

Final Annual Load Factors for 2019/20 TNUoS tariffs

November 2018

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Summary of Annual Load Factors for the 2019/20 charging year

Executive summary

These are the final ALFs that will be used for TNUoS charging in 2019/20

This document contains the final Annual Load Factors (ALFs) to be used in the calculation of generator Transmission Network Use of System (TNUoS) tariffs for 2019/20, effective from 1 April 2019. The ALFs are based on generation data for five years from 2013/14 until 2017/18.

Every generator requires a load factor which is used to calculate what share they pick up of a portion of TNUoS tariffs. We use generation data from the past five years to calculate the load factor for each generating station.

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.

For more information on the ALFs calculation process, please see CUSC section 14.15.100-112¹, or our guide within this document on page 14.

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¹ <https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc>

Final Annual Load Factors for 2019/20

The table below shows the final ALFs using data from the 2013/14 to 2017/18 charging years.

The column headers for each year reflect the charging year that began during that year. For example, “2017” refers to the 2017/18 charging year.

Table 1: Draft ALFs by generating station

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	
ABERTHAW	Coal	Actual	Actual	Actual	Actual	Actual	65.5413%	59.0043%	54.2611%	50.8335%	5.0742%	54.6997%
ACHRUACH	Onshore_Wind	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	33.6464%	36.7140%	44.3464%	38.2356%
AFTON	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	34.8738%	37.2641%
AIKENGALL II	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	33.5082%	36.8089%
AN SUIDHE	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	41.5843%	36.9422%	35.4900%	34.0938%	41.2323%	37.8882%
ARECLEOCH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	33.8296%	29.7298%	36.8612%	19.7246%	35.1728%	32.9108%
BAGLAN BAY	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	16.4106%	37.9194%	29.1228%	55.2030%	24.2891%	30.4438%
BARROW	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	54.1080%	47.0231%	47.1791%	44.2584%	47.0417%	47.0813%
BARRY	CCGT_CHP	Actual	Actual	Actual	Partial	Actual	1.2989%	0.4003%	2.1727%	24.3468%	0.5407%	1.3374%
BEAULY CASCADE	Hydro	Actual	Actual	Actual	Actual	Actual	35.6683%	37.1167%	35.0094%	30.4872%	21.9937%	33.7216%
BEINNEUN	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	30.9623%	25.8214%	31.7476%
BHLARAI DH	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	33.4339%	46.3209%	39.4047%
BLACK LAW	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	31.9648%	26.7881%	26.9035%	23.4623%	21.2137%	25.7180%
BLACKCRAIG WINDFARM	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	36.0208%	37.6465%
BLACKLAW EXTENSION	Onshore_Wind	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	33.4635%	13.1095%	30.4870%	25.6867%
BRIMSDOWN	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	18.7645%	11.1229%	16.4463%	45.0615%	27.6168%	20.9426%
BURBO BANK EXT	Offshore_Wind	Generic	Generic	Actual	Actual	Actual	0.0000%	0.0000%	16.7781%	25.0233%	49.3850%	30.3955%
CARRAIG GHEAL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	45.2760%	48.9277%	45.6254%	40.4211%	45.5371%	45.4795%
CARRINGTON	CCGT_CHP	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	38.7318%	58.0115%	58.8066%	51.8500%
CLUNIE	Hydro	Actual	Actual	Actual	Actual	Actual	45.3256%	43.2488%	47.9711%	32.8297%	32.1699%	40.4681%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	
CLYDE (NORTH)	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	42.6598%	36.8882%	41.4120%	26.8858%	39.2619%	39.1873%
CLYDE (SOUTH)	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	39.8941%	29.4115%	39.9615%	34.8751%	39.1634%	37.9775%
CONNAHS QUAY	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	12.8233%	18.3739%	28.2713%	37.4588%	20.0846%	22.2433%
CONON CASCADE	Hydro	Actual	Actual	Actual	Actual	Actual	54.2820%	55.5287%	58.9860%	48.6782%	50.8547%	53.5551%
CORBY	CCGT_CHP	Actual	Actual	Actual	Generic	Partial	8.0834%	9.6755%	4.5411%	0.0000%	44.6503%	7.4333%
CORRIEGARTH	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	22.5645%	41.2013%	34.0750%
CORRIEMOILLIE	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	32.2316%	30.4210%	33.7040%
CORYTON	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	9.7852%	17.5123%	26.4000%	63.0383%	16.4022%	20.1048%
COTTAM	Coal	Actual	Actual	Actual	Actual	Actual	67.3951%	51.4426%	34.4157%	14.9387%	21.6580%	35.8388%
COTTAM DEVELOPMENT CENTRE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	16.0249%	31.3132%	28.2382%	67.2482%	56.3007%	38.6174%
COUR	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	38.3247%	55.4273%	44.0704%
COWES	Gas_Oil	Actual	Actual	Actual	Actual	Actual	0.0956%	0.3135%	0.4912%	0.5319%	0.6942%	0.4456%
CRUACHAN	Pumped_Storage	Actual	Actual	Actual	Actual	Actual	9.6969%	9.0516%	8.8673%	7.1914%	9.6225%	9.1805%
CRYSTAL RIG II	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	50.2549%	47.5958%	48.3836%	40.2679%	52.5802%	48.7447%
CRYSTAL RIG III	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	39.9503%	51.9020%	43.4372%
DAMHEAD CREEK	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	77.1783%	67.4641%	64.8983%	68.1119%	63.5108%	66.8248%
DEESIDE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	17.3035%	13.9018%	17.4579%	27.1090%	20.8164%	18.5259%
