

TDR Transmission Banding Analysis

January 2021



Direction Requirements

The Direction from Ofgem states;

18 - that there will be a single fixed TNUoS residual charge for transmission-connected consumers.

35 - ... following an assessment of whether there should be more than one band for TNUoS residual charges for transmission-connected consumers ... having regard to:

- a. whether there should be a similar approach to banding as for extra-high voltage (EHV) distribution-connected consumers; or
- b. an exceptions mechanism for very small or complex sites.

The EHV requirements are to band by percentiles based on capacity (paragraphs 20 – 22)

Analysis Assumptions

ESO has undertaken some analysis to satisfy paragraph 35;

Assumptions used in this analysis are;

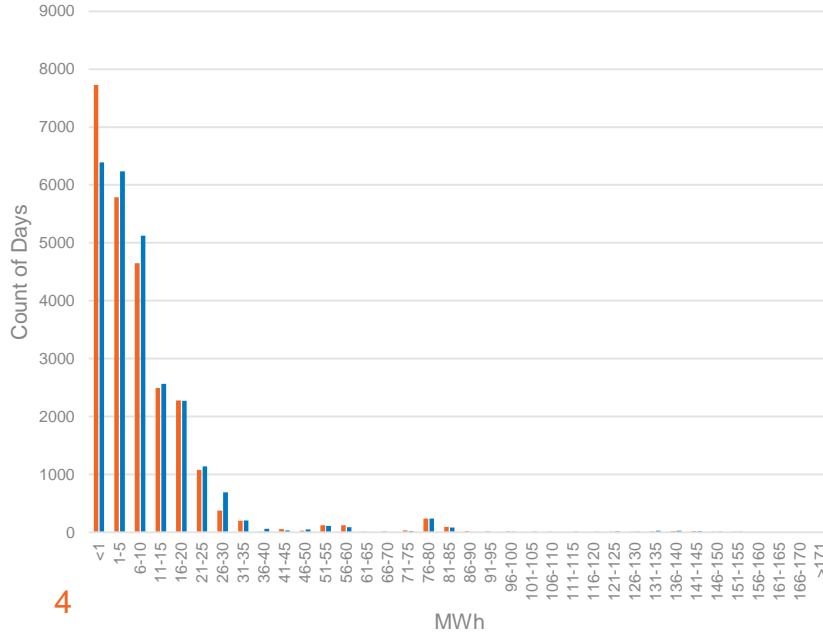
- Site = BMU. “Sequential” BMUs deemed to be the same Site (e.g. T_GNHLD-1, T_GNHLD-2 and T_GNHLD-3 will be the same Greenhill Site).
- Final Demand = All ‘Consuming BMUs’ after removing Interconnectors, Generator Station Demand (e.g. T_PEHED-1), Supplier BMUs and inactive BMUs (no generation or consumption in the date range).
- Results in 58 ‘Final Demand Sites’, full list used in the analysis on the last slide.
- 2018 and 2019 calendar year date ranges used.
- Analysis undertaken using 2 metrics;
 1. Consumption – max metered MWh consumption during a Settlement Period for each day.
 2. Capacity – there is no transmission equivalent of MIC (i.e. no ‘Demand TEC’) so used ‘Demand Capacity’ from BSC Section K 3.4. Info available [here](#). This is Customer provided information (subject to governance rules).

