

Draft Annual Load Factors for 2024/25 TNUoS Tariffs

For review by all generators

November 2023



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Summary of Annual Load Factors for the 2024/25 charging year

Executive Summary

Please review the ALFs and provide your comments or feedback by THURSDAY 21st DECEMBER 2023

The Electricity System Operator (ESO) is responsible for calculating, billing and collecting the Transmission Network Use of System (TNUoS) charges from generators and suppliers for use of the transmission networks. The TNUoS charges are designed to recover the cost of installing and maintaining the transmission system in England, Wales, Scotland and offshore. The methodologies for TNUoS charges are defined in the Connection and Use of System Code (CUSC). One of the key parameters for the generator TNUoS charges is Annual Load Factors (ALFs).

This document contains the draft Annual Load Factors (ALFs) to be used in the calculation of final generator TNUoS tariffs for 2024/25, effective from 1 April 2024.

We use generation data from the past five years to calculate the load factor for each generator. The draft ALFs in this document are based on generation data between 2018/19 and 2022/23.

Where historic data is not available for a new or mothballed station, we use a generic ALF corresponding to the station's generation technology type.

The ALFs for each generator at station level, and the generic ALF for each generation technology type, are published below.

We invite all generators to review their specific ALF as calculated in table 1 below. You can check your ALF against your TEC using your output metering and your Final Physical Notifications.

Comments on the ALFs can be submitted until close of business Thursday 21st December 2023. After this deadline, we will publish a revised and final version of the ALFs that will be used in the Final TNUoS tariffs for the 2024/25 charging year.

TNUoS Revenue team

E TNUoS.Queries@nationalgrideso.com

Draft Annual Load Factors for 2024/25

The table below shows the draft ALFs using data from the 2018/19 to 2022/23 charging years.

Please note that where there is no data available for a station, the generic ALF for the station’s generation type is used to complete the required data, this is shown as 0% in the table as it represents their actual data for that year.

