

Issue	Revision
2	0

# The Statement of Use of System Charges

Effective from 1 April 2020

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

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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 **Revenue Team** at:

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# Schedule 1

Transmission Network Use of System Charge (TNUoS)

## 1. Basis of 2020/21 Transmission Network Use of System Charges

The Transmission Network Use of System Charges for 2020/21 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	£14.935634 /MWkm
Annuity factor	5.8%
Overhead factor	1.8%
Locational onshore security factor	1.8
Offshore civil engineering discount	£0.468226/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
<b>Cable Expansion Factor</b>	10.20	11.45	22.58	22.58	22.58	22.58
<b>OHL Expansion Factor</b>	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	119.9337373
Burbo Bank Ext	24.85216412
Dudgeon	19.13693244
Greater Gabbard & Galloper	50.84496177
Gunfleet	104.6524217
Gwynt Y Môr	43.75658184
Humber Gateway	54.57730644
Lincs	63.36387446
London Array	51.64095423
Ormonde	85.32956002
Race Bank	5.538418242
Robin Rigg East	189.9029979
Robin Rigg West	189.9029979
Sheringham Shoal	50.77130928
Thanet	81.51641097
Walney 1	77.67417589
Walney 2	70.59647672
West of Duddon Sands	63.54117003
Westermost Rough	86.42977156

Further Local Expansion Factors used to calculate Local Circuit Tariffs applicable to generation connecting to offshore transmission infrastructure during 2020/21 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 2020/21

**Table 1.5 Wider Zonal Generation TNUoS Tariffs**

The following table provides the Wider Zonal Generation TNUoS tariffs applicable from 1 April 2020.

Generation Zone	Tariff (£/kW)							
	System Peak	Shared Year Round	Not Shared Year Round	Residual	Example tariffs for a generator of each technology type			
					Conventional Carbon 80%	Conventional Low Carbon 80%	Intermittent 40%	
1	North Scotland	2.756293	20.876589	15.013811	- 4.849145	26.619468	29.622230	18.515302
2	East Aberdeenshire	4.932772	13.269866	15.013811	- 4.849145	22.710569	25.713331	15.472612
3	Western Highlands	2.154270	19.428157	14.818277	- 4.849145	24.702272	27.665928	17.740395
4	Skye and Lochalsh	- 4.187934	19.428157	14.734427	- 4.849145	18.292988	21.239874	17.656545
5	Eastern Grampian and Tayside	3.076871	17.722549	14.283033	- 4.849145	23.832192	26.688798	16.522908
6	Central Grampian	3.775150	16.967576	13.905167	- 4.849145	23.624199	26.405233	15.843052
7	Argyll	3.600719	13.842955	23.996813	- 4.849145	29.023388	33.822751	24.684850
8	The Trossachs	3.680023	13.842955	12.274252	- 4.849145	19.724644	22.179494	12.962289
9	Stirlingshire and Fife	2.448114	11.515492	11.455403	- 4.849145	15.975685	18.266766	11.212455
10	South West Scotlands	2.863723	12.079258	11.625499	- 4.849145	16.978384	19.303483	11.608057
11	Lothian and Borders	3.992083	12.079258	6.031905	- 4.849145	13.631868	14.838249	6.014463
12	Solway and Cheviot	1.798534	7.644909	6.430470	- 4.849145	8.209692	9.495786	4.639289
13	North East England	3.909481	5.860353	4.259232	- 4.849145	7.156004	8.007850	1.754228
14	North Lancashire and The Lakes	1.911978	5.860353	0.871121	- 4.849145	2.448012	2.622236	- 1.633883
15	South Lancashire, Yorkshire and Humber	4.632105	1.427044	0.133525	- 4.849145	1.031415	1.058120	- 4.144802
16	North Midlands and North Wales	3.364918	0.356055	-	- 4.849145	- 1.199383	- 1.199383	- 4.706723
17	South Lincolnshire and North Norfolk	1.772926	0.372940	-	- 4.849145	- 2.777867	- 2.777867	- 4.699969
18	Mid Wales and The Midlands	1.028830	1.033194	-	- 4.849145	- 2.993760	- 2.993760	- 4.435867
19	Anglesey and Snowdon	3.476508	1.651390	-	- 4.849145	- 0.051525	- 0.051525	- 4.188589
20	Pembrokeshire	9.116666	- 4.819420	-	- 4.849145	0.411985	0.411985	- 6.776913
21	South Wales & Gloucester	5.844645	- 4.941232	-	- 4.849145	- 2.957486	- 2.957486	- 6.825638
22	Cotswold	2.544754	2.902551	- 7.885646	- 4.849145	- 6.290867	- 7.867996	-11.573771
23	Central London	- 5.772175	2.902551	- 7.139875	- 4.849145	-14.011179	-15.439154	-10.828000
24	Essex and Kent	- 3.806958	2.902551	-	- 4.849145	- 6.334062	- 6.334062	- 3.688125
25	Oxfordshire, Surrey and Sussex	- 0.933476	- 2.366475	-	- 4.849145	- 7.675801	- 7.675801	- 5.795735
26	Somerset and Wessex	- 1.796550	- 3.216596	-	- 4.849145	- 9.218972	- 9.218972	- 6.135783
27	West Devon and Cornwall	- 0.261549	- 5.784184	-	- 4.849145	- 9.738041	- 9.738041	- 7.162819
<b>Small Generator Discount (£/kW)</b>				11.545625				

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 (ALF).



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.

The 80% and 40% ALFs used in this table for the Conventional Carbon, Conventional Low Carbon and Intermittent example tariffs are for illustration only. Tariffs for individual generators are calculated using their own ALF.

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 2020 for clarification. Confirmation of the zoning of a particular generator can be obtained by contacting NGESO's Revenue Team.

### 3. Schedule of Annual Load Factors for 2020/21

Annual Load Factors for specific generators are listed in Table 1.6. Generators commissioning or re-planting since April 2017 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
ABERDEEN	Offshore_Wind	47.1384%
ABERTHAW	Coal	36.7230%
ACHRUACH	Onshore_Wind	41.0870%
AFTON	Onshore_Wind	35.9704%
AIKENGALL II	Onshore_Wind	30.5401%
AN SUIDHE	Onshore_Wind	36.2422%
ARECLEOCH	Onshore_Wind	31.8618%
BAD A CHEO	Onshore_Wind	30.9619%
BAGLAN BAY	CCGT_CHP	30.4438%
BARROW	Offshore_Wind	46.1078%
BARRY	CCGT_CHP	1.0379%
BEATRICE	Offshore_Wind	49.4982%
BEAULY CASCADE	Hydro	33.3346%
BEINNEUN	Onshore_Wind	31.5679%
BHLARAI DH	Onshore_Wind	39.9834%
BLACK LAW	Onshore_Wind	25.5387%
BLACKCRAIG WINDFARM	Onshore_Wind	37.3511%
BLACKLAW EXTENSION	Onshore_Wind	25.8627%
BRIMSDOWN	CCGT_CHP	26.0796%
BURBO BANK EXT	Offshore_Wind	38.9768%
CARRAIG GHEAL	Onshore_Wind	45.6366%
CARRINGTON	CCGT_CHP	60.7485%
CLUNIE	Hydro	37.6429%



