Issue	Revision
13	0

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The Statement of Use of System Charges

Effective from 1 April 2017

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

nationalgrid

Contents

Introduction

This statement is published in accordance with the Transmission Licence of National Grid Electricity Transmission plc (National Grid).

This document sets out the annual tariffs for Transmission Network Use of System charges and the parameters used to calculate these; details of the Balancing Services Incentive Scheme which forms part of the Balancing Services Use of System Charges; and fees charged by National Grid 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 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:

http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/The-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**, preferably by email at:

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Schedule 1

Basis of 2017/18 Transmission Network Use of System Charges

The Transmission Network Use of System Charges for 2017/18 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	£13.57449607/MWkm
Annuity factor	5.8%
Overhead factor	1.8%
Locational onshore security factor	1.8
Offshore civil engineering discount	£0.425554/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
Greater Gabbard & Galloper	43.85, 41.84
Gunfleet	83.15
Gwynt Y Môr	38.88
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
Humber Gateway	49.59

Further Local Expansion Factors used to calculate Local Circuit Tariffs applicable to generation connecting to offshore transmission infrastructure during 2017/18 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.

Schedule of Transmission Network Use of System Wider Zonal Generation Charges (£/kW) in 2017/18

Table 1.5

The following table provides the Wider Zonal Generation TNUoS tariffs applicable from 1 April 2017.

Zone No.	Zone Name	Peak Security (£/kW)	Year Round Shared (£/kW)	Year Round Not Shared (£/kW)	Residual (£/kW)
1	North Scotland	-0.002000	11.940060	16.909972	-1.853883
2	East Aberdeenshire	0.794338	5.576753	16.909972	-1.853883
3	Western Highlands	-0.408343	10.088312	16.676506	-1.853883
4	Skye and Lochalsh	-6.224181	10.088312	16.419588	-1.853883
5	Eastern Grampian and Tayside	0.273013	8.954210	16.107179	-1.853883
6	Central Grampian	2.437359	10.092599	17.127997	-1.853883
7	Argyll	1.556747	8.028893	25.544208	-1.853883
8	The Trossachs	1.784393	8.028893	15.183823	-1.853883
9	Stirlingshire and Fife	-0.133834	3.913693	13.153459	-1.853883
10	South West Scotlands	1.695579	6.348284	14.148463	-1.853883
11	Lothian and Borders	2.818959	6.348284	9.032482	-1.853883
12	Solway and Cheviot	0.568031	3.496664	7.670008	-1.853883
13	North East England	3.144168	2.042519	4.198748	-1.853883
14	North Lancashire and The Lakes	1.202446	2.042519	3.009858	-1.853883
15	South Lancashire, Yorkshire and Humber	3.997792	0.568225	0.164386	-1.853883
16	North Midlands and North Wales	3.745536	-0.951028	0.000000	-1.853883
17	South Lincolnshire and North Norfolk	2.193746	-0.335202	0.000000	-1.853883
18	Mid Wales and The Midlands	1.229614	-0.198633	0.000000	-1.853883
19	Anglesey and Snowdon	4.415405	-1.704058	0.000000	-1.853883
20	Pembrokeshire	9.048900	-3.884439	0.000000	-1.853883
21	South Wales & Gloucester	6.153082	-3.944204	0.000000	-1.853883
22	Cotswold	3.146674	2.065177	-6.056186	-1.853883
23	Central London	-4.269553	2.065177	-5.486685	-1.853883
24	Essex and Kent	-3.668247	2.065177	0.000000	-1.853883
25	Oxfordshire, Surrey and Sussex	-1.153480	-2.668629	0.000000	-1.853883
26	Somerset and Wessex	-1.243261	-3.921646	0.000000	-1.853883
27	West Devon and Cornwall	0.195665	-5.301776	0.000000	-1.853883

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 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 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.

Schedule of Annual Load Factors for 2017/18

Annual Load Factors for specific generators are listed in Table 1.16. Generators commissioning or re-planting since April 2016 should use the generic Annual Load Factor for their technology in Table 1.17.

Table 1.16

Power Station	Technology	Specific ALF
ABERTHAW	Coal	**59.6022%**
ACHRUACH	Onshore_Wind	**36.4210%**
AN SUIDHE WIND FARM	Onshore_Wind	**35.7576%**
ARECLEOCH	Onshore_Wind	**33.8135%**
BAGLAN BAY	CCGT_CHP	**31.5393%**
BARKING	CCGT_CHP	**8.3575%**
BARROW OFFSHORE WIND LTD	Offshore_Wind	**49.4368%**
BARRY	CCGT_CHP	**1.3905%**
BEAULY CASCADE	Hydro	**35.9315%**
BLACK LAW	Onshore_Wind	**28.5521%**
BLACKLAW EXTENSION	Onshore_Wind	**36.3601%**
BRIMSDOWN	CCGT_CHP	**19.0289%**
BURBO BANK	Offshore_Wind	**37.5881%**
CARRAIG GHEAL	Onshore_Wind	**46.6097%**
CARRINGTON	CCGT_CHP	**38.8663%**
CLUNIE SCHEME	Hydro	**45.5152%**
CLYDE (NORTH)	Onshore_Wind	**40.3200%**
CLYDE (SOUTH)	Onshore_Wind	**33.6380%**
CONNAHS QUAY	CCGT_CHP	**21.7185%**
CONON CASCADE	Hydro	**56.2656%**
CORBY	CCGT_CHP	**6.9366%**
CORYTON	CCGT_CHP	**19.8664%**
COTTAM	Coal	**59.2426%**
COTTAM DEVELOPMENT CENTRE	CCGT_CHP	**25.1921%**
COWES	Gas_Oil	**0.2554%**
CRUACHAN	Pumped_Storage	**8.9550%**
CRYSTAL RIG II	Onshore_Wind	**48.4464%**
DAMHEAD CREEK	CCGT_CHP	**69.8469%**
DEESIDE	CCGT_CHP	**18.1722%**
DIDCOT B	CCGT_CHP	**38.5623%**
DIDCOT GTS	Gas_Oil	**0.1715%**
DINORWIG	Pumped_Storage	**15.0844%**
DRAX	Coal	**81.2941%**
DUNGENESS B	Nuclear	**58.5094%**
DUNLAW EXTENSION	Onshore_Wind	**32.4265%**
EDINBANE WIND	Onshore_Wind	**35.4393%**
EGGBOROUGH	Coal	**53.1372%**
ERROCHTY	Hydro	**26.2245%**
FALLAGO	Onshore_Wind	**51.7981%**
FARR WINDFARM TOMATIN	Onshore_Wind	**40.9876%**
FASNAKYLE G1 & G3	Hydro	**42.8388%**

Power Station	Technology	Specific ALF
FAWLEY CHP	CCGT_CHP	**65.3556%**
FFESTINIOGG	Pumped_Storage	**3.7013%**
FIDDLERS FERRY	Coal	**48.7927%**
FINLARIG	Hydro	**61.4861%**
FOYERS	Pumped_Storage	**14.5407%**
GARRY CASCADE	Hydro	**60.1969%**
GLANDFORD BRIGG	CCGT_CHP	**1.0230%**
GLENDOE	Hydro	**28.1792%**
GLENMORISTON	Hydro	**47.9668%**
GORDONBUSH	Onshore_Wind	**47.3579%**
GRAIN	CCGT_CHP	**36.8879%**
GRANGEMOUTH	CCGT_CHP	**59.4496%**
GREAT YARMOUTH	CCGT_CHP	**28.2821%**
GREATER GABBARD OFFSHORE WIND FARM	Offshore_Wind	**43.5381%**
GRIFFIN WIND	Onshore_Wind	**31.4334%**
GUNFLEET SANDS I	Offshore_Wind	**49.2093%**
GUNFLEET SANDS II	Offshore_Wind	**46.2622%**
GWYNT Y MOR	Offshore_Wind	**44.2499%**
HADYARD HILL	Onshore_Wind	**32.1217%**
HARESTANES	Onshore_Wind	**26.7624%**
HARTLEPOOL	Nuclear	**67.0691%**
HEYSHAM	Nuclear	**76.4933%**
HINKLEY POINT B	Nuclear	**66.0886%**
HUMBER GATEWAY OFFSHORE WIND FARM	Offshore_Wind	**52.9831%**
HUNTERSTON	Nuclear	**78.8876%**
IMMINGHAM	CCGT_CHP	**58.8265%**
INDIAN QUEENS	Gas_Oil	**0.2207%**
IRONBRIDGE	Biomass	**26.8847%**
KEADBY	CCGT_CHP	**18.1513%**
KILBRAUR	Onshore_Wind	**48.9964%**
KILLIN CASCADE	Hydro	**47.7990%**
KINGS LYNN A	CCGT_CHP	**5.2027%**
LANGAGE	CCGT_CHP	**39.2164%**
LINCS WIND FARM	Offshore_Wind	**46.5157%**
LITTLE BARFORD	CCGT_CHP	**29.9974%**
LITTLEBROOK D	Gas_Oil	**0.0615%**
LOCHLUICHART	Onshore_Wind	**25.5726%**
LONDON ARRAY	Offshore_Wind	**60.7422%**
LYNEMOUTH	Coal	**60.6565%**
MARCHWOOD	CCGT_CHP	**56.6559%**
MARK HILL	Onshore_Wind	**29.0827%**
MEDWAY	CCGT_CHP	**25.6102%**
MILLENNIUM	Onshore_Wind	**49.4240%**
NANT	Hydro	**36.4571%**
ORMONDE	Offshore_Wind	**46.5753%**
PEMBROKE	CCGT_CHP	**64.5459%**
PETERBOROUGH	CCGT_CHP	**2.1262%**
PETERHEAD	CCGT_CHP	**32.2130%**
RATCLIFFE-ON-SOAR	Coal	**58.8302%**