DERSALLOCH	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	33.7728%	39.8576%	37.3632%
DIDCOT B	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	18.6624%	25.5345%	41.1389%	50.1358%	44.1234%	36.9322%
DIDCOT GTS	Gas_Oil	Actual	Actual	Actual	Actual	Actual	0.0902%	0.2843%	0.4861%	0.0452%	0.6337%	0.2869%
DINORWIG	Pumped_Storage	Actual	Actual	Actual	Actual	Actual	15.0898%	15.0650%	14.6353%	15.9596%	14.9467%	15.0338%
DRAX	Coal	Actual	Actual	Actual	Actual	Actual	80.5151%	82.2149%	76.2030%	62.2705%	55.8896%	72.9962%
DUDGEON	Offshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	42.4791%	46.9782%	46.3364%
DUNGENESS B	Nuclear	Actual	Actual	Actual	Actual	Actual	61.0068%	54.6917%	70.7617%	79.3403%	68.2086%	66.6590%
DUNLAW EXTENSION	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	34.8226%	30.0797%	29.1203%	26.5549%	31.0840%	30.0947%
DUNMAGLASS	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	38.9713%	75.6936%	51.0414%
EDINBANE WIND	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	39.4785%	31.2458%	35.5937%	32.5009%	34.5929%	34.2292%
EGGBOROUGH	Coal	Actual	Actual	Actual	Partial	Actual	72.1843%	45.7421%	27.0157%	40.0283%	7.1715%	48.3140%
ERROCHTY	Hydro	Actual	Actual	Actual	Actual	Actual	28.2628%	25.3585%	28.1507%	16.1775%	13.6081%	23.2289%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	
EWE HILL	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	33.3314%	33.1849%	34.9919%
FALLAGO	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	54.8683%	44.7267%	55.7992%	43.2176%	49.4158%	49.6703%
FARR WINDFARM	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	44.7212%	38.5712%	40.9963%	34.1766%	38.3046%	39.2907%
FASNAKYLE G1 & G3	Hydro	Actual	Actual	Actual	Actual	Actual	35.3695%	57.4834%	53.1573%	30.9768%	38.1673%	42.2314%
FAWLEY CHP	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	63.3619%	72.8484%	57.6978%	63.2006%	76.0793%	66.4703%
FFESTINIOG	Pumped_Storage	Actual	Actual	Actual	Actual	Actual	5.4631%	4.3251%	3.4113%	5.6749%	4.2118%	4.6667%
FIDDLERS FERRY	Coal	Actual	Actual	Actual	Actual	Actual	49.0374%	45.2435%	27.4591%	8.2478%	13.9908%	28.8978%
FINLARIG	Hydro	Actual	Actual	Actual	Actual	Actual	59.9142%	59.4092%	65.1349%	49.6402%	52.6415%	57.3216%
FOYERS	Pumped_Storage	Actual	Actual	Actual	Actual	Actual	14.7097%	12.3048%	15.4323%	11.3046%	14.5333%	13.8493%
FREASDAIL	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	32.5600%	38.9709%	36.6634%
GALAWHISTLE	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	34.9765%	42.4455%	38.6271%
GALLOPER	Offshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	54.7593%	51.2877%
GARRY CASCADE	Hydro	Actual	Actual	Actual	Actual	Actual	55.9308%	64.3828%	60.2772%	61.0498%	60.0010%	60.4426%
GLANDFORD BRIGG	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	1.5673%	0.5401%	1.8191%	2.7682%	1.8418%	1.7427%
GLEN APP	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	25.1373%	24.8393%	29.4787%
GLENDOE	Hydro	Actual	Actual	Actual	Actual	Actual	36.3802%	32.3494%	34.8532%	23.8605%	24.0105%	30.4044%
GLENMORISTON	Hydro	Actual	Actual	Actual	Actual	Actual	44.4594%	48.7487%	50.6921%	34.6709%	44.3960%	45.8680%
GORDONBUSH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	46.5594%	47.7981%	47.7161%	50.4126%	34.1762%	47.3579%
GRAIN	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	41.3833%	44.0031%	39.7895%	53.8227%	39.7755%	41.7253%
GRANGEMOUTH	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	55.9047%	62.6168%	59.8274%	51.4558%	58.9786%	58.2369%
GREAT YARMOUTH	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	20.7409%	18.6633%	59.8957%	63.5120%	50.1521%	43.5962%
GREATER GABBARD	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	48.3038%	42.1327%	50.2468%	43.1132%	46.4939%	45.9703%
GRIFFIN WIND	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	31.9566%	31.3152%	31.0284%	25.8228%	28.8970%	30.4135%
GUNFLEET SANDS I	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	56.6472%	47.0132%	50.4650%	45.7940%	47.3019%	48.2600%
GUNFLEET SANDS II	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	52.2361%	44.7211%	49.0521%	43.9893%	46.9928%	46.9220%
GWYNT Y MOR	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	8.0036%	61.6185%	63.1276%	44.8323%	50.4031%	52.2846%
HADYARD HILL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	31.9488%	27.7635%	36.6527%	31.4364%	34.0375%	32.4742%
HARESTANES	Onshore_Wind	Partial	Actual	Actual	Actual	Actual	24.1419%	28.6355%	27.8093%	22.5464%	29.0125%	28.4858%
HARTLEPOOL	Nuclear	Actual	Actual	Actual	Actual	Actual	73.7557%	56.2803%	53.8666%	78.0390%	80.6218%	69.3583%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	
HEYSHAM	Nuclear	Actual	Actual	Actual	Actual	Actual	73.3628%	68.8252%	72.7344%	79.6169%	85.1617%	75.2380%
HINKLEY POINT B	Nuclear	Actual	Actual	Actual	Actual	Actual	68.8664%	70.1411%	67.6412%	71.2265%	83.4643%	70.0780%
HUMBER GATEWAY	Offshore_Wind	Generic	Partial	Actual	Actual	Actual	0.0000%	43.9343%	62.9631%	59.7195%	54.9913%	59.2246%
HUNTERSTON	Nuclear	Actual	Actual	Actual	Actual	Actual	84.7953%	79.1368%	82.1786%	83.2939%	79.8644%	81.7790%
IMMINGHAM	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	37.8219%	56.8316%	69.4686%	71.9550%	64.3175%	63.5392%
INDIAN QUEENS	Gas_Oil	Actual	Actual	Actual	Actual	Actual	0.2321%	0.0876%	0.0723%	0.0847%	0.0740%	0.0821%
KEADBY	CCGT_CHP	Actual	Generic	Partial	Actual	Actual	0.0001%	0.0000%	35.1858%	28.6076%	38.6957%	22.4345%
KEITH HILL	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	36.9858%	37.9681%
KILBRAUR	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	51.3777%	54.3550%	50.3807%	46.5342%	56.7501%	52.0378%
