

10/5/2023

Arek Gulbenkoglu
General Manager
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

Dear AER,

I write on behalf of Quarry Products Newcastle (QPN) in the Hunter Valley of NSW. I write with regards to Ausgrid's 2024-29 Regulatory Proposal.

QPN is a large market electrical user that consumes approximately 1.5 GWh per annum across 3 NMIs. Two of the NMIs are currently on Ausgrid tariffs (EA305 & EA370) that include Network Capacity charges.

Ausgrid's currently approved tariffs and their 2024-2029 regulatory proposal have a unique, unparalleled in Australia and unfair approach to how their demand charges are applied to large customers. As per their Tariff Structure Statement Compliance paper – 31 Jan 2023¹ on page 23 the Peak Capacity charges are applied as follows:

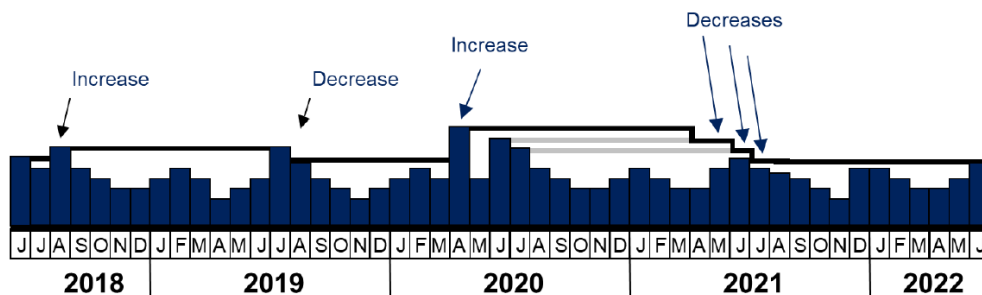
Peak capacity	cents / kVA / day	Charge applied to the customer's highest kVA of demand during any half-hour period between 3-9pm on working weekdays in the previous 12 months
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As explained in Ausgrid's existing Network Price Guide ² on page 20 this in effect gives rise to a ratcheting effect whereby a site must reduce their maximum demand consecutively over a 12-month period before any reduction in demand charges are seen.

This is grossly unfair and not cost reflective in that:

- 1) Large consumption customers are charged for peak demand every month over a 12 month period even if they only operate for one hour in the peak demand capture period in the first month of a 12 month period as per the diagram below taken directly from Ausgrid's ES7 Network Price Guide.

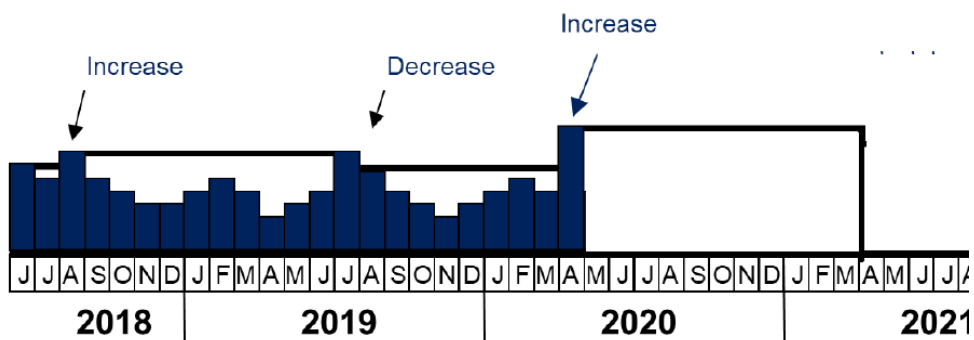
Illustrative example of the ratcheting of the capacity charge calculation



¹ [Ausgrid - 2024-29 Regulatory Proposal - 31 Jan 2023](#)

² [Ausgrid ES7-Network-Price-Guide](#)

As an example if a customer were to have the below maximum demands captured up until April 2020 they would then be charged demand charges for the next 11 months based on the maximum demand capture in April 2020 even though no demand had been captured in the following 11 months.



This contrasts with small business and residential customers on Ausgrid demand tariffs whereby they are only charged for the peak demand measured each month. This is distinctly in contrast to Ausgrid’s statement that charges are “cost reflective”.