Consumption Analysis

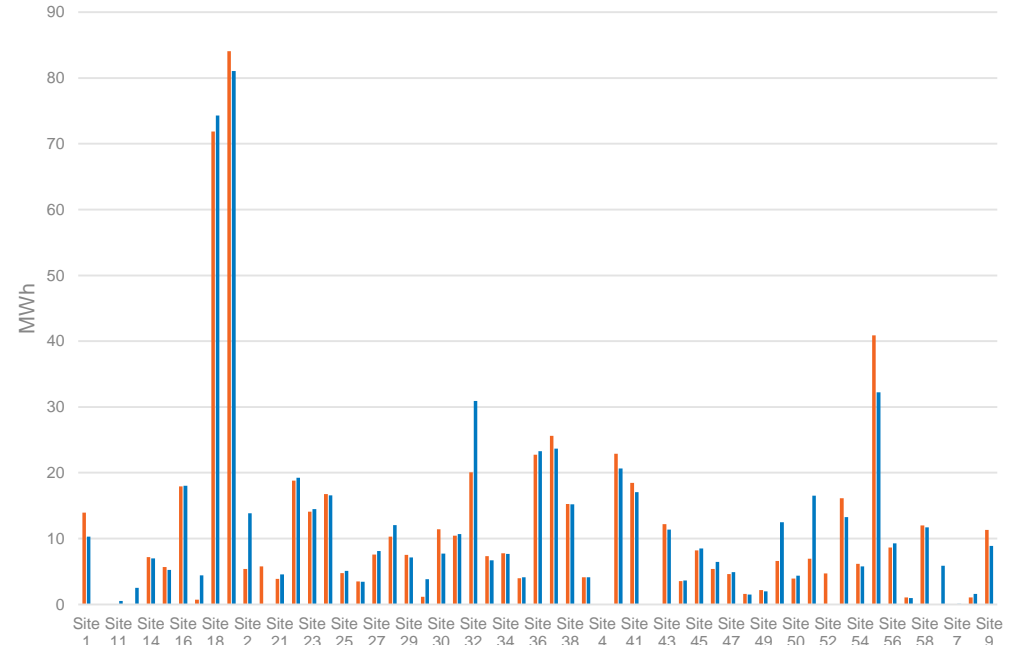
- Metered data per BMU per Settlement Period and select the highest demanding Settlement Period for that day for the BMU
- Repeat this for all days in 2018 and 2019. Sum the figures if BMUs are merged to form a site.
- Summary of backing data at end of slides