Table 1: Draft ALFs by generating station

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
ABERDEEN	Offshore_Wind	Partial	Actual	Actual	Actual	Actual	44.7745%	43.4877%	40.4600%	39.8013%	40.4739%	41.4739%
ACHRUACH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	42.2005%	44.6235%	38.9476%	30.9230%	27.6794%	37.3570%
AFTON	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	37.3713%	54.8712%	44.9021%	31.8944%	35.1075%	39.1270%
AIKENGALL II	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	22.4459%	26.2386%	25.3400%	37.8846%	50.7794%	29.8211%
AN SUIDHE	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	36.2945%	38.0034%	36.6430%	36.4042%	32.7853%	36.4473%
ARECLEOCH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	30.6827%	33.7507%	29.8557%	20.7179%	19.6203%	27.0854%
BAD A CHEO	Onshore_Wind	Partial	Actual	Actual	Actual	Actual	21.5538%	44.1803%	40.2060%	38.3828%	36.3398%	40.9230%
BARROW	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	39.0292%	41.0261%	36.8873%	32.7662%	36.3397%	37.4187%
BEATRICE	Offshore_Wind	Partial	Actual	Actual	Actual	Actual	51.8538%	62.4523%	47.4445%	46.4316%	48.0706%	52.6558%
BEAULY CASCADE	Hydro	Actual	Actual	Actual	Actual	Actual	34.5072%	38.3073%	33.6181%	33.8611%	31.4152%	33.9955%
BEINNEUN	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	37.9202%	37.8757%	39.9402%	32.9284%	34.8742%	36.8900%
BHLARAIDH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	40.1955%	38.8473%	35.5105%	32.7032%	34.0764%	36.1447%
BLACK LAW	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	26.3658%	26.1492%	18.7236%	21.7779%	23.3144%	23.7472%
BLACKCRAIG WINDFARM	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	40.3666%	50.2739%	48.9036%	42.0617%	42.0026%	44.3226%
BLACKLAW EXTENSION	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	33.9916%	35.2458%	30.8894%	19.3554%	29.2178%	31.3662%
BRIMSDOWN	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	34.1757%	48.5050%	4.9608%	63.6660%	68.0226%	48.7822%
BURBO BANK EXT	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	42.5220%	49.1381%	45.9610%	38.1707%	40.6398%	43.0409%
BUSTLEHOLME	Pumped_Storage	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	1.4545%	6.0562%
CAPENHURST	Pumped_Storage	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	2.3736%	6.3625%
CARRAIG GHEAL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	45.7472%	49.1331%	45.8985%	42.5664%	44.6001%	45.4153%
CARRINGTON	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	65.4275%	45.6708%	36.5051%	65.5803%	62.1030%	57.7338%
CLUNIE	Hydro	Actual	Actual	Actual	Actual	Actual	36.8500%	47.5977%	40.7445%	35.4478%	36.5998%	38.0648%
CLYDE (NORTH)	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	41.4890%	43.6042%	37.7586%	34.4795%	39.2960%	39.5145%
CLYDE (SOUTH)	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	38.7296%	26.6271%	36.3028%	30.9274%	34.1761%	33.8021%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
CONNAHS QUAY	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	19.0546%	14.7379%	19.8650%	20.5616%	30.0815%	19.8271%
CONON CASCADE	Hydro	Actual	Actual	Actual	Actual	Actual	50.7941%	57.4034%	54.2900%	50.3881%	41.8695%	51.8241%
CORBY	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	1.8650%	0.3397%	0.3494%	1.2397%	0.7447%	0.7779%
CORRIEGARTH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	44.7484%	46.1902%	50.5594%	44.1801%	46.8636%	45.9341%
CORRIEMOILLIE	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	30.7985%	36.3718%	32.9303%	29.6203%	29.6355%	31.1214%
CORYTON	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	23.4777%	39.0899%	31.1732%	19.1165%	16.3333%	24.5891%
COTTAM DEVELOPMENT CENTRE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	77.5270%	55.5832%	59.6052%	60.2601%	46.2399%	58.4828%
COUR	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	55.6107%	57.8770%	55.7018%	47.6677%	47.3158%	52.9934%
COWES	Gas_Oil	Actual	Actual	Actual	Actual	Actual	0.0395%	0.0884%	0.0740%	0.2156%	0.1557%	0.1060%
COWLEY	Battery	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	7.6721%	1.9502%	2.8427%	4.1550%
CREAG RIABHACH WIND FARM	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	29.2325%	35.5322%
CROSSDYKES	Onshore_Wind	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	28.1135%	29.9792%	39.6955%	32.5961%
CRUACHAN	Pumped_Storage	Actual	Actual	Actual	Actual	Actual	6.5778%	8.0284%	8.2655%	5.8915%	13.2868%	7.6239%
CRYSTAL RIG II	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	48.7267%	49.7918%	48.4995%	45.9008%	40.0808%	47.7090%
CRYSTAL RIG III	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	49.5314%	53.8704%	52.9482%	48.4103%	48.2998%	50.2966%
CUMBERHEAD WIND FARM	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	18.6182%	31.9941%
DALQUHANDY WIND FARM	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	26.0670%	34.4771%
DAMHEAD CREEK	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	45.2453%	30.0390%	24.5035%	30.2402%	37.3939%	32.5577%
DEESIDE	reactive_Compensatio	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	6.0389%	0.0000%	0.0000%	2.0130%
DERSALLOCH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	35.2052%	37.1058%	32.3152%	30.7585%	33.9248%	33.8151%
DIDCOT B	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	50.9938%	50.2420%	41.8806%	54.9314%	55.4508%	52.0557%