CLYDE (NORTH)	Onshore_Wind	39.1873%
CLYDE (SOUTH)	Onshore_Wind	37.5893%
CONNAHS QUAY	CCGT_CHP	22.4702%
CONON CASCADE	Hydro	52.3925%
CORBY	CCGT_CHP	5.3605%
CORRIEGARTH	Onshore_Wind	36.1714%
CORRIEMOILLIE	Onshore_Wind	31.1504%
CORYTON	CCGT_CHP	22.4633%
COTTAM	Coal	23.6708%
COTTAM DEVELOPMENT CENTRE	CCGT_CHP	51.6207%
COUR	Onshore_Wind	49.7875%
COWES	Gas_Oil	0.4456%
CRUACHAN	Pumped_Storage	8.3701%
CRYSTAL RIG II	Onshore_Wind	48.2354%
CRYSTAL RIG III	Onshore_Wind	47.1279%
DAMHEAD CREEK	CCGT_CHP	65.2910%
DEESIDE	CCGT_CHP	17.3921%
DERSALLOCH	Onshore_Wind	36.2785%
DIDCOT B	CCGT_CHP	45.1327%
DIDCOT GTS	Gas_Oil	0.4680%
DINORWIG	Pumped_Storage	14.8823%
DORENEILL	Onshore_Wind	37.0145%
DRAX	Coal	64.7877%
DUDGEON	Offshore_Wind	45.5699%
DUNGENESS B	Nuclear	64.5540%
DUNLAW EXTENSION	Onshore_Wind	29.2201%
DUNMAGLASS	Onshore_Wind	55.3959%
EDINBANE WIND	Onshore_Wind	34.0292%
EGGBOROUGH	Coal	26.6431%
ERROCHTY	Hydro	19.8284%
EWE HILL	Onshore_Wind	33.1428%
FALLAGO	Onshore_Wind	47.3552%
FARR WINDFARM	Onshore_Wind	38.8150%
FASNAKYLE G1 & G3	Hydro	44.9933%
FAWLEY CHP	CCGT_CHP	68.1130%
FFESTINIOG	Pumped_Storage	3.9827%
FIDDLERS FERRY	Coal	16.5659%
FINLARIG	Hydro	58.7298%
FOYERS	Pumped_Storage	13.9220%
FREASDAIL	Onshore_Wind	37.3305%
GALAWHISTLE	Onshore_Wind	41.6221%
GALLOPER	Offshore_Wind	52.2948%
GARRY CASCADE	Hydro	60.4426%
GLANDFORD BRIGG	CCGT_CHP	1.5635%

GLEN APP	Onshore_Wind	24.0212%
GLENDOE	Hydro	29.3225%
GLENMORISTON	Hydro	43.6576%
GORDONBUSH	Onshore_Wind	44.7123%
GRAIN	CCGT_CHP	44.6951%
GRANGEMOUTH	CCGT_CHP	60.4743%
GREAT YARMOUTH	CCGT_CHP	48.8796%
GREATER GABBARD	Offshore_Wind	43.9132%
GRIFFIN WIND	Onshore_Wind	29.0979%
GUNFLEET SANDS I	Offshore_Wind	46.7030%
GUNFLEET SANDS II	Offshore_Wind	45.2344%
GWYNT Y MOR	Offshore_Wind	52.2846%
HADYARD HILL	Onshore_Wind	32.2491%
HARESTANES	Onshore_Wind	26.7640%
HARTLEPOOL	Nuclear	71.6471%
HEYSHAM	Nuclear	76.5675%
HINKLEY POINT B	Nuclear	73.7379%
HORNSEA 1B	Offshore_Wind	45.3779%
HUMBER GATEWAY	Offshore_Wind	59.2246%
HUNTERSTON	Nuclear	80.3933%
IMMINGHAM	CCGT_CHP	68.5804%
INDIAN QUEENS	Gas_Oil	0.0770%
J G PEARS	Biomass	38.6636%
KEADBY	CCGT_CHP	35.8907%
KEITH HILL	Onshore_Wind	32.1670%
KILBRAUR	Onshore_Wind	51.5019%
KILGALLIOCH	Onshore_Wind	31.3145%
KILLIN CASCADE	Hydro	40.0734%
KILLINGHOLME (POWERGEN)	Gas_Oil	0.5188%
KINGS LYNN A	CCGT_CHP	17.1241%
KYPE MUIR	Onshore_Wind	33.0365%
LANGAGE	CCGT_CHP	33.9196%
LINCS WIND FARM	Offshore_Wind	46.7970%
LITTLE BARFORD	CCGT_CHP	59.2528%
LOCHLUICHART	Onshore_Wind	31.2678%
LONDON ARRAY	Offshore_Wind	56.0880%
LYNEMOUTH	Coal	42.1888%
MARCHWOOD	CCGT_CHP	68.6817%
MARK HILL	Onshore_Wind	28.8508%
MEDWAY	CCGT_CHP	32.4756%
MIDDLE MUIR	Onshore_Wind	33.5663%
MILLENNIUM	Onshore_Wind	51.7721%
MINNYGAP	Onshore_Wind	33.0300%
NANT	Hydro	35.1116%

ORMONDE	Offshore_Wind	41.6515%
PEMBROKE	CCGT_CHP	69.4492%
PENY CYMOEDD	Onshore_Wind	32.0801%
PETERBOROUGH	CCGT_CHP	1.1064%
PETERHEAD	CCGT_CHP	42.3950%
POGBIE	Onshore_Wind	33.4696%
RACE BANK	Offshore_Wind	43.5453%
RAMPION	Offshore_Wind	41.5993%
RATCLIFFE-ON-SOAR	Coal	18.6376%
ROBIN RIGG EAST	Offshore_Wind	48.3465%
ROBIN RIGG WEST	Offshore_Wind	50.7841%
ROCKSAVAGE	CCGT_CHP	28.4132%
RYE HOUSE	CCGT_CHP	9.9678%
SALTEND	CCGT_CHP	69.8126%
SANQUHAR	Onshore_Wind	40.6201%
SEABANK	CCGT_CHP	33.8568%
SELLAFIELD	CCGT_CHP	17.4771%
SEVERN POWER	CCGT_CHP	39.9630%
SHERINGHAM SHOAL	Offshore_Wind	50.4498%
SHOREHAM	CCGT_CHP	41.7830%
SIZEWELL B	Nuclear	88.1488%
SLOY G2 & G3	Hydro	11.9329%
SOUTH HUMBER BANK	CCGT_CHP	39.2533%
SPALDING	CCGT_CHP	46.7394%
STAYTHORPE	CCGT_CHP	60.9057%
STRATHY NORTH & SOUTH	Onshore_Wind	36.8337%
STRONELAIRG	Onshore_Wind	40.5555%
SUTTON BRIDGE	CCGT_CHP	22.9154%
TAYLORS LANE	Gas_Oil	0.3629%
THANET	Offshore_Wind	36.6459%
TODDLBURN	Onshore_Wind	34.5032%
TORNESS	Nuclear	87.9028%
USKMOUTH	Coal	16.6496%
WALNEY 4	Offshore_Wind	47.9525%
WALNEY I	Offshore_Wind	50.0902%
WALNEY II	Offshore_Wind	53.9791%
WALNEY III	Offshore_Wind	49.7561%
WEST BURTON	Coal	18.2198%
WEST BURTON B	CCGT_CHP	58.8141%
WEST OF DUDDON SANDS	Offshore_Wind	48.8146%
WESTERMOST ROUGH	Offshore_Wind	58.7938%
WHITELEE	Onshore_Wind	30.0579%
WHITELEE EXTENSION	Onshore_Wind	26.1989%
WHITESIDE HILL	Onshore_Wind	43.0404%

WILTON	CCGT_CHP	17.7214%
WINDY STANDARD II	Onshore_Wind	42.8050%

**Table 1.7 Generic Annual Load Factors**

Technology	Generic ALF
Gas_Oil #	0.3935%
Pumped_Storage	10.2893%
Tidal *	18.9000%
Biomass	39.8387%
Wave *	31.0000%
Onshore_Wind	35.6660%
CCGT_CHP	50.9470%
Hydro	41.7886%
Offshore_Wind	48.3204%
Coal	27.7372%
Nuclear	77.5645%

# Includes OCGTs (Open Cycle Gas Turbine generating plant).

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

These Generic ALFs are calculated in accordance with CUSC 14.15.110.

#### Small Generators' Discount

Small generators connected to the 132kV transmission system are eligible for a reduction in the listed Generation TNUoS tariffs. The regulator has made the decision to extend the Small Generator discount until March 2021.

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 2020/21, this figure has been calculated as £11.545625/kW.