During the AER Resets Public Forum on the 5/4/2023 this question was specifically put to Ausgrid. The paraphrased answer that was provided was that “*the appropriate demand charges all comes down to the size of the pipe*” and that “tariffs are a complex issue”. This is conflating the issue and did not directly address the inequity between small customers and large customers. All customers have a “pipe” or wired network connection. Ausgrid have also made their demand charges “complex” for large market customers by adding the rolling demand window of 12 months as opposed to month by month like every other DNSP in Australia.

When a new customer needs to connect to Ausgrid (or any other DNSP’s) network the ASP process needs to be undertaken and the new customer essentially pays for the design, installation of assets that need to be upgraded on Ausgrid’s network to provide the customer connection.

At that point in time the customer is effectively paying for the size of the pipe into their premise. If the customer then operates for only 1 business day a year they are then back charged for the previous 12 months based on that 1 business day of peak demand capture. Why are they paying for the “pipe” over and over even if the asset has not been used in the past 11 months?

We suggest that a more equitable and cost reflective approach is to do what all other Australian DNSPs do and only level the demand charge monthly.

2) Despite the fact that Ausgrid have introduced demand tariffs for residential and small business customers those customers will still be allowed to opt out into time of use tariffs whereas large consumption customers do not have this benefit. Simple Time of Use based tariffs are not cost reflective so why do large consumers have to subsidise small consumers? We suggest the reason why Ausgrid do this is because unlike small market customers, large market customers do not have recourse with the Energy Ombudsman. This makes it near on impossible for large market customers to challenge Ausgrid on these tariffs as generally the only way to do so would be legally unless the AER steps in.

3) Ausgrid's demand capture period is currently set at 6 hours (2-8pm) and Ausgrid are now proposing that it be 3-9pm. This window is too wide and or at the wrong times with respect to demand on the distribution network. As per 8.2 of Our TSS Explanatory Statement for 2024-29 ³page 35 Ausgrid state:

Over the past 5 years, 92% of system-wide peaks have occurred in the proposed window of 3pm to 9pm, while only 83% have occurred in the current peak window; and Over the past 3 years, 82% of annual zone substation peaks have occurred in the proposed window, compared to 52% in the current peak window.

Ausgrid have therefore effectively admitted that they had their peak demand window set to the wrong time period during the 2019-2024 period.

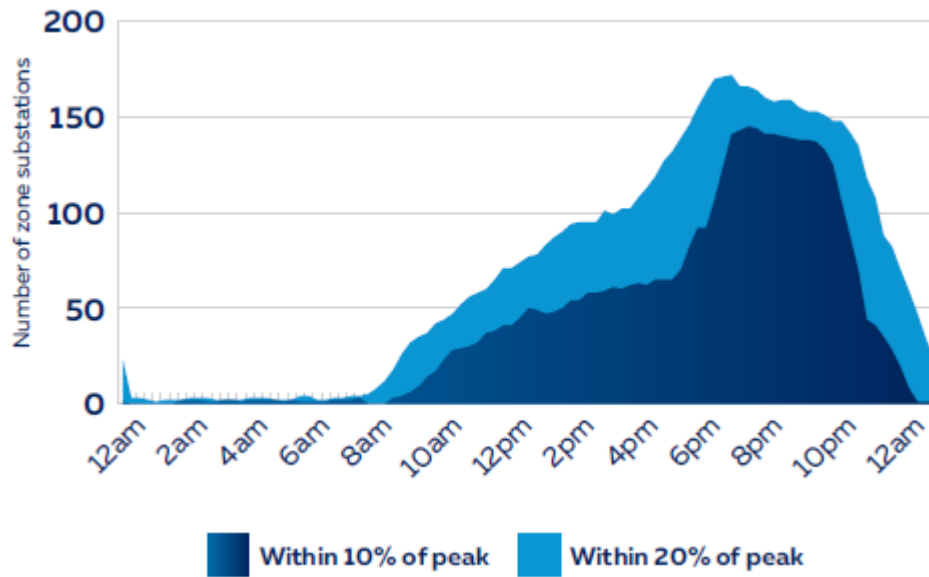
We suggest that the peak demand capture period should be from 5pm-9pm from the 1st of July 2024 or at a maximum from 4:30-9pm.

4) Ausgrid have stated on page 24 of their TSS Explanatory Statement³ that:

'the increasing uptake of rooftop solar is reducing demand on our network in the afternoon, when the volume of customer energy typically peaks.

