

Issue	Revision
1	3

The Statement of Use of System Charges

Effective from 1 April 2019

Based Upon:

The Statement of the Connection Charging Methodology
and
The Statement of the Use of System Charging Methodology

contained within

Section 14 Parts I and II respectively
of the Connection and Use of System Code

Please note that this is an updated version of the Charging Statement that was approved by Ofgem on 17/10/2019 and was published on 21/10/2019.

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Introduction

This statement is published in accordance with the National Grid Electricity System Operator Licence.

This document sets out the annual tariffs for Transmission Network Use of System charges and the parameters used to calculate these and fees charged by National Grid Electricity System Operator in relation to applications for connection, use of system and engineering works.

Further information on the methods by which and principles upon which National Grid Electricity System Operator derives Use of System charges is set out in the **Statement of the Use of System Charging Methodology** which is included in Section 14 of the Connection and Use of System Code (CUSC) which is available on our website at:

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

If you require further detail on any of the information contained within this document or have comments on how this document might be improved, please contact our **Charging Team** at:

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Schedule 1

Transmission Network Use of System Charge (TNUoS)

1. Basis of 2019/20 Transmission Network Use of System Charges

The Transmission Network Use of System Charges for 2019/20 found within this document have been calculated using the methodology described in the Statement of Use of System Charging Methodology. Part of the tariff calculation utilises a DC Load Flow (DCLF) Investment Cost Related Pricing (ICRP) transport and tariff model. The following tables provide a summary of some of the parameters utilised to calculate tariffs within this model.

Table 1.1: TNUoS Calculation Parameters

Parameter	Value/Basis
Transport model network, nodal generation & nodal demand data	Based upon various data sources as defined in Section 14 of the Connection and Use of System Code (CUSC)
Expansion constant	£14.552251 /MWkm
Annuity factor	5.8%
Overhead factor	1.8%
Locational onshore security factor	1.8
Offshore civil engineering discount	£0.456207/kW

Table 1.2: Onshore Wider Cable and Overhead Line (OHL) Expansion Factors

TO Region	Cable Expansion Factor			OHL Expansion Factor		
	400kV	275kV	132kV	400kV	275kV	132kV
Scottish Hydro Electric Transmission Ltd	10.20	11.45	20.77	1.00	1.20	2.59
SP Transmission Ltd	10.20	11.45	22.58	1.00	1.20	2.87
National Grid Electricity Transmission plc	10.20	11.45	22.58	1.00	1.20	2.87

Table 1.3 Onshore Local Expansion Factors (All TO Regions)

2dp	400kV	275kV	132kV			
			Single Circuit <200MVA	Double Circuit <200MVA	Single Circuit >=200MVA	Double Circuit >=200MVA
Cable Expansion Factor	10.20	11.45	22.58	22.58	22.58	22.58
OHL Expansion Factor	1.00	1.20	10.33	8.388	5.912	3.950

Table 1.4 Offshore Local Expansion Factors

Offshore Power Station	Local Expansion Factor (to 2 d.p.)
Barrow	95.29
Burbo Bank Ext	25.70
Dudgeon	19.79
Greater Gabbard & Galloper	43.85, 41.84
Gunfleet	83.15
Gwynt Y Môr	38.88
Humber Gateway	49.59
Lincs	56.30
London Array	44.48
Ormonde	71.32
Robin Rigg East	144.21
Robin Rigg West	144.21
Sheringham Shoal	43.80
Thanet	72.45
Walney I	61.71
Walney 2	59.00
West of Duddon Sands	57.73
Westermost Rough	78.53

Further Local Expansion Factors used to calculate Local Circuit Tariffs applicable to generation connecting to offshore transmission infrastructure during 2019/20 will be published in future revisions of this statement following the completion of the tender process relating to the sale of the relating offshore transmission assets.

2. Schedule of Transmission Network Use of System Wider Zonal Generation Charges (£/kW) in 2019/20

Table 1.5 Wider Zonal Generation TNUoS Tariffs

The following table provides the Wider Zonal Generation TNUoS tariffs applicable from 1 April 2019.

Zone	Zone Name	System Peak Tariff (£/kW)	Shared Year Round Tariff (£/kW)	Not Shared Year Round Tariff (£/kW)	Residual Tariff (£/kW)
1	North Scotland	2.280543	17.691649	15.483854	-3.527532
2	East Aberdeenshire	4.393220	9.220124	15.483854	-3.527532
3	Western Highlands	1.436393	18.259144	15.522353	-3.527532
4	Skye and Lochalsh	-2.864332	18.259144	17.231378	-3.527532
5	Eastern Grampian and Tayside	2.043322	15.184507	14.767083	-3.527532
6	Central Grampian	2.967375	14.208477	14.345112	-3.527532
7	Argyll	2.973002	11.114505	24.583506	-3.527532
8	The Trossachs	2.985196	11.114505	12.941107	-3.527532
9	Stirlingshire and Fife	1.812251	8.514562	12.163013	-3.527532
10	South West Scotlands	3.140376	9.845323	12.498708	-3.527532
11	Lothian and Borders	3.851953	9.845323	6.686795	-3.527532
12	Solway and Cheviot	2.070632	5.497614	7.254010	-3.527532
13	North East England	4.306590	2.912948	3.907136	-3.527532
14	North Lancashire and The Lakes	1.826522	2.912948	2.524088	-3.527532
15	South Lancashire, Yorkshire and Humber	4.792817	0.495644	0.145609	-3.527532
16	North Midlands and North Wales	4.254582	-1.092088		-3.527532
17	South Lincolnshire and North Norfolk	2.412017	-0.604939		-3.527532
18	Mid Wales and The Midlands	1.511077	-0.155294		-3.527532
19	Anglesey and Snowdon	4.773680	-1.031192		-3.527532
20	Pembrokeshire	9.029701	-4.395975		-3.527532
21	South Wales & Gloucester	5.948658	-4.288358		-3.527532
22	Cotswold	2.744945	2.559043	-6.759012	-3.527532
23	Central London	-5.853432	2.559043	-6.745145	-3.527532
24	Essex and Kent	-3.866906	2.559043		-3.527532
25	Oxfordshire, Surrey and Sussex	-1.553471	-2.585615		-3.527532
26	Somerset and Wessex	-1.644081	-2.876601		-3.527532
27	West Devon and Cornwall	-0.094512	-5.153912		-3.527532

The System Peak, Shared Year Round and Not Shared Year Round tariffs are locational elements that reflect the cost of providing incremental capacity to generation on an area of the main integrated onshore transmission system. The non-locational residual element ensures that the appropriate amount of transmission revenue is recovered from generators.

For conventional low-carbon generation technologies, the wider zonal generation tariff is the sum of the Peak Tariff, the Shared Year Round Tariff scaled by the generator's Annual Load Factor, the Not Shared Year Round Tariff and the Residual Tariff.

For conventional carbon generation technology, the wider zonal generation tariff is the sum of the Peak Tariff and the Residual Tariff, and the Shared Year Round Tariff and Shared Not Year Round Tariff scaled by the generator's Annual Load Factor.

For intermittent generation technologies, the wider zonal generation tariff is the sum of the Shared Year Round Tariff scaled by the generator's Annual Load Factor, the Not Shared Year Round Tariff and the Residual Tariff.

Wider Generation charges are levied by reference to the Transmission Licensee's substation to which the party is connected or deemed connected. Transmission Licensee's substations are assigned to a generation zone as shown on the zonal maps.

If a party is unclear from looking at the geographical map which zone the relevant National Grid substation is assigned to, then those parties should refer to the electrical version of the map of Generation Use of System Tariff Zones as at 1 April 2019 for clarification. Confirmation of the zoning of a particular generator can be obtained by contacting NGENSO's Revenue Team.

3. Schedule of Annual Load Factors for 2019/20

Annual Load Factors for specific generators are listed in Table 1.6. Generators commissioning or re-planting since April 2016 should use the generic Annual Load Factor for their technology in Table 1.7.

Table 1.6 Annual Load Factors

Power Station	Technology	Specific ALF
ABERTHAW	Coal	54.6997%
ACHRUACH	Onshore_Wind	38.2356%
AFTON	Onshore_Wind	37.2641%
AIKENGALL II	Onshore_Wind	36.8089%
AN SUIDHE	Onshore_Wind	37.8882%
ARECLEOCH	Onshore_Wind	32.9108%
BAGLAN BAY	CCGT_CHP	30.4438%
BARROW	Offshore_Wind	47.0813%
BARRY	CCGT_CHP	1.3374%
BEAULY CASCADE	Hydro	33.7216%
BEINNEUN	Onshore_Wind	31.7476%
BHLARAI DH	Onshore_Wind	39.4047%
BLACK LAW	Onshore_Wind	25.7180%
BLACKCRAIG WINDFARM	Onshore_Wind	37.6465%
BLACKLAW EXTENSION	Onshore_Wind	25.6867%
BRIMSDOWN	CCGT_CHP	20.9426%
BURBO BANK EXT	Offshore_Wind	30.3955%
CARRAIG GHEAL	Onshore_Wind	45.4795%
CARRINGTON	CCGT_CHP	51.8500%
CLUNIE	Hydro	40.4681%
CLYDE (NORTH)	Onshore_Wind	39.1873%
CLYDE (SOUTH)	Onshore_Wind	37.9775%
CONNAHS QUAY	CCGT_CHP	22.2433%
CONON CASCADE	Hydro	53.5551%
CORBY	CCGT_CHP	7.4333%
CORRIEGARTH	Onshore_Wind	34.0750%
CORRIEMOILLIE	Onshore_Wind	33.7040%
CORYTON	CCGT_CHP	20.1048%
COTTAM	Coal	35.8388%
COTTAM DEVELOPMENT CENTRE	CCGT_CHP	38.6174%
COUR	Onshore_Wind	44.0704%

