MW for Season 7.2 in addition to the 2362MW and 2348MW already contracted for the respective seasons. Four units with a response time greater than 20 minutes tendered for seasons 7.1 and 7.2, the remaining tenders were for response times of 20 minutes or less.

A potential maximum of 2363MW was submitted for seasons in STOR Year 8 (2014/15) from 123 units. This included tenders from five companies with indexations on their submitted prices. The indexations are to adjust the availability price with respect to RPI change, and to adjust the utilisation prices with respect to gasoil price (Gas medium consumer price in this instance).

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

STOR Marketplace Continues to be Competitive and Heavily Subscribed

Prior to tender round 19, there was a significant amount of Framework Agreement activity with approximately 450MW of potential STOR capacity being added to new and existing agreements relating to tenders throughout STOR Years 7 and 8, albeit not all volumes were tendered as part of TR19.

For the first time in a few years, the maximum volume of MW tendered for STOR has fallen (see Figure 1). There are a couple of key reasons for this drop; the seasons in STOR Year 7 are the first where Aggregators are not able to facilitate within season growth through tendering multiple contracts and the withdrawal of mothballed plant that had previously participated in STOR. However, such reductions have been mostly offset by new and existing providers tendering new volumes to the STOR market.

The amount of contracted STOR actually used to maintain the ORR[2] 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 remain consistent throughout STOR Year 7.

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 TR19 and Outlook for STOR Year 7 (2013/14)

For the remaining seasons in Year 7, the combined capacity of tenders in TR19 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 TR19 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 existing Flexible STOR contracts for STOR Year 7 have been put under pressure by the economics from the leading and thus accepted, tenders from this tender round. This has led to ~290MW of previously accepted flexible units for seasons 7.1 and 7.2 being undercut by tenders in TR19. National Grid anticipates week ahead flexible STOR availability rejections to become a general feature of the STOR market, as opposed to observing flexible undercutting during the winter months in isolation. In light of this development we acknowledge the impact such undercutting has upon flexible contracts and are keeping the matter under review.

The volume of rejections to available flexible STOR units experienced on a week to week basis will continue to be influenced by a number of factors such as STOR unit availability and the market surplus for the week ahead.

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, apart from Scottish based tenders which have a devaluation applied to the economics of their tenders.

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

As the optimal STOR level is expected to be unchanged for seasons 7.3 and 7.4, and taking into consideration the pre-TR20 contracted position, there is likely to be very little need and scope for National Grid to add to the contracted STOR volumes for these seasons in TR20. This is due to contracted STOR volumes being forecast to out-turn on target, at the optimal STOR MW level.

Currently the need to add to the contracted STOR volumes for seasons 7.5 and 7.6 is greater than the existing contracted position and in this regard there are two further tender rounds available for participation in the winter season of 2013/14

The procurement of Long Notice STOR tenders for seasons 7.3 – 7.6 is unaffected as Long Notice STOR MW do not contribute to the optimal STOR level.

[2] 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

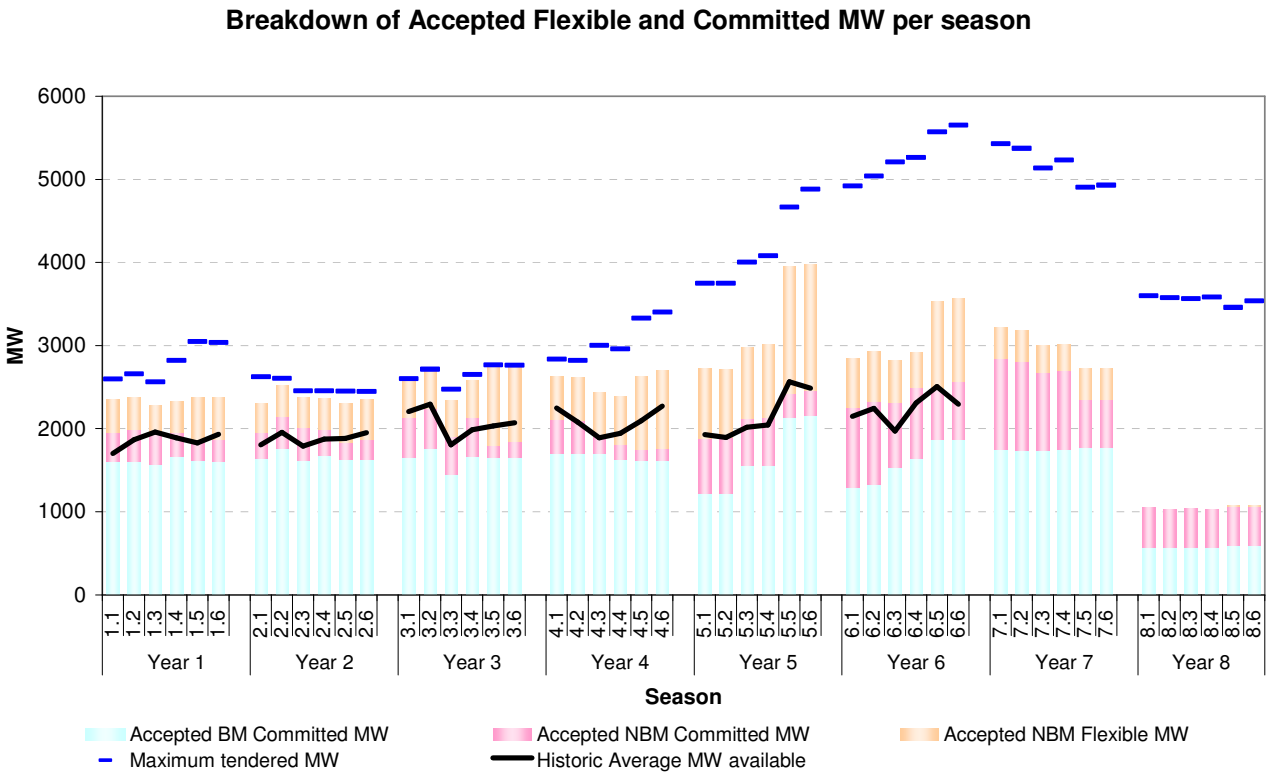
Outlook for STOR Year 8 (2014/15)

Looking ahead to STOR Year 8 (2014/15), the economics[3] of the tenders received has resulted in the acceptance of a number of STOR tenders, yet there are still large volumes of STOR MW still to be procured in future tender rounds.

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 TR 19.

Figure 1



[3] 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 19.

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		219	0	0	215	0	0	217	0	0	219	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		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
sub Total Rejected MW		**5973**	**402**	**19**	**5916**	**409**	**19**	**5758**	**362**	**19**	**5933**	**370**	**19**	**5792**	**641**	**19**	**5859**	**597**	**19**
sub Total Accepted MW		**2670**	**376**	**175**	**2646**	**375**	**166**	**2594**	**321**	**84**	**2613**	**313**	**86**	**2360**	**367**	**0**	**2354**	**367**	**0**
Total Accepted MW		**3221**			**3187**			**2999**			**3012**			**2727**			**2721**		
Average Rejected Availability Price (£MWh)	TR 10	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 11	£ 16.33	£ -	£ -	£ 16.21	£ -	£ -	£ 16.27	£ -	£ -	£ 16.33	£ -	£ -	£ 19.33	£ -	£ -	£ 19.33	£ -	£ -
	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	£ -
Average Accepted Availability Price (£MWh)	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	£ -	£ -
Average Rejected Utilisation Price (£MWh)	TR 10	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
	TR 11	£ 219	£ -	£ -	£ 220	£ -	£ -	£ 219	£ -	£ -	£ 219	£ -	£ -	£ 190	£ -	£ -	£ 191	£ -	£ -
	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	£ -
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	£ -	£ -