Year	Mean Avg	1 S.D
2018	9.6MWh	16.4MWh
2019	10.1MWh	16.6MWh

Count of daily MWh Outputs



Average MWh consumption over year per Site

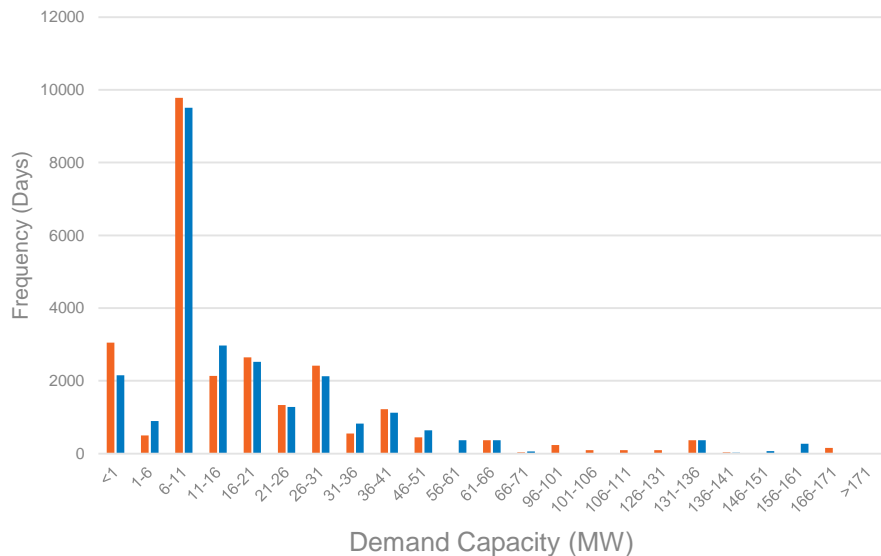


Demand Capacity Analysis

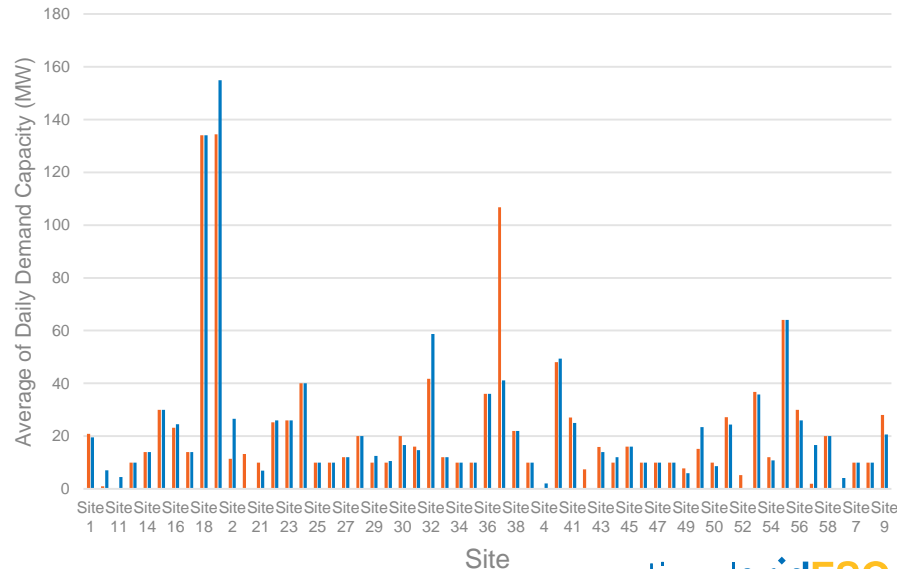
Year	Mean Avg	1 S.D
2018	20.3MW	25.9MW
2019	20.5MW	25.3MW

- Elxon have provided Daily Demand Capacity data per BMU. Sum these figures if BMUs are merged to form a site.
- Summary of backing data at end of slides

Count of daily Demand Capacity (MW)



Average Demand Capacity over year per Site



Analysis Conclusions

Based on this analysis, ESO proposes;

- **Review this proposal for consistency when EHV and HV bandings are created**
- **1 charging band for Transmission connected customers (as per paragraph 18 of the Direction)**
 - There is potential merit in a 2nd band for large sites in future however limited number of sites (<6) would be in this band at present (based on mean + 1 standard deviation)
- **No special exceptions mechanism for small or complex Sites (as per paragraph 35 of the Direction) at this stage.**
 - A general dispute process will be created as per the Direction, but nothing specific in relation to Paragraph 35 to be created.
- **Provision to consider these conclusions at each Price Control as part of rebanding**

Consumption Analysis Backing Data

Year	Mean Avg	1 S.D
2018	9.6MWh	16.4MWh
2019	10.1MWh	16.6MWh

Max Demand (MWh)	Count		
	2018	2019	Grand Total
<1	7725	6391	14116
1-5	5786	6236	12022
6-10	4649	5124	9773
11-15	2493	2568	5061
16-20	2278	2273	4551
21-25	1080	1140	2220
26-30	379	691	1070
31-35	203	204	407
36-40	14	60	74
41-45	58	33	91
46-50	31	49	80
51-55	121	114	235
56-60	124	92	216
61-65	14	8	22
66-70	16	9	25
71-75	33	25	58
76-80	238	239	477
81-85	98	85	183
86-90	25	2	27
91-95	20	5	25
96-100	17	10	27
101-105	5	10	15
106-110	11	9	20
111-115	2	13	15
116-120	8	12	20
121-125	10	18	28
126-130	13	12	25
131-135	17	28	45
136-140	26	30	56
141-145	23	24	47
146-150	14	10	24
151-155	11	15	26
156-160	6	6	12
161-165	2	4	6
166-170		1	1
>171			
Grand Total	25550	25550	51100