And the below chart from page 35 also shows it is very clear that peak demand is not a major issue until approximately 5pm. Again, therefor how can Ausgrid justify starting it at 3pm let alone 4pm?

³ [Ausgrid - Att. 8.2 - Our TSS Explanatory Statement for 2024-29 - 31 Jan 2023](#)



That being said the above chart obfuscates the real picture in terms of network peaks/expenditure drivers as it does not show the seasonal nature of the peaks. It is common knowledge in the electrical distribution industry that distribution network peaks occur on a handful of days in summer or occasionally winter when people return from work and run air conditioning/electric heating. This typically occurs from 5-8pm.

Ausgrid's Distribution Zone Substation data is freely available here: <https://www.ausgrid.com.au/Industry/Our-Research/Data-to-share/Distribution-zone-substation-data>

Analysis of the dataset for 2022 has been performed and the results appended to the end of this letter. As can be seen from the analysis there are very few (generally less than 0.5%) of all time samples at zone substations where the measured demand is within 10% of the maximum demand observed over the given period.

A heatmap of Branxton distribution zone substation has also been appended showing how infrequent demands within 10% of the maximum demand observed in the data occur.

It is also notable that within the datasets that for the majority of the sites that demand figures >90% of the observed max demand were visible on the 1st of February 2022. This corresponded with what was measured as the highest temperature measured at Sydney's Observatory Hill BOM weather station. http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=122&p_display_type=dailyDataFile&p_startYear=2022&p_c=-876881648&p_stn_num=066214
There are also others that corresponded with the coldest days of the year 9-10/6/22.

It is therefore nonsensical to apply a demand capture period of 12 months. Also, why should any of Ausgrid's demand tariffs have their peak demand capture period start at 3pm when their own distribution zone substation data shows generally that their zone substations are not overloaded at that point in time?

For a reference to what could be considered a cost reflective and or equitable demand tariff please see Ausnet tariffs NSP75 – NSP78.

Ausnet levies a capacity charge for a customer based on the based on the nameplate rating of the transformer the customer is connected to. If there is more than one customer connected to a transformer then each customer is charged based on their percentage allocation.

Ausnet also levy a critical peak demand charge where the customer's peak demand is captured on 5 nominated peak demand weekdays during the defined critical peak demand period.

This is essentially Ausnet signalling to the market that what drives upgrades of their network is the demand on a handful of days in a year, not every day of the year as Ausgrid are currently doing and penalising large customers for.

As a summary QPN believe that Ausgrid's rolling demand capacity charges are grossly inequitable and not cost reflective and should be changed to a month to month charge basis so that large customers are not subsidising small customers and or are cost reflective. Ausgrid's peak demand capture period is also too wide and should be reduced to at a maximum 4:30pm-9pm. We ask that the AER analyse the available Ausgrid Distribution Zone Substation data to form their own opinion and act on enforcing these changes so that larger customers are not penalised for non cost reflective tariffs for another 5 years.