## 4. Schedule of Transmission Network Use of System Local Substation Generation Charges (£/kW) in 2020/21

**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 2020, 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	0.203179	0.116232	0.083748
<1320 MW	Redundancy	0.447587	0.276925	0.201402
>=1320 MW	No redundancy	0.000000	0.364438	0.263562
>=1320 MW	Redundancy	0.000000	0.598313	0.436719

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 2020:

<b>Offshore Power Station</b>	<b>Local Substation Tariff (£/kW)</b>
<b>Barrow</b>	<b>8.162444</b>
<b>Burbo Bank Ext</b>	<b>10.580601</b>
<b>Dudgeon</b>	<b>15.326966</b>
<b>Greater Gabbard</b>	<b>15.324099</b>
<b>Gunfleet</b>	<b>17.665294</b>
Gw ynt Y Môr	18.654651
<b>Humber Gateway</b>	<b>15.005644</b>
<b>Lincs</b>	<b>15.268405</b>
<b>London Array</b>	<b>10.412718</b>
<b>Ormonde</b>	<b>25.233893</b>
<b>Race Bank</b>	<b>9.624985</b>
<b>Robin Rigg East</b>	<b>-0.466793</b>
<b>Robin Rigg West</b>	<b>-0.466793</b>
<b>Sheringham Shoal</b>	<b>24.410421</b>
<b>Thanet</b>	<b>18.57596</b>
<b>Walney 1</b>	<b>21.778046</b>
<b>Walney 2</b>	<b>21.61966</b>
<b>West of Duddon Sands</b>	<b>8.423723</b>
<b>Westermost Rough</b>	<b>17.737529</b>

Further local substation tariffs applicable to generation connecting to offshore transmission infrastructure during 2020/21 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 2020/21

**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 2020.

Substation Name	(£/kW)	Substation Name	(£/kW)	Substation Name	(£/kW)
Aberarder	1.674800	Dunhill	1.449479	Mark Hill	0.886056
Aberdeen Bay	2.638574	Dunlaw Extension	1.526206	Middle Muir	2.005933
Achruch	4.345091	Edinbane	6.927489	Middleton	0.150275
Aigas	0.661862	Ewe Hill	2.463019	Millennium Wind	1.848216
An Suidhe	- 0.969437	Fallago	0.438701	Moffat	0.189262
Arecleoch	2.101823	Farr	3.608124	Mossford	2.915511
Baglan Bay	0.770013	Feroch	4.451403	Nant	- 1.243308
Beinneun Wind Farm	1.519952	Ffestiniog	0.256029	Necton	1.136934
Bhlaraidh Wind Farm	0.653386	Finlarig	0.324035	New Deer	0.762008
Black Hill	1.571596	Foyers	0.296426	Rhigos	0.102846
Black Law	1.768307	Galawhistle	3.541018	Rocksavage	0.017912
BlackCraig Wind Farm	6.370470	Glendoe	1.861454	Saltend	0.017558
BlackLaw Extension	3.749925	Glenglass	4.869173	South Humber Bank	0.418643
Clyde (North)	0.110981	Gordonbush	0.241519	Spalding	0.286811
Clyde (South)	0.128344	Griffin Wind	9.829899	Strathbrora	0.109582
Corriegarh	2.931749	Hadyard Hill	2.801053	Strathy Wind	1.898434
Corriemoillie	1.685397	Harestanes	2.554720	Stronelairg	1.088627
Coryton	0.049976	Hartlepool	0.207898	Wester Dod	0.481568
Cruachan	1.846679	Invergarry	0.370326	Whitelee	0.107401
Crystal Rig	0.137216	Kilgallioch	1.065057	Whitelee Extension	0.298574
Culligran	1.753949	Kilmorack	0.199859		
Deanie	2.881488	Kype Muir	1.501022		
Dersalloch	2.437668	Langage	0.665581		
Dinorwig	2.428025	Lochay	0.370326		
Dorenell	2.123778	Luichart	0.582090		
Dumnaglass	1.146983	Marchwood	0.386209		

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 2020:

Offshore Power Station	Local Circuit Tariff (£/kW)
Barrow	42.705899
Burbo Bank	20.257999
Dudgeon	23.898895
Greater Gabbard	35.213271
Gunfleet	16.218123
Gunfleet	18.377138
Gwynt Y Môr	33.857735
Humber Gateway	59.779295
Lincs	35.465138
London Array	47.008379
Ormonde	26.420532
Robin Rigg East	30.921041
Robin Rigg West	30.921041
Sheringham Shoal	28.627705
Thanet	34.613653
Walney 1	43.370922
Walney 2	43.753022
West of Duddon Sands	41.56585
Westermost Rough	30.004308

Further local circuit tariffs applicable to generation connecting to offshore transmission infrastructure during 2020/21 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 2020/21

**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 2020.

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Aberdeen Offshore Wind Farm	0.187072	0.013680	0.748288	0.935360	1.122432
Aberthaw	0.000000	0.000000	0.000000	0.000000	0.000000
A'Chruach Wind Farm	0.936493	0.068485	3.745972	4.682465	5.618958
Afton Wind Farm	0.083731	0.006123	0.334924	0.418655	0.502386
Aigas (part of the Beaulieu Cascade)	0.482974	0.035320	1.931896	2.414870	2.897844
Aikengall II Windfarm	0.000000	0.000000	0.000000	0.000000	0.000000
Aikengall IIa Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
An Suidhe Wind Farm, Argyll (SRO)	0.622271	0.045506	2.489084	3.111355	3.733626
Arcleloch	0.678826	0.049642	2.715304	3.394130	4.072956
Bad a Cheo Wind Farm	0.277515	0.020294	1.110060	1.387575	1.665090
Baglan Bay	0.028252	0.002066	0.113008	0.141260	0.169512
Barrow Offshore Wind Farm	2.053129	0.150144	8.212516	10.265645	12.318774
Beatrice Wind Farm	1.076156	0.078698	4.304624	5.380780	6.456936
Beinneun Wind Farm	0.935830	0.068437	3.743320	4.679150	5.614980
Bhlaraidh Wind Farm	0.976171	0.071387	3.904684	4.880855	5.857026
Blackcraig Wind Farm	0.331596	0.024249	1.326384	1.657980	1.989576
Blacklaw	0.327554	0.023954	1.310216	1.637770	1.965324
Blacklaw Extension	0.000000	0.000000	0.000000	0.000000	0.000000
Braintree	0.000000	0.000000	0.000000	0.000000	0.000000
Burbo Bank Extension Offshore Wind Farm	1.371732	0.100314	5.486928	6.858660	8.230392
Carraig Gheal Wind Farm	0.975139	0.071311	3.900556	4.875695	5.850834
Carrington Power Station	0.000000	0.000000	0.000000	0.000000	0.000000
CDCL	0.000000	0.000000	0.000000	0.000000	0.000000
Clunie (part of the Clunie Cascade)	0.411579	0.030098	1.646316	2.057895	2.469474
Clyde South	0.313312	0.022912	1.253248	1.566560	1.879872
Connahs Quay	0.000000	0.000000	0.000000	0.000000	0.000000
Corby	0.000000	0.000000	0.000000	0.000000	0.000000
Corriearth	0.488529	0.035726	1.954116	2.442645	2.931174
Coryton	0.000000	0.000000	0.000000	0.000000	0.000000