DIDCOT GTS	Gas_Oil	Actual	Actual	Actual	Actual	Actual	0.7115%	0.5130%	0.0737%	0.1578%	0.1083%	0.2597%
DINORWIG	Pumped_Storage	Actual	Actual	Actual	Actual	Actual	12.5027%	8.2963%	7.3817%	10.1178%	9.1530%	9.1890%
DORENELL	Onshore_Wind	Partial	Actual	Actual	Actual	Actual	39.7116%	54.8990%	50.4355%	45.9927%	42.5678%	50.4424%
DOUGLAS WEST	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	40.3298%	46.9573%	41.9897%
DRAX	Coal	Actual	Actual	Actual	Actual	Actual	50.9593%	46.7591%	47.3862%	44.2811%	37.9458%	46.1421%
DUDGEON	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	47.2525%	54.1115%	50.4436%	48.3572%	47.0348%	48.6844%
DUNGENESS B	Nuclear	Actual	Actual	Actual	Actual	Actual	39.8945%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
DUNLAW EXTENSION	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	28.4604%	29.8704%	26.5288%	24.8042%	25.1612%	26.7168%
DUNMAGLASS	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	51.5228%	50.4246%	41.6275%	40.9001%	47.1722%	46.4081%
EAST ANGLIA 1	Offshore_Wind	Generic	Partial	Actual	Actual	Actual	0.0000%	30.2828%	49.0266%	50.5934%	48.8347%	49.4849%
EDINBANE WIND	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	34.9938%	32.6744%	30.1338%	30.9158%	31.5036%	31.6979%
ERROCHTY	Hydro	Actual	Actual	Actual	Actual	Actual	17.9492%	26.5126%	19.3928%	24.2338%	23.1601%	22.2622%
EWE HILL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	32.9121%	36.6313%	29.5980%	27.8813%	32.2466%	31.5856%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
FALLAGO	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	47.9232%	51.8467%	50.9745%	44.0807%	43.3643%	47.6595%
FARR WINDFARM	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	39.5693%	40.9761%	38.1431%	39.7780%	49.9325%	40.1078%
FASNAKYLE G1 & G3	Hydro	Actual	Actual	Actual	Actual	Actual	43.6554%	54.6486%	49.1345%	41.0037%	43.5656%	45.4518%
FAWLEY CHP	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	68.2899%	65.6292%	70.0968%	64.7543%	58.0886%	66.2245%
FFESTINIOG	Pumped_Storage	Actual	Actual	Actual	Actual	Actual	2.9504%	2.1464%	3.6192%	4.2564%	5.2797%	3.6087%
FINLARIG	Hydro	Actual	Actual	Actual	Actual	Actual	64.1387%	69.5043%	61.4982%	54.8479%	59.1878%	61.6083%
FOYERS	Pumped_Storage	Actual	Actual	Actual	Actual	Actual	14.9278%	7.6086%	12.5348%	11.5561%	22.2811%	13.0063%
FREASDAIL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	40.4607%	42.0718%	38.5290%	35.8249%	40.1250%	39.7049%
GALAWHISTLE	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	47.4443%	50.0137%	49.1133%	35.7352%	36.4122%	44.3233%
GALLOPER	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	53.8046%	54.2416%	51.7484%	51.7748%	49.4099%	52.4426%
GARRY CASCADE	Hydro	Actual	Actual	Actual	Actual	Actual	54.2012%	57.0471%	63.4954%	53.0632%	55.6830%	55.6437%
GLANDFORD BRIGG	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	1.0295%	0.6378%	0.1233%	0.0000%	0.0000%	0.2537%
GLEN APP	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	22.0870%	26.2184%	25.5772%	18.9414%	16.1433%	22.2019%
GLEN KYLLACHY WIND FARM	Onshore_Wind	Generic	Generic	Generic	Actual	Actual	0.0000%	0.0000%	0.0000%	40.2426%	37.5392%	38.8213%
GLENDOE	Hydro	Actual	Actual	Actual	Actual	Actual	31.6076%	36.0951%	33.8791%	33.5063%	29.4133%	32.9976%
GLENMORISTON	Hydro	Actual	Actual	Actual	Actual	Actual	37.8283%	45.1829%	42.7433%	0.0279%	0.0316%	26.8677%
GORDONBUSH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	38.6227%	41.4003%	31.2278%	37.8413%	40.6492%	39.0377%
GRAIN	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	50.2928%	49.2656%	46.8759%	45.5408%	37.8457%	47.2274%
GRANGEMOUTH	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	63.5659%	62.3434%	54.9758%	47.7542%	47.0719%	55.0245%
GREAT YARMOUTH	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	36.5911%	53.4446%	37.8027%	54.4555%	39.8262%	43.6912%
GREATER GABBARD	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	39.9735%	47.3707%	44.6564%	40.4104%	35.9032%	41.6801%
GRIFFIN WIND	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	27.3684%	27.5826%	24.2980%	23.3292%	24.0860%	25.2508%
GUNFLEET SANDS I	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	39.8080%	45.4945%	42.0515%	37.1512%	38.7166%	40.1921%
GUNFLEET SANDS II	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	39.6453%	45.0419%	41.8400%	38.0427%	37.5132%	39.8427%
GWYNT Y MOR	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	42.8331%	45.3165%	41.7255%	35.5432%	37.6200%	40.7262%
HADYARD HILL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	31.2735%	33.5312%	29.9285%	28.5335%	31.7926%	30.9982%
HALSARY WIND FARM	Onshore_Wind	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	33.4644%	51.6171%	49.6943%	44.9253%
HARESTANES	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	23.8473%	29.0205%	27.9253%	24.1662%	25.9778%	26.0231%
HARTING RIG WIND FARM	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	19.0437%	32.1360%
HARTLEPOOL	Nuclear	Actual	Actual	Actual	Actual	Actual	85.4489%	78.3650%	82.6796%	55.8166%	77.8362%	79.6270%
HEYSHAM	Nuclear	Actual	Actual	Actual	Actual	Actual	77.3512%	81.9479%	72.3488%	59.6539%	71.3767%	73.6922%
HINKLEY POINT B	Nuclear	Actual	Actual	Actual	Actual	Actual	79.8462%	72.3339%	8.5019%	73.6931%	26.1853%	57.4041%
HORNSEA 1A	Offshore_Wind	Generic	Partial	Actual	Actual	Actual	0.0000%	35.7733%	50.0278%	49.5545%	52.2254%	50.6026%