Regards

Robert Frost

Chartered Electrical Engineer on behalf of QPN

Table 1 - 2022 Ausgrid Distribution Zone Substation data peak interval analysis

Zone Substation File	Max kVA observed in dataset	90% of Max kVA observed	Number occurrences in dataset (15 min) intervals > 90%	% of Annual 15 Min Intervals > 90% of Max observed
Aberdeen 66_11kV FY2022.xlsx	5.140658	4.626592463	61	0.175554724
Adamstown 132_11kV FY2022.xlsx	27.53331	24.77997884	20	0.057557269
Argenton 132_11kV FY2022.xlsx	30.10972	27.09874623	14	0.040406373
Auburn 33_11kV FY2022.xlsx	25.22912	22.7062085	20	0.057557269
Avoca 66_11kV FY2022.xlsx	39.27921	35.3512872	63	0.181305399
Avondale 33_11kV FY2022.xlsx	8.584868	7.7263812	81	0.233106941
Baerami 33_11kV FY2022.xlsx	0.547761	0.49298472	47	0.135419368
Balgowlah North 132_11kV FY2022.xlsx	35.38892	31.850028	82	0.236665897
Bankstown 132_11kV FY2022.xlsx	54.71808	49.24626936	41	0.118005987
Bass Hill 33_11kV FY2022.xlsx	16.78515	15.10663663	57	0.164038218
Beacon Hill 33_11kV FY2022.xlsx	18.95568	17.06011089	60	0.172671808
Belrose 33_11kV FY2022.xlsx	26.87961	24.19165035	49	0.14101531
Berkeley Vale 132_11kV FY2022.xlsx	36.91664	33.22497322	50	0.144308474
Berowra 132_11kV FY2022.xlsx	23.71956	21.34760237	43	0.123748129
Blackwattle Bay 33_5kV FY2022.xlsx	3.60251	3.242258782	241	0.693565097
Blakehurst 33_11kV FY2022.xlsx	20.03032	18.02728401	188	0.541038333
Botany 33_11kV FY2022.xlsx	24.00978	21.6088013	30	0.086335904
Brandy Hill 132_11kV FY2022.xlsx	9.459006	8.5131054	4	0.015023474
Branxton 66_11kV FY2022.xlsx	12.16748	10.950732	37	0.106480949
Broadmeadow 132_11kV FY2022.xlsx	23.34214	21.00792708	9	0.025900771
Brookvale 33_11kV FY2022.xlsx	36.37331	32.7359786	126	0.362610798
Burwood 132_11kV FY2022.xlsx	71.46516	64.31863951	10	0.028778635
Campbell St 132_11kV FY2022.xlsx	31.13388	28.0204902	77	0.221595488
Camperdown 33_11kV FY2022.xlsx	23.90148	21.511332	237	0.682053643
Camperdown 33_5kV FY2022.xlsx	3.102103	2.791892697	60	0.172671808
Campsie 33_11kV FY2022.xlsx	66.92071	60.22864149	100	0.287786347
Cardiff 33_11kV FY2022.xlsx	17.26871	15.54183836	8	0.023022908
Careel Bay 33_11kV FY2022.xlsx	13.39825	12.05842226	107	0.307931392
Caringbah 33_11kV FY2022.xlsx	21.4359	19.29231235	25	0.071946587
Castle Cove 132_11kV FY2022.xlsx	54.69131	49.22217608	14	0.040290089
Cessnock South 33_11kV FY2022.xlsx	19.12387	17.21148687	60	0.173170169
Charlestown 132_11kV FY2022.xlsx	30.1293	27.11637259	23	0.06619086
Charmhaven 132_11kV FY2022.xlsx	42.31264	38.08137852	8	0.023022908
Chatswood 33_11kV FY2022.xlsx	40.24256	36.21830816	71	0.204328307
City Central 132_11kV FY2022.xlsx	76.24726	68.62253557	257	0.739610913
City East 33_11kV FY2022.xlsx	24.91486	22.42337772	138	0.397145159
City North 132_11kV FY2022.xlsx	118.3603	106.5242442	416	1.197191205
City South 132_11kV FY2022.xlsx	89.09876	80.18888484	255	0.733855186
Clovelly 132_11kV FY2022.xlsx	42.77199	38.49478797	161	0.463336019
Concord 33_11kV FY2022.xlsx	38.16366	34.34729492	10	0.028778635