KILGALLIOCH	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	25.2739%	25.3254%	29.6862%
KILLIN CASCADE	Hydro	Actual	Actual	Actual	Actual	Actual	45.5356%	44.8205%	53.2348%	27.4962%	34.9231%	41.7597%
KILLINGHOLME (POWERGEN)	Gas_Oil	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	0.5489%	0.3765%
LANGAGE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	40.8749%	34.8629%	16.5310%	44.5413%	42.3368%	39.3582%
LINCS WIND FARM	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	46.5987%	43.8178%	49.1306%	44.5192%	51.0911%	46.7495%
LITTLE BARFORD	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	33.6286%	49.6644%	39.9829%	64.8597%	66.3067%	51.5023%
LOCHLUICHAIR	Onshore_Wind	Partial	Actual	Actual	Actual	Actual	27.6728%	20.2103%	29.2663%	31.6897%	34.3322%	31.7627%
LONDON ARRAY	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	51.2703%	64.0880%	66.8682%	53.6245%	50.5515%	56.3276%
LYNEMOUTH	Coal	Generic	Generic	Partial	Generic	Actual	0.0000%	0.0000%	68.0196%	0.0000%	1.0783%	35.5714%
MARCHWOOD	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	48.6845%	66.4021%	55.0879%	75.4248%	67.3692%	62.9531%
MARK HILL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	30.2863%	26.7942%	34.0227%	21.9653%	31.0915%	29.3907%
MEDWAY	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	14.5545%	28.0962%	34.1799%	35.1505%	36.7261%	32.4756%
MILLENNIUM	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	52.6618%	53.2636%	48.4038%	44.9764%	53.6488%	51.4431%
MINNYGAP	Onshore_Wind	Generic	Generic	Generic	Generic	Actual	0.0000%	0.0000%	0.0000%	0.0000%	30.9962%	35.9716%
NANT	Hydro	Actual	Actual	Actual	Actual	Actual	35.5883%	36.4040%	37.3788%	30.6350%	34.9026%	35.6317%
ORMONDE	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	49.6561%	42.8711%	47.1986%	41.2188%	37.7162%	43.7628%
PEMBROKE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	60.3928%	67.5346%	64.5596%	77.6478%	70.2866%	67.4603%
PEN Y CYMOEDD	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	26.9446%	36.0948%	33.8329%
PETERBOROUGH	CCGT_CHP	Actual	Actual	Partial	Actual	Actual	1.8311%	1.0929%	4.1032%	1.7914%	0.4349%	1.5718%
PETERHEAD	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	41.8811%	0.4858%	23.3813%	42.2292%	65.7808%	35.8305%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	
RACE BANK	Offshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	45.3062%	38.1978%	44.3520%
RAMPION	Offshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	40.9885%	46.6974%
RATCLIFFE-ON-SOAR	Coal	Actual	Actual	Actual	Actual	Actual	71.7403%	56.1767%	19.6814%	15.4657%	19.3780%	31.7454%
ROBIN RIGG EAST	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	46.7562%	55.3209%	51.9700%	50.5096%	42.5599%	49.7453%
ROBIN RIGG WEST	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	48.0629%	53.4150%	56.0881%	51.5383%	47.3991%	51.0054%
ROCKSAVAGE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	2.6155%	4.4252%	19.8061%	58.6806%	29.8122%	18.0145%
RYE HOUSE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	7.4695%	5.3701%	7.7906%	15.6538%	13.4736%	9.5779%
SALTEND	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	69.0062%	67.9518%	55.6228%	77.4019%	70.1596%	69.0392%
SANQUHAR	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	35.2098%	37.3761%
SEABANK	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	18.2781%	25.6956%	27.2136%	41.6815%	55.4606%	31.5303%
SELLAFIELD	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	25.0221%	18.9719%	28.6790%	19.8588%	13.6007%	21.2842%
SEVERN POWER	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	32.4163%	24.6354%	18.3226%	64.4246%	55.6920%	37.5812%
SHERINGHAM SHOAL	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	49.3517%	46.2286%	53.6184%	46.9715%	54.3071%	49.9805%
SHOREHAM	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	20.7501%	10.2239%	48.9514%	68.9863%	64.2994%	44.6670%
SIZEWELL B	Nuclear	Actual	Actual	Actual	Actual	Actual	82.5051%	84.7924%	98.7826%	81.6359%	73.3708%	82.9778%
SLOY G2 & G3	Hydro	Actual	Actual	Actual	Actual	Actual	14.3471%	15.5941%	13.9439%	8.1782%	12.0303%	13.4404%
SOUTH HUMBER BANK	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	24.3373%	34.4673%	48.6753%	55.3419%	34.6174%	39.2533%
SPALDING	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	33.4800%	39.3092%	47.9407%	60.9748%	52.9683%	46.7394%
STAYTHORPE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	37.6216%	56.6148%	69.4422%	65.7791%	52.0701%	58.1547%
STRATHY NORTH & SOUTH	Onshore_Wind	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	49.6340%	36.1987%	40.2313%	42.0213%
STRONELAIRG	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	37.5366%	38.1517%
SUTTON BRIDGE	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	9.4124%	17.2025%	13.1999%	38.0184%	29.1878%	19.8634%
TAYLORS LANE	Gas_Oil	Actual	Actual	Actual	Actual	Actual	0.0483%	0.0640%	0.1708%	0.8047%	1.1712%	0.3465%
THANET	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	39.7489%	35.5935%	41.3434%	33.7132%	38.5069%	37.9498%
TODDLBURN	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	39.5374%	33.7211%	35.0823%	31.3435%	38.0158%	35.6064%
TORNESS	Nuclear	Actual	Actual	Actual	Actual	Actual	86.4669%	91.4945%	85.7725%	97.9942%	86.4413%	88.1343%
USK MOUTH	Coal	Actual	Partial	Actual	Actual	Actual	38.9899%	46.9428%	25.5184%	24.3304%	0.1000%	29.6129%
WALNEY 4	Offshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	45.2033%	48.1024%
WALNEY 1	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	57.7046%	52.0555%	50.7535%	47.4617%	55.9472%	52.9187%

