nationalgrid

Tariff Information Paper

Initial view of TNUoS tariffs for 2015/16

This information paper provides National Grid's initial view of Transmission Network Use of System (TNUoS) tariffs for 2015/16, which apply to generators and suppliers. It is the first of a series of updates National Grid will publish throughout the year.

4 February 2014

V1.0

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Any Questions?

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1 Executive Summary

National Grid sets Transmission Network Use of System (TNUoS) tariffs for generators and suppliers. The resulting charges reflect the use customers make of the network and the impact they have on it. In order that customers can appropriately respond to transmission charges, National Grid produces a variety of tariff forecasts. This document forecasts tariffs for 2015/16.

Our TNUoS tariff forecast for 2015/16 is based on the current charging methodology and takes into account changes in generation and demand connected to the transmission system; changes in the transmission network due to investments undertaken by transmission owners (TOs); and changes in the revenues required to undertake this work.

The forecast total transmission allowed revenue is expected to increase from £2,477m to £2,650m, an increase of £173m. There is expected to be new generation spread across Great Britain and some particularly significant circuit changes including the reconfiguration of London and the Beauly - Denny circuit. The GB demand profile has changed slightly, seeing reductions around the Midlands and Southern England. These changes result in an average increase in demand tariffs of £2.28/kW. Wider generation tariffs have decreased by around £0.25/kW. There are some variations in tariff changes that are caused by specific new generators, circuit changes and reductions in demand in the Midlands and Southern England.

National Grid will update the tariffs contained in this report on a quarterly basis, to take into account new information as it becomes available. This includes changes in generation, forecast demand and the total revenue that TNUoS charges are set to recover. TNUoS tariffs for 2015/16 will be finalised at the end of January 2015.

2 Tariff Summary

This section shows the generation and demand tariffs forecast for 2015/16 only. Information on how these tariffs were calculated and why they have changed from 2014/15 can be found later in this document.

2.1 Generation Tariffs

Wider Tariffs (£/kW)

Zone	Zone Name	2015/16 Tariff (£/kW)
1	North Scotland	26.91
2	East Aberdeenshire	22.67
3	Western Highlands	25.15
4	Skye and Lochalsh	30.61
5	Eastern Grampian and Tayside	23.55
6	Central Grampian	22.54
7	Argyll	22.49
8	The Trossachs	19.24
9	Stirlingshire and Fife	18.40
10	South West Scotland	17.41
11	Lothian and Borders	14.47
12	Solway and Cheviot	12.94
13	North East England	9.71
14	North Lancashire and The Lakes	9.06
15	South Lancashire, Yorkshire and Humber	7.37
16	North Midlands and North Wales	5.90
17	South Lincolnshire and North Norfolk	4.00
18	Mid Wales and The Midlands	3.12
19	Anglesey and Snowdon	8.42
20	Pembrokeshire	6.42
21	South Wales	3.76
22	Cotswold	0.46
23	Central London	-4.95
24	Essex and Kent	-0.46
25	Oxfordshire, Surrey and Sussex	-1.47
26	Somerset and Wessex	-3.27
27	West Devon and Cornwall	-5.27

Small Generators Discount (£/kW) = 9.40

Local Substation Tariffs (£/kW)

Substation Rating	Connection Type	Local Substation Tariff (£/kW)		
		132kV	275kV	400kV
<1320 MW	No redundancy	0.180769	0.103411	0.074509
<1320 MW	Redundancy	0.398220	0.246380	0.179189
>=1320 MW	No redundancy	-	0.324240	0.234492
>=1320 MW	Redundancy	-	0.532319	0.388549

Local Circuit Tariffs (£/kW)

Substation	2015/16	Substation	2015/16	Substation	2015/16
Aberdeen Bay	0.82	Didcot	0.22	Kilmorack	0.18
Achruach	2.43	Dinorwig	2.16	Langage	0.59
Aigas	0.59	Brochloch	3.37	Lochay	0.33
An Suidhe	-0.29	Edinbane	6.16	Luichart	1.02
Arecleoch	0.28	Ewe Hill	2.33	Mark Hill	-0.79
Baglan Bay	0.64	Farr Windfarm	2.00	Marchwood	0.34
Afton	3.66	Fallago	0.07	Millennium Wind	1.46
Blacklaw Extension	2.16	Carraig Gheal	3.96	Mossford	3.57
Black Law	0.90	Ffestiniogg	0.23	Nant	-1.11
Bodelwyddan	-0.02	Finlarig	0.29	Neilston	0.79
Carrington	0.06	Foyers	0.69	Quoich	3.90
Clyde (North)	0.10	Glendoe	1.66	Rocksavage	0.02
Clyde (South)	0.11	Glenmoriston	1.19	Saltend	0.30
Corriegarth	2.28	Gordonbush	2.19	South Humber Bank	0.76
Corriemoillie	2.48	Griffin Wind	1.68	Spalding	0.27
Coryton	0.32	Hadyard Hill	2.48	Kilbraur	1.95
Cour	0.41	Harestanes	4.80	Strathy Wind	3.87
Cruachan	1.72	Hartlepool	0.54	Aikengall II	1.10
Crystal Rig	-0.01	Hedon	0.17	Whitelee	0.10
Culligran	1.56	Invergarry	-0.62	Whitelee Extension	0.27
Deanie	2.56	Killgallioch	1.32		
Dersalloch	1.65	Killingholme	0.27		