Average Prices are Weighted by MW Volume and Hours Tendered

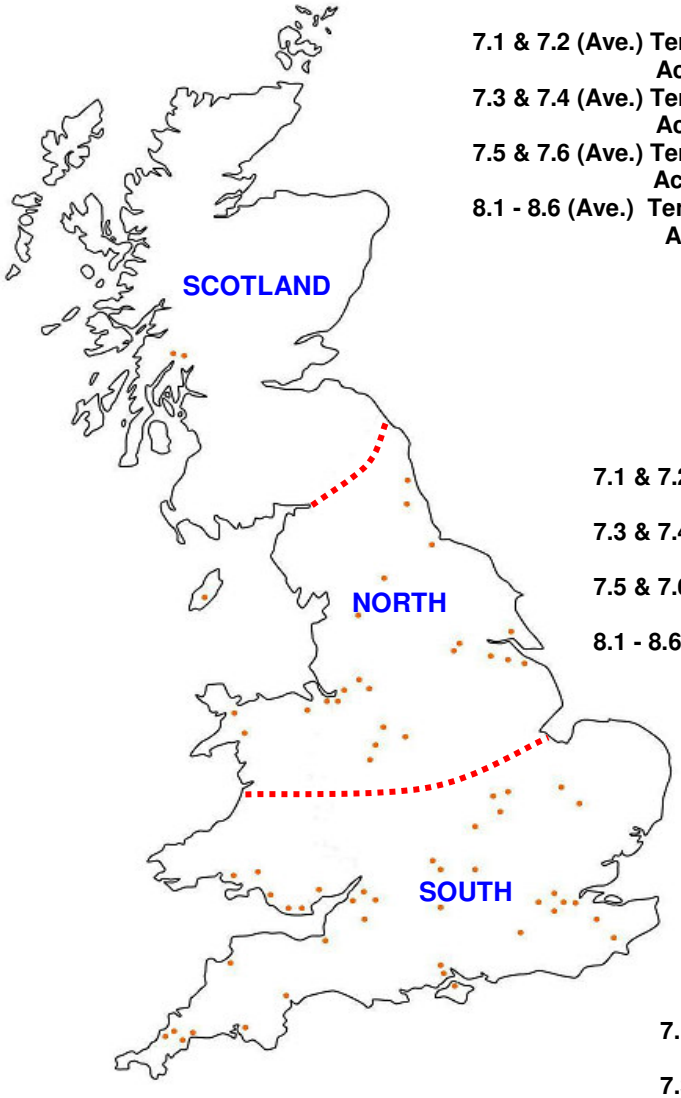
Table 2 Year 8 Summary

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
sub Total Rejected MW		**2649**	**134**	**0**	**2641**	**134**	**0**	**2624**	**134**	**0**	**2643**	**134**	**0**	**2372**	**238**	**0**	**2482**	**214**	**0**
sub Total Accepted MW		**1048**	**0**	**0**	**1032**	**0**	**0**	**1038**	**0**	**0**	**1037**	**0**	**0**	**1063**	**14**	**0**	**1060**	**14**	**0**
Total Accepted MW		**1048**			**1032**			**1038**			**1037**			**1077**			**1074**		
Average Rejected Availability Price (£MWh)	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	£ -
Average Accepted Availability Price (£MWh)	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	£ -
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	£ -
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	£ -

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 south of England region for seasons 7.3 & 7.4, an average of 29 units were tendered offering an average total of 569MW of capacity, of which an average of 9 units were accepted which represents an average of 249MW 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



SCOTLAND

7.1 & 7.2 (Ave.) Tendered: 4 Units, 100 MW
Accepted: 0 Units, 0 MW
7.3 & 7.4 (Ave.) Tendered: 3 Units, 91 MW
Accepted: 0 Units, 0 MW
7.5 & 7.6 (Ave.) Tendered: 1 Unit, 32 MW
Accepted: 0 Units, 0 MW
8.1 - 8.6 (Ave.) Tendered: 0 Units, 0 MW
Accepted: 0 Units, 0 MW

NORTH

7.1 & 7.2 (Ave.) Tendered: 26 Units, 694 MW
Accepted: 12 Units, 448 MW
7.3 & 7.4 (Ave.) Tendered: 21 Units, 605 MW
Accepted: 10 Units, 362 MW
7.5 & 7.6 (Ave.) Tendered: 12 Units, 390 MW
Accepted: 4 Units, 200 MW
8.1 - 8.6 (Ave.) Tendered: 19 Units, 687 MW
Accepted: 1 Unit, 143 MW

SOUTH

7.1 & 7.2 (Ave.) Tendered: 35 Units, 731 MW
Accepted: 12 Units, 373 MW
7.3 & 7.4 (Ave.) Tendered: 29 Units, 569 MW
Accepted: 9 Units, 249 MW
7.5 & 7.6 (Ave.) Tendered: 26 Units, 514 MW
Accepted: 2 Units, 147 MW
8.1 - 8.6 (Ave.) Tendered: 56 Units, 1259 MW
Accepted: 5 Units, 395 MW

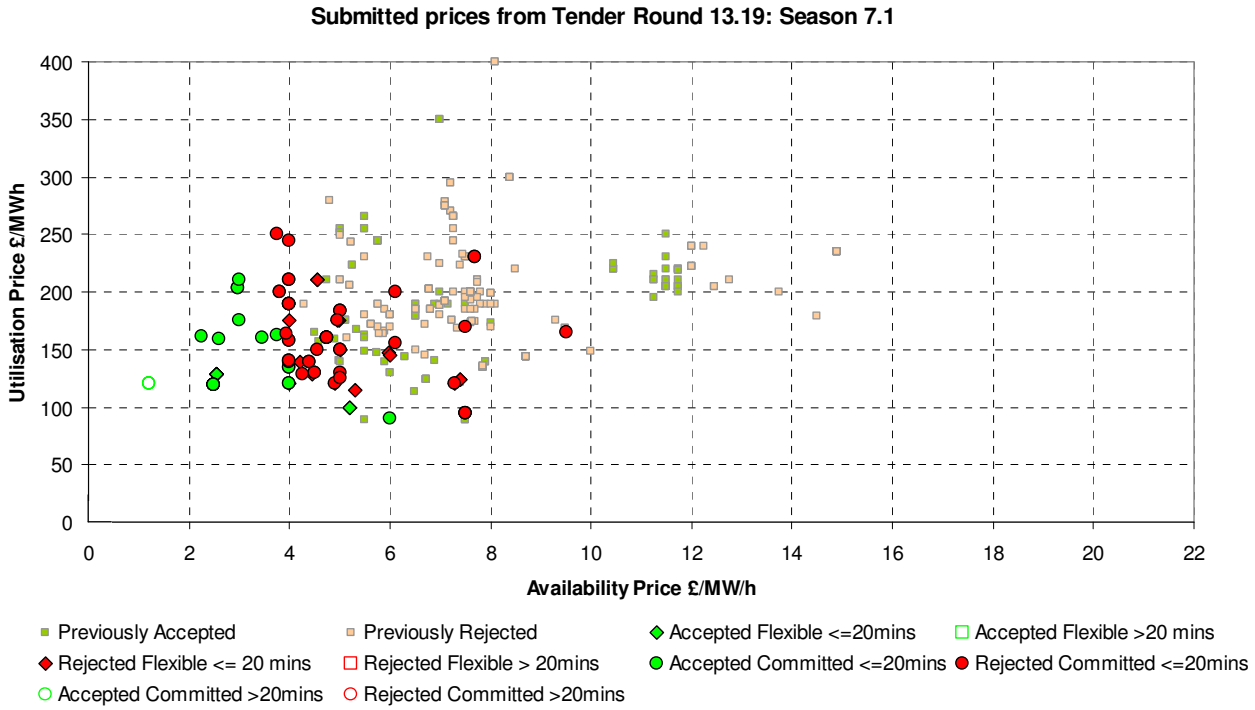
MULTIPLE LOCATIONS (Aggregators)