HORNSEA 1B	Offshore_Wind	Partial	Actual	Actual	Actual	Actual	39.4929%	56.1660%	52.5372%	49.8309%	52.0226%	53.5753%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
HORNSEA 1C	Offshore_Wind	Generic	Partial	Actual	Actual	Actual	0.0000%	45.3217%	50.9526%	49.4558%	52.5005%	50.9696%
HORNSEA 2A	Offshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	3.8606%	41.4360%	30.6920%
HORNSEA 2B	Offshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	15.6889%	39.8762%	34.1148%
HORNSEA 2C	Offshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	28.6342%	49.6073%	41.6736%
HUMBER GATEWAY	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	46.8351%	50.3072%	47.4682%	44.0755%	46.5691%	46.9575%
IMMINGHAM	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	72.9980%	69.2946%	69.7413%	46.2767%	46.3097%	61.7818%
INDIAN QUEENS	Gas_Oil	Actual	Actual	Actual	Actual	Actual	0.0288%	0.1789%	0.0430%	0.5132%	0.4828%	0.2349%
J G PEARS	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	36.3135%	43.5479%	45.1644%	42.1169%	39.2792%	41.6480%
KEADBY	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	40.3687%	27.3173%	29.3689%	14.9634%	35.0215%	30.5692%
KEADBY II CCGT POWER STATION	CCGT_CHP	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	34.1801%	19.2568%	34.2881%
KEITH HILL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	23.8493%	24.7990%	22.2586%	19.7960%	21.2221%	22.4433%
KEMSLEY	Battery	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	7.2267%	1.6915%	2.9802%	3.9661%
KENNOXHEAD WIND FARM EXTENSION	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	23.0074%	29.5302%	30.4066%
KILBRAUR	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	49.7699%	44.2180%	41.2281%	42.2555%	42.4742%	42.9826%
KILGALLIOCH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	43.3442%	46.4978%	43.4111%	38.7621%	38.8750%	41.8768%
KILLIN CASCADE	Hydro	Actual	Actual	Actual	Actual	Actual	40.4764%	43.1565%	42.0620%	34.9296%	39.0446%	40.5277%
KILLINGHOLME (POWERGEN)	Gas_Oil	Actual	Actual	Actual	Actual	Actual	0.6139%	1.2782%	1.6444%	1.2381%	2.4900%	1.3869%
KINGS LYNN A	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	0.4254%	20.9575%	51.7706%	55.5285%	51.4320%	41.3867%
KYPE MUIR	Onshore_Wind	Partial	Actual	Actual	Actual	Actual	27.7774%	42.8204%	35.5513%	32.0539%	35.0616%	37.8111%
LANGAGE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	24.5591%	28.9836%	25.4374%	54.5199%	36.8012%	30.4074%
LINCS WIND FARM	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	46.7412%	50.8056%	48.3981%	44.2258%	43.7300%	46.4550%
LITTLE BARFORD	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	63.2342%	38.4787%	38.3298%	28.9830%	37.7184%	38.1756%
LOCHLUICHART	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	32.8475%	34.1454%	30.2399%	29.0049%	30.5907%	31.2260%
LONDON ARRAY	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	36.8539%	45.8936%	46.8827%	41.9931%	41.8038%	43.2302%
LYNEMOUTH	Biomass	Actual	Actual	Actual	Actual	Actual	85.6495%	90.7180%	87.1228%	90.7966%	16.3568%	87.8301%
MARCHWOOD	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	72.2737%	45.8482%	63.6469%	73.2378%	72.8363%	69.5856%
MARK HILL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	28.6666%	31.8364%	27.8354%	26.2231%	25.2694%	27.5750%
MEDWAY	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	27.4290%	21.3610%	35.5113%	9.7881%	27.2468%	25.3456%
MIDDLE MUIR	Onshore_Wind	Partial	Actual	Actual	Actual	Actual	29.3669%	50.1156%	37.3334%	26.6592%	32.6697%	40.0396%
MILLENNIUM	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	54.1216%	54.8443%	45.2370%	40.3105%	42.6228%	47.3271%
MINNYGAP	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	32.4279%	34.1156%	32.2366%	28.8148%	31.1874%	31.9506%
MORAY EAST POWER STATIONS	Offshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	33.9646%	47.7258%	42.8232%
NANT	Hydro	Actual	Actual	Actual	Actual	Actual	34.0281%	38.0822%	31.3490%	33.8403%	31.9802%	33.2829%
NURSILING TERTIARY	Battery	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	9.0074%	0.0756%	0.2406%	3.1078%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
ORMONDE	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	40.8646%	42.8854%	39.5996%	27.8130%	30.9133%	37.1258%
PEMBROKE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	70.5263%	63.4003%	60.9615%	77.4265%	77.9907%	70.4510%
PEN Y CYMOEDD	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	33.2009%	38.5408%	36.6615%	31.6591%	33.7183%	34.5269%
PETERBOROUGH	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	0.4136%	0.5500%	0.7858%	2.4456%	0.7895%	0.7084%
PETERHEAD	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	61.5747%	50.7405%	45.1695%	27.1070%	55.1618%	50.3573%
POGBIE	Onshore_Wind	Partial	Actual	Actual	Actual	Actual	29.0769%	32.0583%	28.6354%	27.6012%	28.2439%	29.6459%
RACE BANK	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	47.1320%	51.5222%	48.5914%	45.0760%	46.9553%	47.5596%
RAMPION	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	35.4891%	35.3948%	46.9187%	42.1023%	43.6169%	40.4028%
RATCLIFFE-ON-SOAR	Coal	Actual	Actual	Actual	Actual	Actual	16.8536%	1.1881%	8.6794%	27.4231%	19.5997%	15.0442%
ROBIN RIGG EAST	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	34.4229%	40.0541%	40.1533%	34.3910%	38.8582%	37.7784%