COWES	Gas_Oil	0.4456%
CRUACHAN	Pumped_Storage	9.1805%
CRYSTAL RIG II	Onshore_Wind	48.7447%
CRYSTAL RIG III	Onshore_Wind	43.4372%
DAMHEAD CREEK	CCGT_CHP	66.8248%
DEESIDE	CCGT_CHP	18.5259%
DERSALLOCH	Onshore_Wind	37.3632%
DIDCOT B	CCGT_CHP	36.9322%
DIDCOT GTS	Gas_Oil	0.2869%
DINORWIG	Pumped_Storage	15.0338%
DRAX	Coal	72.9962%
DUDGEON	Offshore_Wind	46.3364%
DUNGENESS B	Nuclear	66.6590%
DUNLAW EXTENSION	Onshore_Wind	30.0947%
DUNMAGLASS	Onshore_Wind	51.0414%
EDINBANE WIND	Onshore_Wind	34.2292%
EGGBOROUGH	Coal	48.3140%
ERROCHTY	Hydro	23.2289%
EWE HILL	Onshore_Wind	34.9919%
FALLAGO	Onshore_Wind	49.6703%
FARR WINDFARM	Onshore_Wind	39.2907%
FASNAKYLE G1 & G3	Hydro	42.2314%
FAWLEY CHP	CCGT_CHP	66.4703%
FFESTINIOG	Pumped_Storage	4.6667%
FIDDLERS FERRY	Coal	28.8978%
FINLARIG	Hydro	57.3216%
FOYERS	Pumped_Storage	13.8493%
FREASDAIL	Onshore_Wind	36.6634%
GALAWHISTLE	Onshore_Wind	38.6271%
GALLOPER	Offshore_Wind	51.2877%
GARRY CASCADE	Hydro	60.4426%
GLANDFORD BRIGG	CCGT_CHP	1.7427%
GLENAPP	Onshore_Wind	29.4787%
GLENDOE	Hydro	30.4044%
GLENMORISTON	Hydro	45.8680%
GORDONBUSH	Onshore_Wind	47.3579%
GRAIN	CCGT_CHP	41.7253%
GRANGEMOUTH	CCGT_CHP	58.2369%
GREAT YARMOUTH	CCGT_CHP	43.5962%
GREATER GABBARD	Offshore_Wind	45.9703%
GRIFFIN WIND	Onshore_Wind	30.4135%
GUNFLEET SANDS I	Offshore_Wind	48.2600%
GUNFLEET SANDS II	Offshore_Wind	46.9220%
GWYNT Y MOR	Offshore_Wind	52.2846%
HADYARD HILL	Onshore_Wind	32.4742%
HARESTANES	Onshore_Wind	28.4858%
HARTLEPOOL	Nuclear	69.3583%
HEYSHAM	Nuclear	75.2380%
HINKLEY POINT B	Nuclear	70.0780%
HUMBER GATEWAY	Offshore_Wind	59.2246%
HUNTERSTON	Nuclear	81.7790%

IMMINGHAM	CCGT_CHP	63.5392%
INDIAN QUEENS	Gas_Oil	0.0821%
KEADBY	CCGT_CHP	22.4345%
KEITH HILL	Onshore_Wind	37.9681%
KILBRAUR	Onshore_Wind	52.0378%
KILGALLIOCH	Onshore_Wind	29.6862%
KILLIN CASCADE	Hydro	41.7597%
KILLINGHOLME (POWERGEN)	Gas_Oil	0.3624%
LANGAGE	CCGT_CHP	39.3582%
LINCS WIND FARM	Offshore_Wind	46.7495%
LITTLE BARFORD	CCGT_CHP	51.5023%
LOCHLUICHART	Onshore_Wind	31.7627%
LONDON ARRAY	Offshore_Wind	56.3276%
LYNEMOUTH	Coal	35.5714%
MARCHWOOD	CCGT_CHP	62.9531%
MARK HILL	Onshore_Wind	29.3907%
MEDWAY	CCGT_CHP	32.4756%
MILLENNIUM	Onshore_Wind	51.4431%
MINNYGAP	Onshore_Wind	35.9716%
NANT	Hydro	35.6317%
ORMONDE	Offshore_Wind	43.7628%
PEMBROKE	CCGT_CHP	67.4603%
PENY CYMOEDD	Onshore_Wind	33.8329%
PETERBOROUGH	CCGT_CHP	1.5718%
PETERHEAD	CCGT_CHP	35.8305%
RACE BANK	Offshore_Wind	44.3520%
RAMPION	Offshore_Wind	46.6974%
RATCLIFFE-ON-SOAR	Coal	31.7454%
ROBIN RIGG EAST	Offshore_Wind	49.7453%
ROBIN RIGG WEST	Offshore_Wind	51.0054%
ROCKSAVAGE	CCGT_CHP	18.0145%
RYE HOUSE	CCGT_CHP	9.5779%
SALTEND	CCGT_CHP	69.0392%
SANQUHAR	Onshore_Wind	37.3761%
SEABANK	CCGT_CHP	31.5303%
SELLAFIELD	CCGT_CHP	21.2842%
SEVERN POWER	CCGT_CHP	37.5812%
SHERINGHAM SHOAL	Offshore_Wind	49.9805%
SHOREHAM	CCGT_CHP	44.6670%
SIZEWELL B	Nuclear	82.9778%
SLOY G2 & G3	Hydro	13.4404%
SOUTH HUMBER BANK	CCGT_CHP	39.2533%
SPALDING	CCGT_CHP	46.7394%
STAYTHORPE	CCGT_CHP	58.1547%
STRATHY NORTH & SOUTH	Onshore_Wind	42.0213%
STRONELAIRG	Onshore_Wind	38.1517%
SUTTON BRIDGE	CCGT_CHP	19.8634%
TAYLORS LANE	Gas_Oil	0.3465%
THANET	Offshore_Wind	37.9498%
TODDLBURN	Onshore_Wind	35.6064%
TORNESS	Nuclear	88.1343%

USKMOUTH	Coal	29.6129%
WALNEY 4	Offshore_Wind	48.1024%
WALNEY I	Offshore_Wind	52.9187%
WALNEY II	Offshore_Wind	58.3767%
WALNEY III	Offshore_Wind	49.7600%
WEST BURTON	Coal	35.3629%
WEST BURTON B	CCGT_CHP	53.4925%
WEST OF DUDDON SANDS	Offshore_Wind	50.9755%
WESTERMOST ROUGH	Offshore_Wind	58.7938%
WHITELEE	Onshore_Wind	30.4405%
WHITELEE EXTENSION	Onshore_Wind	26.3140%
WHITESIDE HILL	Onshore_Wind	38.4297%
WILTON	CCGT_CHP	15.3753%
WINDY STANDARD II	Onshore_Wind	40.0722%

Table 1.7 Generic Annual Load Factors

Technology	Generic ALF	Intermittent/ Conventional
Gas_Oil	0.2715%	Conventional
Pumped_Storage	10.6826%	Conventional
Tidal	18.9000%	Intermittent
Biomass	26.8847%	Conventional
Wave	31.0000%	Intermittent
Onshore_Wind	38.4593%	Intermittent
CCGT_CHP	48.6379%	Conventional
Hydro	42.4165%	Conventional
Offshore_Wind	49.5519%	Intermittent
Coal	37.6162%	Conventional
Nuclear	76.3178%	Conventional

Small Generators' Discount

Small generators connected to the 132kV transmission system are eligible for a reduction in the listed Generation TNUoS tariffs. This discount has been calculated in accordance with direction from the Authority and equates to 25% of the combined generation and demand residual components of the TNUoS tariffs. For 2019/20, this figure has been calculated as £11.813214/kW.

4. Schedule of Transmission Network Use of System Local Substation Generation Charges (£/kW) in 2019/20

Table 1.8 Onshore Local Substation Tariffs (£/kW)

The following table provides the Local Substation Generation TNUoS tariffs applicable to all generation directly connected to the onshore GB Transmission Network from 1 April 2019, which has been updated from the examples listed in the Statement of Use of System Methodology.

Sum of TEC at connecting Substation	Connection Type	Local Substation Tariff (£/kW)		
		132kV	275kV	400kV
<1320 MW	No redundancy	0.197964	0.113248	0.081598
<1320 MW	Redundancy	0.436098	0.269817	0.196232
>=1320 MW	No redundancy	0.000000	0.355083	0.256797
>=1320 MW	Redundancy	0.000000	0.582955	0.425509

The above tariffs reflect the cost of the transmission substation equipment provided to facilitate generation connecting to an onshore substation.

Table 1.9 Offshore Local Substation Tariffs (£/kW)

The following table provides the Local Substation Generation TNUoS tariffs applicable to generation connecting to offshore transmission infrastructure from 1 April 2019:

Offshore Power Station	Local Substation Tariff (£/kW)
Barrow	7.977330
Burbo Bank Ext	10.335699
Dudgeon	14.972203
Greater Gabbard	14.956555
Gunfleet	17.264666
Gw ynt Y Môr	18.214690
Humber Gateway	14.494729
Lincs	14.908307
London Array	10.148476
Ormonde	24.661619
Robin Rigg East	-0.456207
Robin Rigg West	-0.456207
Sheringham Shoal	23.827399
Thanet	18.145429
Walney 1	21.284146
Walney 2	21.129352
West of Duddon Sands	8.212971
Westermost Rough	17.293756

Further local substation tariffs applicable to generation connecting to offshore transmission infrastructure during 2019/20 will be published in future revisions of this statement following the completion of the tender process relating to the sale of the relating offshore transmission assets.

5. Schedule of Transmission Network Use of System Local Circuit Charges (£/kW) in 2019/20

Table 1.10 Onshore Local Circuit Tariffs

The following table provides the Local Circuit Generation TNUoS tariffs applicable to directly connected generation not connected to the main integrated onshore GB Transmission Network from 1 April 2019.

Substation Name	(£/kW)	Substation Name	(£/kW)	Substation Name	(£/kW)
Achruach	4.233666	Dunhill	1.412272	Lochay	0.360820
Aberdeen Bay	2.570844	Dunlaw Extension	1.481497	Luichart	0.565969
Aigas	0.644872	Edinbane	6.749147	Marchwood	0.376298
An Suidhe	3.002388	Ewe Hill	2.399796	Mark Hill	0.863311
Arecleoch	2.047871	Fallago	0.018259	Middle Muir	1.954443
Baglan Bay	0.750267	Farr	3.515507	Middleton	0.110030
Beinneun Wind Farm	1.480658	Fernoch	4.337076	Millennium South	0.928980
Bhlaraidh Wind Farm	0.648821	Ffestiniog	0.249457	Millennium Wind	1.800496
Black Hill	1.531255	Finlarig	0.315718	Moffat	0.177954
Black Law	1.722917	Foyers	0.742448	Mossford	2.839493
BlackCraig Wind Farm	6.206946	Galaw histle	1.458315	Nant	-1.211205
BlackLaw Extension	3.653668	Gills Bay	2.483116	Necton	1.108759
Clyde (North)	0.108132	Glendoe	1.813672	Rhigos	0.100477
Clyde (South)	0.125049	Glenglass	4.744186	Rocksavage	0.017459
Corriegarth	3.108511	Gordonbush	1.169225	Saltend	0.336368
Corriemoillie	1.640955	Griffin Wind	9.565045	South Humber Bank	0.938014
Coryton	0.052904	Hadyard Hill	2.729153	Spalding	0.276480
Cruachan	1.798572	Harestanes	2.482693	Strathbrora	0.779835
Crystal Rig	-0.048382	Hartlepool	0.596300	Strathy Wind	2.003637
Culligran	1.708927	Hedon	0.178507	Stronelairg	1.413146
Deanie	2.807523	Invergarry	-0.675138	Wester Dod	0.287131
Dersalloch	2.375095	Kilgallioch	1.037718	Whitelee	0.104644
Didcot	0.519707	Killingholme	0.704527	Whitelee Extension	0.290910
Dinorwig	2.365700	Kilmorack	0.194729		
Dorenell	2.069263	Kype Muir	1.462492		
Dumnaglass	1.830606	Langage	0.648712		

The above tariffs reflect the cost of transmission circuits between the point of connection and the main interconnected transmission system.