Power Station	Technology	Specific ALF
ROBIN RIGG EAST	Offshore_Wind	**46.7127%**
ROBIN RIGG WEST	Offshore_Wind	**48.6565%**
ROCKSAVAGE	CCGT_CHP	**21.9044%**
RYE HOUSE	CCGT_CHP	**8.6596%**
SALTEND	CCGT_CHP	**72.8471%**
SEABANK	CCGT_CHP	**23.7291%**
SELLAFIELD	CCGT_CHP	**19.3496%**
SEVERN POWER	CCGT_CHP	**28.2250%**
SHERINGHAM SHOAL	Offshore_Wind	**49.7329%**
SHOREHAM	CCGT_CHP	**26.6418%**
SIZEWELL B	Nuclear	**88.0078%**
SLOY G2 & G3	Hydro	**14.4635%**
SOUTH HUMBER BANK	CCGT_CHP	**32.1065%**
SPALDING	CCGT_CHP	**40.6492%**
STAYTHORPE	CCGT_CHP	**56.4953%**
STRATHY NORTH & SOUTH	Onshore_Wind	**41.7502%**
SUTTON BRIDGE	CCGT_CHP	**16.8559%**
TAYLORS LANE	Gas_Oil	**0.1132%**
THANET OFFSHORE WIND FARM	Offshore_Wind	**38.8172%**
TODDLEBURN	Onshore_Wind	**35.6652%**
TORNESS	Nuclear	**87.4352%**
USKMOUTH	Coal	**36.5674%**
WALNEY I	Offshore_Wind	**49.4697%**
WALNEY II	Offshore_Wind	**51.9854%**
WEST BURTON	Coal	**58.3329%**
WEST BURTON B	CCGT_CHP	**45.4973%**
WEST OF DUDDON SANDS OFFSHORE WIND FARM	Offshore_Wind	**42.6923%**
WESTERMOST ROUGH	Offshore_Wind	**43.1621%**
WHITELEE	Onshore_Wind	**31.1516%**
WHITELEE EXTENSION	Onshore_Wind	**27.1848%**
WILTON	CCGT_CHP	**11.1090%**
WYLFA	Nuclear	**82.5139%**

Table 1.17

Technology	Generic ALF	Intermittent/ Conventional
Gas_Oil	0.1645%	Conventional
Pumped_Storage	10.5704%	Conventional
Tidal	18.9000%	Intermittent
Biomass	26.8847%	Conventional
Wave	31.0000%	Intermittent
Onshore_Wind	37.8084%	Intermittent
CCGT_CHP	38.9336%	Conventional
Hydro	44.3345%	Conventional
Offshore_Wind	47.9931%	Intermittent
Coal	56.9749%	Conventional
Nuclear	75.6256%	Conventional

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 2017 for clarification. Confirmation of the zoning of a particular generator can be obtained by contacting National Grid's Revenue Team.

Small Generators' Discount

In accordance with Licence Condition C13 in National Grid's Transmission Licence, 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 2017/18, this figure has been calculated as £11.351718/kW.

Schedule of Transmission Network Use of System Local Substation Generation Charges (£/kW) in 2017/18

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 2017, which has been updated from the examples listed in the Statement of Use of System Methodology.

		Local Substation Tariff (£/kW)		
Sum of TEC at connecting Substation	**Connection Type**	**132kV**	**275kV**	**400kV**
<1320 MW	No redundancy	0.184663	0.105639	0.076115
<1320 MW	Redundancy	0.406797	0.251688	0.183048
>=1320 MW	No redundancy		0.331225	0.239543
>=1320 MW	Redundancy		0.543787	0.396919

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 2017:

Offshore Power Station	Local Substation Tariff (£/kW)
Barrow	7.441339
Greater Gabbard	13.951635
Gunfleet	16.104666
Gwynt Y Mor	16.990859
Lincs	13.906629
London Array	9.466607
Ormonde	23.004623
Robin Rigg East	-0.425554
Robin Rigg West	-0.425554
Sheringham Shoal	22.226453
Thanet	16.926252
Walney 1	19.854080
Walney 2	19.709687
West of Duddon Sands	7.661147
Westermost Rough	16.131802
Humber Gateway	13.520839

Further local substation tariffs applicable to generation connecting to offshore transmission infrastructure during 2017/18 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.

Schedule of Transmission Network Use of System Local Circuit Charges (£/kW) in 2017/18

Table 1.10

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 2017.

Substation Name	(£/kW)	Substation Name	(£/kW)	Substation Name	(£/kW)
Achruach	3.939872	Dinorwig	2.206750	Kilmorack	0.181645
Aigas	0.601544	Dunlaw Extension	1.379173	Langage	0.604792
An Suidhe	2.819601	Brochlock	1.317382	Lochay	0.336577
Arecleoch	1.910276	Dumnaglass	1.707609	Luichart	0.527938
Baglan Bay	0.699507	Edinbane	-6.291543	Mark Hill	0.805306
Beinneun Wind Farm	1.381894	Earlshaugh Wind Farm	3.464522	Margree	5.537474
Bhlaraidh Wind Farm	0.593841	Ewe Hill	1.263917	Marchwood	0.351279
Black Hill	0.793539	Farr Windfarm	2.065880	Millennium Wind	1.680242
BlackCraig Wind Farm	5.789906	Fallago	0.905483	Moffat	0.155042
Black Law	1.607155	Carraig Gheal	4.045828	Mossford	2.648705
BlackLaw Extension	3.408181	Ffestiniogg	0.232696	Nant	2.308346
Bodelwyddan	0.105826	Finlarig	0.294505	Necton	1.034410
Carrington	-0.032882	Foyers	0.692563	Rhigos	0.093347
Clyde (North)	0.100867	Galawhistle	0.778413	Rocksavage	0.016271
Clyde (South)	0.116647	Glendoe	1.691813	Saltend	0.313585
Corriegarth	3.466566	Ulziside	8.931637	South Humber Bank	0.867492
Corriemoillie	1.530696	Gordonbush	0.376037	Spalding	0.255407
Coryton	0.047815	Griffin Wind	-0.845619	Kilbraur	0.237471
Cruachan	1.676790	Hadyard Hill	2.545783	Stronelairg	1.332406
Crystal Rig	0.334929	Harestanes	2.304928	Strathy Wind	2.018352
Culligran	1.594105	Hartlepool	0.552782	Wester Dodds	0.647899
Deanie	2.618888	Hedon	0.166412	Whitelee	0.097613
Dersalloch	2.215514	Invergarry	1.305184	Whitelee Extension	0.271364
Didcot	0.476938	Kilgallioch	0.967994		

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

Table 1.11

The following table provides the Local Circuit Generation TNUoS tariffs applicable to generation connecting to offshore transmission infrastructure from 1 April 2017:

Offshore Power Station	Local Circuit Tariff (£/kW)
Barrow	38.933077
Greater Gabbard	32.059484
Gunfleet	14.785345
Gwynt Y Mor	16.738095
Lincs	54.447630
London Array	32.242737
Ormonde	42.855458
Robin Rigg East	28.189344
Robin Rigg West	28.189344
Sheringham Shoal	26.066423
Thanet	31.539657
Walney 1	39.539350
Walney 2	39.887693
West of Duddon Sands	37.803015
Westermost Rough	27.288105
Humber Gateway	30.507520

Further local circuit tariffs applicable to generation connecting to offshore transmission infrastructure during 2017/18 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.