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	
WALNEY II	Offshore_Wind	Actual	Actual	Actual	Actual	Actual	61.9219%	58.2355%	35.7988%	54.9727%	62.8290%	58.3767%
WALNEY III	Offshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	50.1762%	49.7600%
WEST BURTON	Coal	Actual	Actual	Actual	Actual	Actual	68.9176%	61.5364%	32.7325%	10.1071%	11.8199%	35.3629%
WEST BURTON B	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	30.3021%	46.8421%	59.3477%	54.2878%	63.2420%	53.4925%
WEST OF DUDDON SANDS	Offshore_Wind	Partial	Actual	Actual	Actual	Actual	40.4810%	40.0506%	48.7540%	48.7691%	55.4034%	50.9755%
WESTERMOST ROUGH	Offshore_Wind	Generic	Partial	Actual	Actual	Actual	0.0000%	26.2900%	54.8014%	58.1061%	63.4740%	58.7938%
WHITELEE	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	35.1074%	29.8105%	31.8773%	27.2893%	29.6336%	30.4405%
WHITELEE EXTENSION	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	27.0102%	27.7787%	26.7655%	23.5253%	25.1664%	26.3140%
WHITESIDE HILL	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	38.3704%	38.4297%
WILTON	CCGT_CHP	Actual	Actual	Actual	Actual	Actual	4.4941%	21.5867%	16.1379%	14.4130%	15.5750%	15.3753%
WINDY STANDARD II	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	43.2981%	40.0722%