ROBIN RIGG WEST	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	40.9494%	41.9934%	41.3967%	35.9395%	40.6587%	41.0016%
ROCKSAVAGE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	35.6214%	34.7678%	28.4727%	28.3526%	15.0415%	30.5310%
RYE HOUSE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	8.6393%	7.0222%	8.1726%	9.2983%	19.9986%	8.7034%
SALTEND	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	71.3266%	74.0812%	74.1271%	64.4094%	58.3750%	69.9391%
SANDY KNOWE WIND FARM	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	18.9976%	32.1206%
SANQUHAR	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	50.9844%	57.9841%	52.5076%	47.6727%	56.6589%	53.3836%
SEABANK	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	32.6753%	22.3590%	27.1891%	28.1000%	48.0019%	29.3215%
SEAGREEN 1	Offshore_Wind	Generic	Generic	Generic	Generic	Actual	0.0000%	0.0000%	0.0000%	0.0000%	14.4362%	35.9983%
SELLAFIELD	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	8.8320%	3.2368%	2.0667%	0.4333%	0.6887%	1.9974%
SEVERN POWER	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	39.5616%	26.2481%	9.2566%	0.0000%	0.0000%	11.8349%
SHERINGHAM SHOAL	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	50.7594%	49.0236%	45.7952%	39.2167%	39.4031%	44.7406%
SHOREHAM	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	12.0983%	7.2596%	26.1252%	34.5515%	49.7670%	24.2583%
SIZEWELL B	Nuclear	Actual	Actual	Actual	Actual	Actual	98.0180%	79.9515%	79.7295%	62.9812%	85.0139%	81.5650%
SLOY G2 & G3	Hydro	Actual	Actual	Actual	Actual	Actual	9.8246%	17.5169%	14.3504%	11.3156%	13.2415%	12.9692%
SOUTH HUMBER BANK	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	31.0569%	55.5443%	78.9930%	35.8557%	38.7863%	43.3955%
SOUTH KYLE WIND FARM	Onshore_Wind	Generic	Generic	Generic	Generic	Actual	0.0000%	0.0000%	0.0000%	0.0000%	4.9623%	27.4422%
SPALDING	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	38.1850%	55.8932%	47.0122%	41.3400%	48.7848%	45.7123%
SPALDING ENERGY EXPANSION	CCGT_CHP	Generic	Partial	Actual	Actual	Actual	0.0000%	13.5062%	3.5577%	3.2713%	1.6750%	2.8347%
STAYTHORPE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	60.3233%	56.1406%	41.6716%	57.3049%	60.2292%	57.8916%
STRATHY NORTH & SOUTH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	34.0711%	38.3054%	34.4987%	35.0703%	35.8570%	35.1420%
STRONELAIRG	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	48.4638%	47.6741%	33.0353%	39.7871%	42.9007%	43.4539%
SUTTON BRIDGE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	22.3560%	26.4852%	4.0643%	0.0000%	0.0000%	8.8068%
TAYLORS LANE	Gas_Oil	Actual	Actual	Actual	Actual	Actual	0.1133%	0.0960%	0.3699%	0.5212%	0.3103%	0.2645%
TEES RENEWABLE	Biomass	Generic	Generic	Actual	Actual	Actual	0.0000%	0.0000%	0.0000%	0.0000%	9.8997%	3.2999%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
THANET	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	35.8373%	41.2821%	39.0315%	35.4464%	35.4673%	36.7787%
TODDLBURN	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	34.7062%	37.2691%	34.7073%	30.5257%	32.2613%	33.8916%
TORNESS	Nuclear	Actual	Actual	Actual	Actual	Actual	85.4632%	96.5546%	83.6090%	68.7405%	68.3285%	79.2709%
TRALORG	Onshore_Wind	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	26.5038%	29.6661%	87.9149%	48.0283%
TRITON KNOLL OFFSHORE WIND FARM	Offshore_Wind	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	8.5859%	41.4188%	58.9126%	36.3058%
TWENTYSHILLING WIND FARM	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	21.0781%	49.1043%	36.2882%
USKMOUTH	Coal	Actual	Actual	Actual	Actual	Actual	0.0108%	0.0000%	0.0128%	0.0000%	0.0000%	0.0036%
WALNEY 4	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	50.3338%	56.1017%	50.4266%	41.8824%	49.5450%	50.1018%
WALNEY I	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	41.6150%	46.5322%	44.2968%	35.3784%	40.4092%	42.1070%
WALNEY II	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	48.7292%	54.7220%	49.7557%	42.6198%	47.8576%	48.7808%
WALNEY III	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	50.7716%	56.2050%	53.1360%	43.1102%	49.7948%	51.2341%
WEST BURTON	Coal	Actual	Actual	Actual	Actual	Actual	6.3690%	10.3006%	5.2432%	0.7669%	0.1212%	4.1264%
WEST BURTON B	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	62.8067%	53.4863%	40.1276%	50.1360%	58.9481%	54.1901%
WEST OF DUDDON SANDS	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	48.9209%	50.7437%	50.6867%	43.4545%	48.8273%	49.4783%
WESTERMOST ROUGH	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	52.5501%	56.1661%	53.1495%	48.2304%	49.4807%	51.7268%
WHITELEE	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	30.7296%	31.3487%	28.2256%	25.0306%	28.3630%	29.1061%
WHITELEE EXTENSION	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	26.6647%	28.4492%	27.0979%	23.9659%	24.3578%	26.0401%
WHITESIDE HILL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	55.0847%	60.3399%	56.3037%	53.1403%	57.8233%	56.4039%
WILTON	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	21.4515%	17.1525%	28.2414%	22.7866%	18.6264%	20.9548%
WINDY RIG WIND FARM	Onshore_Wind	Generic	Generic	Generic	Actual	Actual	0.0000%	0.0000%	0.0000%	23.7254%	53.1949%	38.5341%
WINDY STANDARD II	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	49.4509%	53.4476%	52.5437%	44.5141%	49.6262%	50.5403%