Table 1.11 Offshore Local Circuit Tariffs

The following table provides the Local Circuit Generation TNUoS tariffs applicable to generation connecting to offshore transmission infrastructure from 1 April 2019:

Offshore Power Station	Local Circuit Tariff (£/kW)
Barrow	41.737380
Burbo Bank	19.789101
Dudgeon	23.345723
Greater Gabbard	34.368691
Gunfleet	15.850315
Gunfleet	15.850315
Gwynt Y Môr	17.943720
Humber Gateway	32.704941
Lincs	58.369428
London Array	34.565143
Ormonde	45.942286
Robin Rigg East	30.219789
Robin Rigg West	30.219789
Sheringham Shoal	27.943956
Thanet	33.811421
Walney 1	42.387322
Walney 2	42.760756
West of Duddon Sands	40.525921
Westermost Rough	29.253635

Further local circuit tariffs applicable to generation connecting to offshore transmission infrastructure during 2019/20 will be published in future revisions of this statement following the completion of the tender process relating to the sale of the relating offshore transmission assets.

6. Schedule of Transmission Network Use of System STTEC and LDTEC Charges in 2019/20

Table 1.12 Short Term Transmission Entry Capacity (STTEC) and Limited Duration Transmission Entry Capacity (LDTEC) tariffs

The following table provides the Short Term Transmission Entry Capacity (STTEC) and Limited Duration Transmission Entry Capacity (LDTEC) tariffs applicable to generators from 1 April 2019.

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Aberdeen Offshore Wind Farm	0.241886	0.017689	0.967544	1.209430	1.451316
Aberthaw	0.034564	0.002528	0.138256	0.172820	0.207384
A'Chruach Wind Farm	0.941015	0.068816	3.764060	4.705075	5.646090
Afton	0.146690	0.010727	0.586760	0.733450	0.880140
Aigas (part of the Beauly Cascade)	0.484701	0.035446	1.938804	2.423505	2.908206
Aikengall II Windfarm	0.381586	0.027905	1.526344	1.907930	2.289516
An Suidhe Wind Farm, Argyll (SRO)	0.874345	0.063940	3.497380	4.371725	5.246070
Arcleloch	0.759002	0.055505	3.036008	3.795010	4.554012
Bad a Cheo Wind Farm	0.375121	0.027432	1.500484	1.875605	2.250726
Baglan Bay	0.097957	0.007164	0.391828	0.489785	0.587742
Barrow Offshore Wind Farm	2.063560	0.150907	8.254240	10.317800	12.381360
Barry Power Station	0.124098	0.009075	0.496392	0.620490	0.744588
Beatrice Wind Farm	1.087951	0.079561	4.351804	5.439755	6.527706
Beinneun Wind Farm	1.022190	0.074752	4.088760	5.110950	6.133140
Bhlaraidh Wind Farm	1.051920	0.076926	4.207680	5.259600	6.311520
Blackcraig Wind Farm	0.381638	0.027909	1.526552	1.908190	2.289828
Blacklaw	0.399639	0.029225	1.598556	1.998195	2.397834
Blacklaw Extension	0.000000	0.000000	0.000000	0.000000	0.000000
BP Grangemouth	0.542152	0.039647	2.168608	2.710760	3.252912
Burbo Bank Extension Offshore Wind Farm	1.378929	0.100840	5.515716	6.894645	8.273574
Carraig Gheal Wind Farm	0.988713	0.072304	3.954852	4.943565	5.932278
Carrington Power Station	0.018744	0.001371	0.074976	0.093720	0.112464
CDCL	0.038368	0.002806	0.153472	0.191840	0.230208
Clunie (part of the Clunie Cascade)	0.410156	0.029994	1.640624	2.050780	2.460936

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Clyde North	0.380035	0.027792	1.520140	1.900175	2.280210
Clyde South	0.374670	0.027399	1.498680	1.873350	2.248020
Connahs Quay	0.047756	0.003492	0.191024	0.238780	0.286536
Corby	0.000000	0.000000	0.000000	0.000000	0.000000
Corriearth	0.497596	0.036389	1.990384	2.487980	2.985576
Corriemoillie Wind Farm	0.429605	0.031417	1.718420	2.148025	2.577630
Coryton	0.000000	0.000000	0.000000	0.000000	0.000000
Cottam	0.039961	0.002922	0.159844	0.199805	0.239766
Cour Wind Farm	0.765296	0.055966	3.061184	3.826480	4.591776
Cowes	0.000000	0.000000	0.000000	0.000000	0.000000
Crossdykes	0.000000	0.000000	0.000000	0.000000	0.000000
Cruachan	0.187840	0.013737	0.751360	0.939200	1.127040
Crystal Rig 2 Wind Farm	0.425575	0.031122	1.702300	2.127875	2.553450
Crystal Rig 3 Wind Farm	0.398141	0.029116	1.592564	1.990705	2.388846
Culligran (part of the Beaulieu Cascade)	0.540564	0.039531	2.162256	2.702820	3.243384
Damhead Creek	0.000000	0.000000	0.000000	0.000000	0.000000
Deanie (part of the Beaulieu Cascade)	0.598240	0.043749	2.392960	2.991200	3.589440
Deeside	0.049888	0.003648	0.199552	0.249440	0.299328
Dersalloch Wind Farm	0.179001	0.013090	0.716004	0.895005	1.074006
Didcot B	0.000000	0.000000	0.000000	0.000000	0.000000
Dinorwig	0.194965	0.014258	0.779860	0.974825	1.169790
Dorenell Windfarm	1.103951	0.080731	4.415804	5.519755	6.623706
Drax (Biomass)	0.113341	0.008289	0.453364	0.566705	0.680046
Drax (Coal)	0.113341	0.008289	0.453364	0.566705	0.680046
Dudgeon Offshore Wind Farm	1.869989	0.136751	7.479956	9.349945	11.219934
Dungeness B	0.000000	0.000000	0.000000	0.000000	0.000000
Dunlaw Extension	0.000000	0.000000	0.000000	0.000000	0.000000
Dunmaglass Wind Farm	0.588092	0.043007	2.352368	2.940460	3.528552
East Anglia One	0.000000	0.000000	0.000000	0.000000	0.000000
Edinbane Wind, Skye	0.792104	0.057926	3.168416	3.960520	4.752624
Enfield	0.000000	0.000000	0.000000	0.000000	0.000000
Errochty	0.272728	0.019944	1.090912	1.363640	1.636368
Ewe Hill	0.000000	0.000000	0.000000	0.000000	0.000000
Fallago Rig Wind Farm	0.433858	0.031728	1.735432	2.169290	2.603148

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Farr Wind Farm, Tomatin	0.567407	0.041494	2.269628	2.837035	3.404442
Fasnakyle G1 & G2	1.115917	0.081606	4.463668	5.579585	6.695502
Fawley CHP	0.000000	0.000000	0.000000	0.000000	0.000000
Ffestiniog	0.054537	0.003988	0.218148	0.272685	0.327222
Fiddlers Ferry	0.106761	0.007807	0.427044	0.533805	0.640566
Finlary	0.558072	0.040811	2.232288	2.790360	3.348432
Foyers	0.220672	0.016138	0.882688	1.103360	1.324032
Freasdail	0.709573	0.051891	2.838292	3.547865	4.257438
Galawhistle Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Galloper Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Glen App Windfarm	0.121069	0.008854	0.484276	0.605345	0.726414
Glendoe	0.482014	0.035249	1.928056	2.410070	2.892084
Glenmoriston (part of the Moriston Cascade)	0.535031	0.039126	2.140124	2.675155	3.210186
Gordonbush Wind	1.134902	0.082995	4.539608	5.674510	6.809412
Grain	0.000000	0.000000	0.000000	0.000000	0.000000
Great Yarmouth	0.000000	0.000000	0.000000	0.000000	0.000000
Greater Gabbard Offshore Wind Farm	2.400632	0.175556	9.602528	12.003160	14.403792
Griffin Wind Farm	1.357589	0.099279	5.430356	6.787945	8.145534
Gunfleet Sands II Offshore Wind Farm	1.084854	0.079335	4.339416	5.424270	6.509124
Gunfleet Sands Offshore Wind Farm	1.084745	0.079327	4.338980	5.423725	6.508470
Gwynt Y Mor Offshore Wind Farm	1.683144	0.123087	6.732576	8.415720	10.098864
Hadyard Hill	0.172319	0.012602	0.689276	0.861595	1.033914
Harestanes	0.418592	0.030611	1.674368	2.092960	2.511552
Hartlepool	0.397566	0.029074	1.590264	1.987830	2.385396
Heysham Power Station	0.180612	0.013208	0.722448	0.903060	1.083672
Hinkley Point B	0.000000	0.000000	0.000000	0.000000	0.000000
Homsea Power Station 1A	0.000000	0.000000	0.000000	0.000000	0.000000
Homsea Power Station 1B	0.000000	0.000000	0.000000	0.000000	0.000000
Homsea Power Station 1C	0.000000	0.000000	0.000000	0.000000	0.000000
Humber Gateway Offshore Wind Farm	2.325214	0.170041	9.300856	11.626070	13.951284
Hunterston	1.068858	0.078165	4.275432	5.344290	6.413148
Immingham	0.098121	0.007175	0.392484	0.490605	0.588726

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Indian Queens	0.000000	0.000000	0.000000	0.000000	0.000000
Invergarry (part of the Garry Cascade)	0.639299	0.046751	2.557196	3.196495	3.835794
J G Pears	0.024449	0.001788	0.097796	0.122245	0.146694
Keadby	0.035610	0.002604	0.142440	0.178050	0.213660
Keith Hill Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Kilbraur Wind Farm	1.157927	0.084678	4.631708	5.789635	6.947562
Kilgallioch	0.684854	0.050083	2.739416	3.424270	4.109124
Killingholme	0.125876	0.009205	0.503504	0.629380	0.755256
Kilmorack (part of the Beaully Cascade)	0.461068	0.033718	1.844272	2.305340	2.766408
Kings Lynn A	0.000000	0.000000	0.000000	0.000000	0.000000
Kype Muir	0.000000	0.000000	0.000000	0.000000	0.000000
Langage	0.000000	0.000000	0.000000	0.000000	0.000000
Liberty Steel Dalzell	0.000000	0.000000	0.000000	0.000000	0.000000
Lincs Offshore Wind Farm	3.647038	0.266705	14.588152	18.235190	21.882228
Little Barford	0.000000	0.000000	0.000000	0.000000	0.000000
Lochay (Part of Killin Cascade Hydro Scheme)	0.444357	0.032495	1.777428	2.221785	2.666142
Lochluichart	0.411574	0.030098	1.646296	2.057870	2.469444
London Array Offshore Wind Farm	2.237946	0.163659	8.951784	11.189730	13.427676
Luichart (part of the Conon Cascade)	0.664774	0.048614	2.659096	3.323870	3.988644
Lynemouth Power Station	0.168266	0.012305	0.673064	0.841330	1.009596
Marchwood	0.000000	0.000000	0.000000	0.000000	0.000000
Mark Hill Wind Farm	0.674171	0.049302	2.696684	3.370855	4.045026
Medway Power Station	0.000000	0.000000	0.000000	0.000000	0.000000
Middle Muir Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Millennium Wind	0.607590	0.044433	2.430360	3.037950	3.645540
Mিনnygap	0.000000	0.000000	0.000000	0.000000	0.000000
Morlais	0.065423	0.004784	0.261692	0.327115	0.392538
Mossford (part of the Conon Cascade)	0.784134	0.057343	3.136536	3.920670	4.704804
Nant	0.796047	0.058214	3.184188	3.980235	4.776282
Ormonde Offshore Wind Farm	3.740172	0.273516	14.960688	18.700860	22.441032
Orrin (part of the Conon Cascade)	0.635061	0.046442	2.540244	3.175305	3.810366
Pembroke Power Station	0.155512	0.011373	0.622048	0.777560	0.933072