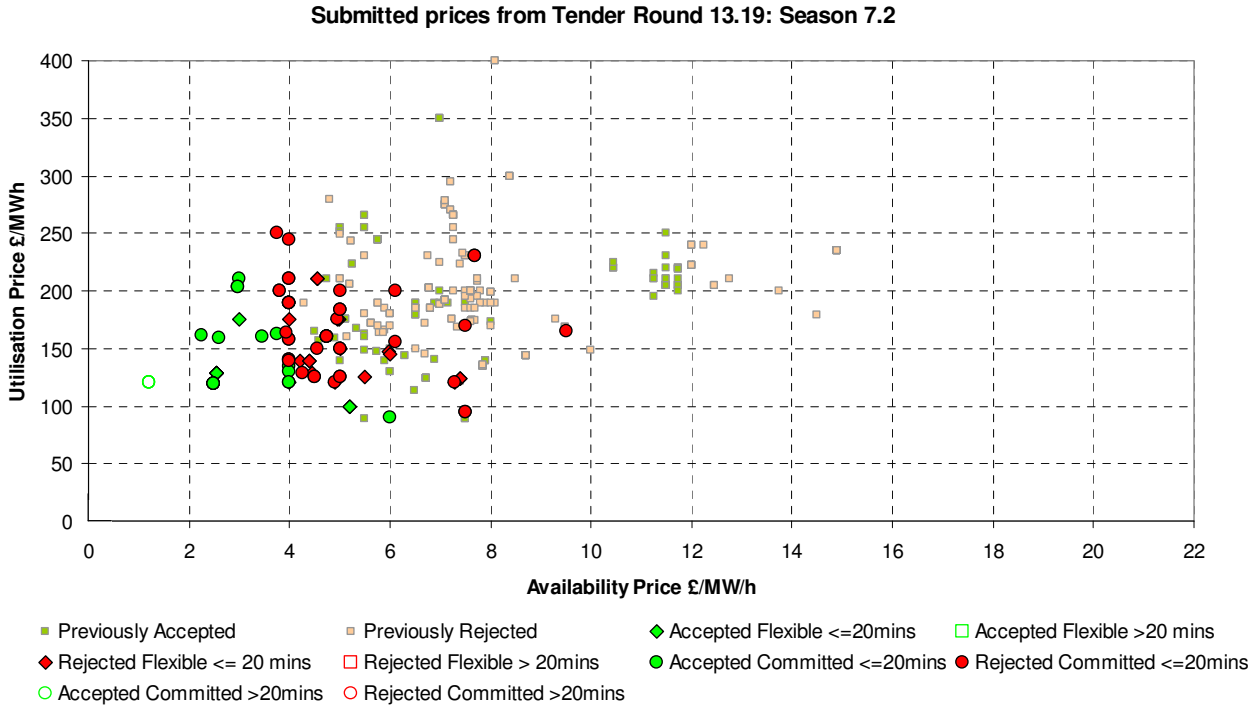
7.1 & 7.2 (Ave.) Tendered: 28 Units, 189 MW
Accepted: 7 Units, 28 MW
7.3 & 7.4 (Ave.) Tendered: 34 Units, 222 MW
Accepted: 6 Units, 25 MW
7.5 & 7.6 (Ave.) Tendered: 26 Units, 218 MW
Accepted: 0 Units, 0 MW
8.1 - 8.6 (Ave.) Tendered: 42 Units, 371 MW
Accepted: 7 Units, 56 MW

Section 1.2 Prices

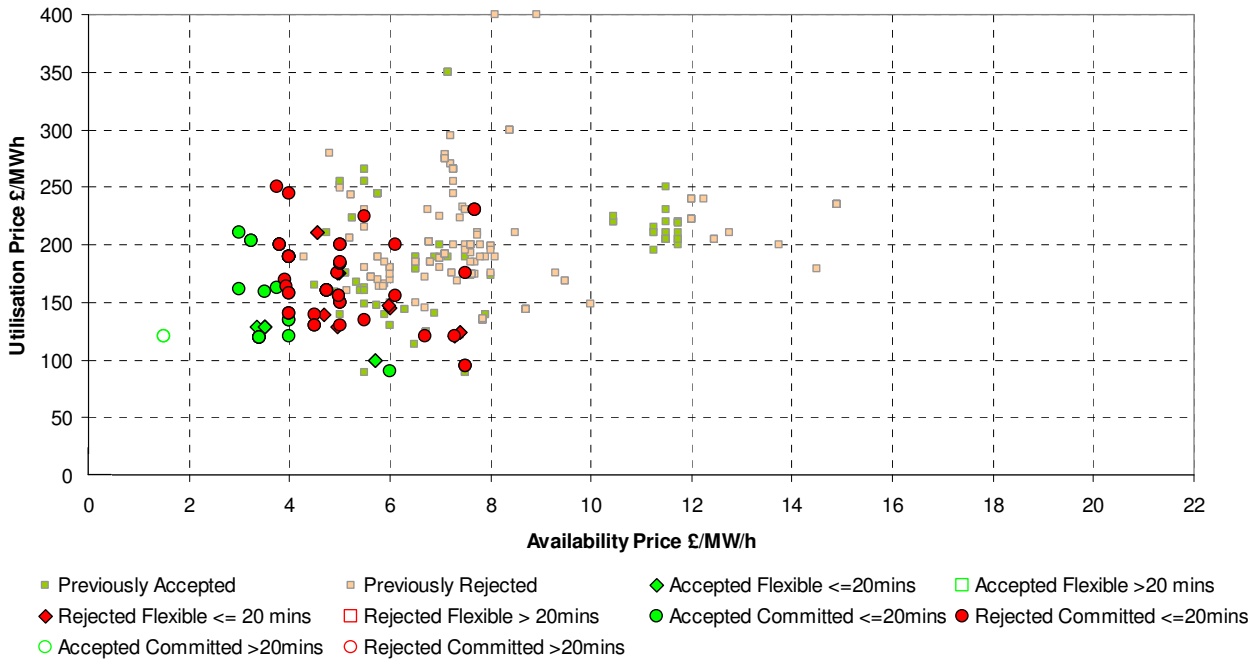
Figures 3 and 4 below show scatter plots of availability and utilisation price for each tender and for each season. The data is broken down into response time groups of >20 mins or <=20 mins, flexible or committed service and accepted or rejected tenders. These charts also depict the accepted and rejected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