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Cour Wind Farm	0.784439	0.057365	3.137756	3.922195	4.706634
Cowes	0.000000	0.000000	0.000000	0.000000	0.000000
Cowley	0.000000	0.000000	0.000000	0.000000	0.000000
Crossdykes	0.366143	0.026776	1.464572	1.830715	2.196858
Cruachan	0.156441	0.011440	0.625764	0.782205	0.938646
Crystal Rig 2 Wind Farm	0.385762	0.028211	1.543048	1.928810	2.314572
Crystal Rig 3 Wind Farm	0.378739	0.027697	1.514956	1.893695	2.272434
Culligran (part of the Beaulieu Cascade)	0.540308	0.039512	2.161232	2.701540	3.241848
Cumberhead	0.484845	0.035456	1.939380	2.424225	2.909070
Damhead Creek	0.000000	0.000000	0.000000	0.000000	0.000000
Deanie (part of the Beaulieu Cascade)	0.599504	0.043841	2.398016	2.997520	3.597024
Deeside	0.000000	0.000000	0.000000	0.000000	0.000000
Dersaloch Wind Farm	0.118322	0.008653	0.473288	0.591610	0.709932
Derwent	0.000000	0.000000	0.000000	0.000000	0.000000
Didcot B	0.000000	0.000000	0.000000	0.000000	0.000000
Dinorwig	0.082148	0.006007	0.328592	0.410740	0.492888
Dorenell Windfarm	1.061497	0.077626	4.245988	5.307485	6.368982
Drax (Biomass)	0.064614	0.004725	0.258456	0.323070	0.387684
Drax (Coal)	0.064614	0.004725	0.258456	0.323070	0.387684
Dudgeon Offshore Wind Farm	1.873389	0.137000	7.493556	9.366945	11.240334
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	0.605534	0.044282	2.422136	3.027670	3.633204
East Anglia One	0.000000	0.000000	0.000000	0.000000	0.000000
Edinbane Wind, Skye	0.634282	0.046385	2.537128	3.171410	3.805692
Enfield	0.000000	0.000000	0.000000	0.000000	0.000000
Errochty	0.245827	0.017977	0.983308	1.229135	1.474962
Ewe Hill	0.000000	0.000000	0.000000	0.000000	0.000000
Fallago Rig Wind Farm	0.396009	0.028960	1.584036	1.980045	2.376054
Farr Wind Farm, Tomatin	0.553014	0.040441	2.212056	2.765070	3.318084
Fasnakyle G1 & G2	1.101503	0.080552	4.406012	5.507515	6.609018
Fawley CHP	0.000000	0.000000	0.000000	0.000000	0.000000
Ffestiniog	0.000000	0.000000	0.000000	0.000000	0.000000
Finlarig	0.618334	0.045218	2.473336	3.091670	3.710004
Foyers	0.174115	0.012733	0.696460	0.870575	1.044690
Freasdail	0.681075	0.049807	2.724300	3.405375	4.086450
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	0.022959	0.001679	0.091836	0.114795	0.137754

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Glendoe	0.437810	0.032017	1.751240	2.189050	2.626860
Glenmoriston (part of the Moriston Cascade)	0.486298	0.035563	1.945192	2.431490	2.917788
Gordonbush Wind Farm	1.042483	0.076236	4.169932	5.212415	6.254898
Grain	0.000000	0.000000	0.000000	0.000000	0.000000
Grangemouth CHP	0.603249	0.044115	2.412996	3.016245	3.619494
Great Yarmouth	0.000000	0.000000	0.000000	0.000000	0.000000
Greater Gabbard Offshore Wind Farm	2.422452	0.177152	9.689808	12.112260	14.534712
Griffin Wind Farm	1.305584	0.095476	5.222336	6.527920	7.833504
Gunfleet Sands II Offshore Wind Farm	1.101832	0.080576	4.407328	5.509160	6.610992
Gunfleet Sands Offshore Wind Farm	1.108776	0.081084	4.435104	5.543880	6.652656
Gwynt Y Mor Offshore Wind Farm	2.320521	0.169698	9.282084	11.602605	13.923126
Hadyard Hill	0.111847	0.008179	0.447388	0.559235	0.671082
Halsary Wind Farm	0.948050	0.069330	3.792200	4.740250	5.688300
Harestanes	0.335229	0.024515	1.340916	1.676145	2.011374
Harker	0.000000	0.000000	0.000000	0.000000	0.000000
Hartlepool	0.420166	0.030726	1.680664	2.100830	2.520996
Heysham Power Station	0.150034	0.010972	0.600136	0.750170	0.900204
Hinkley Point B	0.000000	0.000000	0.000000	0.000000	0.000000
Hirwaun Power Station	0.056642	0.004142	0.226568	0.283210	0.339852
Hornsea Power Station 1A	0.000000	0.000000	0.000000	0.000000	0.000000
Hornsea Power Station 1B	0.000000	0.000000	0.000000	0.000000	0.000000
Hornsea Power Station 1C	0.000000	0.000000	0.000000	0.000000	0.000000
Hornsea Power Station 2A	0.000000	0.000000	0.000000	0.000000	0.000000
Humber Gateway Offshore Wind Farm	3.736805	0.273270	14.947220	18.684025	22.420830
Hunterston	1.026501	0.075067	4.106004	5.132505	6.159006
Immingham	0.055367	0.004049	0.221468	0.276835	0.332202
Indian Queens	0.000000	0.000000	0.000000	0.000000	0.000000
Invergarry (part of the Garry Cascade)	0.676944	0.049504	2.707776	3.384720	4.061664
J G Pears	0.000000	0.000000	0.000000	0.000000	0.000000
Keadby	0.000000	0.000000	0.000000	0.000000	0.000000
Keadby II	0.000000	0.000000	0.000000	0.000000	0.000000
Keith Hill Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Kemsley Battery	0.000000	0.000000	0.000000	0.000000	0.000000
Kilbraur Wind Farm	1.109972	0.081171	4.439888	5.549860	6.659832

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Kilgallioch	0.610258	0.044628	2.441032	3.051290	3.661548
Killingholme	0.011958	0.000874	0.047832	0.059790	0.071748
Kilmorack (part of the Beauly Cascade)	0.458719	0.033546	1.834876	2.293595	2.752314
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
Limekilns	0.924552	0.067612	3.698208	4.622760	5.547312
Lincs Offshore Wind Farm	2.163170	0.158191	8.652680	10.815850	12.979020
Little Barford	0.000000	0.000000	0.000000	0.000000	0.000000
Llanwern Phase 1	0.000000	0.000000	0.000000	0.000000	0.000000
Lochay (Part of Killin Cascade Hydro Scheme)	0.454573	0.033243	1.818292	2.272865	2.727438
Lochluichart	0.382183	0.027949	1.528732	1.910915	2.293098
London Array Offshore Wind Farm	3.643276	0.266430	14.573104	18.216380	21.859656
Luichart (part of the Conon Cascade)	0.687664	0.050288	2.750656	3.438320	4.125984
Lynemouth Power Station	0.174808	0.012784	0.699232	0.874040	1.048848
Marchwood	0.000000	0.000000	0.000000	0.000000	0.000000
Mark Hill Wind Farm	0.591339	0.043244	2.365356	2.956695	3.548034
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	0.552997	0.040440	2.211988	2.764985	3.317982
Minnygap	0.000000	0.000000	0.000000	0.000000	0.000000
Moray Firth Offshore Wind Farm	0.910283	0.066568	3.641132	4.551415	5.461698
Mossford (part of the Conon Cascade)	0.810169	0.059247	3.240676	4.050845	4.861014
Nant	0.788714	0.057678	3.154856	3.943570	4.732284
Neart Na Gaoithe Offshore Wind Farm	0.375728	0.027477	1.502912	1.878640	2.254368
Norwich Battery	0.000000	0.000000	0.000000	0.000000	0.000000
Nursling	0.000000	0.000000	0.000000	0.000000	0.000000
Ormonde Offshore Wind Farm	1.811692	0.132488	7.246768	9.058460	10.870152
Orrin (part of the Conon Cascade)	0.657105	0.048054	2.628420	3.285525	3.942630
Pembroke Power Station	0.071253	0.005211	0.285012	0.356265	0.427518
Pen Y Cymoedd Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Pencloe Windfarm	0.664447	0.048591	2.657788	3.322235	3.986682
Peterborough	0.000000	0.000000	0.000000	0.000000	0.000000



Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Peterhead	0.648449	0.047421	2.593796	3.242245	3.890694
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	1.772917	0.129652	7.091668	8.864585	10.637502
Robin Rigg West Offshore Wind Farm	1.782701	0.130368	7.130804	8.913505	10.696206
Rocksavage	0.000000	0.000000	0.000000	0.000000	0.000000
Rye House	0.000000	0.000000	0.000000	0.000000	0.000000
Saltend	0.061263	0.004480	0.245052	0.306315	0.367578
Sanquhar Wind Farm	0.273509	0.020001	1.094036	1.367545	1.641054
Seabank	0.000000	0.000000	0.000000	0.000000	0.000000
Sellafield	0.000000	0.000000	0.000000	0.000000	0.000000
Severn Power	0.000000	0.000000	0.000000	0.000000	0.000000
Sheringham Shoal Offshore Wind Farm	2.589957	0.189402	10.359828	12.949785	15.539742
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	0.074264	0.005431	0.297056	0.371320	0.445584
South Humber Bank	0.065672	0.004803	0.262688	0.328360	0.394032
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	0.000000	0.000000	0.000000	0.000000	0.000000
Strathy North and South Wind	0.441539	0.032289	1.766156	2.207695	2.649234
Stronelairg	1.004857	0.073484	4.019428	5.024285	6.029142
Sundon Battery	0.000000	0.000000	0.000000	0.000000	0.000000
Sutton Bridge	0.000000	0.000000	0.000000	0.000000	0.000000
Taylor's Lane	0.000000	0.000000	0.000000	0.000000	0.000000
Tees Renewable Energy Plant	0.176861	0.012934	0.707444	0.884305	1.061166
Templeborough	0.000000	0.000000	0.000000	0.000000	0.000000
Thanet Offshore Wind Farm	2.637464	0.192876	10.549856	13.187320	15.824784
Thurrock	0.000000	0.000000	0.000000	0.000000	0.000000
Toddleburn Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Torness	0.839698	0.061406	3.358792	4.198490	5.038188
Trafford Power	0.000000	0.000000	0.000000	0.000000	0.000000
Tralorg Wind Farm	0.628456	0.045959	2.513824	3.142280	3.770736
Triton Knoll Offshore Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Twentyshilling Wind Farm	0.837570	0.061251	3.350280	4.187850	5.025420
Uskmouth	0.023611	0.001727	0.094444	0.118055	0.141666
Walney 3 Offshore Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Walney 4 Offshore Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Walney I Offshore Wind Farm	3.365586	0.246123	13.462344	16.827930	20.193516
Walney II Offshore Wind Farm	3.389296	0.247857	13.557184	16.946480	20.335776
West Burton A	0.000000	0.000000	0.000000	0.000000	0.000000
West Burton B	0.000000	0.000000	0.000000	0.000000	0.000000
West of Duddon Sands Offshore Wind Farm	2.565793	0.187635	10.263172	12.828965	15.394758
Westermost Rough Offshore Wind Farm	2.302925	0.168411	9.211700	11.514625	13.817550
Whitelee	0.558115	0.040815	2.232460	2.790575	3.348690
Whitelee Extension	0.543679	0.039759	2.174716	2.718395	3.262074
Whiteside Hill Wind Farm	0.288857	0.021124	1.155428	1.444285	1.733142
Wilton	0.059356	0.004341	0.237424	0.296780	0.356136
Windy Rig Wind Farm	0.664447	0.048591	2.657788	3.322235	3.986682
Windy Standard II (Brockloch Rig 1) Wind Farm	0.120662	0.008824	0.482648	0.603310	0.723972

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 2020/21 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 2020/21

**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 2020. 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	1.060446
Gunfleet	3.031261
Ormonde	0.374617
Robin Rigg East	9.583854
Robin Rigg West	9.583854
Sheringham Shoal	0.622282
Thanet	0.833273

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 2020/21 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 Half hourly (HH) Demand Tariffs (£/kW) and Non half Hourly (NHH) Demand Tariffs (p/kWh) for 2020/21

**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 2020.

Demand Zone		HH Demand Tariff (£/kW)	NHH Demand Tariff (p/kWh)	Embedded Export Tariff (£/kW)
1	Northern Scotland	21.126849	2.742642	-
2	Southern Scotland	28.760295	3.528995	-
3	Northern	40.022002	4.768367	-
4	North West	46.674676	5.735191	-
5	Yorkshire	47.834680	5.645414	-
6	N Wales & Mersey	48.904955	5.811644	0.587601
7	East Midlands	51.387929	6.281123	3.070575
8	Midlands	52.648445	6.525494	4.331091
9	Eastern	53.488450	6.994220	5.171096
10	South Wales	50.613794	5.594905	2.296440
11	South East	56.501849	7.511337	8.184495
12	London	59.267002	5.828242	10.949648
13	Southern	57.772417	7.136303	9.455063
14	South Western	57.020402	7.608806	8.703048

Residual charge for demand:	51.031645	
Tariffs include small gen tariff of:	0.700635	0.085865

Please note the tariffs in **Error! Reference source not found.1.14** above include the effect of the Small Generator Discount.

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 2020/21 the demand residual element to two decimal places is £51.03/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 NHH demand 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

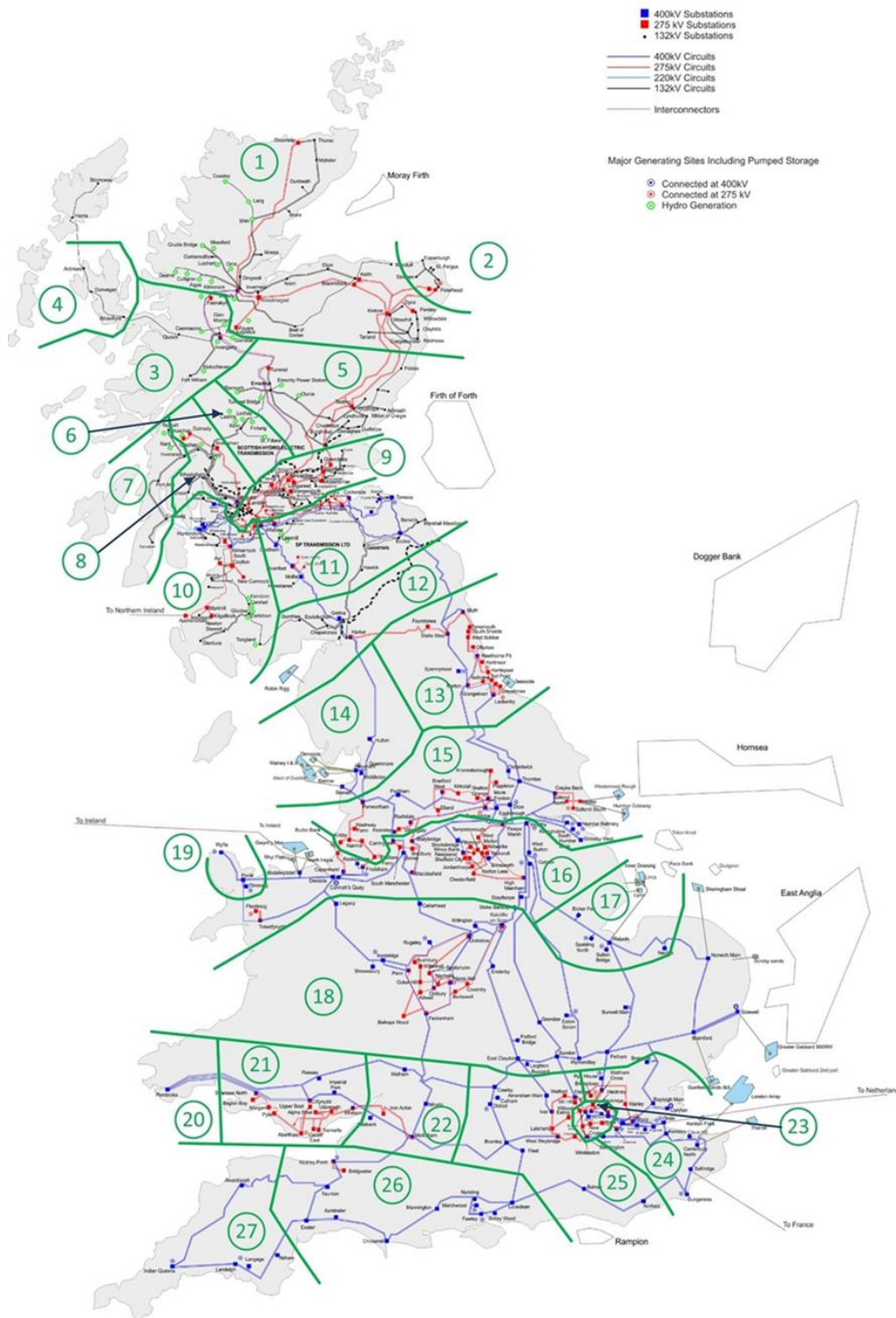
In accordance with Standard Licence Condition C13 governing the adjustments to use of system charges for the small generators discount, a unit amount of £0.700635/kW to the HH demand tariff and 0.085865p/kWh to the NHH demand tariff has been included on a non-discriminatory and non-locational basis.