Cronulla 132_11kV FY2022.xlsx	59.88504	53.89653296	71	0.204328307
Croudace Bay 33_11kV FY2022.xlsx	17.93206	16.13885437	28	0.080580177
Crows Nest 132_11kV FY2022.xlsx	38.23492	34.41143054	120	0.345343617
Croydon 132_11kV FY2022.xlsx	38.71774	34.84596642	61	0.175549672
Dalley St 132_11kV FY2022.xlsx	35.15715	31.64143692	71	0.204328307
Darling Harbour 132_11kV FY2022.xlsx	50.31051	45.27945993	83	0.238862668
Darlinghurst 33_11kV FY2022.xlsx	34.68955	31.22059288	290	0.834580408
Dee Why West 33_11kV FY2022.xlsx	43.26285	38.93656488	68	0.195694716
Denman 66_11kV FY2022.xlsx	3.668084	3.301275962	73	0.210084034
Double Bay 132_11kV FY2022.xlsx	61.14811	55.033297	40	0.115114539
Drummoyne 132_11kV FY2022.xlsx	58.66423	52.79780515	110	0.316564982
Dulwich Hill 33_11kV FY2022.xlsx	45.61538	41.05384378	108	0.310809255
Edgeworth 33_11kV FY2022.xlsx	20.95918	18.86326272	39	0.112236675
Empire Bay 66_11kV FY2022.xlsx	12.6936	11.4242364	19	0.054679406
Enfield 33_11kV FY2022.xlsx	12.82714	11.54442692	124	0.443792277
Engadine 132_11kV FY2022.xlsx	30.49418	27.4447584	13	0.037412225
Epping 66_11kV FY2022.xlsx	47.02323	42.3209052	56	0.161160355
Erina 66_11kV FY2022.xlsx	27.03703	24.33332417	24	0.069068723
Flemington 132_11kV FY2022.xlsx	38.01856	34.21670045	24	0.069068723
Galston 132_11kV FY2022.xlsx	11.91165	10.72048939	1	0.002878526
Gateshead 33_11kV FY2022.xlsx	16.32845	14.69560887	13	0.037412225
Gore Hill 33_11kV FY2022.xlsx	40.71768	36.64591449	105	0.302175665
Green Square 132_11kV FY2022.xlsx	60.17149	54.15434266	32	0.092091631
Greenacre Park 132_11kV FY2022.xlsx	51.32331	46.19097507	20	0.057557269
Gwawley Bay 132_11kV FY2022.xlsx	27.50485	24.75436116	14	0.070943549
Harbord 33_11kV FY2022.xlsx	22.81279	20.5315115	31	0.089213768
Homebush Bay 132_11kV FY2022.xlsx	40.22873	36.20585664	59	0.169793945
Hornsby 132_11kV FY2022.xlsx	68.06144	61.25529291	41	0.117992402
Hunters Hill 66_11kV FY2022.xlsx	52.62737	47.36463741	65	0.187061126
Hurstville North 132_11kV FY2022.xlsx	23.27467	20.94719976	15	0.043167952
Jannali 33_11kV FY2022.xlsx	33.36303	30.02672611	81	0.317248943
Jesmond 132_11kV FY2022.xlsx	37.36342	33.62707728	51	0.146771037
Jewells 33_11kV FY2022.xlsx	13.62407	12.2616648	25	0.072145908
Killarney 33_11kV FY2022.xlsx	14.51512	13.06361084	34	0.097847358
Kingsford 132_11kV FY2022.xlsx	57.9965	52.1968536	177	0.51091098
Kirrawee 132_11kV FY2022.xlsx	37.43333	33.6899949	55	0.158282491
Kogarah 132_11kV FY2022.xlsx	65.23344	58.71009996	33	0.094969495
Kotara 33_11kV FY2022.xlsx	17.86556	16.07900673	37	0.106480949
Kurnell South 132_11kV FY2022.xlsx	8.355052	7.519546929	37	0.106480949
Kurri 132_11kV FY2022.xlsx	24.20718	21.78646065	20	0.057557269
Lake Munmorah 132_11kV FY2022.xlsx	20.36531	18.3287808	54	0.155404628
Leichhardt 132_11kV FY2022.xlsx	44.93949	40.44554244	169	0.486358927
Leightonfield 33_11kV FY2022.xlsx	19.51318	17.56186622	65	0.187061126
Lemington 66_11kV FY2022.xlsx	1.780525	1.60247268	11	0.031847134
Lidcombe 33_11kV FY2022.xlsx	16.87155	15.18439907	10	0.028778635