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: Final Generic ALFs for 2019/20

Technology	Generic ALF
Biomass	26.8847%
CCGT_CHP	48.6379%
Coal	37.6162%
Gas_Oil	0.2903%
Hydro	42.4165%
Nuclear	76.3178%
Offshore_Wind	49.5519%
Onshore_Wind	38.4593%
Pumped_Storage	10.6826%
Tidal	18.9000%
Wave	31.0000%

*Note: ALF figures for Wave and Tidal technology are generic figures provided by BEIS due to no metered data being available.

The Biomass ALF for 2017/18 has been copied from the 2015/16 year due to there not being any single majority biomass-fired stations since then.



2

Changes compared to the draft ALFs

Summary of changes

This section summarises the changes that have been made to the draft ALFs.

Changes to specific ALFs

The table below shows the stations which have seen a change to either their 2017 ALF, or both their 2017 ALF and their specific ALF.

If a station has four or five years of historic ALF data, then it might be the case that a change to their 2017 ALF data doesn't affect their specific ALF, because 2017 data might not be included in the calculation of the specific ALF. For more information on the ALF calculation, see page 14.

Table 3: Details of changes to specific ALFs

Station	Fuel type	Previous TEC	New TEC	Previous 2017 ALF	New 2017 ALF	Previous ALF	New ALF
Aberthaw	Coal	1620.0	1610.0	5.0429%	5.0742%	54.6997%	54.6997%
Blackcraig Windfarm	Wind onshore	52.9	110.0	36.6822%	36.0208%	37.8669%	37.6465%
Blacklaw Extension	Wind onshore	69.0	60.0	26.5105%	30.4870%	24.3612%	25.6867%
Cowes	Gas Oil	0.0	99.9	0.0000%	0.6942%	N/A	0.4456%
Didcot GTS	Gas Oil	0.0	99.9	0.0000%	0.6337%	N/A	0.2869%
Glandford Brigg	CCGT CHP	0.0	99.0	0.0000%	1.8418%	N/A	1.7427%
Harestanes	Wind onshore	142.3	125.0	25.4853%	29.0125%	27.3100%	28.4858%
Hinkley Point B	Nuclear	1261.0	1061.0	70.2265%	83.4643%	69.7447%	70.0780%
Killingholme (Powergen) *	Gas Oil	600.0	600.0	0.5300%	0.5489%	0.3195%	0.3765%
Taylors Lane	Gas Oil	144.0	99.0	0.8052%	1.1712%	0.3465%	0.3465%

* The specific ALF for Killingholme (Powergen) has changed due to the change to the generic ALF for Gas Oil (see below).

Changes to Generic ALFs

The Generic ALF for Gas Oil has changed due to the addition of the Cowes and Didcot GTS stations, and the change to the TEC for Taylors Lane.

The Nuclear Generic ALF has changed as a result of the correction of the TEC for Hinkley Point B.

Table 4: Details of changes to Generic ALFs

Technology	Previous Generic ALF	New Generic ALF	Difference: New compared to Previous
Biomass	26.8847%	26.8847%	-
CCGT_CHP	48.6379%	48.6379%	-
Coal	37.6162%	37.6162%	-
Gas_Oil	0.2143%	0.2903%	0.0760%
Hydro	42.4165%	42.4165%	-
Nuclear	76.2702%	76.3178%	0.0476%
Offshore_Wind	49.5519%	49.5519%	-
Onshore_Wind	38.4593%	38.4593%	-
Pumped_Storage	10.6826%	10.6826%	-
Tidal	18.9000%	18.9000%	-
Wave	31.0000%	31.0000%	-



3

How are ALFs calculated?