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 ESO's main revenue restriction. National Grid ESO 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.

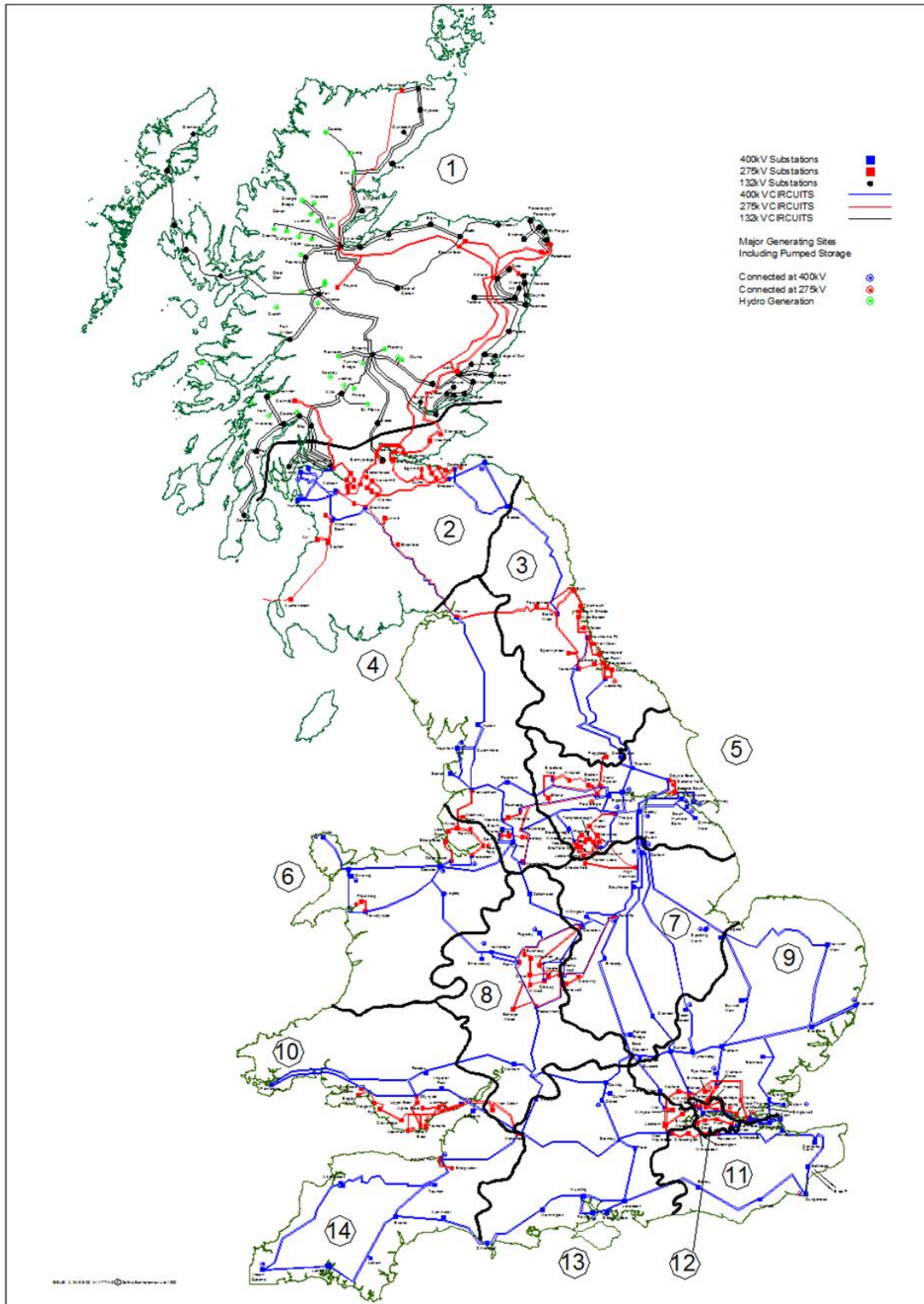
# 9. Zonal Maps Applicable for 2020/21

## Generation Use of System Tariff Zones (Geographical map as at 1 April 2020)

Figure A2: GB Existing Transmission System



Demand Use of System Tariff Zones (Geographical map as at 1 April 2020)







## 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). NGET1 maps to where NGET is host and there are no affected TOs, NGET2 maps to where NGET is the host TO and SPT is an affected TO, SPT1 is where SPT is the host TO and NGET is an affected TO, SPT2 maps to where SPT is the host TO and there are no affected TOs, SPT3 maps to where SPT is host TO and SHET is an affected TO and SHET1 is where SHET is the host TO and there are no affected TOs.

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.

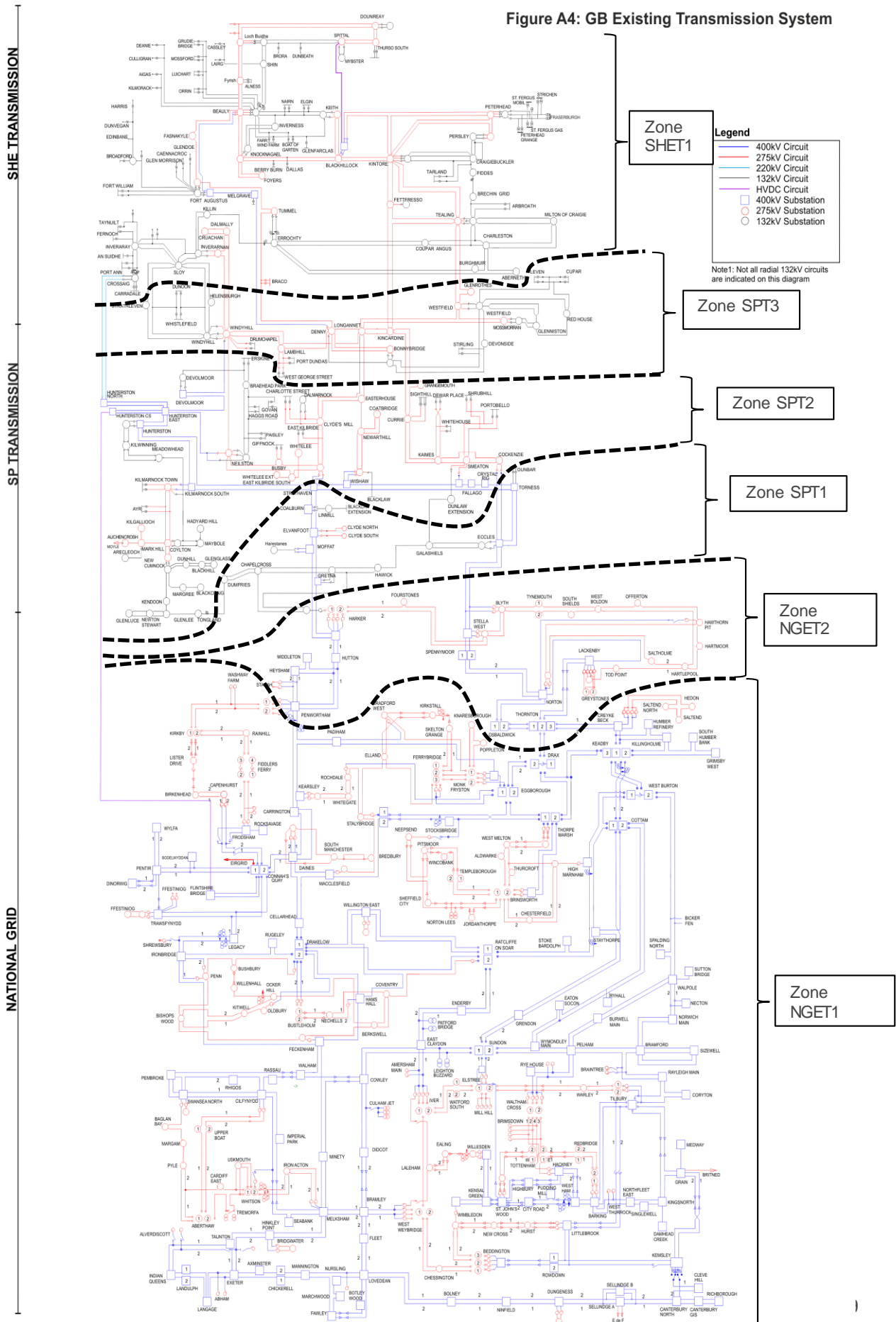
All application fees are subject to VAT and are capped at £400,000 + VAT.