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Pen Y Cymoedd Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Peterborough	0.000000	0.000000	0.000000	0.000000	0.000000
Peterhead	0.524321	0.038343	2.097284	2.621605	3.145926
Pogbie Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Powersite @ Drakelow	0.000000	0.000000	0.000000	0.000000	0.000000
Race Bank Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Rampion Offshore Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Ratcliffe on Soar	0.000000	0.000000	0.000000	0.000000	0.000000
Robin Rigg East Offshore Wind Farm	1.773353	0.129684	7.093412	8.866765	10.640118
Robin Rigg West Offshore Wind Farm	1.776990	0.129950	7.107960	8.884950	10.661940
Rocksavage	0.033042	0.002416	0.132168	0.165210	0.198252
Rye House	0.000000	0.000000	0.000000	0.000000	0.000000
Saltend	0.121495	0.008885	0.485980	0.607475	0.728970
Sanquhar Wind Farm	0.303445	0.022191	1.213780	1.517225	1.820670
Seabank	0.000000	0.000000	0.000000	0.000000	0.000000
Sellafield	0.000000	0.000000	0.000000	0.000000	0.000000
Severn Power	0.056665	0.004144	0.226660	0.283325	0.339990
Sheringham Shoal Offshore Wind Farm	2.560615	0.187256	10.242460	12.803075	15.363690
Shoreham	0.000000	0.000000	0.000000	0.000000	0.000000
Sizewell B	0.000000	0.000000	0.000000	0.000000	0.000000
Sloy G2 and G3	0.119561	0.008743	0.478244	0.597805	0.717366
South Humber Bank	0.151227	0.011059	0.604908	0.756135	0.907362
Spalding	0.000000	0.000000	0.000000	0.000000	0.000000
Spalding Energy Expansion	0.000000	0.000000	0.000000	0.000000	0.000000
Staythorpe C	0.027167	0.001987	0.108668	0.135835	0.163002
Strathy North and South Wind	0.513396	0.037544	2.053584	2.566980	3.080376
Stronelairg	1.080036	0.078982	4.320144	5.400180	6.480216
Sutton Bridge	0.000000	0.000000	0.000000	0.000000	0.000000
Taylors Lane	0.000000	0.000000	0.000000	0.000000	0.000000
Tees Renewable Energy Plant	0.151328	0.011066	0.605312	0.756640	0.907968
Thanet Offshore Wind Farm	2.636258	0.192788	10.545032	13.181290	15.817548
Toddleburn Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Torness	0.833939	0.060985	3.335756	4.169695	5.003634

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Tralorg Wind Farm	0.721044	0.052729	2.884176	3.605220	4.326264
Uskmouth	0.074604	0.005456	0.298416	0.373020	0.447624
Walney 3 Offshore Wind Farm	0.029194	0.002135	0.116776	0.145970	0.175164
Walney 4 Offshore Wind Farm	0.026659	0.001950	0.106636	0.133295	0.159954
Walney I Offshore Wind Farm	3.371000	0.246519	13.484000	16.855000	20.226000
Walney II Offshore Wind Farm	3.390825	0.247969	13.563300	16.954125	20.344950
West Burton A	0.040234	0.002942	0.160936	0.201170	0.241404
West Burton B	0.029840	0.002182	0.119360	0.149200	0.179040
West of Duddon Sands Offshore Wind Farm	2.584068	0.188971	10.336272	12.920340	15.504408
Westermost Rough Offshore Wind Farm	2.290858	0.167529	9.163432	11.454290	13.745148
Whitelee	0.639767	0.046786	2.559068	3.198835	3.838602
Whitelee Extension	0.628217	0.045941	2.512868	3.141085	3.769302
Whiteside Hill Wind Farm	0.308891	0.022589	1.235564	1.544455	1.853346
Whitson Substation	0.000000	0.000000	0.000000	0.000000	0.000000
Wilton	0.110118	0.008053	0.440472	0.550590	0.660708
Windy Standard II (Brockloch Rig 1) Wind Farm	0.154957	0.011332	0.619828	0.774785	0.929742

The above tariffs apply to levels of STTEC or LDTEC access that is agreed during the charging year.

STTEC can be arranged in 4, 5, or 6 week blocks, with the tariff for applicable duration applying.

The LDTEC tariff is applied at two rates during the year. The higher LDTEC rate applies to the first 17 weeks of access within a charging year (whether consecutive or not), and the lower LDTEC rate applies to any subsequent access within the year.

Further LDTEC and STTEC tariffs applicable to generation connecting to offshore transmission infrastructure during 2019/20 will be published in future revisions of this statement following the completion of the tender process relating to the sale of the relating offshore transmission assets.

7. Schedule of Pre-Asset Transfer Related Embedded Transmission Use of System Charges in 2019/20

Table 1.13 Pre-Asset Transfer ETUoS Tariff (£/kW)

The following table provides the Pre-Asset Transfer Related Embedded Transmission Use of System (ETUoS) tariffs applicable to embedded transmission connected offshore generation from 1 April 2019. The relating charge is used to recover the element of the Offshore Transmission Operator's Revenue that relates to distribution charges paid during in the development of the offshore transmission network.

Offshore Power Station	Pre-Asset Transfer ETUoS Tariff (£/kW)
Barrow	1.036396
Gunfleet	2.962515
Ormonde	0.366121
Robin Rigg East	9.366504
Robin Rigg West	9.366504
Sheringham Shoal	0.607419
Thanet	0.813960

Please note that in addition to the charges listed above, any enduring distribution charges made to the NETSO will be passed through to the relating generator in the form of an ETUoS charge.

Further Pre-Asset Transfer Related ETUoS tariffs applicable to generation connecting to offshore transmission infrastructure during 2019/20 will be published in future revisions of this statement following the completion of the tender process relating to the sale of the relating offshore transmission assets.

8. Schedule of Transmission Network Use of System Demand Charges (£/kW) and Energy Consumption Charges (p/kWh) for 2019/20

Table 1.14 Zonal Demand and Energy Consumption TNUoS Tariffs

The following table provides the Zonal Demand and Energy Consumption TNUoS tariffs applicable from 1 April 2019.

Demand Zone	Zone Area	Demand Tariff (£/kW)	Energy Consumption Tariff (p/kWh)	Embedded Export Tariff (£/kW)
1	Northern Scotland	20.971270	2.820450	0.000000
2	Southern Scotland	30.755392	4.026035	0.000000
3	Northern	41.026683	5.213833	7.604902
4	North West	47.831581	6.202276	14.409800
5	Yorkshire	48.039318	6.116328	14.617537
6	N Wales & Mersey	49.345368	6.223760	15.923587
7	East Midlands	51.439770	6.738557	18.017989
8	Midlands	52.928066	6.977433	19.506286
9	Eastern	53.788327	7.496688	20.366546
10	South Wales	49.725642	5.873287	16.303862
11	South East	56.110850	7.945653	22.689070
12	London	59.175788	6.291396	25.754007
13	Southern	57.338781	7.586023	23.917000
14	South Western	55.686678	7.767486	22.264898

A demand User's zone will be determined by the GSP Group to which the User is deemed to be connected.

The Demand Tariff is applied to Demand User's average half-hourly metered demand over the three Triad periods, as described in the Statement of Use of Charging Methodology. Demand Tariffs are a combination of a locational element that reflects the cost of providing incremental capacity to demand on an area of the main integrated onshore transmission system, and a non-locational residual element which ensures that the appropriate amount of transmission revenue is recovered from demand Users. For 2019/20 the demand residual element to two decimal places is £50.78/kW.

In the case of parties liable for both generation and demand charges, the demand tariff zone applicable in respect of that party's demand will be that in which the Transmission Licensee's substation to which the party is connected is geographically located. For example, if a power station were connected at a Transmission Licensee's substation that is geographically located within demand zone 1, it would pay the zone 1 demand tariff.

The energy consumption tariff is based on the annual energy consumption during the period 16:00 hrs to 19:00 hrs (i.e. settlement periods 33 to 38 inclusive) over the relevant financial year.