The ALFs calculation

For each charging year 2013/14 to 2017/18 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. TEC, 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.

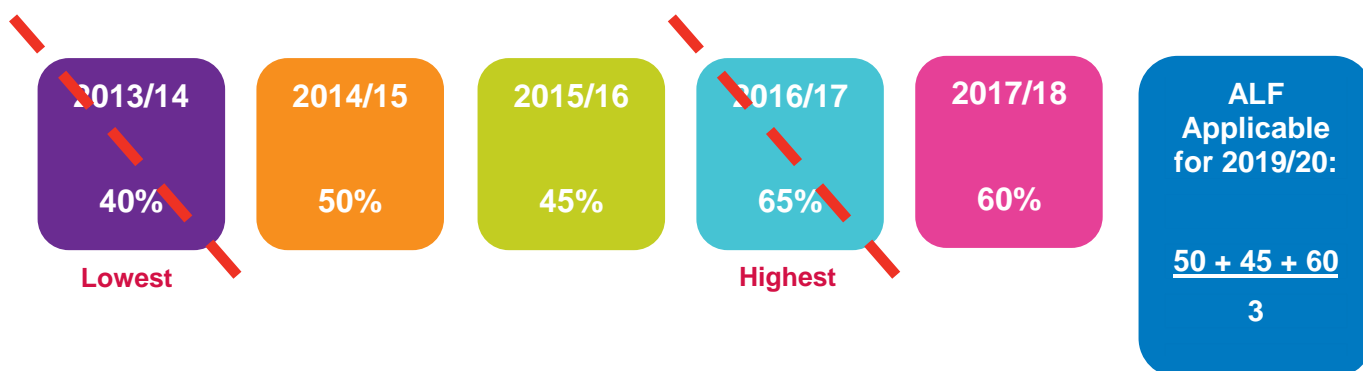
We are happy to provide support and advice on the derivation of ALFs to our customers. However the dataset used to derive the ALFs is very large so we are only able to provide support to generators for stations in their own portfolios.

Below is a guide on how we calculate ALFs based on the number of years of generation data available for that station.

The ALF methodology can be found in CUSC section 14.15.100-112.²

Five years of data

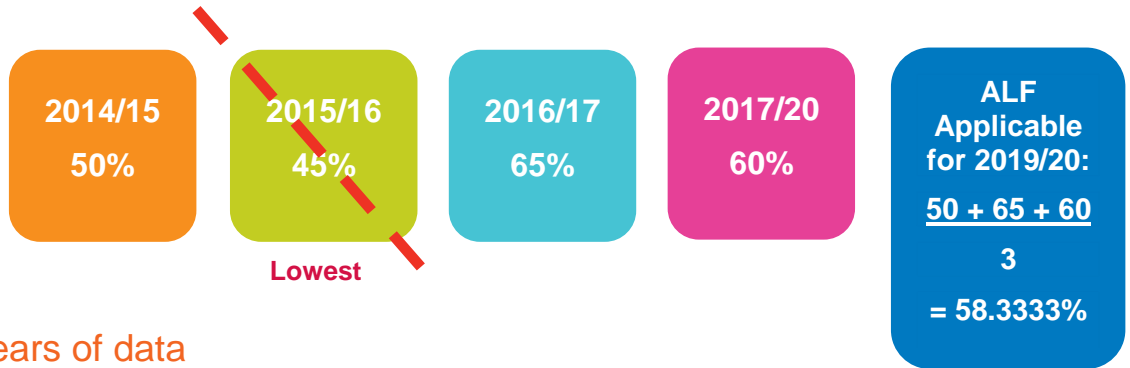
If your station has full ALF data over the past five years, then the highest and lowest years are discounted. Your ALF is then calculated by averaging the output from the remaining three years.