Figure 3 Year 7 Availability and Utilisation price charts

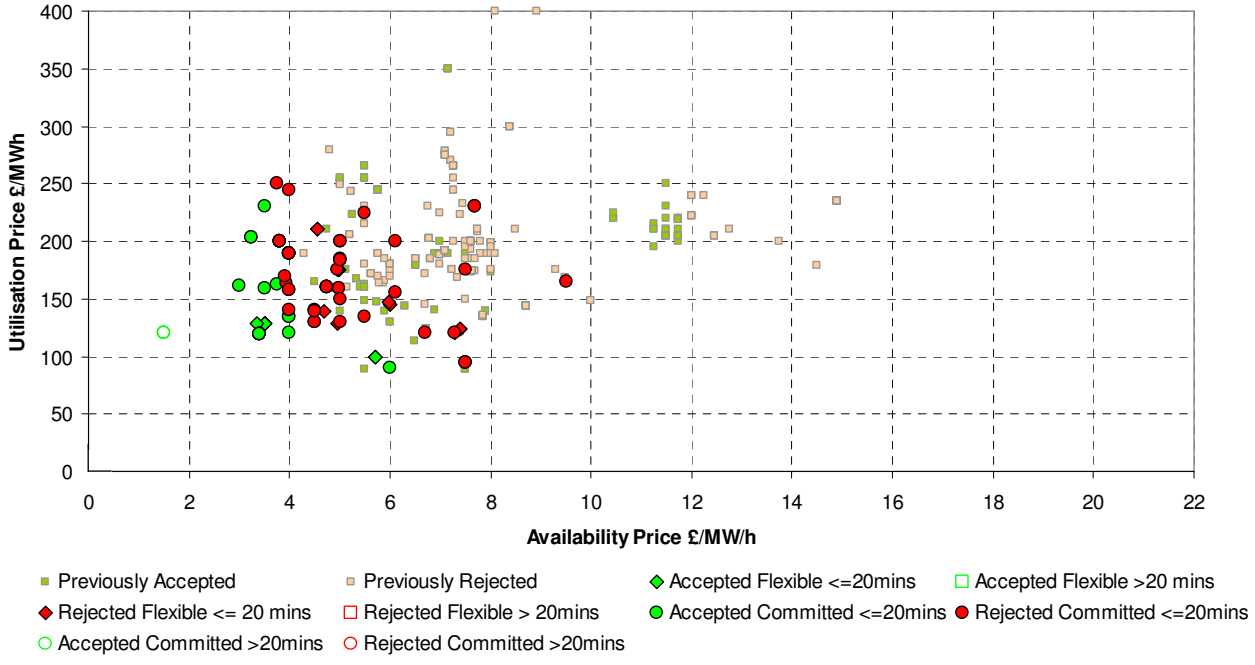




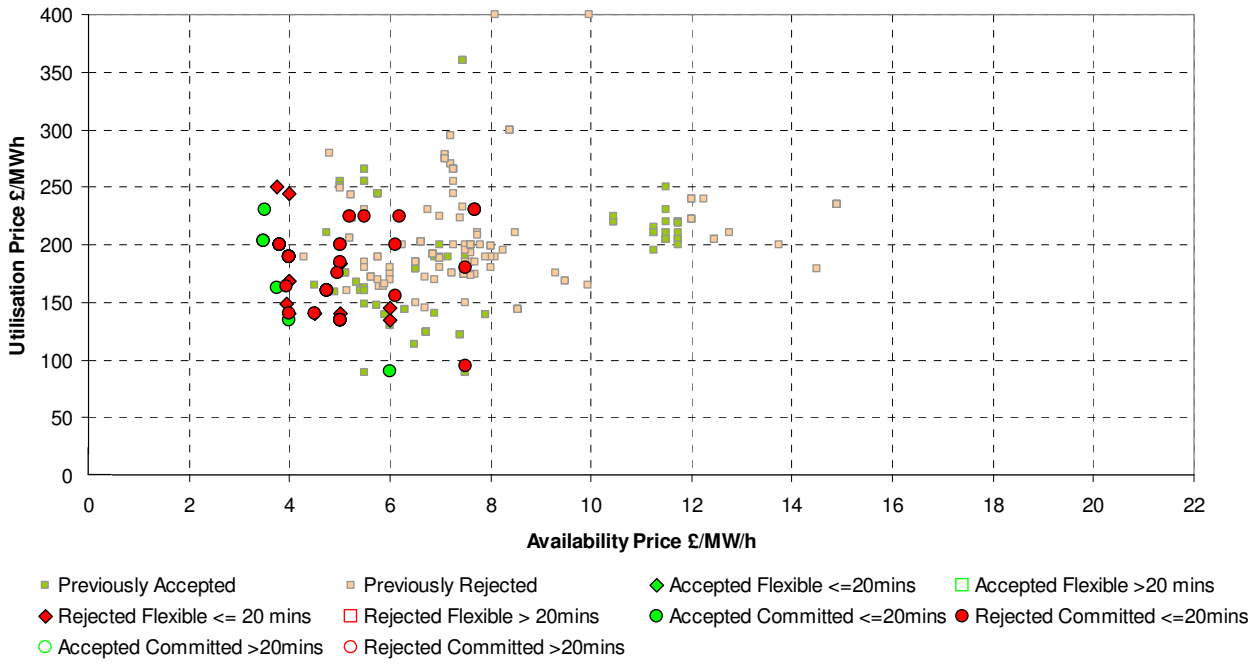
Submitted prices from Tender Round 13.19: Season 7.3