Small Generators Discount

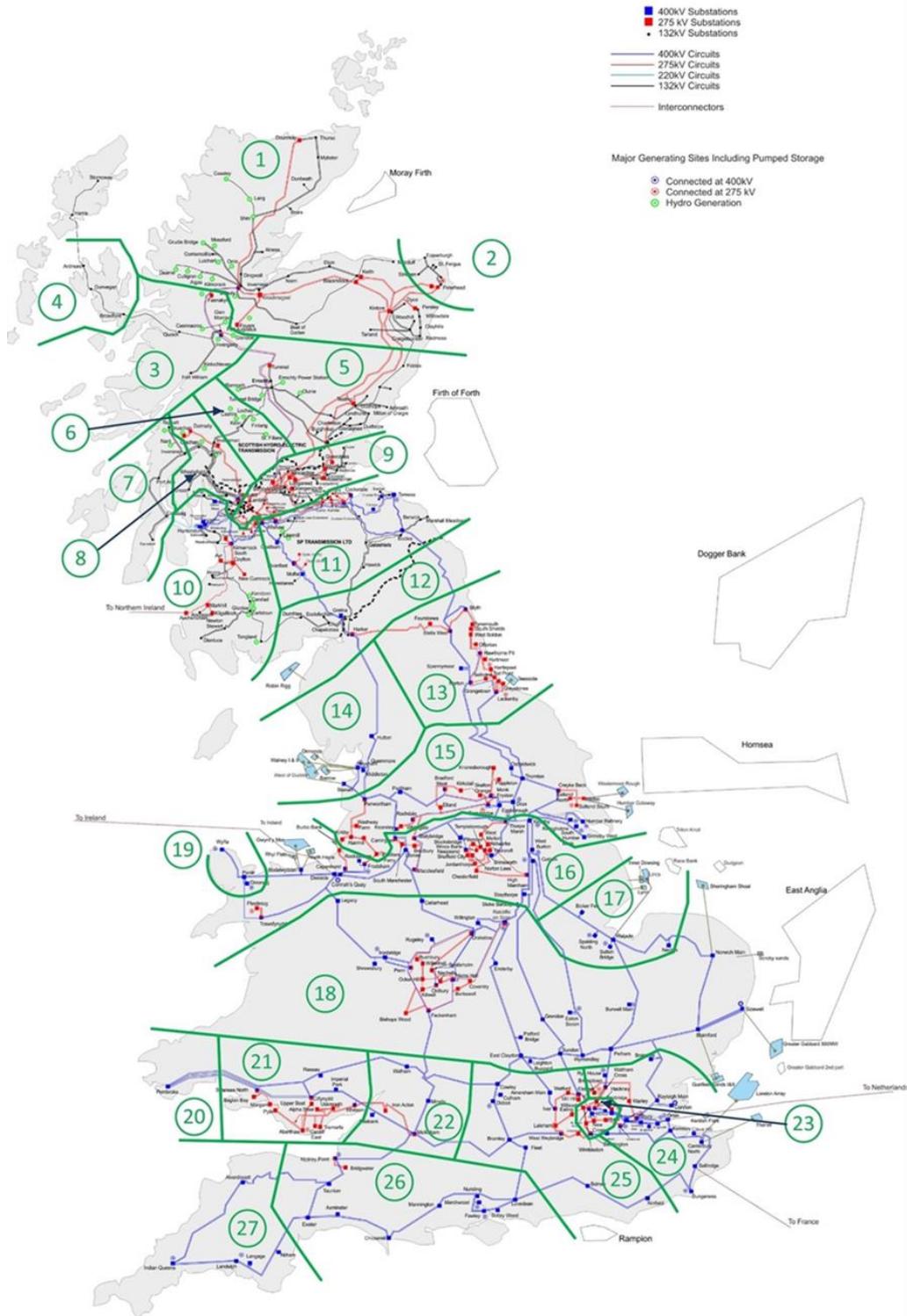
In accordance with Standard Licence Condition C13 governing the adjustments to use of system charges for the small generators discount, a unit amount of £0.618663/kW to the demand tariff and 0.080796p/kWh to the energy consumption tariff has been included on a non-discriminatory and non-locational basis.

Standard Licence Condition C13 requires the small generators discount mechanism to be revenue neutral over the period of its operation so that the net effect on revenue of the licence condition is zero. It will therefore be necessary to manage any under or over recovery associated with the small generators discount separately from the under/over recovery mechanism within National Grid's main revenue restriction. National Grid calculates the unit amount added to the demand tariffs using a forecast of the total discount payable to eligible generators, and a forecast of the demand charging base. If either of these factors outturns differently from the original forecast, then an under/over recovery would occur. The amount of any under/over recovery would be added to the revenue recovery used to derive the unit amount in subsequent years.

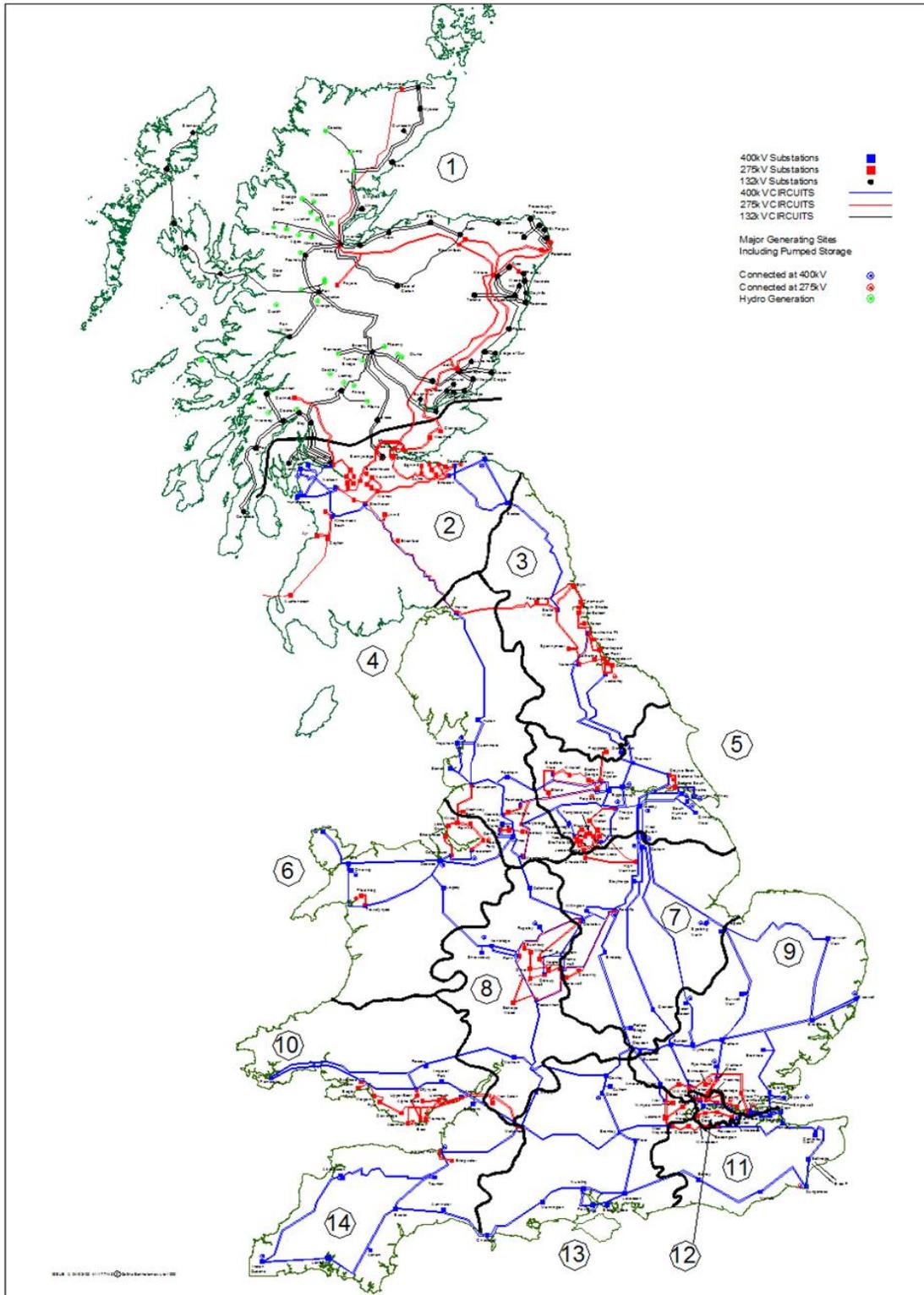
9. Zonal Maps Applicable for 2019/20

Generation Use of System Tariff Zones (Geographical map as at 1 April 2019)

Figure A2: GB Existing Transmission System



Demand Use of System Tariff Zones (Geographical map as at 1 April 2019)





Schedule 2

Application Fees

10. Application Fees for Connection and Use of System Agreements

Application fees are payable in respect of applications for new connection agreements, certain use of system agreements and for modifications to existing agreements based on reasonable costs incurred by National Grid Electricity System Operator including where appropriate, charges from the Transmission Owners (TO's) in accordance with their charging statements. The application process and options available are detailed in the Statement of the Use of System Charging Methodology which is included in Section 14 of the Connection and Use of System Code (CUSC).

The application fee is dependent upon size, type and location of the applicant's scheme as shown on the map and tables on the next page. Users can opt for a variable price application and pay an advance of the Engineering Charges based on the fixed prices shown, which will be reconciled once the actual costs have been calculated using the charge out rates contained in Schedule 4. Alternatively, onshore Users can opt to pay a fixed price application fee in respect of New and Modified Bilateral Agreements. In some circumstances, where a given application is expected to involve significant costs over and above those normally expected (e.g. substantial system studies, special surveys, investigations, or where a Transmission Owner varies the application fee charged to National Grid from the standard fee published in their charging statements) to process an offer of terms, National Grid reserves the right to remove the option for a fixed price application fee.

The map divides GB into six zones based on the Boundary of Influence map defined in Schedule 4 of the STC (SO-TO Code). Zone NGET1 maps onto the area NGET South, Zones NGET2 and STP1 maps to NGET North and SPT South but the host TO differs, Zone SPT2 maps to SPT North, Zone SPT3 maps to SPT North and SHET South and Zone SHET1 maps to SHET North.

The application fees indicated will be reviewed on an annual basis and reflect any changes to the Boundaries of Influence. It should be noted that the zone to which a particular user is applying is determined by the location of the connection to the National Electricity Transmission System and not by the geographical location of the User's plant and equipment.

All application fees are subject to VAT and are capped at £400,000 + VAT.

11. Reconciliation and Refunding of Application Fees for Connection and Use of System Agreements

Application Fees will be reconciled and / or refunded in accordance with Section 14 of the Connection and Use of System Code (CUSC).