Lindfield 33_11kV FY2022.xlsx	31.80051	28.62046013	18	0.070499765
Lisarow 33_11kV FY2022.xlsx	20.70703	18.63632519	84	0.241740532
Long Jetty 66_11kV FY2022.xlsx	39.68361	35.71525136	27	0.077702314
Lucas Heights 33_11kV FY2022.xlsx	7.598856	6.838970662	269	0.774145275
Macquarie Park 132_11kV FY2022.xlsx	72.37741	65.1396654	253	0.728099459
Maitland 33_11kV FY2022.xlsx	21.04416	18.93974361	11	0.031656498
Manly 33_11kV FY2022.xlsx	18.30325	16.47292674	103	0.296419938
Maroubra 132_11kV FY2022.xlsx	42.53498	38.2814808	99	0.284908484
Marrickville 132_11kV FY2022.xlsx	50.70414	45.633726	192	0.552549787
Maryland 132_11kV FY2022.xlsx	19.74084	17.76675698	6	0.017267181
Mascot 33_11kV FY2022.xlsx	29.16655	26.24989818	444	1.277771383
Matraville 33_11kV FY2022.xlsx	37.49715	33.74743307	167	0.4806032
Mayfield West 132_11kV FY2022.xlsx	20.20019	18.18017005	42	0.122577633
Meadowbank 132_11kV FY2022.xlsx	58.55804	52.70223576	109	0.313687119
Medowie 33_11kV FY2022.xlsx	11.83886	10.6549745	24	0.069068723
Menai 132_11kV FY2022.xlsx	40.94169	36.8475177	16	0.046045816
Merriwa 33_11kV FY2022.xlsx	2.956	2.6604	55	0.158661474
Metford 33_11kV FY2022.xlsx	38.64612	34.7815116	13	0.037412225
Milperra 132_11kV FY2022.xlsx	40.43207	36.38886663	151	0.434557385
Miranda 33_11kV FY2022.xlsx	29.69949	26.7295381	20	0.057557269
Mitchell Line 66_11kV FY2022.xlsx	11.51041	10.35936971	44	0.126991457
Mitchells Flat 66_11kV FY2022.xlsx	1.413394	1.27205424	9	0.029998
Mona Vale 33_11kV FY2022.xlsx	33.34595	30.01135678	81	0.317248943
Moonan 33_11kV FY2022.xlsx	0.77345	0.69610471	44	0.126625993
Morisset 132_11kV FY2022.xlsx	340.5678	306.5110272	10	0.035435861
Mortdale 33_11kV FY2022.xlsx	44.56535	40.10881546	82	0.235984805
Mosman 132_11kV FY2022.xlsx	79.77251	71.79526315	94	0.270519167
Mt Hutton 33_11kV FY2022.xlsx	15.09504	13.58554041	53	0.164213788
Mt Thorley 66_11kV FY2022.xlsx	4.718652	4.246786486	63	0.181305399
Muswellbrook 33_11kV FY2022.xlsx	12.60061	11.34055242	46	0.140974563
Narrabeen 33_11kV FY2022.xlsx	13.6087	12.2478262	28	0.080580177
Nelson Bay 33_11kV FY2022.xlsx	23.41813	21.07631779	76	0.218717624
New Lambton 33_11kV FY2022.xlsx	14.94461	13.45014951	19	0.054679406
Newcastle CBD 33_11kV FY2022.xlsx	35.21348	31.692132	56	0.161160355
Newdell 66_11kV FY2022.xlsx	6.887207	6.198485859	10	0.028778635
Newport 33_11kV FY2022.xlsx	18.54061	16.68655157	9	0.025900771
Noraville 33_11kV FY2022.xlsx	23.94808	21.5532678	49	0.14101531
North Head 33_11kV FY2022.xlsx	16.59563	14.93606319	120	0.345343617
North Sydney 132_11kV FY2022.xlsx	52.59175	47.33257618	89	0.256129849
Nulkaba 33_11kV FY2022.xlsx	15.38543	13.84688304	24	0.069268067
Olympic Park 132_11kV FY2022.xlsx	27.28982	24.56083989	31	0.089213768
Paddington 33_11kV FY2022.xlsx	31.61068	28.44961284	89	0.256129849
Paxton 33_11kV FY2022.xlsx	5.402715	4.86244377	37	0.106480949
Peats Ridge 33_11kV FY2022.xlsx	10.39455	9.355092757	2	0.005772339
Pelican 33_11kV FY2022.xlsx	11.08101	9.97291152	35	0.100725222