Average of Max Demand Volume (MWh)			
Row Labels	2018	2019	2018 & 2019
Site 1	14	10	12
Site 10	0	0	0
Site 11	0	1	0
Site 12	0	3	1
Site 14	7	7	7
Site 15	6	5	5
Site 16	18	18	18
Site 17	1	4	3
Site 18	72	74	73
Site 19	84	81	83
Site 2	5	14	10
Site 20	6	0	3
Site 21	4	5	4
Site 22	19	19	19
Site 23	14	14	14
Site 24	17	17	17
Site 25	5	5	5
Site 26	3	3	3
Site 27	8	8	8
Site 28	10	12	11
Site 29	8	7	7
Site 3	1	4	2
Site 30	11	8	10
Site 31	10	11	11
Site 32	20	31	26
Site 33	7	7	7
Site 34	8	8	8
Site 35	4	4	4
Site 36	23	23	23
Site 37	26	24	25
Site 38	15	15	15
Site 39	4	4	4

Average of Max Demand Volume (MWh)			
Row Labels	2018	2019	2018 & 2019
Site 4	0	0	0
Site 40	23	21	22
Site 41	18	17	18
Site 42	0	0	0
Site 43	12	11	12
Site 44	4	4	4
Site 45	8	9	8
Site 46	5	6	6
Site 47	5	5	5
Site 48	2	2	2
Site 49	2	2	2
Site 5	7	12	10
Site 50	4	4	4
Site 51	7	17	12
Site 52	5	0	2
Site 53	16	13	15
Site 54	6	6	6
Site 55	41	32	37
Site 56	9	9	9
Site 57	1	1	1
Site 58	12	12	12
Site 6	0	6	3
Site 7	0	0	0
Site 8	1	2	1
Site 9	11	9	10
Grand Total	10	10	10

Demand Capacity Analysis Backing Data

Year	Mean Avg	1 S.D
2018	20.3MW	25.9MW
2019	20.5MW	25.3MW

Demand Capacity (MW)	2018	Count 2019	Grand Total
<1	3046	2152	5198
1-6	503	891	1394
6-11	9782	9506	19288
11-16	2131	2970	5101
16-21	2647	2525	5172
21-26	1337	1278	2615
26-31	2421	2124	4545
31-36	553	822	1375
36-41	1220	1125	2345
46-51	442	638	1080
56-61	8	365	373
61-66	365	365	730
66-71	31	59	90
96-101	235		235
101-106	92		92
106-111	91		91
126-131	92		92
131-136	365	365	730
136-141	31	27	58
146-151		65	65
156-161		273	273
166-171	156		156
>171	2		2
Grand Total	25550	25550	51100

Average of Demand Capacity (MW)			
Row Labels	2018	2019	2018 & 2019
Site 1	21	20	20
Site 10	1	7	4
Site 11	0	5	2
Site 12	10	10	10
Site 14	14	14	14
Site 15	30	30	30
Site 16	23	24	24
Site 17	14	14	14
Site 18	134	134	134
Site 19	134	155	145
Site 2	11	27	19
Site 20	13	0	7
Site 21	10	7	8
Site 22	25	26	26
Site 23	26	26	26
Site 24	40	40	40
Site 25	10	10	10
Site 26	10	10	10
Site 27	12	12	12
Site 28	20	20	20
Site 29	10	12	11
Site 3	10	11	10
Site 30	20	17	18
Site 31	16	15	15
Site 32	42	59	50
Site 33	12	12	12
Site 34	10	10	10
Site 35	10	10	10
Site 36	36	36	36
Site 37	107	41	74
Site 38	22	22	22
Site 39	10	10	10

Average of Demand Capacity (MW)			
Row Labels	2018	2019	2018 & 2019
Site 4	0	2	1
Site 40	48	49	49
Site 41	27	25	26
Site 42	7	0	4
Site 43	16	14	15
Site 44	10	12	11
Site 45	16	16	16
Site 46	10	10	10
Site 47	10	10	10
Site 48	10	10	10
Site 49	8	6	7
Site 5	15	23	19
Site 50	10	9	9
Site 51	27	24	26
Site 52	5	0	3
Site 53	37	36	36
Site 54	12	11	11
Site 55	64	64	64
Site 56	30	26	28
Site 57	2	17	9
Site 58	20	20	20
Site 6	0	4	2
Site 7	10	10	10
Site 8	10	10	10
Site 9	28	21	24
Grand Total	20	20	20