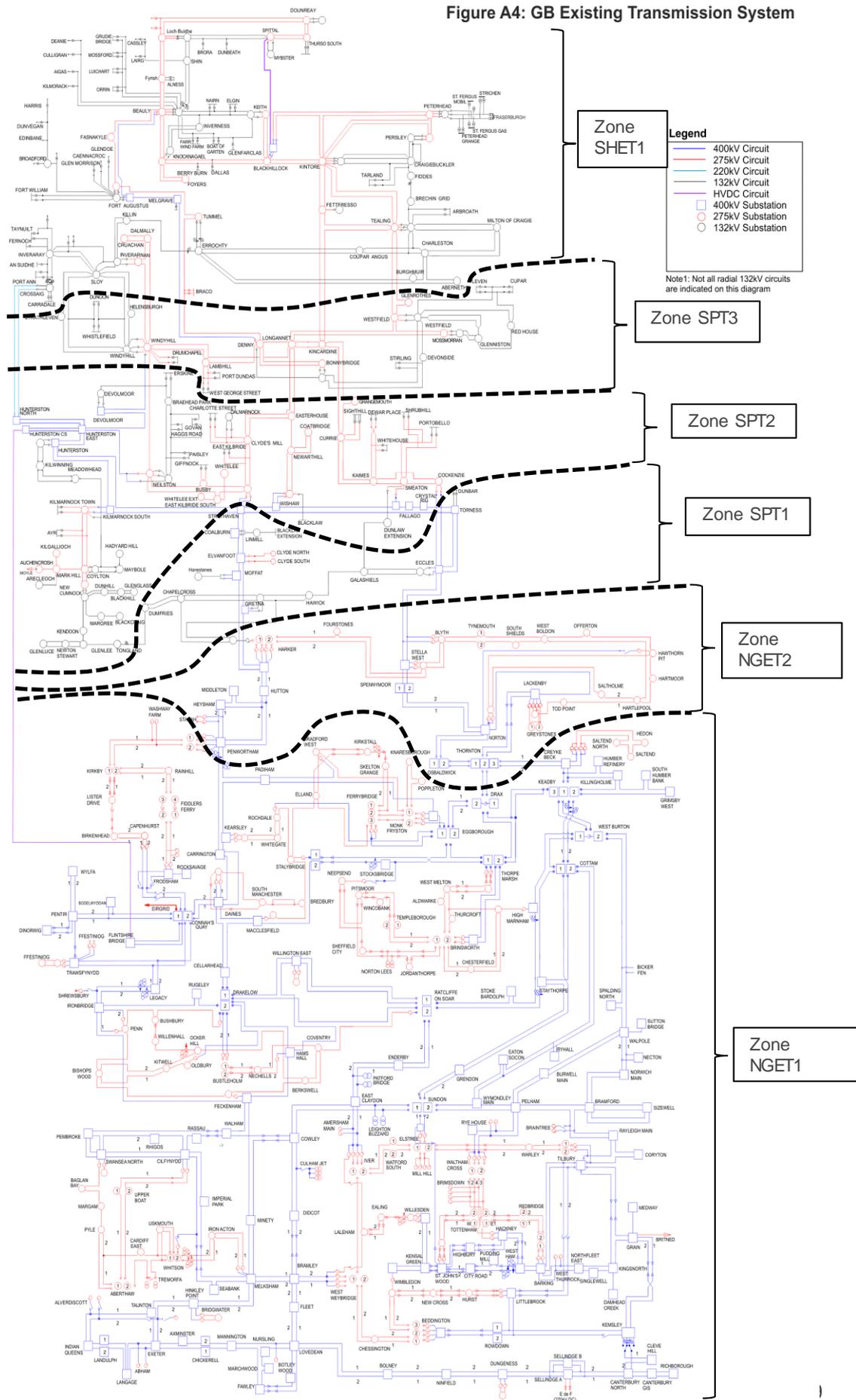
Table 2.6 Zonal Map

Figure A4: GB Existing Transmission System

SHE TRANSMISSION

SP TRANSMISSION

NATIONAL GRID



12. Application Fees for New Bilateral Agreements and Modifications to existing Bilateral Agreements

Table 2.7 Application Fees

		NGET1	NGET2	SPT1	SPT2	SPT3	SHET1
		NGET Host TO	NGET Host, SPT Affected	SPT Host, NGET Affected	SPT Host TO	SPT Host, SHET Affected	SHET Host TO
New Onshore Application (Entry)	<100MW	£18,700	£29,050	£29,050	£24,200	£38,500	£30,900
	100 - 1320MW	£28,100	£43,550	£43,600	£35,800	£57,700	£45,900
	>1320MW	£79,900	£121,200	£121,250	£97,650	£157,500	£123,900
New Onshore Application (Entry) Rate per MW	<100MW	£110	£189	£188	£139	£250	£189
	100 - 1320MW	£59	£94	£95	£69	£120	£92
	>1320MW	£16	£36	£37	£26	£52	£40
New Onshore Supply Point (Exit)	<100MW	£37,500	£41,300	£38,650	£25,250	£37,600	£30,700
	>100MW	£41,700	£56,800	£58,950	£38,650	£63,100	£55,700
New Offshore Application	-	£46,850	£83,000	£83,000	£48,250	£117,450	£84,150
Onshore Modification Application to Existing Supply Point (Exit)	<100	£30,950	£33,650	£33,700	£20,300	£29,200	£12,150
	>100	£36,800	£47,750	£48,150	£27,850	£45,450	£21,150
Statement of Works (Exit)	-	£3,100	£3,350	£3,650	£1,150	£1,600	£1,100
Modification Application Following Statement of Works (Project Progression)	-	£10,650	£11,700	£11,650	£5,800	£10,250	£7,650
Complex Project Progression		£21,450	£28,050	£37,000	£22,750	£29,400	£13,150
TEC increase / decrease	<100MW	£18,700	£29,050	£29,050	£24,200	£38,500	£30,900
	100 - 1320MW	£28,100	£43,550	£43,600	£35,800	£57,700	£45,900
	>1320MW	£79,900	£121,200	£121,250	£97,650	£157,500	£123,900
TEC increase / decrease Rate per MW	<100MW	£110	£189	£188	£139	£250	£189
	100 - 1320MW	£59	£94	£95	£69	£120	£92
	>1320MW	£16	£36	£37	£26	£52	£40

Application Type	Fraction of New Application Fee
Onshore Modification Application (Entry)	0.75
Offshore Modification Application (Entry)	0.75
Embedded Generation New Application (Entry) BEGA / BELLA	0.5
Embedded Generation Modification Application (Entry) BEGA / BELLA	0.4
Design Variation in addition to Standard Offer (Entry)	1.5

Table 2.8 Other Application Fees

Application Type	NGET1	NGET2	SPT1	SPT2	SPT3	SHET1
TEC Exchange Request (no system works)	£10,000	£10,000	£10,000	£10,000	£17,000	£17,000
Request for STTEC or SNSTF	£10,000					
Directly Connected Reactive Only Service Provider	£20,000	£20,000	£21,000	£21,000	£22,000	£22,000
Suppliers and Interconnector Users	£5,000					
Assign, transfer or novate a bilateral agreement or minor admin changes	£3,000					

If applying for a combination of changes after making an initial application and this is prior to the completion of works associated to the initial application, such as a change to works or completion date that also includes a TEC Change, the Application Fee will be the higher of the TEC Change Fee or Modification Application Fee.

*Where the developer requests National Grid to identify the transmission reinforcement works and the works at the GSP (mod notice process), the application fee will be indicative only.

Table 2.9 Limited Duration TEC Request Fees

Limited Duration TEC (LDTEC)		Duration of LDTEC (t)	Zone	£ (£'000)	Agreement Type (as Table C)
14	Basic request fee for duration t (applicable to all requests for LDTEC Offers)	t <= 3 months	All	10 + VAT	Bilateral Connection Agreement / BEGA
		3 months < t <= 6 months		15 + VAT	
		6 months < t <= 9 months		20 + VAT	
		t > 9 months		30 + VAT	
	Additional fee for rolling assessment (applicable to a request for an LDTEC Indicative Block Offer)	t <= 3 months		1 + VAT	
		3 months < t <= 6 months		1.5 + VAT	
		6 months < t <= 9 months		2 + VAT	
		t > 9 months		3 + VAT	
	Additional fee for combined applications (applicable to a combined request for an LDTEC Block Offer and an LDTEC Indicative Block Offer)	t <= 3 months		5 + VAT	
		3 months < t <= 6 months		7.5 + VAT	
		6 months < t <= 9 months		10 + VAT	
		t > 9 months		15 + VAT	

Table 2.10 Temporary TEC Exchange Rate Request Fees

Temporary TEC Exchange Rate Request Fees		Duration of Temporary Exchange period (t)	£
15	Application fee for Temporary TEC Exchange Rate Requests	t <= 3 months	15,000
		3 months < t <= 6 months	25,000
		6 months < t <= 9 months	30,000
		t > 9 months +	45,000

13. Examples

1. Entry Application Fee for a New Bilateral Agreement onshore

300MW Generator wishing to connect to the transmission system in Zone NGET1

Application Fee = £28,100 + (300 * 59) = £45,800

2. Entry Application Fee for a New Bilateral Agreement offshore

2000MW Generator wishing to connect to the transmission system in Zone SPT1

Two Connection Sites

Application Fee = 2 * £83,000 = £166,000

3. Entry Application Fee for a Modification to an existing Bilateral Agreement offshore

2000MW Generator in Zone SPT1 seeking to alter a commissioning date where there are 2 affected transmission interface sites

This would be a Modification Application

Fee = 0.75 * (2 * £83,000) = £124,500

4. Entry Application Fee for a Modification to an existing Bilateral Agreement

300MW Generator in Zone NGET2 seeking to alter commissioning date

This would be a Modification Application

Fee = 0.75 * (£43,550 + (300 * 94)) = £53,812.50

5. Entry Application Fee for an embedded generator (BEGA/ BELLA)

300MW embedded generator requesting a BEGA in Zone NGET2

Fee = 0.5 * (£43,550 + (300 * 94)) = £35,875

6. Entry Application Fee for a TEC Increase

400MW generator in Zone SPT3 wishes to increase TEC by 20MW to 420MW

Application Fee = £38,500 + (20 * 250) = £43,500

7. Entry Application Fee for a change to completion date

500MW generator in Zone NGET2 wishes to change their completion date by moving it back by 12 months

Application Fee = 0.75 * (£43,550 + (500 * 94)) = £67,912.50

8. Entry Application Fee for a Decrease TEC

600MW generator in Zone SHET1 wishes to decrease TEC by 100MW to 500MW

Application Fee = 0.75 * (£45,900 + (100 * 100)) = £41,925

Table 2.11 Bilateral Agreement Types

Bilateral Agreement Type	Description
Bilateral Connection Agreement	In respect of Connection Sites of Users.
Bilateral Embedded Licence Exemptible Large Power Station Agreement (BELLA)	For generators that own or are responsible for embedded exemptible large power stations (another party may be responsible for the output under the CUSC and BSC).
Bilateral Embedded Generation Agreement (BEGA)	For generators and BSC parties with embedded power stations, excluding those which are exempt (unless they otherwise choose to be), who are responsible for the output onto a Distribution System.
Construction Agreement	In respect of parties that are applying for new or modified agreements up until the time of commissioning.

Table 2.12 Generator Types

The definitions provided below have been extracted from the Grid Code and are provided for ease of reference within this document.

Type of Plant	Definition
Embedded	Having a direct connection to a User System or the System of any other User to which Customers and/or Power Stations are connected, such connection being either a direct connection or a connection via a busbar of another User or of a Transmission Licensee (but with no other connection to the National Electricity Transmission System).
Small Power Station	A Power Station in NGET's Transmission Area with a Registered Capacity of less than 50MW, a Power Station in SPT's Transmission Area with a Registered Capacity of less than 30MW or a Power Station in SHE T's Transmission Area with a Registered Capacity of less than 10 MW.
Medium Power Station	A Power Station in NGET's Transmission Area with a Registered Capacity of 50MW or more, but less than 100MW.