Submitted prices from Tender Round 13.19: Season 7.4



Submitted prices from Tender Round 13.19: Season 7.5



Submitted prices from Tender Round 13.19: Season 7.6

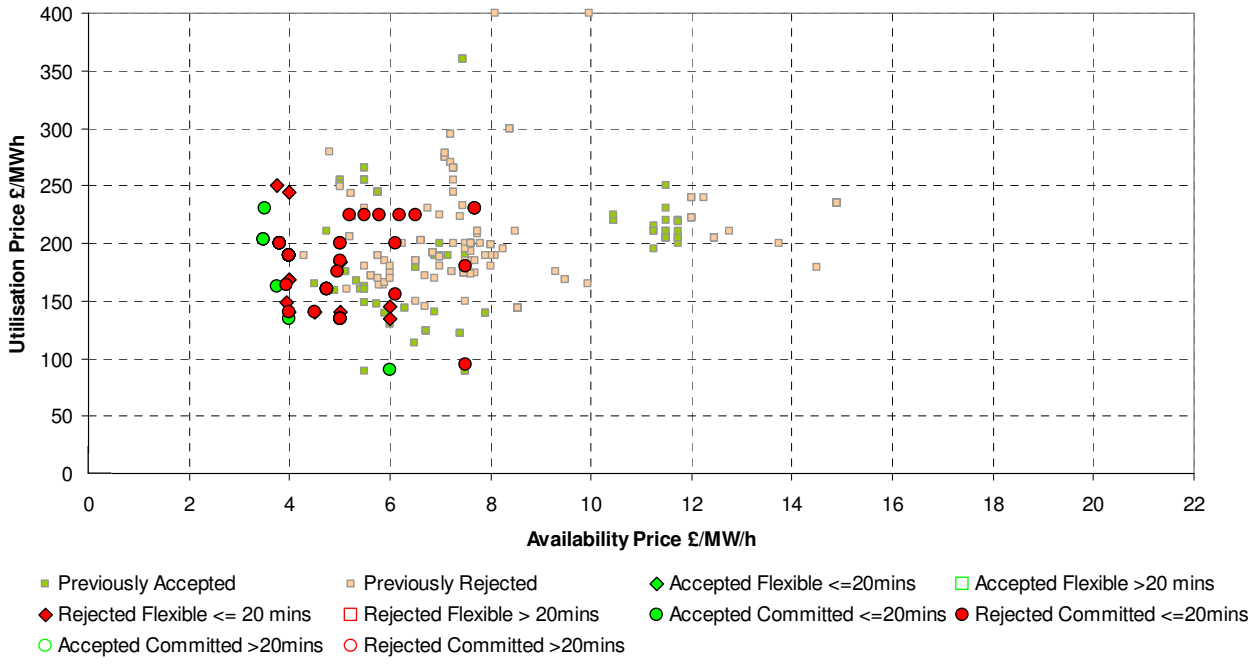
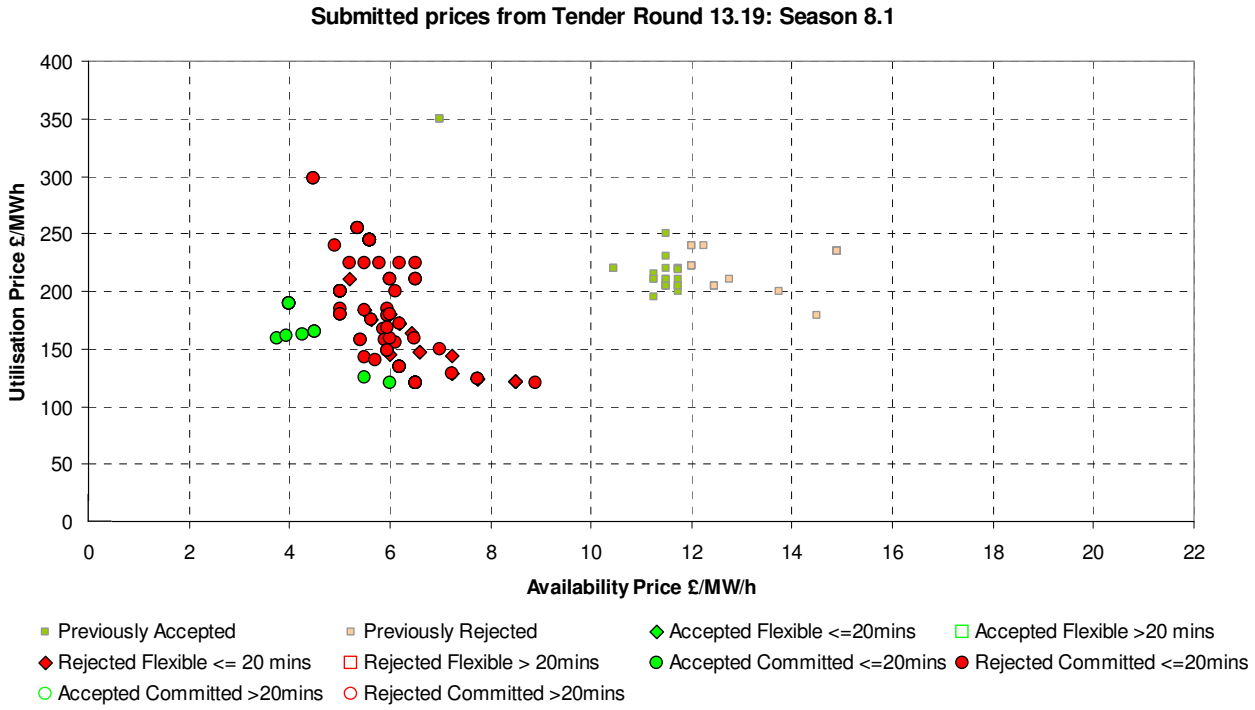
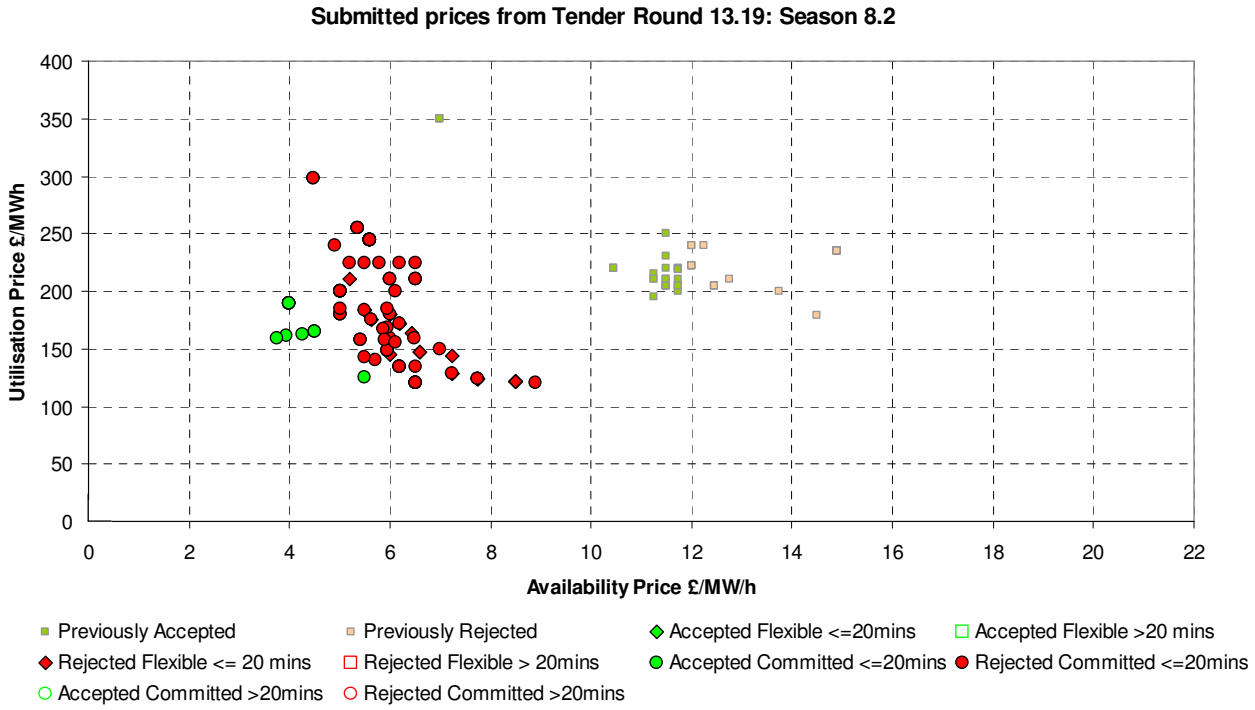
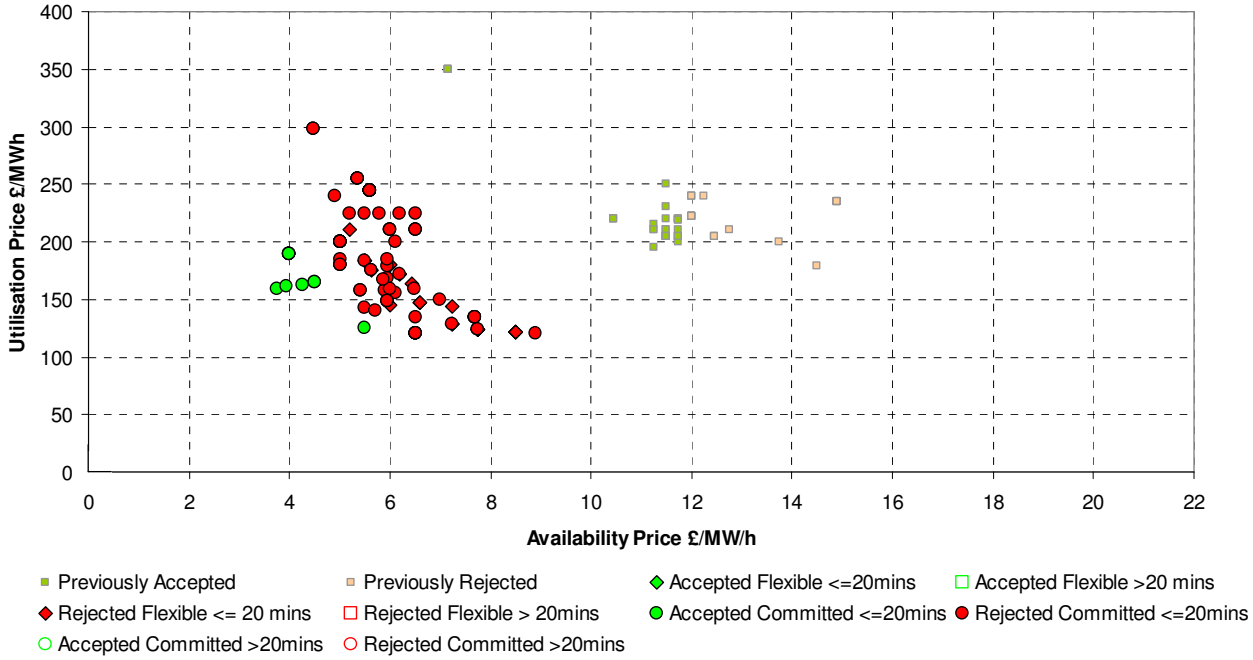