Offshore Local Tariffs (£/kW)

Offshore Generator	Tariff Component (£/kW)		
	Substation	Circuit	ETUoS
Robin Rigg East	-0.42	27.59	8.55
Robin Rigg West	-0.42	27.59	8.55
Gunfleet Sands 1 & 2	15.76	14.47	2.70
Barrow	7.28	38.10	0.95
Ormonde	22.51	41.94	0.33
Walney 1	19.43	38.69	
Walney 2	19.29	39.03	
Sheringham Shoal	25.54	21.78	0.56
Greater Gabbard	31.41	13.67	
London Array	31.59	9.28	

2.2 Demand Tariffs

Half Hour metered zonal tariffs (£/kW)

Zone	Zone Name	HH 2015/16 Tariff (£/kW)
1	Northern Scotland	18.57
2	Southern Scotland	22.25
3	Northern	28.64
4	North West	31.58
5	Yorkshire	32.25
6	N Wales & Mersey	31.63
7	East Midlands	35.11
8	Midlands	35.84
9	Eastern	37.19
10	South Wales	34.24
11	South East	40.36
12	London	43.00
13	Southern	40.88
14	South Western	40.61

Non-Half Hour metered zonal tariffs (p/kWh)

Zone	Zone Name	NHH 2015/16 Tariff (p/kWh)
1	Northern Scotland	2.51
2	Southern Scotland	3.09
3	Northern	3.90
4	North West	4.52
5	Yorkshire	4.38
6	N Wales & Mersey	4.47
7	East Midlands	4.86
8	Midlands	5.03
9	Eastern	5.10
10	South Wales	4.52
11	South East	5.54
12	London	5.73
13	Southern	5.67
14	South Western	5.50

3 Introduction

3.1 Background

National Grid sets Transmission Network Use of System (TNUoS) tariffs for generators and suppliers. These tariffs serve two purposes: to provide information to customers about the transmission cost of connecting in different parts of the country and to recover the total allowed revenues of the onshore and offshore transmission owners.

To provide information about the cost of connecting in different parts of the network, National Grid determines a locational component of TNUoS tariffs using a model of power flows on the transmission system. This model considers the impact that increases in generation and demand have on power flows at times of peak demand. Where a change in demand or generation increases power flows, tariffs increase to reflect the need to invest. Similarly, if a change reduces flows on the network, tariffs are reduced to reflect this. In order to calculate flows on the network, information about the generation and demand connected to the network is required in conjunction with the electrical characteristics of the circuits that link these.

The charging model includes information about the cost of investing in transmission circuits based on different types of generic construction (e.g. voltage and cable / overhead line) and the costs incurred in different TO regions. Onshore, these costs are based on 'standard' conditions and are intended to be more forward looking. This means that they reflect the cost of replacing assets at current rather than historical cost so they do not necessarily reflect the actual cost of investment to connect a specific generator or demand site. However, for offshore generators, project specific costs are taken into account since these costs vary significantly from one project to another.

The locational components of TNUoS tariffs do not recover the full revenue that onshore and offshore transmission owners have been allowed in their price controls. Therefore, to ensure the correct total revenue recovery, separate non-locational "residual" tariff elements are included in the locational generation and demand tariffs. The residuals are set to ensure that 27% of total transmission revenue is recovered from generation customers, and 73% from suppliers of both half hourly (HH) and non half-hourly (NHH) demand. This ratio is fixed in the charging methodology.

The main locational and residual tariff elements are combined into a zonal tariff, referred to as the wider zonal generation tariff or demand tariff, as appropriate. For generation customers, local tariffs are also calculated. These reflect the cost associated with the transmission substation they connect to and, where a generator is not connected to the main interconnected transmission system (MITS), the cost of local circuits that the generator uses to export onto the MITS. This allows the charges to reflect where local connections are single circuit. These charges are therefore locational and specific to individual generators.

3.2 CMP213 ('Project TransmiT')

CUSC Modification Proposal 213 (CMP213) proposes a new methodology for setting wider tariffs that introduces year round locational price signals reflecting intermittency and load factor. On 16th December 2013 Ofgem informed the industry that it would decide on the future of

CMP213 in March 2014. In light of this the analysis of tariffs in this document are based on current methodology. However a set of 2015/16 tariffs have been calculated using the WACM2 methodology and are included in Appendix C for information.