Generic Annual Load Factors

Generic ALFs are used to fill in the gaps for a generator if it does not have a full three years' worth of generation history.

Table 2: Draft Generic ALFs for 2024/25

Technology	Generic ALF
Battery	1.6301%
Biomass	45.5650%
CCGT_CHP	49.4274%
Coal	16.3291%
Gas_Oil	0.4504%
Hydro	40.4462%
Nuclear	61.9265%
Offshore_Wind	46.7794%
Onshore_Wind	38.6821%
Pumped_Storage	8.3570%
Reactive_Compensation	0.0000%
Solar	10.9000%
Tidal	12.6000%
Wave	2.9000%

Owing to a lack of available actual data, the Generic ALF values for Wave, Tidal and Solar technologies are taken from the Department of Energy Security & Net Zero publication '[Calculating the level of the Renewables Obligation for 2024 to 2025](#)'

Last year, we revised our technology categories to include "Battery" and "Reactive Compensation" which both now have actual data to include in the calculations. These categories will remain under review, in particular in the event of any further decision from Ofgem on their current review of the treatment of Synchronous Condensers¹.

¹ <https://www.ofgem.gov.uk/publications/call-evidence-correct-regulatory-treatment-assets-dedication-provision-ancillary-services>



How are ALFs calculated?

The ALFs Calculation

For each charging year 2018/19 to 2022/23 a Yearly Load Factor has been calculated using the higher of Metered Output (MO), Final Physical Notification (FPN) or zero in each half hour settlement period, divided by the sum of Transmission Entry Capacity (TEC), Short Term TEC (STTEC) and Limited Duration TEC (LDTEC) applicable in the same half hour.

All calculations are in local time, i.e. clock change days have 46 or 50 half hour settlement periods rather than the usual 48. STTEC and LDTEC are daily products so changes occur at midnight.

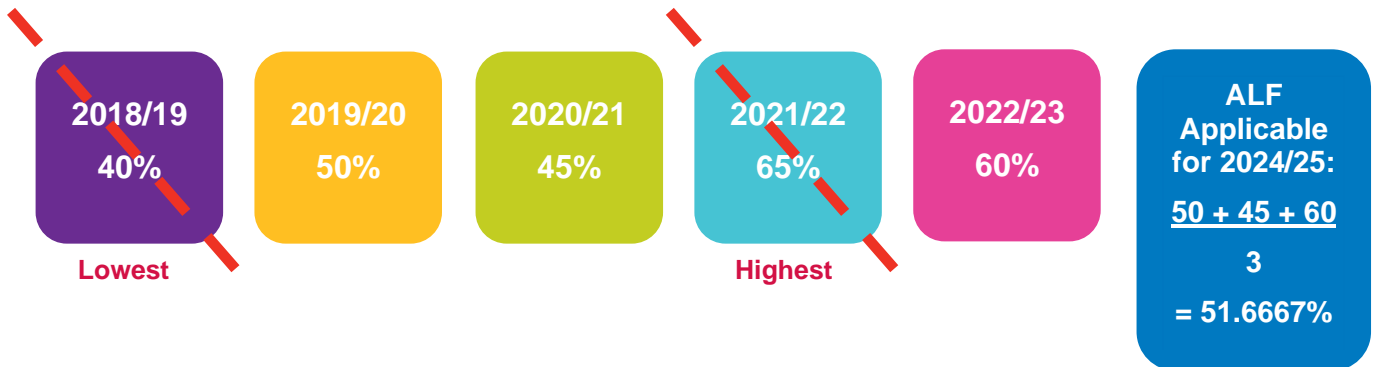
ALFs are calculated at station level, so where a station has multiple Balancing Mechanism Units (BMUs) representing generating units, station demand or trading site demand, the MO and FPN will be the aggregate of these.

For cascade hydro schemes, the ALF is calculated at scheme level, so the MO and FPN will be the aggregate of the BMU associated with the scheme. The scheme ALF is applied to each station in the scheme.

We have presented examples below with different scenarios that show how we calculate ALFs based on the number of years of generation data available for that station.

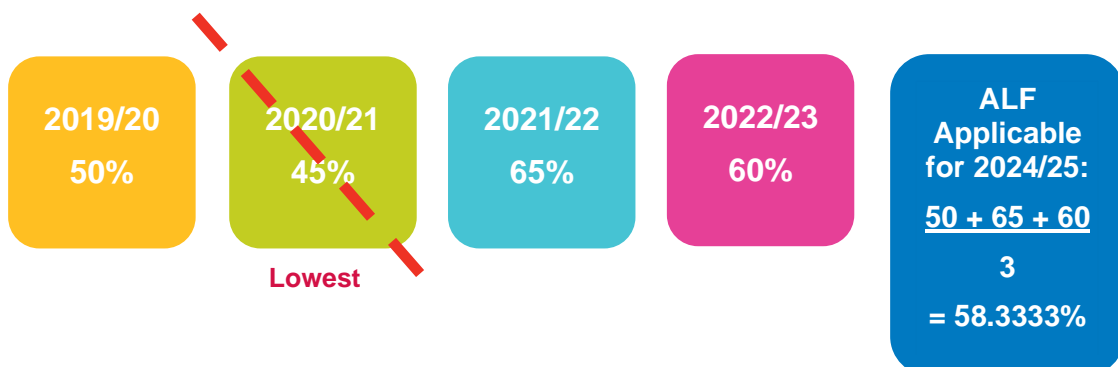
Five years of data

If your station has full ALF data over the past five years, then the highest and lowest years are discounted. Your ALF is then calculated by averaging the output from the remaining three years.