Figure 4 Year 8 Availability and Utilisation price charts

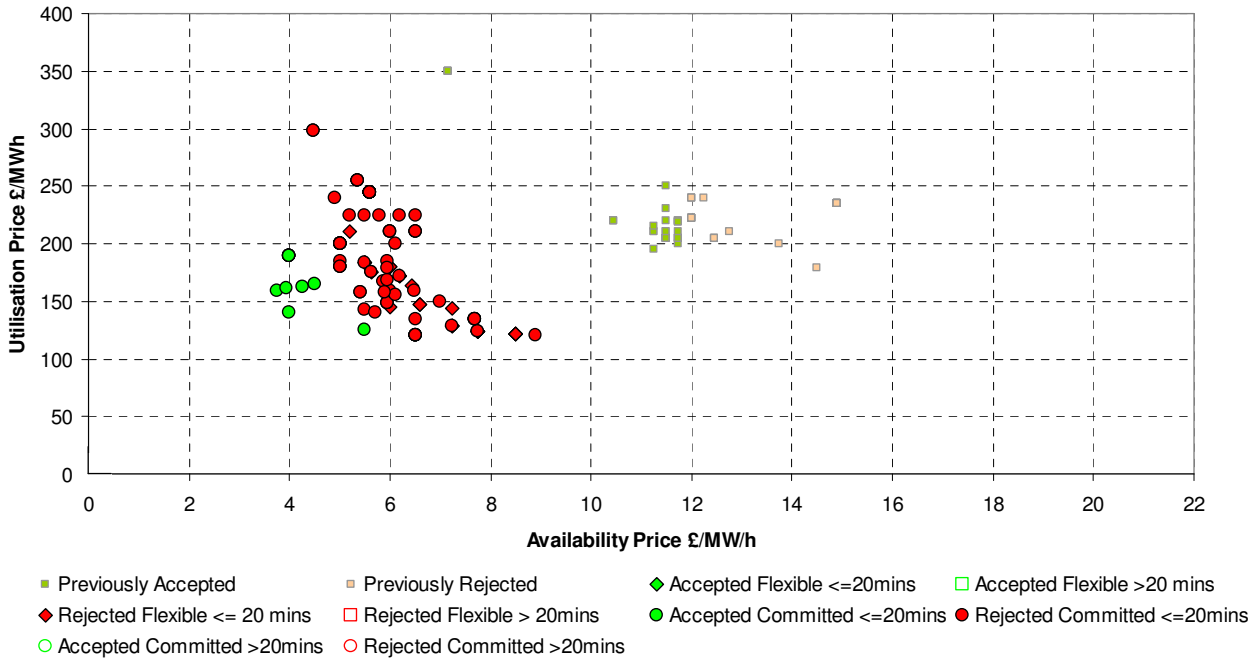




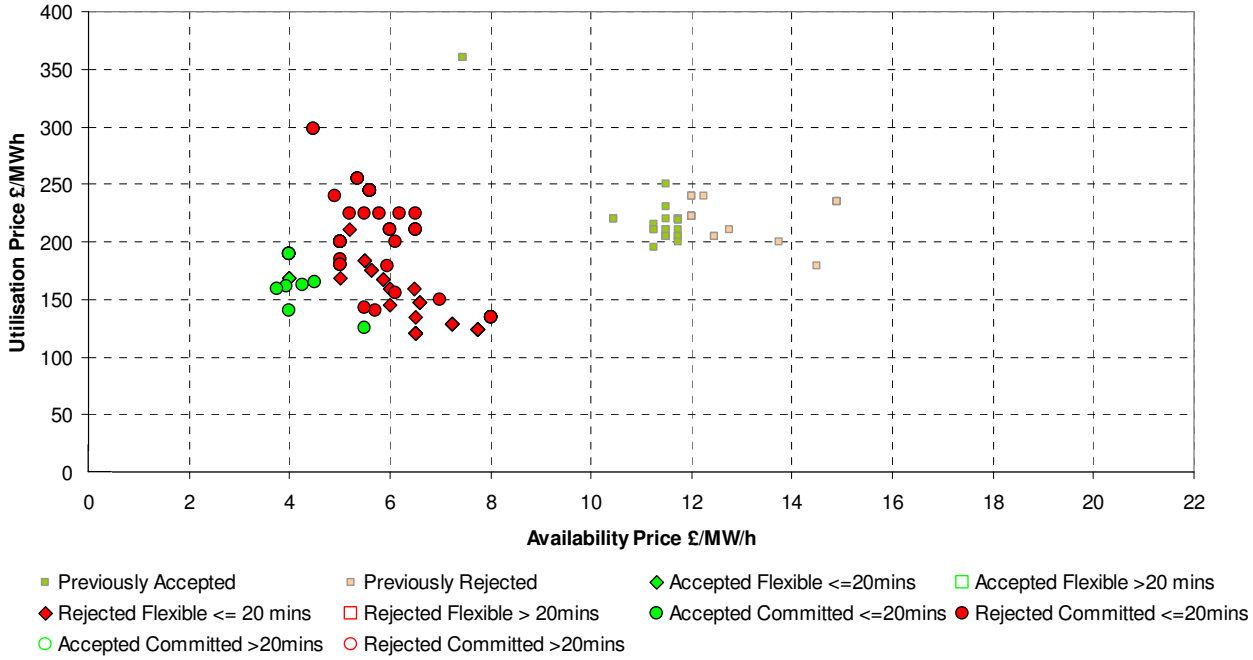
Submitted prices from Tender Round 13.19: Season 8.3



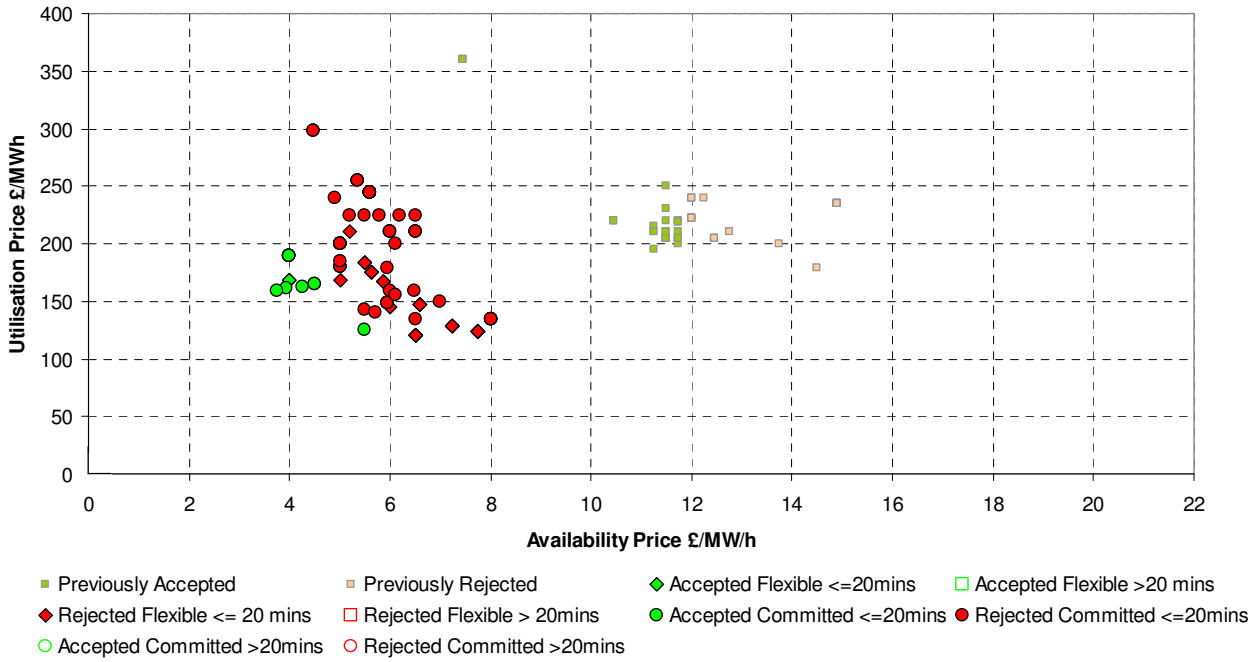
Submitted prices from Tender Round 13.19: Season 8.4