4 Updates to the Charging Model for 2015/16

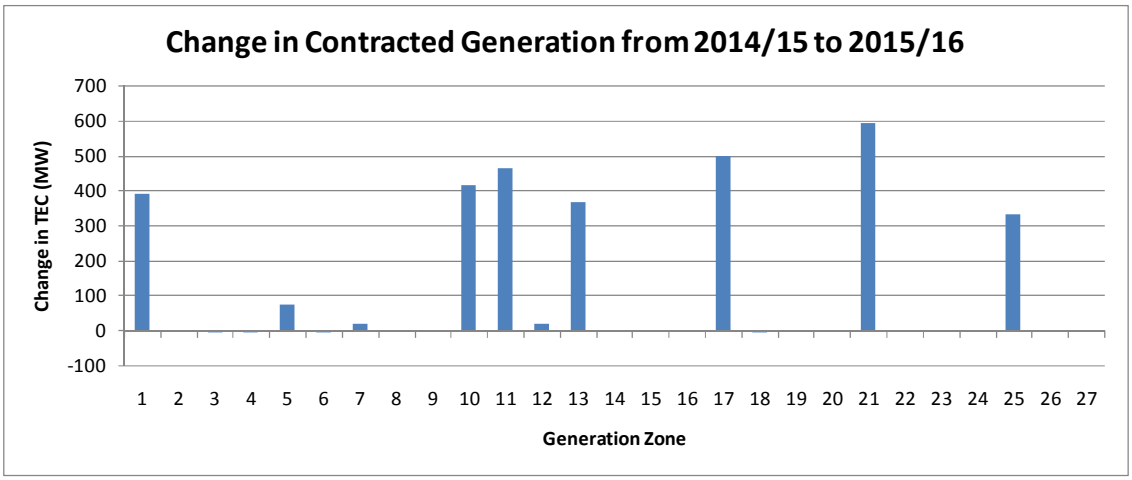
To calculate generation and demand tariffs for 2015/16 a number of changes must be made to the model used to calculate tariffs for 2014/15. These can be grouped into the following categories:

- generation, demand, and the transmission network, which affect the locational element of tariffs;
- the total revenue to collect and the demand and generation charging bases, which affect the residual element of tariffs; and
- updates to model parameters, such as the unit cost of investment.

4.1 Changes influencing the locational element of tariffs

4.1.1 Generation

Information about generation capacities for 2015/16 has been taken from the contracted generation background on 20th December 2013. The following chart shows the changes from 2014/15 that have been incorporated in the charging model for 2015/16. Appendices A and B provide the same data in tabular form by station and by zone. For reference, Zones 1 to 12 represent Scotland and Zones 13 to 27 represent England & Wales.

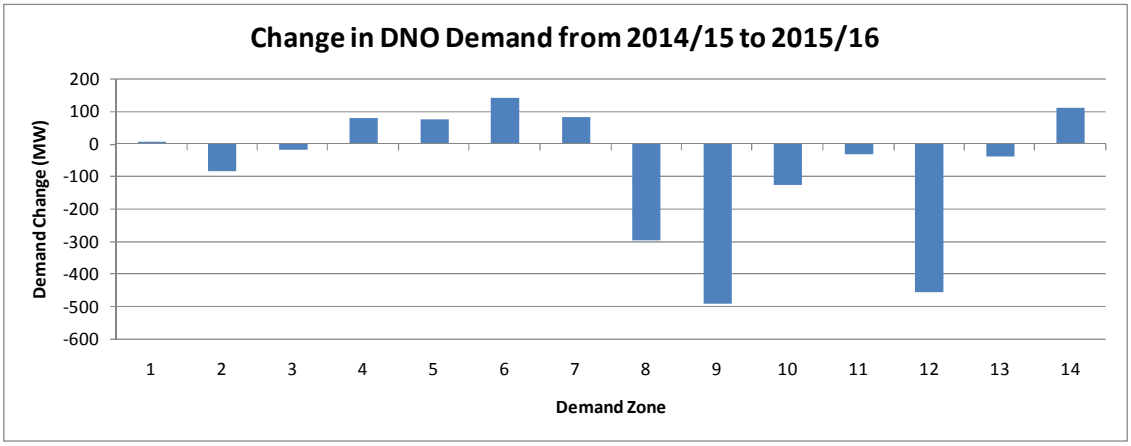


The chart shows there has been an increase in modelled generation of 3.2GW between 2014/15 and 2015/16.