² <https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc>

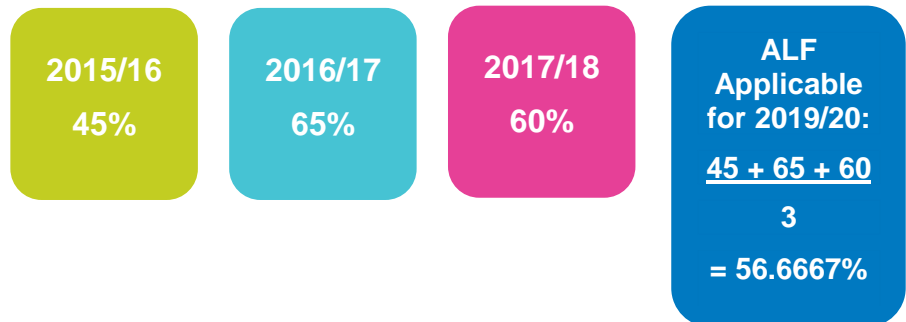
Four years of data

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

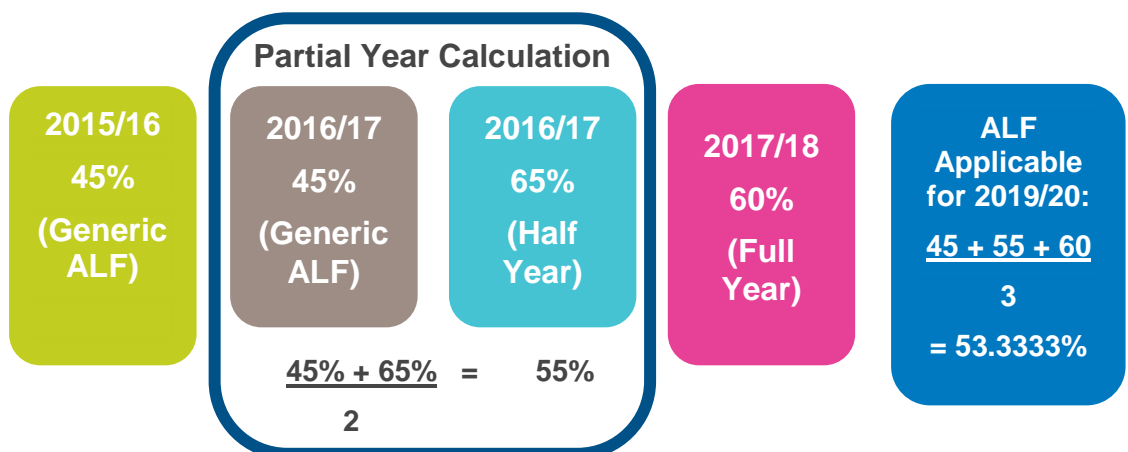
If your station has full ALF data over the past three years, then your ALF is the average of these three years. If you have three full years and one partial year, the partial year is ignored.



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 2016/17.



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.

A partial year would most likely occur when TEC is held for only part of the year. The station's output data is used from the day in the year that the station first begins to output onto the system.

Calculation of partial year ALFs

In these ALFs we have amended the model so that for each partial ALF from 2014/15 onwards, the generic ALF for that specific year is used to calculate it, instead of the most recently calculated generic ALF. This means that the partial ALF will remain the same, rather than being updated each year using the most recently calculated ALF.

2014/15 was the first year for which we calculated ALFs, so generic ALFs are not available for the years prior to this. These partial years will continue to be calculated using the most recent generic ALF.

For new generators, the station specific load factor is calculated from the date of first output, and not the earliest date on which TEC is held. Generic ALF data is used for every half-hourly period before first output to form a 'partial' year of ALF data for that power station.

Commissioning years have been taken from the Digest of United Kingdom Energy Statistics Table 5.11³ but commissioning dates within the five charging years under consideration have been checked against Metered Output and Final Physical Notification data to determine the exact date.

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).

TNUoS Revenue team

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³ <https://www.gov.uk/government/publications/electricity-chapter-5-digest-of-united-kingdom-energy-statistics-dukes>



A

Generation charging principles

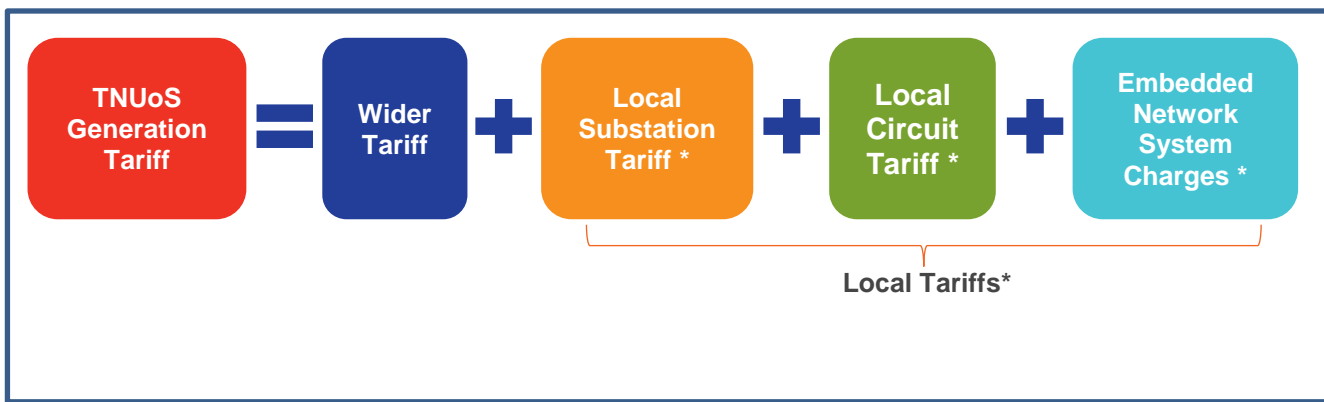
Generation charging principles

Generators pay TNUoS (Transmission Network Use of System) tariffs to allow National Grid as System Operator to recover the capital costs of building and maintaining the transmission network on behalf of the transmission asset owners (TOs).