Large Power Station	A Power Station in NGET's Transmission Area with a Registered Capacity of 100MW or more or a Power Station in SPT's Transmission Area with a Registered Capacity of 30 MW or more; or a Power Station in SHE T's Transmission Area with a Registered Capacity of 10 MW or more.
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Glossary

Affected TO	A TO who owns or operates a transmission system which is electrically impacted by a User's connection to a Host TO's transmission system
Authority	The Gas and Electricity Markets Authority (GEMA) established under Section 1 of the Utilities Act 2000
Bilateral Connection Agreement	An agreement between the SO and the User covering the connection to the TO's transmission system.
CUSC	Connection and Use of System Code
Entry	A point of connection at which electricity may be exported from a User's installation onto the Transmission System, i.e. Generation
Exit	A point of connection at which electricity may flow from the Transmission System to the User's installation, i.e. Demand
Host TO	The TO which will electrically connect the User to a transmission system which is owned or operated by that TO
NGET	National Grid Electricity Transmission plc
Post-Vesting	Means after 31 March 1990
Price Control	As set out in the TO's Licence
Retail Price Index	Table 36: RPI: All items index 1947-2013 "CHAW" published by the Office for National Statistics and as amended monthly
SO	System Operator
STC	The System Operator-Transmission Owner Code
TO	An onshore or offshore Transmission Owner. This being [TO name plc]
Transmission Interface Site	The site at which the Transmission interface point is located
Transmission Licence	Transmission licence granted or treated as granted under section 6(1)(b) of the Act
User	A generation or demand customer connected to the TO's transmission system and party to SO's bilateral agreement(s).



Schedule 3

Charge-Out Rates

14. Charge-Out Rates for Engineering Charges for Variable Price Applications

Appropriately qualified staff will be appointed to process applications and feasibility studies and carry out work in relation to the development of the National Electricity Transmission System. Travel, subsistence and computing costs will also be charged on an actual basis. It should be noted that these rates only apply to work carried out by the Transmission Licensee's in relation to licensed transmission activities. Different rates may apply when asked to quote for other work.

Table 3.1 Charge-Out Rates

	£/day			
	NGESO	NGET	SPT	SHET
Section Manager Internal Solicitor	1000	997	1093	990
Principal Power System Engineer	802	815	836	833
Senior Power System Engineer Project Manager Account Manager Senior Wayleave Officer	678	691	698	695
Power System Design Engineer Draughtsman	538	548	587	554
Graduate Engineer	461	473	467	468
Administrative Support	370	373	369	366



Schedule 4

Connection Charges

15. Non-Capital Components applicable for Maintenance and Transmission Running Costs in Connection Charges for 2019/20

The non-capital component of the connection charge is divided into two parts, as set out below.

Part A: Site Specific Maintenance Charges

Site-specific maintenance charges will be calculated each year based on the forecast total site specific maintenance for GB divided by the total GAV of the transmission licensees GB connection assets, to arrive at a percentage of total GAV. For 2019/20 this will be 0.45%.

Part B: Transmission Running Costs

The Transmission Running Cost (TRC) factor is calculated at the beginning of each price control to reflect the appropriate amount of other Transmission Running Costs (rates, operation, indirect overheads) incurred by the transmission licensees that should be attributed to connection assets.

The TRC factor is calculated by taking a proportion of the forecast Transmission Running Costs for the transmission licensees (based on operational expenditure figures from the latest price control) that corresponds with the proportion of the transmission licensees' total connection assets as a function of their total business GAV. This cost factor is therefore expressed as a percentage of an asset's GAV and will be fixed for the entirety of the price control period. For 2013/14 to 2020/21 this will be 1.47%.

To illustrate the calculation, the following example uses the average operating expenditure from the published price control and the connection assets of each transmission licensee expressed as a percentage of their total system GAV to arrive at a GB TRC of 1.47%:

Example:

Connection assets as a percentage of total system GAV for each TO:

Scottish Power Transmission Ltd	18.6%
Scottish Hydro Transmission Ltd	7.5%
National Grid Electricity Transmission	16.3%

Published current price control average annual operating expenditure (£m):

Scottish Power Transmission Ltd	43.4
Scottish Hydro Transmission Ltd	33.1
National Grid Electricity Transmission	317.9

Total GB Connection GAV = £3.38bn

GB TRC Factor = $(18.6\% \times £43.4m + 7.5\% \times £33.1m + 16.3\% \times £317.1m) / £3.38bn$

GB TRC Factor = 1.84%

Net GB TRC Factor = Gross GB TRC Factor – Site Specific Maintenance Factor*

Net GB TRC Factor = 1.84% - 0.37% = 1.47%

* Note – the Site Specific Maintenance Factor used to calculate the TRC Factor is that which applies for the first year of the price control period or in this example, is the 2013/14 Site Specific Maintenance Factor of 0.37%.

16. Illustrative Connection Asset Charges

An indication of First Year Connection Asset Charges for new connection assets using estimates of Gross Asset Values are outlined in Appendix 1. Additional examples of connection charge calculations are included in Appendix 2 of this Statement to provide some general illustrations of how connection charge calculations are applied.



A

Appendix A: Illustrative Connection Asset Charges

17. 2019/20 First Year Connection Charges based on the RPI Method (6% rate of return)

The following table provides an indication of typical charges for new connection assets. Before using the table, it is important to read through the notes below as they explain the assumptions used in calculating the figures.

Calculation of Gross Asset Value (GAV)

The GAV figures in the following table were calculated using the following assumptions:

- Each asset is new
- The GAV includes estimated costs of construction, engineering and Liquidated Damages premiums.
- The GAV does not include Interest During Construction but does include a 5% risk factor to compensate for this.

For details of the Calculation of the Gross Asset Value, see Chapter 2 of The Statement of the Connection Charging Methodology (Section 14 Part I of the Connection and Use of System Code).

Calculation of first year connection charge

The first year connection charges in the following table were calculated using the following assumptions:

- The assets are new
- The assets are depreciated over 40 years
- The rate of return is assumed to be 6% for RPI indexation
- The connection charges include maintenance costs at the 2019/20 rate of 0.45% of the GAV
- The connection charges include Transmission Running Costs at the 2019/20 rate of 1.47% of the GAV

For details of the Basic Annual Connection Charge Formula, see Chapter 2 of The Statement of the Connection Charging Methodology (Section 14 Part I of the Connection and Use of System Code).

Please note that the actual charges will depend on the specific assets at a site. Charges applicable to specific works will be detailed in the User's Bilateral Connection Agreement. Agreement specific GAVs and NAVs for each User will be made available on request.

Notes on Assets

Common Inclusions

The estimates include Design, Project management, Site setup, equipment transportation to site, installation, commissioning

Common exclusions

VAT, Inflation, costs associated with planning, site complexities such as ecology, environmental, archaeology, contamination, land purchase and management, site access including road crossings, rivers, etc.,

Notes and Assumptions

Transformers

- **Plant:** The above SGT cost estimates have been developed based on standard NG specifications and ordered in bulk quantities (part of bulk procurement framework). However, SGT equipment cost depends heavily on the site specific specification & requirements, number of units ordered, metal prices index, forex and various other conditions driven by the market.
- **Civil:** Based on nominal base sizes, good ground condition, no piling, no contamination, shallow/ deep bund, Firewall (generic brick wall) on one side with standard height of 8m.

Exclusions

- **Plant:** Bay protection, control and SCADA system, below ground earthing, auxiliary supplies such as AC/DC system (all considered under part of the Bay Cost estimate). Any power cabling on the HV and LV side.
- **Civil:** Trenching/Ducting and Piling, noise enclosure, access works, oil containment drainage.

Single/Double Busbar bay

Assumptions

- **Plant:** The bay cost estimate is based on NGET standard bay drawing 41/177344. Indicative prices provided for bay protection, control, cabling, auxiliary systems and earthing are based on various assumptions (i.e. location of equipment, type of equipment, trench layout, ratings, etc.), and can vary based on site specific conditions and requirements. Air insulated switchgear (AIS) technology is used in costing and it can vary if Gas insulated switchgear (GIS) technology is used.
- **Civil:** Nominal base sizes, dimensions of concrete footings, good ground condition.

Exclusions

- **Civil:** Trenching / Ducting and Piling. Any power cabling on HV and LV side.

Cable

Assumptions - All based on 1 circuit of 1 cable per phase, 100m straight, flat and unimpeded route within substation environment.

- Standard AIS CI3 terminations on steel AIS supports, c/w SVL's, anti-touch shrouds, corona rings, arc horns and solar protection as required.
- XLPE Lead/AlI sheathed cable, supply, installation, commission with High Voltage AC & sheath testing
- Earth Continuity Cable (ECC) & Link Boxes, supply, installation & connection included
- DTS c/w terminations into Fibre Optic Terminal boxes on AIS support - on 400 & 275kV only
- PD Monitoring/Testing on 400 & 275kV only

- Full Design Verification & Assurance to NG Standards and Specifications
- Cable installed in new precast concrete troughs, flat formation, secured in CBS, with cleats to prevent movement under fault conditions, 5T/11T loading standard concrete lids
- Connection & modifications to earth mat
- P&C Duct (1 x 90mm) included (Max 100m excluding cable(s))
- Excavation waste disposal, site establishment / prelims, security & access costs included
- Standalone project(s) with its own design/project team
- Water Management (if required)
- Costs do not allow for any small quantity/MOQ surcharge that may be levied by cable supplier

Exclusions

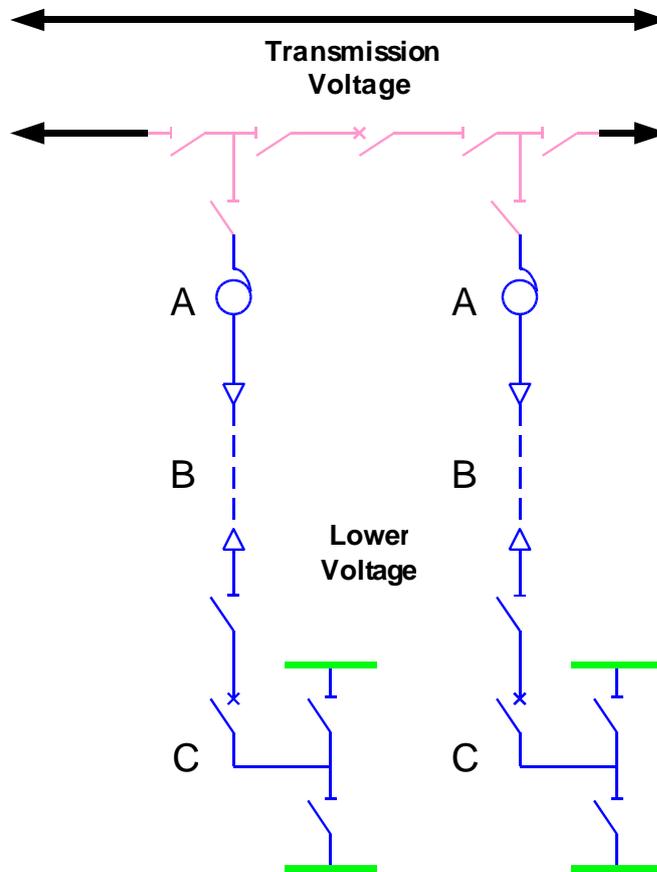
- **Civils:** Piling
- **Plant:** Oil works, pilot cabling (within substation scope)