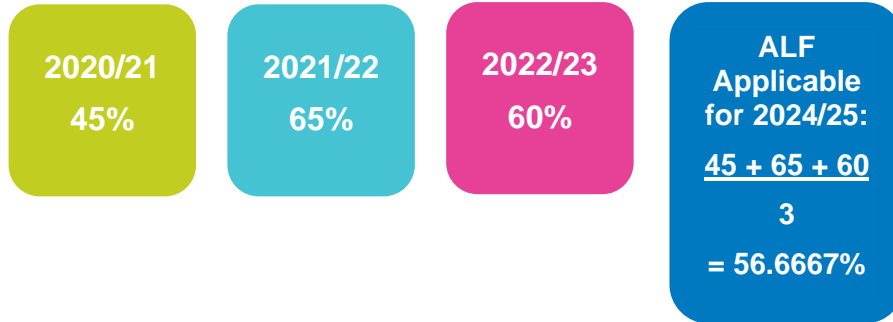
Four years of data

If your station has full ALF data over the past four years, then the lowest year is discounted. Your ALF is then calculated by averaging the output from the remaining three years. If you have four full years and one partial year, the partial year is ignored.



Three years of data

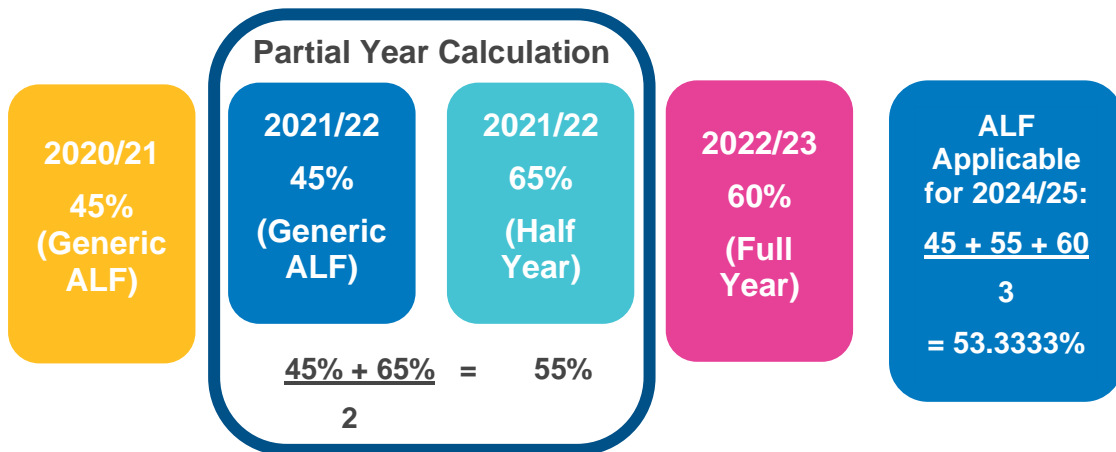
If your station has full ALF data over the past three years, then your ALF is the average of these three years. If you have three full years and one partial year, the partial year is ignored.



Fewer than three years of data

If your station has fewer than three full years of ALF data available, then any full years are used. Any gaps in the generation data from partial years are filled in using the generic ALF for the station’s generation type.

In the example below it is assumed that there is half a year of generation data available from 2021/22.



Any years with no data at all are filled in full by the generic ALF until there are at least three years of data available.

Calculation of partial year ALFs

Each partial year ALF is calculated using a combination of actual station data and the generic ALF for the relevant year. This means that the partial year ALF will remain the same for each year that it is used, rather than being updated each year using the most recently calculated ALF.

For new generators, the station specific load factor is calculated from the earliest date on which TEC is held. The generic ALF is used for the period prior to TEC being held to form a ‘partial’ year of ALF data for that power station.

Commissioning years are determined by referring to Transmission Entry Capacity effective dates, Metered Output and Final Physical Notification data.

Generic ALFs

For a generator with no output data history, the generic ALF for that generation technology type will be used. Generic ALFs are calculated from the ten most recently commissioned generators from each technology (where available).

Next Steps

If you have any comments or questions on these ALFs, please get in touch using the contact details below.

Please submit your comments by Thursday 21st December. We will publish the final ALFs in January which will be used for TNUoS tariffs for 2024/25.