## 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





## 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	£19,100	£30,050	£29,900	£24,900	£39,400	£30,900
	100 - 1320MW	£28,800	£44,850	£44,950	£36,900	£58,900	£45,900
	>1320MW	£82,150	£125,500	£124,700	£100,400	£160,900	£123,900
New Onshore Application (Entry) Rate (£/MW)	<100MW	£113	£193	£189	£139	£250	£189
	100 - 1320MW	£61	£96	£96	£69	£120	£92
	>1320MW	£16	£38	£36	£26	£52	£40
New Onshore Supply Point (Exit)	<100MW	£38,450	£42,100	£50,500	£36,700	£48,200	£30,700
	>100MW	£42,800	£58,100	£60,600	£39,700	£64,200	£55,700
New Offshore Application	-	£47,800	£84,950	£85,200	£49,400	£119,700	£85,200
Onshore Modification Application to Existing Supply Point (Exit)	<100	£31,800	£44,500	£44,950	£31,150	£39,650	£12,150
	>100	£37,800	£59,000	£50,050	£29,150	£46,150	£21,150
Statement of Works (Exit)	-	£3,200	£3,500	£3,800	£1,200	£1,650	£1,100
Modification Application Following Statement Of Works (Simple Project Progression*)	-	£10,900	£12,000	£13,200	£7,150	£10,350	£7,650
Complex Project Progression**		£18,250	£25,050	£35,900	£24,150	£29,650	£13,150.
TEC Increase	<100MW	£19,100	£30,050	£29,900	£24,900	£39,400	£30,900
	100 - 1320MW	£28,800	£44,850	£44,950	£36,900	£58,900	£45,900
	>1320MW	£82,150	£125,500	£124,700	£100,400	£160,900	£123,900
TEC Increase Rate (£/MW)	<100MW	£113	£193	£189	£139	£250	£189
	100 - 1320MW	£61	£96	£96	£69	£120	£92
	>1320MW	£16	£38	£36	£26	£52	£40

**\*Simple Project Progression**

Relevant to an application at a single GSP where there is one or more Relevant Embedded Generators wishing to connect where either a previous Statement of Works (stage 1) response has indicated the need to Confirm Project Progression without the need for more detailed study; or where the DNO has chosen to skip Stage 1 Statement of Works and move straight to Project progression as the impact is already known.

**\*\*Complex Project Progression**

Relevant to an application at a single GSP where one or more Relevant Embedded Generators wish to connect and where a previous Stage 1 Statement of Works response has indicated that Confirmation of Project Progression is required and that significant further study is needed; or where the DNO has chosen to skip Stage 1 and move straight to Project Progression where it has already been indicated that significant works and study of the GSP are required.

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 2.12 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 2.13 Limited Duration TEC Request Fees**

Limited Duration TEC (LDTEC)		Duration of LDTEC (t)	Zone	£ (£'000)	Agreement Type (as Table C)
14	<b>Basic request fee for duration t</b> (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	
	<b>Additional fee for rolling assessment</b> (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	
	<b>Additional fee for combined applications</b> (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 2.14 Temporary TEC Exchange Rate Request Fees**

Temporary TEC Exchange Rate Request Fees		Duration of Temporary Exchange period (t)	£
15	<b>Application fee for Temporary TEC Exchange Rate Requests</b>	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 =  $\text{£}28,800 + (300 * 61) = \text{£}47,100$
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 =  $2 * \text{£}85,200 = \text{£}170,400$
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 =  $0.75 * (2 * \text{£}85,200) = \text{£}127,800$
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 =  $0.75 * (\text{£}44,850 + (300 * 96)) = \text{£}55,237.50$
5. Entry Application Fee for an embedded generator (BEGA/ BELLA), 300MW embedded generator requesting a BEGA in Zone NGET2.  
Application Fee =  $0.5 * (\text{£}44,850 + (300 * 96)) = \text{£}36,825$
6. Entry Application Fee for a TEC Increase  
400MW generator in Zone SPT3 wishes to increase TEC by 20MW to 420MW.  
Application Fee =  $\text{£}39,400 + (20 * 250) = \text{£}44,400$
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 =  $0.75 * (\text{£}44,850 + (500 * 96)) = \text{£}69,637.50$
8. Entry Application Fee to decrease TEC  
600MW generator in Zone SHET1 wishes to decrease TEC by 100MW to 500MW.  
Application Fee =  $0.75 * (\text{£}45,900 + (100 * 92)) = \text{£}41,325$

**Table 2.15 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 2.16 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.

## **Glossary**

<b>Affected TO</b>	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
<b>Authority</b>	The Gas and Electricity Markets Authority (GEMA) established under Section 1 of the Utilities Act 2000
<b>Bilateral Connection Agreement</b>	An agreement between the SO and the User covering the connection to the TO's transmission system.
<b>CUSC</b>	Connection and Use of System Code
<b>Entry</b>	A point of connection at which electricity may be exported from a User's installation onto the Transmission System, i.e. Generation
<b>Exit</b>	A point of connection at which electricity may flow from the Transmission System to the User's installation, i.e. Demand
<b>Host TO</b>	The TO which will electrically connect the User to a transmission system which is owned or operated by that TO
<b>NGET</b>	National Grid Electricity Transmission plc
<b>Post-Vesting</b>	Means after 31 March 1990
<b>Price Control</b>	As set out in the TO's Licence
<b>Retail Price Index</b>	Table 36: RPI: All items index 1947-2013 "CHAW" published by the Office for National Statistics and as amended monthly
<b>SO</b>	System Operator
<b>STC</b>	The System Operator-Transmission Owner Code
<b>TO</b>	An onshore or offshore Transmission Owner. This being [TO name plc]
<b>Transmission Interface Site</b>	The site at which the Transmission interface point is located
<b>Transmission Licence</b>	Transmission licence granted or treated as granted under section 6(1)(b) of the Act
<b>User</b>	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	SHE T
Section Manager Internal Solicitor	1036	£953	£1123	£990
Principal Power System Engineer	831	£825	£859	£833
Senior Power System Engineer Project Manager Account Manager Senior Wayleave Officer	688	£717	£717	£695
Power System Design Engineer Draughtsman	545	£584	£603	£554
Graduate Engineer	466	£480	£480	£468
Administrative Support	372	£426	£379	£366





# Schedule 4

Connection Charges

## 15. Non-Capital Components applicable for Maintenance and Transmission Running Costs in Connection Charges for 2020/21

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 2020/21 this will be 0.41%.