Submitted prices from Tender Round 13.19: Season 8.5



Submitted prices from Tender Round 13.19: 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 TR19, 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 1500MW 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 TR19.**

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

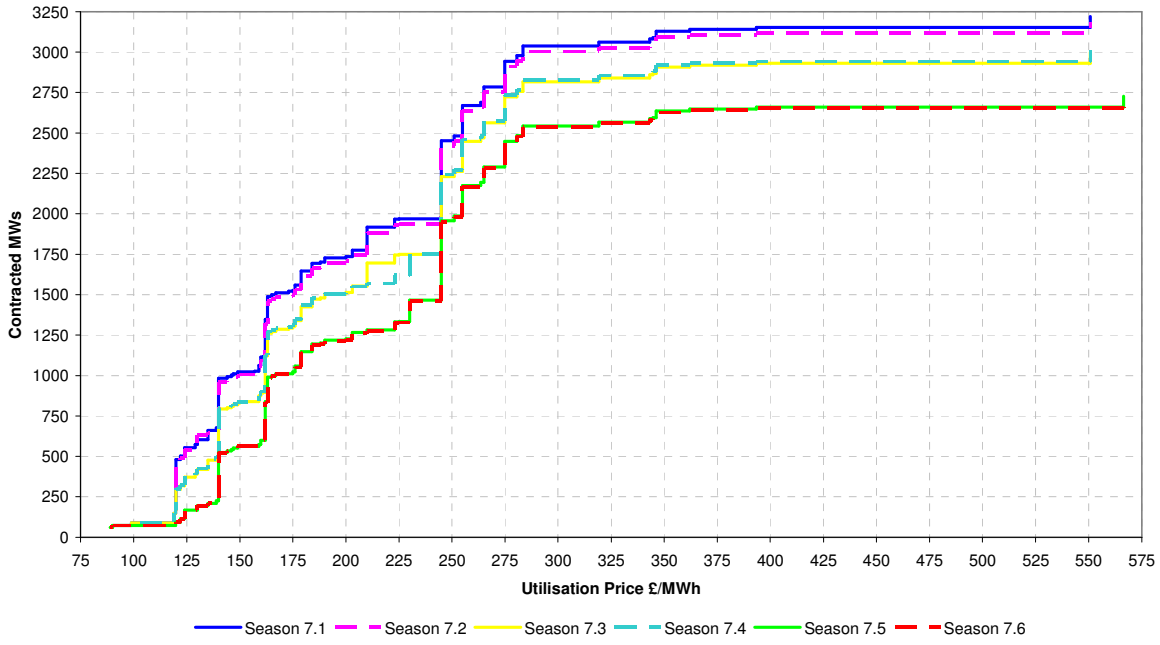


Figure 5b: Cumulative MW by Response Time for Year 7

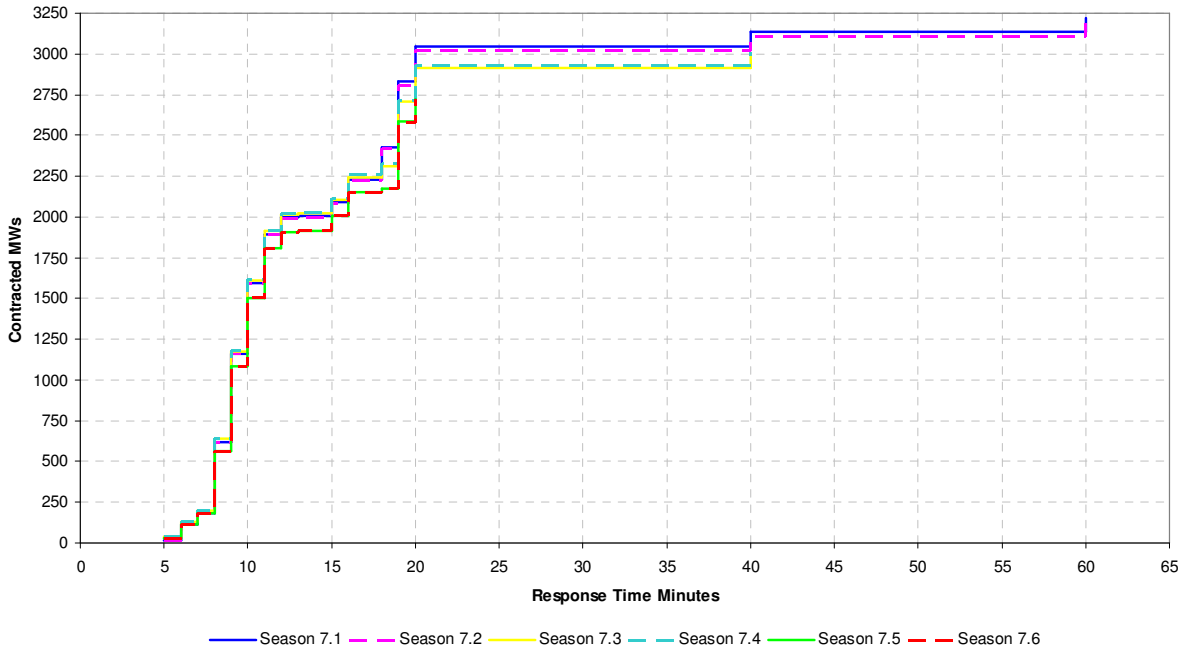


Figure 6b illustrates that for seasons 8.1 and 8.2 approximately 470MW of STOR is contracted with a response time of 10 minutes or less. **No indexation has been applied to Year 8 utilisation prices, the utilisation prices are presented according to their original base year.**