Schedule of Transmission Network Use of System STTEC and LDTEC Charges in 2017/18

Table 1.12

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 2017.

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Aberthaw	0.130838	0.009568	0.523352	0.654190	0.785028
A'Chruach Wind Farm	1.017834	0.074433	4.071336	5.089170	6.107004
Afton	0.813136	0.059464	3.252544	4.065680	4.878816
Aigas	0.460886	0.033704	1.843544	2.304430	2.765316
Aikengall II Windfarm	0.546595	0.039972	2.186380	2.732975	3.279570
An Suidhe Wind Farm, Argyll (SRO)	0.956223	0.069928	3.824892	4.781115	5.737338
Arecleoch	0.868145	0.063487	3.472580	4.340725	5.208870
Baglan Bay	0.210337	0.015382	0.841348	1.051685	1.262022
Barking	0.000000	0.000000	0.000000	0.000000	0.000000
Barrow Offshore Wind Farm	2.003145	0.146489	8.012580	10.015725	12.018870
Barry Power Station	0.222829	0.016295	0.891316	1.114145	1.336974
Beinneun Wind Farm	1.060679	0.077567	4.242716	5.303395	6.364074
Bhlaraidh Wind Farm	1.019306	0.074541	4.077224	5.096530	6.115836
Blackcraig Wind Farm	0.489173	0.035773	1.956692	2.445865	2.935038
Blacklaw	0.566107	0.041399	2.264428	2.830535	3.396642
Blacklaw Extension	0.090716	0.006634	0.362864	0.453580	0.544296
BP Grangemouth	0.708352	0.051801	2.833408	3.541760	4.250112
Burbo Bank Extension Offshore Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Carraig Gheal Wind Farm	1.066343	0.077981	4.265372	5.331715	6.398058
Carrington Power Station	0.087790	0.006420	0.351160	0.438950	0.526740
CDCL	0.107572	0.007867	0.430288	0.537860	0.645432
Clunie	0.390324	0.028544	1.561296	1.951620	2.341944
Clyde North	0.522098	0.038181	2.088392	2.610490	3.132588
Clyde South	0.500657	0.036613	2.002628	2.503285	3.003942
Connahs Quay	0.109306	0.007993	0.437224	0.546530	0.655836
Corby	0.000000	0.000000	0.000000	0.000000	0.000000
Corriegarth	0.623170	0.045572	2.492680	3.115850	3.739020
Corriemoillie Wind Farm	0.533199	0.038992	2.132796	2.665995	3.199194
Coryton	0.000000	0.000000	0.000000	0.000000	0.000000
Cottam	0.090571	0.006623	0.362284	0.452855	0.543426
Cour Wind Farm	0.828500	0.060588	3.314000	4.142500	4.971000
Crookedstane Windfarm	0.509010	0.037224	2.036040	2.545050	3.054060

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Cruachan	0.924827	0.067632	3.699308	4.624135	5.548962
Crystal Rig 2 Wind Farm	0.565535	0.041357	2.262140	2.827675	3.393210
Crystal Rig 3 Wind Farm	0.520470	0.038062	2.081880	2.602350	3.122820
Culligran	0.512995	0.037515	2.051980	2.564975	3.077970
Damhead Creek	0.000000	0.000000	0.000000	0.000000	0.000000
Deanie	0.566796	0.041449	2.267184	2.833980	3.400776
Deeside	0.111077	0.008123	0.444308	0.555385	0.666462
Dersalloch Wind Farm	0.301517	0.022050	1.206068	1.507585	1.809102
Didcot B	0.000000	0.000000	0.000000	0.000000	0.000000
Dinorwig	0.249415	0.018240	0.997660	1.247075	1.496490
Drax (Biomass)	0.166275	0.012160	0.665100	0.831375	0.997650
Drax (Coal)	0.166275	0.012160	0.665100	0.831375	0.997650
Dudgeon Offshore Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
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	0.530825	0.038819	2.123300	2.654125	3.184950
Edinbane Wind, Skye	0.035820	0.002620	0.143280	0.179100	0.214920
Enfield	0.000000	0.000000	0.000000	0.000000	0.000000
Errochty	0.299639	0.021912	1.198556	1.498195	1.797834
Ewe Hill	0.000000	0.000000	0.000000	0.000000	0.000000
Fallago Rig Wind Farm	0.606659	0.044365	2.426636	3.033295	3.639954
Farr Wind Farm, Tomatin	0.569563	0.041652	2.278252	2.847815	3.417378
Fasnakyle G1 & G2	0.397367	0.029059	1.589468	1.986835	2.384202
Fawley CHP	0.000000	0.000000	0.000000	0.000000	0.000000
Ffestiniog	0.115226	0.008426	0.460904	0.576130	0.691356
Fiddlers Ferry	0.164290	0.012014	0.657160	0.821450	0.985740
Finlarig	0.684832	0.050081	2.739328	3.424160	4.108992
Foyers	0.923394	0.067527	3.693576	4.616970	5.540364
Freasdail	0.816838	0.059735	3.267352	4.084190	4.901028
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	0.285492	0.020878	1.141968	1.427460	1.712952
Glendoe	0.408545	0.029877	1.634180	2.042725	2.451270
Glenmoriston	0.424527	0.031045	1.698108	2.122635	2.547162
Gordonbush Wind	1.107051	0.080958	4.428204	5.535255	6.642306
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	2.313715	0.169200	9.254860	11.568575	13.882290
Griffin Wind Farm	0.873027	0.063844	3.492108	4.365135	5.238162
Gunfleet Sands II Offshore Wind Farm	1.068687	0.078152	4.274748	5.343435	6.412122
Gunfleet Sands Offshore Wind Farm	1.068380	0.078130	4.273520	5.341900	6.410280