TNUoS Revenue team

E TNUoS.Queries@nationalgrid.com



Generation Charging Principles

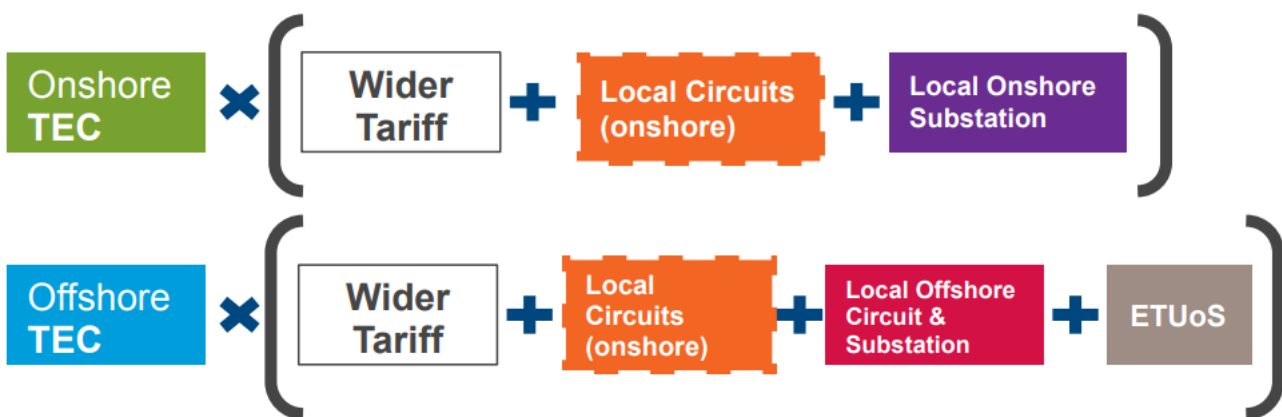
Generation Charging Principles

Transmission Network Use of System Charges (TNUoS) recover the money that GB Transmission Owners (TOs) spend on building, owning and maintaining transmission assets. Generators and suppliers are set charges which differ depending on where in the country they are located, and also by how they use the transmission network. TNUoS tariffs are calculated, set and billed by the Electricity System Operator (ESO), who recover revenue from generators and suppliers and pay it to the TOs.

Generators which pay generation TNUoS will be charged several components, depending on their characteristics. The wider tariff applies differently depending on several factors, and the local elements differ according to the specific arrangements by which the generator is connected to the transmission network.

Different charges may apply to onshore generators compared to offshore generators.

The wider and local components are shown below



All components of TNUoS tariffs are multiplied by the TEC of the generator to calculate the annual TNUoS liability.

There are four factors that affect what charges apply to each generator:

- **TEC:** the amount of capacity (in kW) that the generator can use to connect to the transmission system according to their connection agreement
- **Geographic location:** currently there are 27 generation zones in Great Britain; this determines the wider tariff that applies to the generator
- **Generator fuel type:** whether a generator is gas-fired or wind powered, for example, will determine how the wider tariff applies to them. Where a generator is new or recently commissioned and has limited or no data available, a generic ALF is used (dictated by the fuel type).
- **Connection voltage:** generators connecting at 400kV and 275kV in England and Wales, or at 400kV, 275kV and 132kV in Scotland are directly connected to the electricity transmission system, and so will be charged TNUoS. Generators connected at lower voltages are embedded, and will pay TNUoS if they have 100MW or more TEC.

The wider tariff

The wider tariff is made up of several parts to reflect the cost of different generator types connecting to the transmission system in different parts of the country.

There are four parts that make up the wider tariff: **The Peak**, **Year Round Shared**, **Year Round Not Shared**, and the **Adjustment**. These apply differently to each generator, depending on the type of generator.

The Peak element is paid only by generators which are designed to run at Peak times. The Year Round Elements are paid by all generators to reflect year round system usage. Depending on the generator classification, some of the Year Round elements are multiplied by the **Annual Load Factor (ALF)** of the generator.

The Adjustment is a non-locational element and so is the same in every zone.

How these components apply to different generators is represented in the diagram below.

Intermittent e.g. Wind, Tidal, Solar



Conventional Low Carbon, e.g. Nuclear, Hydro (run-of-river)



Conventional Carbon, e.g. Coal, CCGT, Biomass, Pump Storage, Battery



Generation classifications

All generators are classified according to how they use the transmission system:

- **Intermittent:** these generators are unable to control when they run, instead they run when their fuel is available. They are unlikely to be near full capacity at peak times.
- **Conventional Low Carbon:** these generators are conventional generators which are designed to be run as baseload, but they are less controllable than other types of generator. This could be because their fuel type dictates when they must run, or because they are very difficult to switch off. They are very likely to be generating at peak times.
- **Conventional Carbon:** these generators are more easily controllable than other generators and can be instructed to increase or decrease their output easily. They will almost certainly be running at peak times as their flexibility means they can run at times when electricity prices are highest.

Reactive Compensation is currently treated as Storage², and so is considered to be a Conventional Carbon generator.

Solar, Wave and Tidal would be considered as an Intermittent generator.

For more in depth guidance on TNUoS Charging, please visit the ESO [website](#)

² Pending the conclusion of Ofgem’s review of the treatment of Synchronous Condensers: <https://www.ofgem.gov.uk/publications/call-evidence-correct-regulatory-treatment-assets-dedication-provision-ancillary-services>



Document Revision History

Document Revision History

Version Number	Date of Issue	Notes
1.0	30 th November 2023	Publication of Draft Annual Load Factors for 2024/25 TNUoS Tariffs



Faraday House, Warwick Technology Park,
Gallows Hill, Warwick, CV346DA

nationalgrideso.com

ESO