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

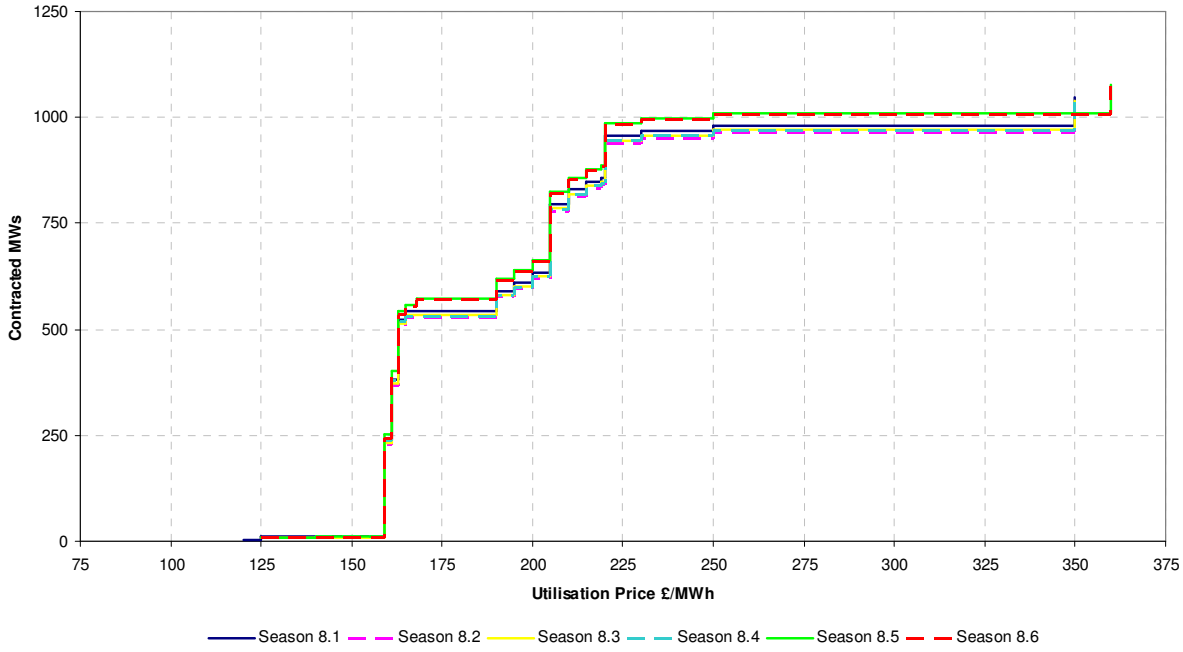
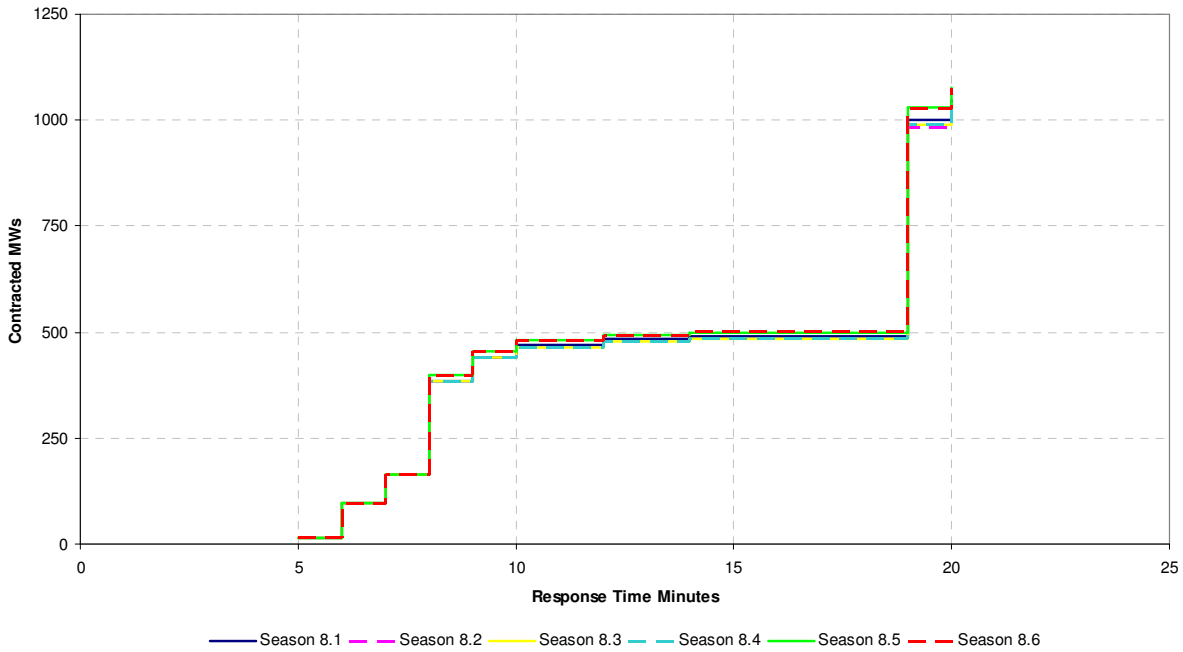


Figure 6b: Cumulative MW by Response Time for Year 8

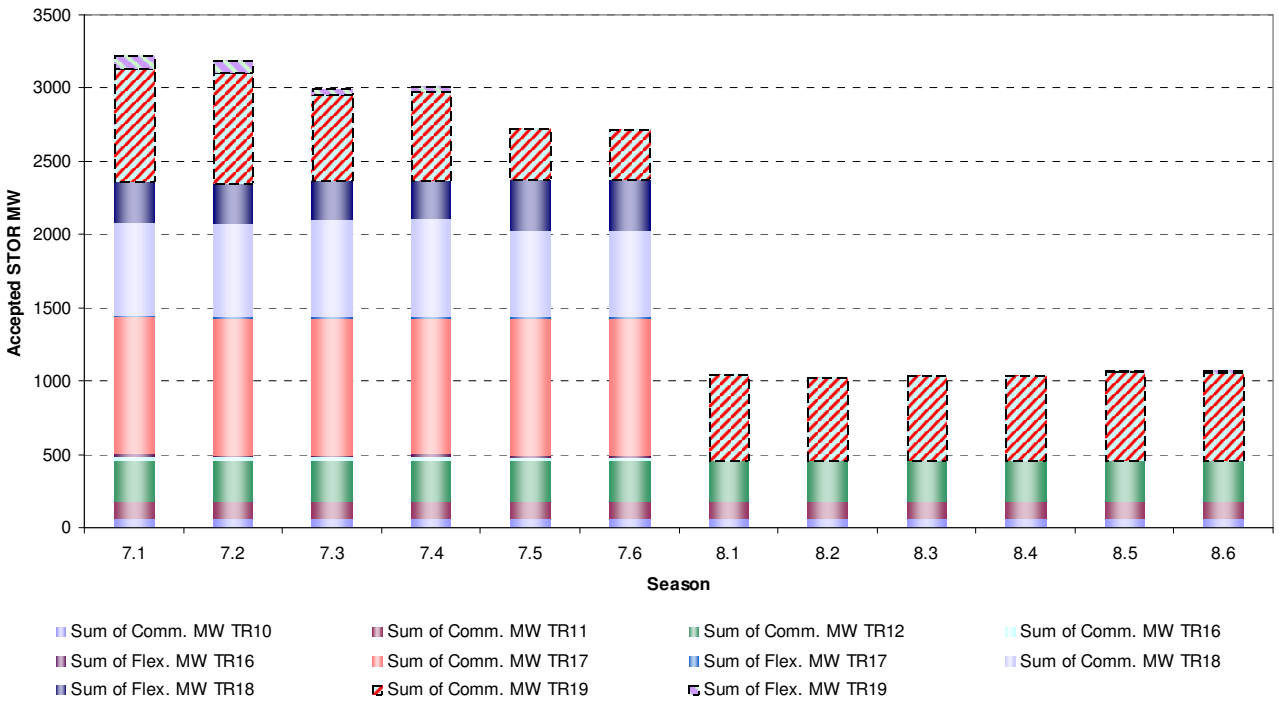


Section 2 Total Contracted Position

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 TR19.



	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
	Grand Total	2845	376	2812	375	2678	321	2699	313	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
	Total	1048	0	1032	0	1038	0	1037	0	1063	14	1060	14

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-1A33-4336-8FA3-1A69DCC1C903/58066/TR19_General_Description.pdf

Appendix 2:

Accepted and Rejected Tenders TR19: 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 23th 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