Power Station	LDTEC Tariff (£/kW/Week)		STTEC Tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days	35 Days	42 Days
Gwynt Y Mor Offshore Wind Farm	1.656904	0.121168	6.627616	8.284520	9.941424
Hadyard Hill	0.299903	0.021932	1.199612	1.499515	1.799418
Harestanes	0.485179	0.035481	1.940716	2.425895	2.911074
Hartlepool	0.402329	0.029422	1.609316	2.011645	2.413974
Heysham Power Station	0.226681	0.016577	0.906724	1.133405	1.360086
Hinkley Point B	0.000000	0.000000	0.000000	0.000000	0.000000
Humber Gateway Offshore Wind Farm	2.247333	0.164346	8.989332	11.236665	13.483998
Hunterston	1.007014	0.073642	4.028056	5.035070	6.042084
Immingham	0.148345	0.010848	0.593380	0.741725	0.890070
Indian Queens	0.000000	0.000000	0.000000	0.000000	0.000000
Invergarry	0.557824	0.040793	2.231296	2.789120	3.346944
Keadby	0.099859	0.007303	0.399436	0.499295	0.599154
Keith Hill Wind Farm	0.575293	0.042071	2.301172	2.876465	3.451758
Kilbraur Wind Farm	1.115593	0.081582	4.462372	5.577965	6.693558
Kilgallioch	0.827841	0.060539	3.311364	4.139205	4.967046
Kilmorack	0.438841	0.032092	1.755364	2.194205	2.633046
Langage	0.000000	0.000000	0.000000	0.000000	0.000000
Lincs Offshore Wind Farm	3.483084	0.254715	13.932336	17.415420	20.898504
Little Barford	0.000000	0.000000	0.000000	0.000000	0.000000
Lochay	0.614519	0.044939	2.458076	3.072595	3.687114
Lochluichart	0.413034	0.030205	1.652136	2.065170	2.478204
London Array Offshore Wind Farm	2.158269	0.157833	8.633076	10.791345	12.949614
Luichart	0.584486	0.042743	2.337944	2.922430	3.506916
Lynemouth Power Station	0.358836	0.026241	1.435344	1.794180	2.153016
Marchwood	0.000000	0.000000	0.000000	0.000000	0.000000
Margree	1.062192	0.077677	4.248768	5.310960	6.373152
Mark Hill Wind Farm	0.790218	0.057788	3.160872	3.951090	4.741308
Medway Power Station	0.000000	0.000000	0.000000	0.000000	0.000000
Millennium Wind (Stage 3), Ceannacroc	0.541895	0.039628	2.167580	2.709475	3.251370
Minnygap	0.000000	0.000000	0.000000	0.000000	0.000000
Mossford	0.695827	0.050885	2.783308	3.479135	4.174962
Nant	1.014060	0.074157	4.056240	5.070300	6.084360
Ormonde Offshore Wind Farm	3.586217	0.262257	14.344868	17.931085	21.517302
Orrin	0.556770	0.040716	2.227080	2.783850	3.340620
Pembroke Power Station	0.266946	0.019522	1.067784	1.334730	1.601676
Pen Y Cymoedd Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Pencloe Windfarm	0.813136	0.059464	3.252544	4.065680	4.878816
Peterborough	0.017469	0.001277	0.069876	0.087345	0.104814
Peterhead	0.939674	0.068718	3.758696	4.698370	5.638044
Pogbie Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Race Bank 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
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	1.711433	0.125156	6.845732	8.557165	10.268598
Robin Rigg West Offshore Wind Farm	1.715001	0.125417	6.860004	8.575005	10.290006
Rocksavage	0.093225	0.006818	0.372900	0.466125	0.559350
Rye House	0.000000	0.000000	0.000000	0.000000	0.000000
Saltend	0.172594	0.012622	0.690376	0.862970	1.035564
Sanquhar Wind Farm	1.240386	0.090708	4.961544	6.201930	7.442316
Seabank	0.000000	0.000000	0.000000	0.000000	0.000000
Sellafield	0.144566	0.010572	0.578264	0.722830	0.867396
Severn Power	0.180476	0.013198	0.721904	0.902380	1.082856
Sheringham Shoal Offshore Wind Farm	2.462608	0.180089	9.850432	12.313040	14.775648
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	0.268196	0.019613	1.072784	1.340980	1.609176
South Humber Bank	0.197145	0.014417	0.788580	0.985725	1.182870
Spalding	0.033708	0.002465	0.134832	0.168540	0.202248
Staythorpe C	0.091943	0.006724	0.367772	0.459715	0.551658
Stella North EFR Submission	0.000000	0.000000	0.000000	0.000000	0.000000
Strathy North and South Wind	0.580025	0.042417	2.320100	2.900125	3.480150
Stronelairg	1.058081	0.077377	4.232324	5.290405	6.348486
Sutton Bridge	0.035715	0.002612	0.142860	0.178575	0.214290
Thanet Offshore Wind Farm	2.529079	0.184950	10.116316	12.645395	15.174474
Toddleburn Wind Farm	0.000000	0.000000	0.000000	0.000000	0.000000
Torness	0.825890	0.060397	3.303560	4.129450	4.955340
Uskmouth	0.171344	0.012530	0.685376	0.856720	1.028064
Walney 3 Offshore Wind Farm	0.112153	0.008202	0.448612	0.560765	0.672918
Walney 4 Offshore Wind Farm	0.112153	0.008202	0.448612	0.560765	0.672918
Walney I Offshore Wind Farm	3.231891	0.236346	12.927564	16.159455	19.391346
Walney II Offshore Wind Farm	3.245296	0.237326	12.981184	16.226480	19.471776
West Burton A	0.091025	0.006657	0.364100	0.455125	0.546150
West Burton B	0.097434	0.007125	0.389736	0.487170	0.584604
West of Duddon Sands Offshore Wind Farm	2.496454	0.182564	9.985816	12.482270	14.978724
Westermost Rough Offshore Wind Farm	2.211110	0.161697	8.844440	11.055550	13.266660
Whitelee	0.759960	0.055575	3.039840	3.799800	4.559760
Whitelee Extension	0.755861	0.055276	3.023444	3.779305	4.535166
Whiteside Hill Wind Farm	0.654113	0.047835	2.616452	3.270565	3.924678
Wilton	0.313300	0.022911	1.253200	1.566500	1.879800
Windy Standard II (Brockloch Rig 1) Wind Farm	0.266027	0.019454	1.064108	1.330135	1.596162

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 2017/18 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.

Schedule of Pre-Asset Transfer Related Embedded Transmission Use of System Charges in 2017/18

Table 1.13

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 2017. 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	0.966762
Gunfleet	2.763466
Ormonde	0.341522
Robin Rigg East	8.737175
Robin Rigg West	8.737175
Sheringham Shoal	0.566607
Thanet	0.759271

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 2017/18 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.

Schedule of Transmission Network Use of System Demand Charges (£/kW) and Energy Consumption Charges (p/kWh) for 2017/18

Table 1.14

The following table provides the Zonal Demand and Energy Consumption TNUoS tariffs applicable from 1 April 2017.

Demand Zone	Zone Area	Demand Tariff (£/kW)	Energy Consumption Tariff (p/kWh)
1	Northern Scotland	29.577679	6.215608
2	Southern Scotland	30.480981	4.262747
3	Northern	39.223189	5.943493
4	North West	45.245665	5.878185
5	Yorkshire	44.967107	5.978783
6	N Wales & Mersey	46.791119	6.607274
7	East Midlands	47.889103	6.248796
8	Midlands	49.457444	6.426317
9	Eastern	49.617070	7.095134
10	South Wales	45.551887	5.775370
11	South East	52.537577	7.475220
12	London	54.969649	5.487378
13	Southern	53.405080	7.047920
14	South Western	51.955583	7.464813

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 2017/18 the demand residual element to two decimal places is £47.26/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.