The TNUoS tariff specific to each generator depends on many factors, including the location, type of connection, connection voltage, plant type and volume of TEC (Transmission Entry Capacity) held by the generator. The TEC figure is equal to the maximum volume of MW the generator is allowed to output onto the transmission network.

Under the current methodology there are 27 generation zones, and each zone has four tariffs. Liability for each tariff component is shown below:

TNUoS tariffs are made up of two general components, the **wider tariff**, and **local tariffs**.



** Additional local tariffs may be applicable to offshore generators*

The wider tariff is set to recover the costs incurred by the generator for the use of the whole system, whereas the local tariffs are for the use of assets in the immediate vicinity of the connection site.

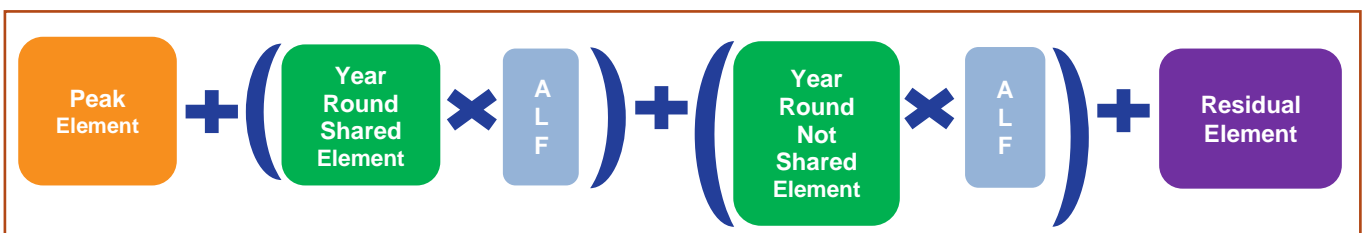
*Embedded network system charges are only payable by generators that are not directly connected to the transmission network and are not applicable to all generators.

The wider tariff

The wider tariff is made up of four components, two of which may be multiplied by the generator's specific ALF, depending on the generator type.

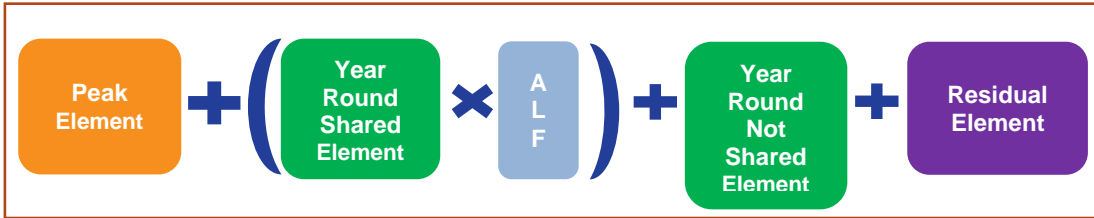
Conventional Carbon Generators

(Biomass, CHP, Coal, Gas, Pump Storage)



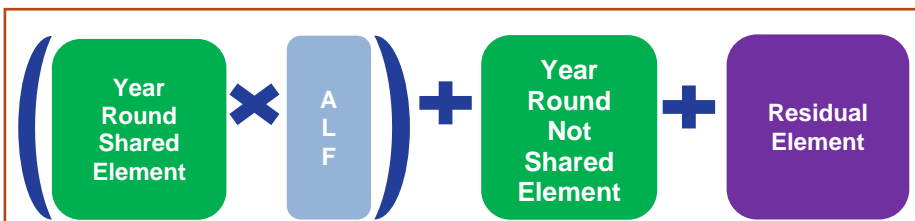
Conventional Low Carbon Generators

(Hydro, Nuclear)



Intermittent Generators

(Wind, Wave, Tidal)



The **Peak** element reflects the cost of using the system at peak times. This is only paid by conventional and peaking generators; intermittent generators do not pay this element.

The **Year Round Shared** and **Year Round Not Shared** elements represent the proportion of transmission network costs shared with other zones, and those specific to each particular zone respectively.

ALFs are calculated annually using data available from the most recent charging year. Any generator with fewer than three years of historical generation data will have any gaps derived from the generic ALF calculated for that generator type.

The **Residual** element is a flat rate for all generation zones which adds a non-locational charge (which may be positive or negative) to the Wider TNUoS tariff, to ensure that the correct amount of aggregate revenue is collected from generators as a whole.