Pennant Hills 132_11kV FY2022.xlsx	67.23111	60.50799983	20	0.057557269
Port Botany 33_11kV FY2022.xlsx	16.6284	14.96556	112	0.323250981
Potts Hill 132_11kV FY2022.xlsx	37.76693	33.99024136	57	0.164038218
Punchbowl 33_11kV FY2022.xlsx	38.18186	34.363674	78	0.224473351
Pymble 33_11kV FY2022.xlsx	29.63335	26.6700139	104	0.299297801
Rathmines 132_11kV FY2022.xlsx	12.92375	11.63137437	46	0.13238172
Raymond Terr NEW 33_11kV FY2022.xlsx	20.98425	18.8858268	62	0.178942508
Revesby 132_11kV FY2022.xlsx	63.47612	57.12850712	1	0.002877863
Riverwood 33_11kV FY2022.xlsx	26.61659	23.95492807	37	0.106480949
RNS Hospital 132_11kV FY2022.xlsx	10.71484	9.64335707	39	0.11256061
Rockdale 132_11kV FY2022.xlsx	39.79229	35.81306424	121	0.34822148
Rose Bay 132_11kV FY2022.xlsx	48.39426	43.55483793	140	0.402900886
Rothbury 132_11kV FY2022.xlsx	11.39567	10.25610552	12	0.034534362
Rouchel 33_11kV FY2022.xlsx	0.969218	0.872296526	7	0.020168842
Rutherford 33_11kV FY2022.xlsx	23.33063	20.99756758	80	0.230229078
Sans Souci 33_11kV FY2022.xlsx	16.44858	14.80372061	119	0.342465753
Scone 66_11kV FY2022.xlsx	13.28216	11.953944	86	0.248210575
Sefton 132_11kV FY2022.xlsx	44.46379	40.01741346	14	0.040290089
Singleton 66_11kV FY2022.xlsx	14.89664	13.40697906	45	0.129671786
Singleton North 66_11kV FY2022.xlsx	17.9825	16.18424844	8	0.023022908
Somersby 132_11kV FY2022.xlsx	17.32576	15.59318004	108	0.310809255
St Ives 33_11kV FY2022.xlsx	45.02231	40.52007596	59	0.169793945
St Peters 132_11kV FY2022.xlsx	65.06926	58.5623304	30	0.086335904
Stockton 33_11kV FY2022.xlsx	7.085116	6.376604256	37	0.121323409
Strathfield South 132_11kV FY2022.xlsx	26.87014	24.18312706	15	0.043167952
Surry Hills 33_11kV FY2022.xlsx	27.5624	24.8061604	45	0.129503856
Swansea 33_11kV FY2022.xlsx	13.31599	11.9843892	39	0.112236675
Tanilba Bay 33_11kV FY2022.xlsx	10.09661	9.086952002	48	0.138137447
Tarro 33_11kV FY2022.xlsx	17.92272	16.13045092	8	0.023086691
Telarah 33_11kV FY2022.xlsx	11.2779	10.15011329	17	0.048923679
Terrey Hills 33_11kV FY2022.xlsx	13.51041	12.15936992	54	0.155404628
Thornton 33_11kV FY2022.xlsx	24.75	22.275	6	0.017267181
Tighes Hill 33_11kV FY2022.xlsx	23.12067	20.8086048	88	0.253982914
Tomago 33_11kV FY2022.xlsx	12.90268	11.61240851	1	0.002886169
Tomalpin 33_11kV FY2022.xlsx	4.848937	4.364043251	1	0.002886169
Tomaree 33_11kV FY2022.xlsx	18.57322	16.715898	26	0.07482445
Top Ryde 132_11kV FY2022.xlsx	44.60594	40.14534443	10	0.028778635
Toronto West 132_11kV FY2022.xlsx	16.59851	14.9386572	61	0.176056338
Turrumurra 33_11kV FY2022.xlsx	38.32013	34.4881152	66	0.208359641
Umina 66_11kV FY2022.xlsx	28.6989	25.82900729	23	0.066192765
Vales Point 33_11kV FY2022.xlsx	5.896524	5.306871344	85	0.244618395
Wamberal 132_11kV FY2022.xlsx	16.00543	14.4048852	63	0.181828677
Waverley 132_11kV FY2022.xlsx	45.8981	41.30828879	156	0.448946702
West Gosford 132_11kV FY2022.xlsx	45.77771	41.19993792	17	0.048923679
Williamtown 33_11kV FY2022.xlsx	6.049453	5.444508138	5	0.014389317

Woy Woy 66_11kV FY2022.xlsx	18.68948	16.82052951	35	0.100725222
Wyong 132_11kV FY2022.xlsx	36.99207	33.29286516	20	0.057557269
Zetland 132_11kV FY2022.xlsx	53.14516	47.83064515	132	0.379877979

Table 2 - Heat map of Branxton Distribution Zone Substation data showing intervals >90% of max demand observed in red