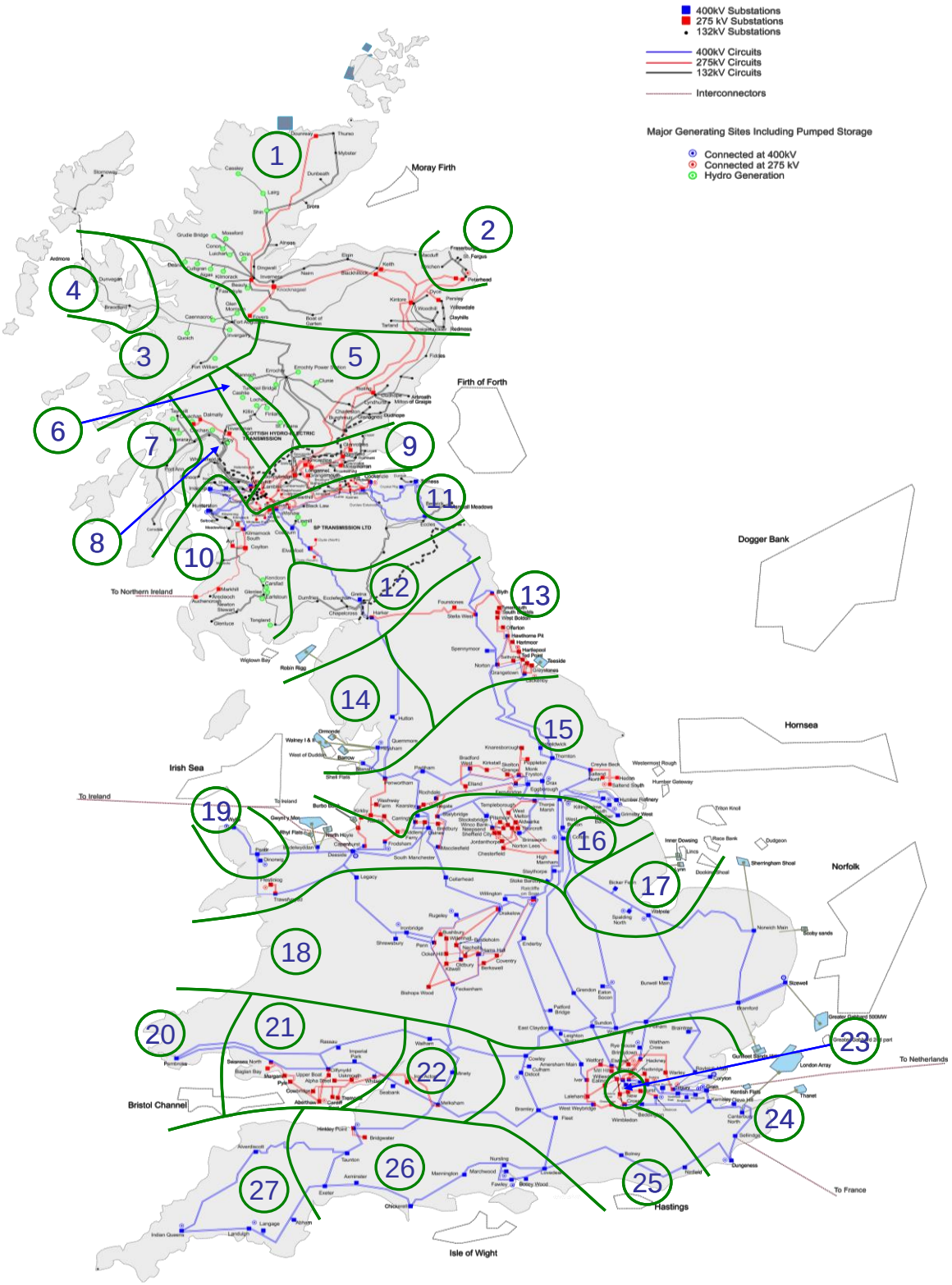
Small Generators Discount

In accordance with Standard Licence Condition C13 governing the adjustments to use of system charges for the small generators discount, a unit amount of £0.552245/kW to the demand tariff and 0.0751737p/kWh to the energy consumption tariff has been included on a non-discriminatory and non-locational basis.

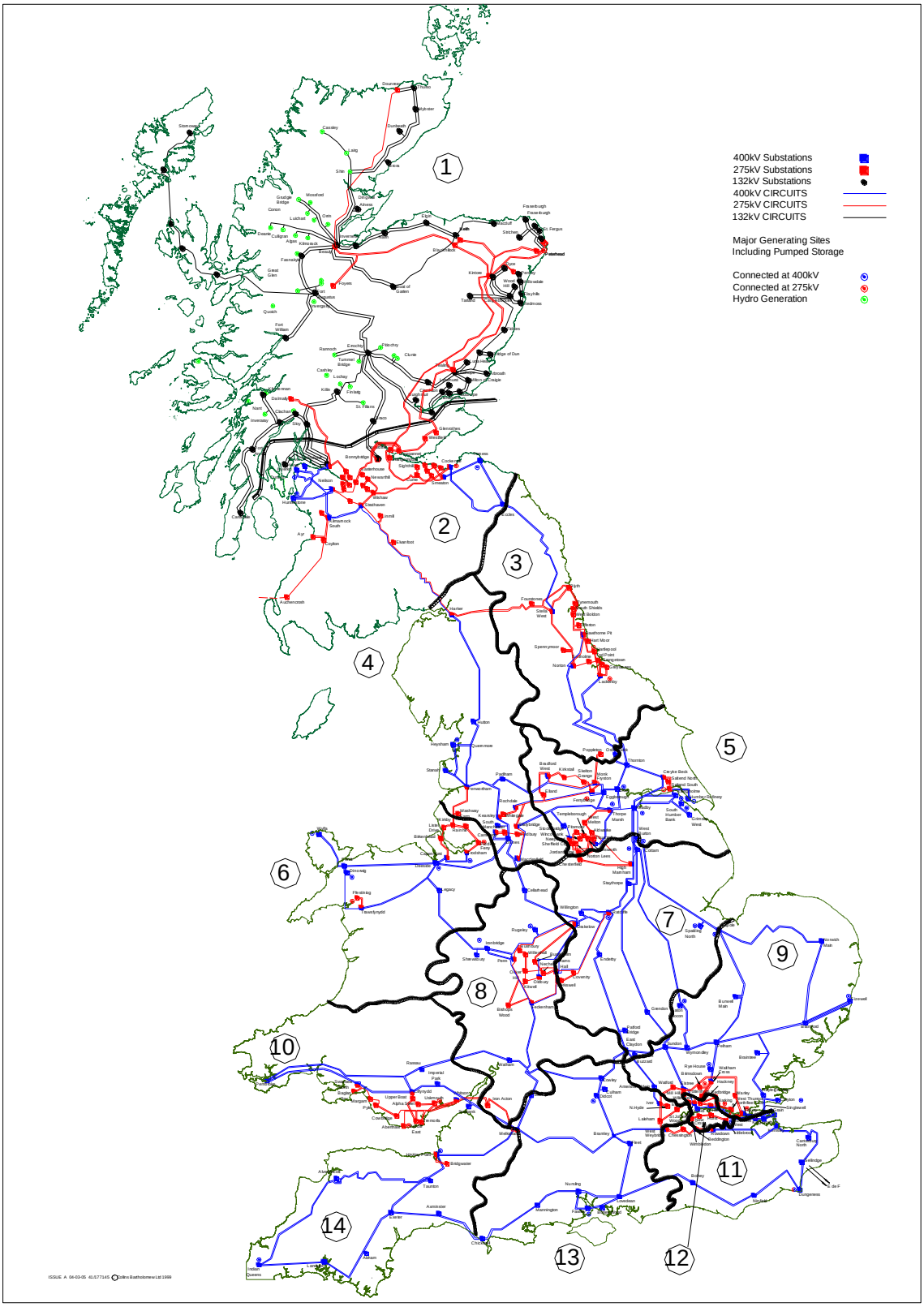
Standard Licence Condition C13 requires the small generators discount mechanism to be revenue neutral over the period of its operation so that the net effect on revenue of the licence condition is zero. It will therefore be necessary to manage any under or over recovery associated with the small generators 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.

Zonal Maps Applicable for 2017/18

Generation Use of System Tariff Zones (Geographical map as at 1 April 2017)



Demand Use of System Tariff Zones (Geographical map as at 1 April 2017)



Schedule 2

Detail of the External Incentive Scheme for the Balancing Services Use of System Charges for 2017/18

The Balancing Services Use of System (BSUoS) Charges for 2017/18 are calculated in accordance with the methodology to be set out in the Statement of Use of System Charging Methodology and comprise External BSUoS Charges and Internal BSUoS Charges. The External BSUoS Charges includes External Costs and an Incentive Scheme. Included here are details of how the Incentive outlined in the Transmission Licence is accommodated into BSUoS Charges. Please note that this section may be updated following implementation of the external incentive scheme arrangements into Section 14 (Charging Methodologies) of the CUSC.

External Incentive Structure and Payments for 2017/18

Balancing Services Incentive Scheme (BSIS)

The forecast External incentive payment for the duration of the External incentive scheme ($FYIncpayEXT_d$) is calculated as the difference between the External Scheme target (MT_t) and the forecast Balancing cost (FBC) subject to sharing factors (SF_t) and a cap/collar (CB_t).

$$FYIncpayEXT_d = SF_t * (MT_t - FBC_d) + CB_t$$

The relevant value of the External incentive payment is calculated by reference to the table below by the selection and application of the appropriate sharing factors and offset dependent upon the value of the forecast Balancing Services cost (FBC).

Table 2.1: BSIS 2017/18

Forecast Balancing Cost (FBC) £m	**MT_t £m**	**SF_t £m**	**CB_t £m**
FBC_t < (Incentive Target $Cost_t$ – 100)	0	0	10
(Incentive Target $Cost_t$ – 100) <= FBC_t < (Incentive Target $Cost_t$)	Incentive Target $Cost_t$	10%	0
(Incentive Target $Cost_t$) = FBC_t	FBC_t	0	0
(Incentive Target $Cost_t$) <= FBC_t < (Incentive Target $Cost_t$ + 100)	Incentive Target $Cost_t$	10%	0
FBC_t >= (Incentive Target $Cost_t$ + 100)	0	0	-10

In respect of each Settlement Day d, the forecast incentivised Balancing Cost (FBC_d) will be calculated as follows:

$$FBC_d = \frac{\sum_{k=1}^{d} IBC_k}{\sum_{k=1}^{d} PFT_k} * NDS$$

Where:

NDS: Number of days in Scheme

The Daily Incentivised Balancing Cost IBC_d in respect of a Settlement Day is calculated as follows:

$$IBC_d = \sum_{j \in d} CSOBM_{jd} + BSCCV_{jd} + BSCCA_d - OM_d - RT_d$$

Forecast Incentive (FIIR)

The forecast incentive is an incentive scheme on the performance of National Grid with regards to its level of accuracy in forecasting the levels of wind generation and demand on the system in day ahead, two day ahead and week-ahead time-scales. This incentive is capped and collared at ±£4m in 2017-18.