### 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%.

The TRC will be recalculated for 1<sup>st</sup> April 2021, which is the beginning of the RII02 price control.

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. 2020/21 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 2020/21 rate of 0.41% of the GAV
- The connection charges include Transmission Running Costs at the 2020/21 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**

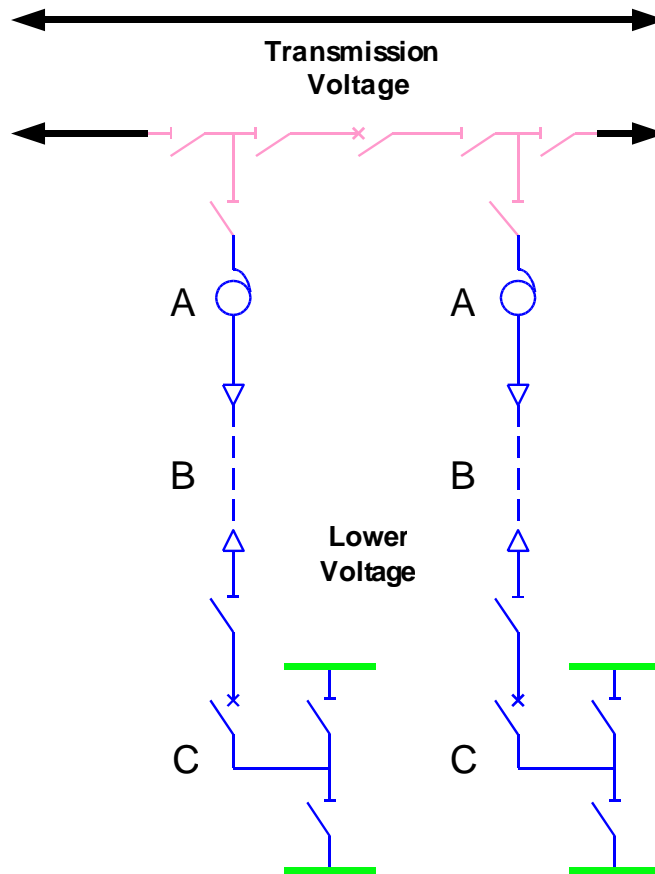
- **Civils:** Piling
- **Plant:** Oil works, pilot cabling (within substation scope)

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

# Connection Examples

## Example 1

### NEW SUPERGRID CONNECTION SINGLE SWITCH MESH TYPE



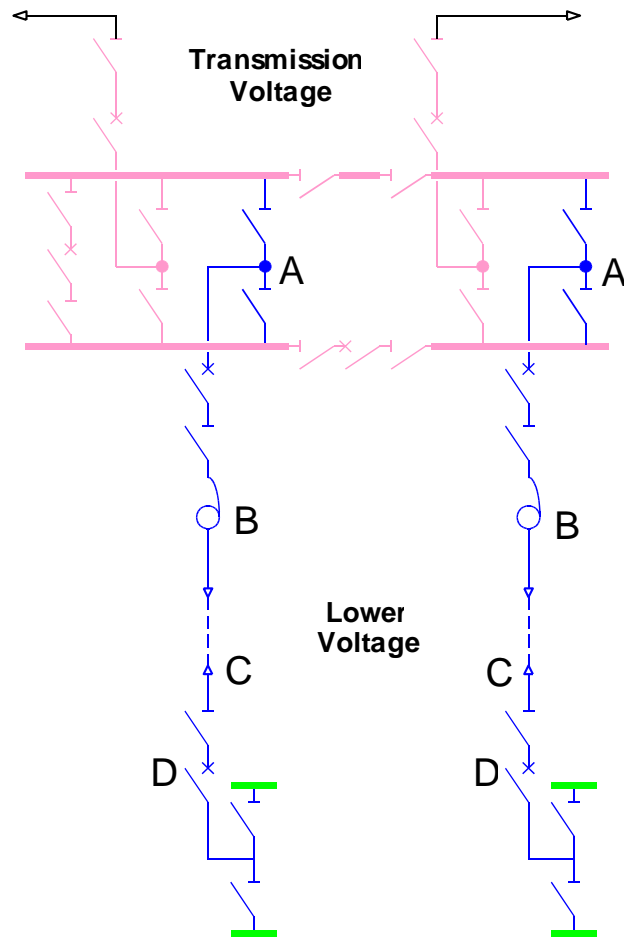
**KEY:**

- 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
	<b>Tota</b>	<b>1682</b>	<b>Tota</b>	<b>1778</b>

Example 2

## NEW SUPERGRID CONNECTION DOUBLE BUSBAR TYPE



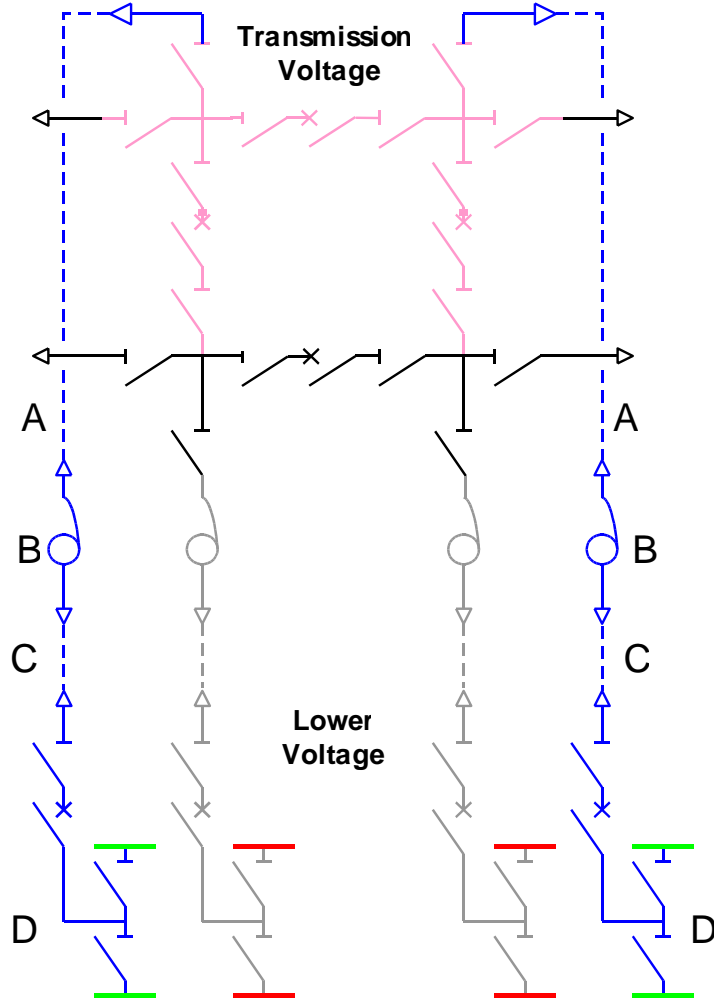
**KEY:**

- 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
<b>Total</b>		<b>2133</b>	<b>Total</b>	<b>2322</b>

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	
	Description	First Year Charges (£000s)	Description	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
<b>Tota</b>		<b>2132</b>	<b>Tota</b>	<b>2284</b>



# 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 2020
- 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 0.41% 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 2020.

Charge	Calculation	
Site Specific Maintenance Charge (0.41% of GAV)	$3,000,000 \times 0.41\%$	£12,300
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%)	$2,887,500 \times 6\%$	£177,750
TOTAL		£309,150

**The first year charge of £309,150 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	£309,150
2	£304,650
10	£268,650
40	£133,650

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 2020. If it is assumed that the asset is commissioned on 1 July 2020, the first year charge would equal 9/12th of the first year annual connection charge i.e. £231,862.50

This gives the following annual charges over time:

Year	Charge
1	£231,862.50 (connection charge for period July 2020 to March 2021)
2	£304,650
10	£268,650
40	£133,650

### 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 NGENSO Section on Balancing Services removed following changes to incentive mechanism.
2.0	2020/21 Publication	-