Illustrative Connection Asset Charges						
	£000's					
	400kV		275kV		132kV	
	GAV	Charge	GAV	Charge	GAV	Charge
Double Busbar Bay	2608	272	2163	226	1341	140
Single Busbar Bay	2295	239	1868	195	1223	128
Transformer Cables 100m (incl. Cable sealing ends)						
120MVA			2259	236	1341	140
180MVA	2415	252	2259	236	1349	141
240MVA	2424	253	2271	237	1359	142
750MVA	2521	263	2338	244		
Transformers						
45MVA 132/66kV					2031	212
90MVA 132/33kV					2031	212
120MVA 275/33kV			3523	368		
180MVA 275/66kV			4192	437		
180MVA 275/132kV			4561	476		
240MVA 275/132kV			4488	468		
240MVA 400/132kV	4749	496				

Connection Examples

Example 1

NEW SUPERGRID CONNECTION SINGLE SWITCH MESH TYPE



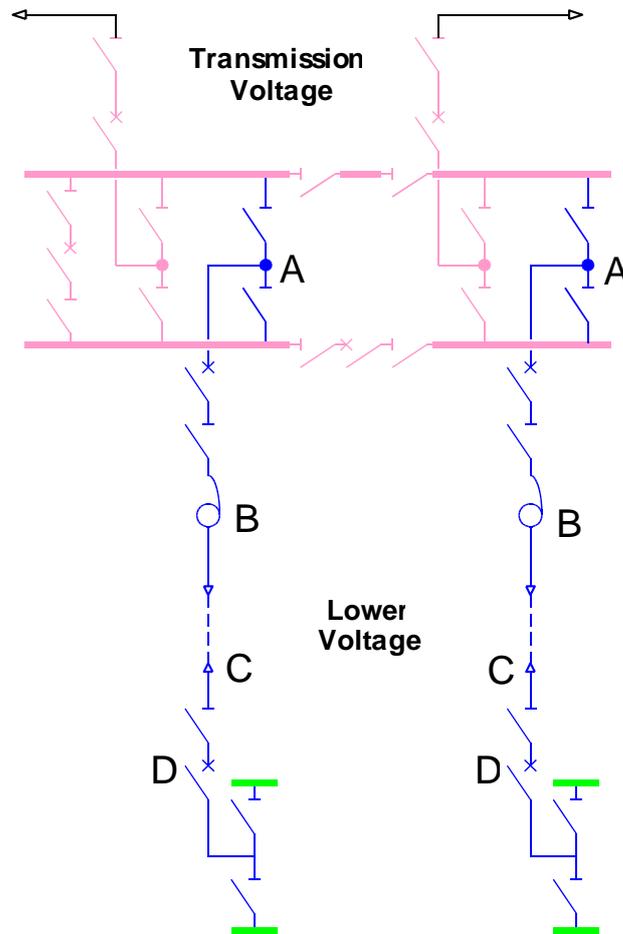
KEY:

- Existing Transmission Assets (infrastructure)
- New Transmission Assets (infrastructure)
- New connection assets wholly charged to customer
- Customer Assets

SCHEDULE FOR NEW CONNECTION				
Rel	275/132kV		400/132kV	
	Descriptor	First Year Charges (£000s)	Descriptor	First Year Charges (£000s)
A	2 x 180MVA Transformers	952	2 x 240MVA Transformers	992
B	2 x 100m 180MVA Cables	450	2 x 100m 240MVA Cables	506
C	2 x 132kV Double Busbar Transformer Bays	280	2 x 132kV Double Busbar Transformer Bays	280
	Tota	1682	Tota	1778

Example 2

NEW SUPERGRID CONNECTION DOUBLE BUSBAR TYPE



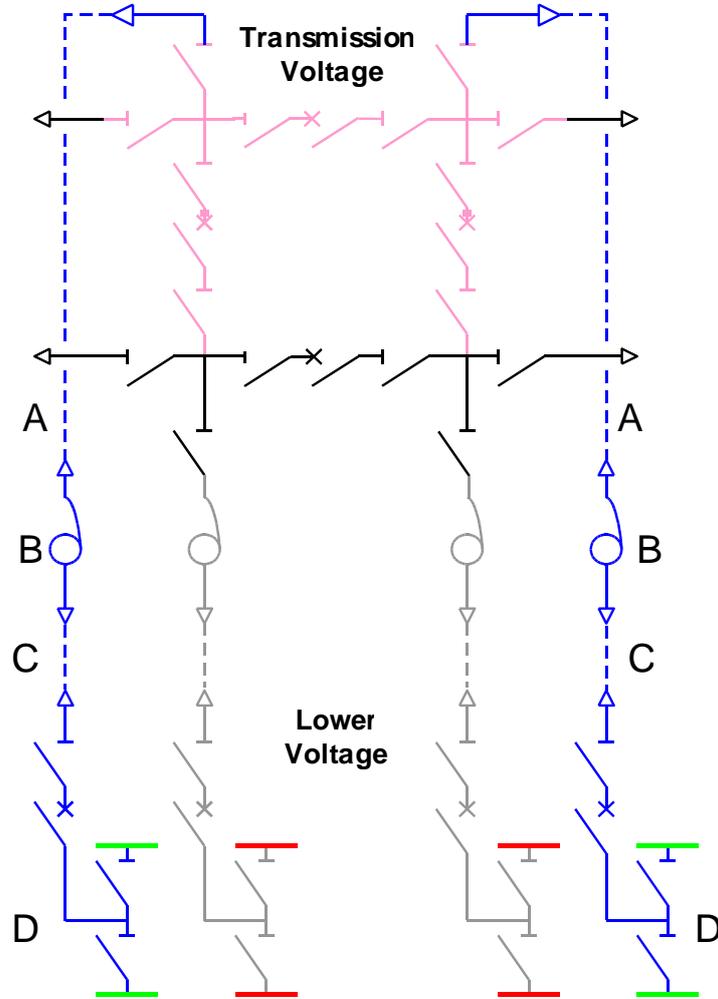
KEY:

- Existing Transmission Assets (infrastructure)
- New Transmission Assets (infrastructure)
- New connection assets wholly charged to customer
- Customer Assets

SCHEDULE FOR NEW CONNECTION				
Ref	275/132kV		400/132kV	
	Descriptor	First Year Charges (£000s)	Descriptor	First Year Charges (£000s)
A	2 x 275kV Double Busbar Transformer Bays	451	2 x 400kV Double Busbar Transformer Bays	544
B	2 x 180MVA Transformers	952	2 x 240MVA Transformers	992
C	2 x 100m 180MVA Cables	450	2 x 100m 240MVA Cables	506
D	2 x 132kV Double Busbar Transformer Bays	280	2 x 132kV Double Busbar Transformer Bays	280
Total		2133	Total	2322

Example 3

EXTENSION OF SINGLE SWITCH MESH TO FOUR SWITCH MESH (extension to single user site)



KEY:

- Existing Transmission Assets (infrastructure)
- New Transmission Assets (infrastructure)
- New connection assets wholly charged to customer
- Existing connection assets wholly charged to another user
- Customer Assets
- Other Users Assets

SCHEDULE FOR NEW CONNECTION				
Ref	275/132kV		400/132kV	
	Descriptor	First Year Charges (£000s)	Descriptor	First Year Charges (£000s)
A	2 x 100m 180MVA Cables	450	2 x 100m 240MVA Cables	506
B	2 x 180MVA Transformers	952	2 x 240MVA Transformers	992
C	2 x 100m 180MVA Cables	450	2 x 100m 240MVA Cables	506
D	2 x 132kV Double Busbar Transformer Bays	280	2 x 132kV Double Busbar Transformer Bays	280
Tota		2132	Tota	2284



B

Appendix B: Examples of Connection Charge Calculations

The following examples of connection charge calculations are intended as general illustrations.

Example 1

This example illustrates the method of calculating the first year connection charge for a given asset value. This method of calculation is applicable to indicative price agreements for new connections, utilising the RPI method of charging, and assuming:

- i) the asset is commissioned on 1 April 2019
- ii) there is no inflation from year to year i.e. GAV remains constant
- iii) the site specific maintenance charge component remains constant throughout the 40 years at 0.45% of GAV
- iv) the Transmission Running Cost component remains constant throughout the 40 years at 1.47% of GAV
- v) the asset is depreciated over 40 years
- vi) the rate of return charge remains constant at 6% for the 40 year life of the asset
- vii) the asset is terminated at the end of its 40 year life

For the purpose of this example, the asset on which charges are based has a Gross Asset Value of £3,000,000 on 1 April 2019.

Charge	Calculation	
Site Specific Maintenance Charge (0.45% of GAV)	$3,000,000 \times 0.45\%$	£13,500
Transmission Running Cost (1.47% of GAV)	$3,000,000 \times 1.47\%$	£44,100
Capital charge (40 year depreciation 2.5% of GAV)	$3,000,000 \times 2.5\%$	£75,000
Return on mid-year NAV (6%)	$2,887,500 \times 6\%$	£173,250
TOTAL		£305,850

The first year charge of £305,850 would reduce in subsequent years as the NAV of the asset is reduced on a straight-line basis, assuming a zero rate of inflation.

This gives the following annual charges over time (assuming no inflation):

Year	Charge
1	£305,850
2	£301,350
10	£265,350
40	£57,600

Based on this example, charges of this form would be payable until 31 March 2059.

Example 2

The previous example assumes that the asset is commissioned on 1 April 2019. If it is assumed that the asset is commissioned on 1 July 2019, the first year charge would equal 9/12th of the first year annual connection charge i.e. £232,762.50

This gives the following annual charges over time:

Year	Charge
1	£232,762.50 (connection charge for period July 2019 to March 2020)
2	£301,350
10	£265,350
40	£57,600

Example 3

In the case of a firm price agreement, there will be two elements in the connection charge, a finance component and a running cost component. These encompass the four elements set out in the examples above. Using exactly the same assumptions as those in example 1 above, the total annual connection charges will be the same as those presented. These charges will not change as a result of the adoption of a different charging methodology by National Grid Electricity System Operator, providing that the connection boundary does not change.

Example 4

If a User has chosen a 20-year depreciation period for their Post Vesting connection assets and subsequently remains connected at the site beyond the twentieth year their charges are calculated as follows.

For years 21-40 they will pay a connection charge based on the following formula:

$$\text{Annual Connection Charge}_n = \text{SSF}_n (\text{RPIGAV}_n) + \text{TC}_n (\text{GAV}_n)$$

The NAV will be zero and the asset will be fully depreciated so there will be no rate of return or depreciation element to the charge.

Index to the Statement of Use of System Charges Revisions

Issue 10	Description	Modifications
10.1	2014/15 Publication	-
11.0	2015/16 Publication	-
12.0	2016/17 Publication	CMP213 Transmit Application fee tables
13.0	2017/18 Publication	-
14.0	2018/19 Publication	Change introduced by CMP264/265 to demand TNUoS tariffs.
1.0	2019/20 Publication	Document transferred to NGESO Section on Balancing Services removed following changes to incentive mechanism.