SO TO mechanism (SOTOC)

The SO TO mechanism allows the SO to fund the Scottish TOs to deliver works differently if that would result in an overall reduction in system costs. It allows the SO to procure services from the Scottish TOs when the costs of procurement are less than the savings achieved. SO TO cost savings could result in an Incentive payment.

The Authority will determine the level of payment based on the end of year report submitted by the SO. The payment level is set at sharing factor of 10% of savings demonstrated with a cap/collar of ±£1m.

Black Start Allowed Revenue

National Grid may recover an allowed revenue in respect of Black Start each year. However Ofgem can disallow up to 10% of the total Black Start costs in each year if they consider that those costs have not been incurred in accordance with a set of published methodologies.

Schedule 3

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 including where appropriate, charges from the Transmission Owners (TO's) in accordance with their charging statements. The application process and options available are 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).

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 three zones based on the Boundary of Influence map defined in Schedule 4 of the STC (SO-TO Code). Zone A maps onto the area NGC South, Zone B maps to NGC North and SPT South, and Zone C maps to SPT North, SHE T South and SHE T North.

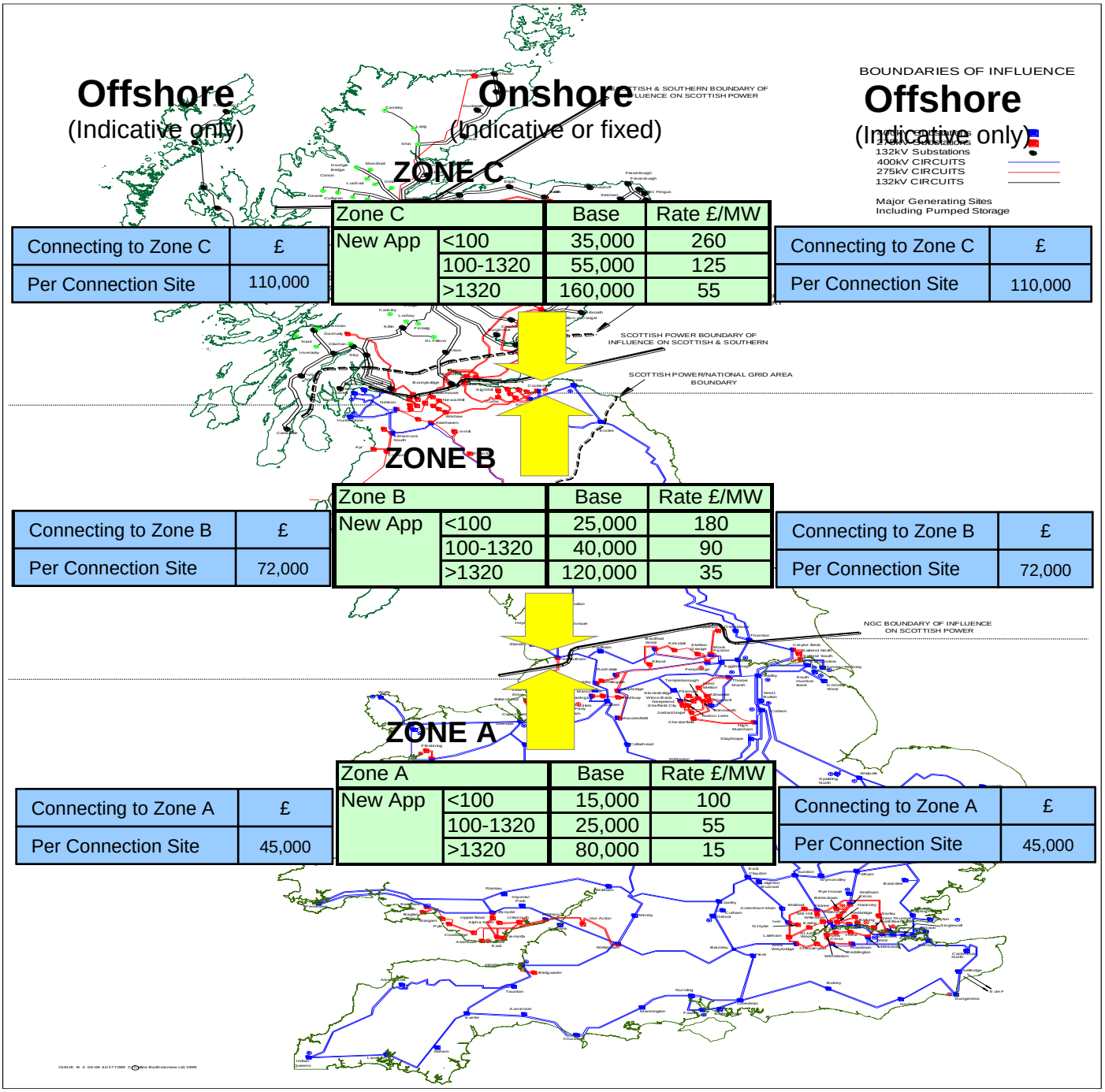
The application fees indicated will be reviewed on an annual basis and reflect any changes to the Boundaries of Influence. It should be noted that the zone to which a particular user is applying is determined by the location of the connection to the National Electricity Transmission System and not by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

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

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).

Entry Application Fees for New Bilateral Agreements



Zone C		Base	Rate £/MW
New App	<100	35,000	260
	100-1320	55,000	125
	>1320	160,000	55

Connecting to Zone C	£
Per Connection Site	110,000

Connecting to Zone C	£
Per Connection Site	110,000

Zone B		Base	Rate £/MW
New App	<100	25,000	180
	100-1320	40,000	90
	>1320	120,000	35

Connecting to Zone B	£
Per Connection Site	72,000

Connecting to Zone B	£
Per Connection Site	72,000

Zone A		Base	Rate £/MW
New App	<100	15,000	100
	100-1320	25,000	55
	>1320	80,000	15

Connecting to Zone A	£
Per Connection Site	45,000

Connecting to Zone A	£
Per Connection Site	45,000

1. New Onshore Application Fee = Base + (MW * Rate)
2. TEC Increase[1] = Base + (TEC Increase * Rate)
3. New Offshore Application Fee = Number of offshore Connection Sites * Fee

[1] The base value and Rate used are the values associated with the change in TEC not the resulting total TEC being applied for.

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

Table 3.1.1: Application Fees in Zone A, when NG South is Host TO

This table details the adjustments applicable for certain scenarios to be taken into consideration when calculating the value of an Application Fee.

Application Type	MW	Base Fee (£)	Rate (£/MW)
New Onshore Application (Entry)	<100MW 100 - 1320MW >1320MW	15,000 25,000 80,000	100 55 15
New Onshore Supply Point (Exit)	<100MW >100MW	37,000 37,000	- -
New Offshore Application (Indicative Only) (Per connection site)	-	45,000	-
Onshore Modification Application to Existing Supply Point (Exit)	<100 >100	28,000 28,000	-
Statement of Works (Exit)	-	2,750	-
Modification Application Following Statement Of Works (Project Progression) (Exit)	-	7,500 or 15,000	-
TEC Increase	<100MW 100 - 1320MW >1320MW	15,000 25,000 80,000	100 55 15

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 3.1.2: Application Fees in Zone B, when SPT South is Host TO

Application Type	MW	Base Fee (£)	Rate (£/MW)
New Onshore Application (Entry)	<100MW 100 - 1320MW >1320MW	25,000 40,000 120,000	180 90 35
New Onshore Supply Point (Exit)	<100MW >100MW	41,000 52,000	- -
New Offshore Application (Indicative Only) (Per connection site)	-	72,000	-
Onshore Modification Application to Existing Supply Point (Exit)	<100 >100	31,000 39,000	-
Statement of Works (Exit)	-	3,000	-
Modification Application Following Statement Of Works (Project Progression) (Exit)	-	8,500 or 16,500	-
TEC Increase	<100MW 100 - 1320MW >1320MW	25,000 40,000 120,000	180 90 35

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 3.1.3: Application Fees in Zone B, when NG North is Host TO

Application Type	MW	Base Fee (£)	Rate (£/MW)
New Onshore Application (Entry)	<100MW 100 - 1320MW >1320MW	25,000 40,000 120,000	180 90 35
New Onshore Supply Point (Exit)	<100MW >100MW	41,000 52,000	- -
New Offshore Application (Indicative Only) (Per connection site)	-	72,000	-
Onshore Modification Application to Existing Supply Point (Exit)	<100 >100	31,000 39,000	-
Statement of Works (Exit)	-	3,000	-
Modification Application Following Statement Of Works (Project Progression) (Exit)	-	8,500 or 16,500	-
TEC Increase	<100MW 100 - 1320MW >1320MW	25,000 40,000 120,000	180 90 35

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 3.1.4: Application Fees in Zone C, when SHE Transmission is Host TO

Application Type	MW	Base Fee (£)	Rate (£/MW)
New Onshore Application (Entry)	<100MW 100 - 1320MW >1320MW	35,000 55,000 160,000	260 125 55
New Onshore Supply Point (Exit)	<100MW >100MW	38,000 60,000	- -
New Offshore Application (Indicative Only) (Per connection site)	-	110,000	-
Onshore Modification Application to Existing Supply Point (Exit)	<100 >100	29,000 45,000	-
Statement of Works (Exit)	-	1,000	-
Modification Application Following Statement Of Works (Project Progression) (Exit)	-	4,500 or 17,200	-
TEC Increase	<100MW 100 - 1320MW >1320MW	35,000 55,000 160,000	260 125 55

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 3.1.5: Application Fees in Zone C, when SPT North is Host TO

Application Type	MW	Base Fee (£)	Rate (£/MW)
New Onshore Application (Entry)	<100MW 100 - 1320MW >1320MW	35,000 55,000 160,000	260 125 55
New Onshore Supply Point (Exit)	<100MW >100MW	38,000 60,000	- -
New Offshore Application (Indicative Only) (Per connection site)	-	110,000	-
Onshore Modification Application to Existing Supply Point (Exit)	<100 >100	29,000 45,000	-
Statement of Works (Exit)	-	1,000	-
Modification Application Following Statement Of Works (Project Progression) (Exit)	-	4,500 or 17,200	-
TEC Increase	<100MW 100 - 1320MW >1320MW	35,000 55,000 160,000	260 125 55

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 3.1.6: Other Application Fees:

Application Type	Zone A	Zone B	Zone C
TEC Exchange Request (no system works)	£10,000	£10,000	£17,000
Request for STTEC or SNSTF	£10,000		
Directly Connected Reactive Only Service Provider	£20,000	£21,000	£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 3.2

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 3.3

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

Examples

1. Entry Application Fee for a New Bilateral Agreement onshore
300MW Generator wishing to connect to the transmission system in Zone A
Application Fee = £25,000 + (300 * 55) = £41,500

2. Entry Application Fee for a New Bilateral Agreement offshore
2000MW Generator wishing to connect to the transmission system in Zone B
Two Connection Sites
Application Fee = 2 * £72,000 = £144,000

3. Entry Application Fee for a Modification to an existing Bilateral Agreement offshore
2000MW Generator in Zone B seeking to alter a commissioning date where there are 2 affected transmission interface sites
This would be a Modification Application
Fee = 0.75 * (2 * £72,000) = £108,000

4. Entry Application Fee for a Modification to an existing Bilateral Agreement
300MW Generator in Zone A seeking to alter commissioning date
This would be a Modification Application
Fee = 0.75 * (£25,000 + (300 * 55)) = £31,125

5. Entry Application Fee for an embedded generator (BEGA/ BELLA)
300MW embedded generator requesting a BEGA in Zone A
Fee = 0.5 * (£25,000 + (300 * 55)) = £20,750

6. Entry Application Fee for a TEC Increase
400MW generator in Zone A wishes to increase TEC by 20MW to 420MW
Application Fee = £15,000 + (20 * 100) = £17,000

7. Entry Application Fee for a change to completion date
500MW generator in Zone B wishes to change their completion date by moving it back by 12 months
Application Fee = 0.75 * (£40,000 + (500 * 90)) = £63,750

8. Entry Application Fee for a Decrease TEC
600MW generator in Zone C wishes to decrease TEC by 100MW to 500MW
Application Fee = 0.75 * (£55,000 + (100 * 125)) = £50,625

Table 3.6: Bilateral Agreement Types

Bilateral Agreement Type	Description
Bilateral Connection Agreement	In respect of Connection Sites of Users.
Bilateral Embedded Licence Exemptable 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 3.7: 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

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. This being NGET
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 4

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 4.1

	£/day		
	National Grid	**SPT**	**SHE T**
Section Manager Internal Solicitor	1030	1044	990
Principal Power System Engineer	819	798	833
Senior Power System Engineer Project Manager Account Manager Senior Wayleave Officer	664	666	695
Power System Design Engineer Draughtsman	525	561	554
Graduate Engineer	448	446	468
Administrative Support	355	352	366

Schedule 5

Non-Capital Components applicable for Maintenance and Transmission Running Costs in Connection Charges for 2017/18

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 2017/18 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	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	317.9

Total GB Connection GAV = £3.38bn
GB TRC Factor = (18.6% x £43.4m + 7.5% x £33.1m + 16.3% x £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%.

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.

Appendix 1: Illustrative Connection Asset Charges

2017/18 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 2017/18 rate of 0.45% of the GAV
- The connection charges include Transmission Running Costs at the 2017/18 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, archeology, 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, auxilliary supplies such as AC/DC system (all considered under part of the Bay Cost estimate).
- **Civil**: Trenching/Ducting and pilling, Noise enclosure, access works, oil containment drainage.

Single/Double Busbar bay

Assumptions

- **Plant**:The bay cost estimate is based on from NG standard bay drawing 41/177344. Indicative prices provided for bay protection, control, cabling, auxiliary systems, 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

Cable

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

- Standard AIS Cl3 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, Install, commission with High Voltage AC & Sheath Testing
- Earth Continuity Cable (ECC) & Link Boxes supply, Install & 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

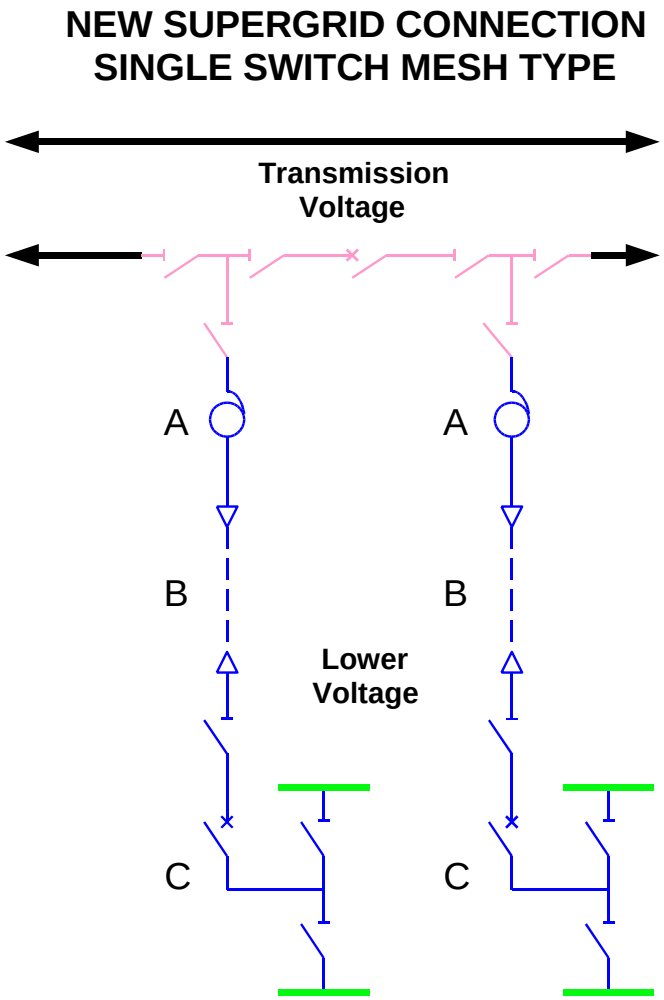
Exclusions

- **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	2558	265	2118	219	1257	130
Single Busbar Bay	2246	232	1829	189	1140	118
Transformer Cables 100m (incl. Cable sealing ends)						
120MVA			2180	225	1287	133
180MVA	2334	241	2180	225	1306	135
240MVA	2342	242	2191	227	1316	136
750MVA	2425	251	2247	232		
Transformers						
45MVA 132/66kV					1993	206
90MVA 132/33kV					1993	206
120MVA 275/33kV			3457	358		
180MVA 275/66kV			4113	425		
180MVA 275/132kV			4475	463		
240MVA 275/132kV			4403	456		
240MVA 400/132kV	4659	482				

Connection Examples

Example 1



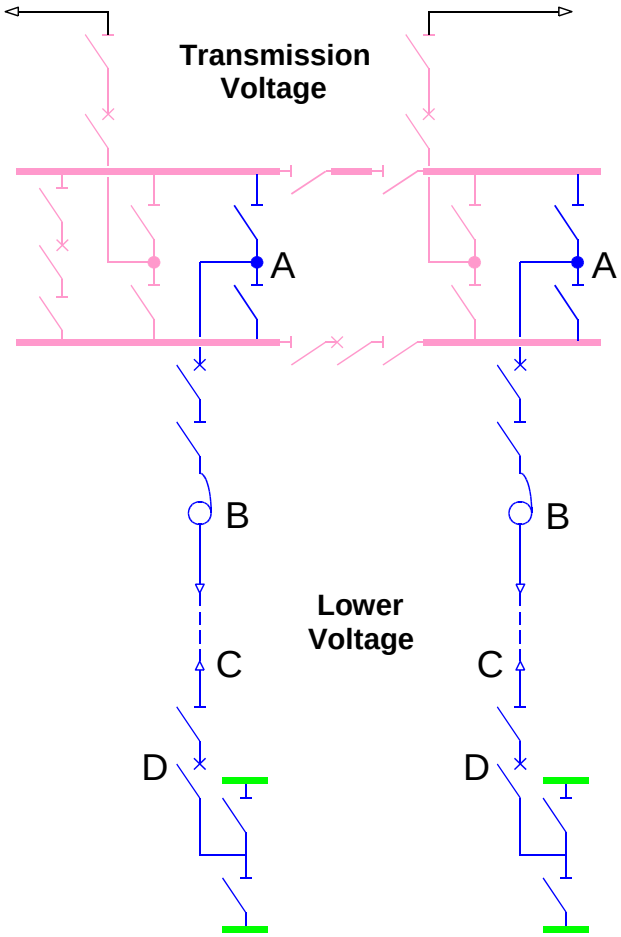
KEY

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

SCHEDULE FOR NEW CONNECTION				
	275/132kV		**400/132kV**	
Ref	Description	First Year Charges (£000s)	Description	First Year Charges (£000s)
A	2 x 180MVA Transformers	926	2 x 240MVA Transformers	964
B	2 x 100m 180MVA Cables	450	2 x 100m 240MVA Cables	484
C	2 x 132kV Double Busbar Transformer Bays	260	2 x 132kV Double Busbar Transformer Bays	260
	Total	**1636**	**Total**	**1708**

Example 2

NEW SUPERGRID CONNECTION
DOUBLE BUSBAR TYPE



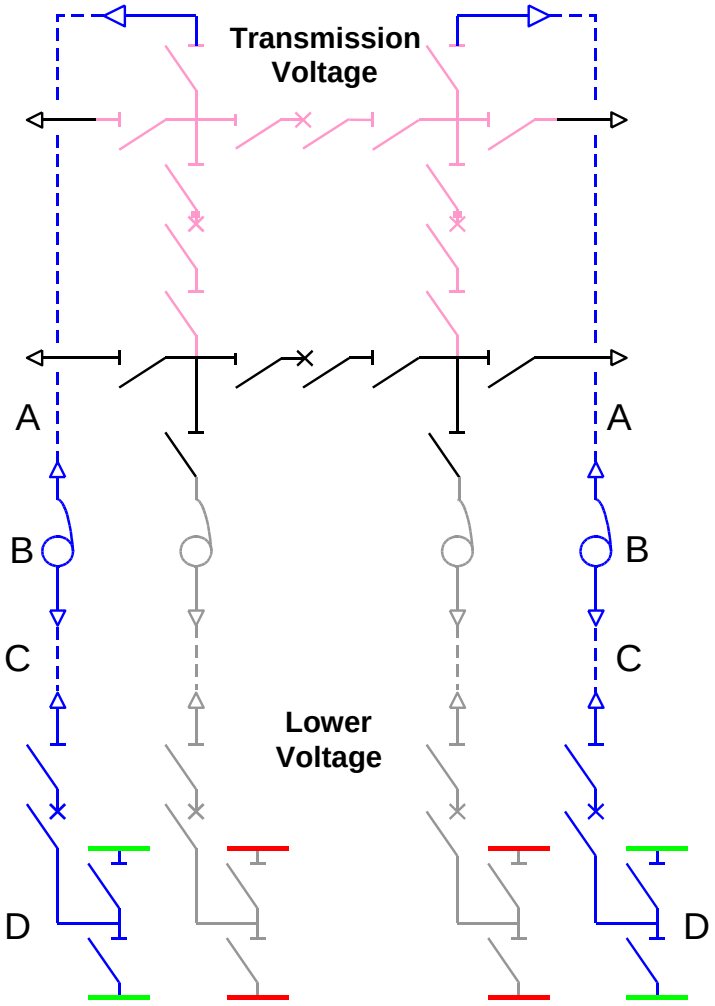
KEY:

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

SCHEDULE FOR NEW CONNECTION				
	275/132kV		**400/132kV**	
Ref	Description	First Year Charges (£000s)	Description	First Year Charges (£000s)
A	2 x 275kV Double Busbar Transformer Bays	438	2 x 400kV Double Busbar Transformer Bays	530
B	2 x 180MVA Transformers	926	2 x 240MVA Transformers	964
C	2 x 100m 180MVA Cables	450	2 x 100m 240MVA Cables	484
D	2 x 132kV Double Busbar Transformer Bays	260	2 x 132kV Double Busbar Transformer Bays	260
	Total	**2074**	**Total**	**2238**

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
- Other Users Assets

SCHEDULE FOR NEW CONNECTION				
	275/132kV		**400/132kV**	
Ref	Description	First Year Charges (£000s)	Description	First Year Charges (£000s)
A	2 x 100m 180MVA Cables	450	2 x 100m 240MVA Cables	484
B	2 x 180MVA Transformers	926	2 x 240MVA Transformers	964
C	2 x 100m 180MVA Cables	450	2 x 100m 240MVA Cables	484
D	2 x 132kV Double Busbar Transformer Bays	260	2 x 132kV Double Busbar Transformer Bays	260
	Total	**2086**	**Total**	**2192**

Appendix 2: 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 2017
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 2017.

Charge	Calculation	
Site Specific Maintenance Charge (0.45% of GAV)	3,000,000 x 0.45%	£13,500
Transmission Running Cost (1.47% of GAV)	3,000,000 x 1.47%	£44,100
Capital charge (40 year depreciation 2.5% of GAV)	3,000,000 x 2.5%	£75,000
Return on mid-year NAV (6%)	2,962,500 x 6%	£177,750
TOTAL		£310,350

The first year charge of £310,350 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	£310,350
2	£305,850
10	£269,850
40	£134,850

Based on this example, charges of this form would be payable until 31 March 2057.

Example 2

The previous example assumes that the asset is commissioned on 1 April 2017. If it is assumed that the asset is commissioned on 1 July 2017, 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 2017 to March 2018)
2	£305,850
10	£269,850
40	£134,850

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, 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:

Annual Connection Charge$_n$ = SSF$_n$ (RPIGAV$_n$)+ TC$_n$ (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