National Grid expects the contracted generation background to change before charges for 2015/16 are finalised in January 2015. The locational element of tariffs will be fixed using the contracted background as of 31 October 2014. This may include TEC reductions of existing power stations for which notification has not yet been received and delays to planned future connections. These TEC changes will be published in the TEC Register and taken into account in future updates of forecast tariffs.

4.1.2 Demand

Information for the 2015/16 peak demand at each Grid Supply Point (GSP) has been sourced from the data that will go into the 2014 Electricity Ten Year Statement (E-TYS), which is based on information received from Distribution Network Operators (DNO) in July 2013. The 2013 forecasts of demand at directly connected demand sites such as steelworks and railways have also been included. This information forecasts a decrease in peak demand between 2014/15 and 2015/16 of about 1.0GW, a decrease of 2.0%. Most of this decrease is in the Midlands and Southern England. In contrast, peak demand in Scotland and the North has less significant changes. Appendix B provides this information in tabular form.



The DNO demand data used in this forecast will not change before charges are finalised in January 2015. However, embedded generation and directly connected demand forecasts may be updated.

4.1.3 Transmission network

A number of provisional network changes have been made to connect new generation and reinforce the network. These have been based on the network information provided by the TOs together with minimal changes needed to connect generation that is contracted to connect during 2015/16. The Beauly - Denny circuit has been included in the circuit changes.

4.2 Allowed Revenues

National Grid recovers revenue on behalf of all onshore and offshore Transmission Owners (TOs) in Great Britain. The revenues of onshore TOs are subject to RIIO price controls set by Ofgem at periodic price reviews. RIIO stands for Revenue = Incentives + Innovation + Outputs. This means that each TO's revenue is set at the price review, but then adjusted during the price control period (2013/14 to 2020/21) depending on its performance against incentives, its innovation and the volume of connections and transmission capacity it delivers. Connections and capacity are driven by customer activity.

Onshore TOs may also receive revenue through Transmission Investment for Renewable Generation (TIRG) or Strategic Wider Works decisions. These are determined by Ofgem to fund specific infrastructure projects and are occasionally adjusted as projects incur unexpected costs or savings.

Under previous price controls, the revenue adjustments, together with corrections for under/over recovery, were lagged by one year. This required Transmission Owners to forecast performance and revenues within year, to set TNUoS tariffs for the following year. Errors in these forecasts could then lead to under/over recovery in the following year. The RIIO price control generally lags adjustments by two years. This allows performance and revenues in a particular year to be accurately accounted for in the following year and the corresponding revenue adjustments incorporated into tariffs the year after that.

The revenues of offshore transmission owners (OFTOs) are determined by Ofgem in a competitive tender process. The revenue is confirmed when the network is transferred from the developer to the appointed OFTO. Prior to this there is uncertainty as to the value of the revenue and when it will start. Therefore, whilst the revenues for existing OFTOs are relatively predictable, the revenue for new OFTOs has to be forecast.

The table below shows the initial revenue forecast for 2015/16, upon which tariffs for 2015/16 have been calculated, and the revenue for 2014/15 for comparison.

	2014/15 TNUoS Revenue	2015/16 TNUoS Revenue
£m Nominal	Jan 2014 Final	Jan 2014 Initial View
National Grid	1,761.9	1,855.6
Scottish Power	312.2	332.5
Scottish Hydro Electricity	214.0	215.7
Offshore	218.4	276.4
Network Innovation Competition	17.8	16.7
Maximum Revenue	2,524.3	2,696.9
Pre-vesting connections	47.0	47.0
TNUoS	2,477.3	2,650.0
Maximum Revenue	2,524.3	2,696.9

Overall revenues are forecast to increase by £173m or 6.8% including inflation of 2.5%. The majority of the increase is in the revenue of the onshore Transmission Owners. These increases were agreed between Ofgem and the transmission owners in early 2013 as part of the RIIO-T1 price reviews and are required to fund investment in the networks to facilitate the move to a lower carbon economy and maintain reliability of the network. Onshore transmission owner revenues forecasts may alter over the year due to:

- Actual inflation for 2013/14 provided by the Office of National Statistics. An average RPI of 250.941 has been assumed for 2013/14.
- Forecast inflation for 2014/15 and 2015/16 provided by HM Treasury. Increases of 3.1%, 3.0% and 3.2% have been assumed for 2014, 2015 and 2016 respectively.
- Determinations by the Authority in November 2014 to adjust base allowances to reflect performance in 2013/14. Total adjustments of +/- £30m are feasible.

- Potential adjustments to the Scottish Power Transmission and Scottish Hydro Electricity Transmission revenues e.g. for the Beauly – Mossford and Kintyre - Hunterston reinforcements.

- Under or over recovery of allowed revenue during 2013/14. The relatively mild weather in 2013/14 to date increases the likelihood of under-recovery and 2015/16 revenues being increased in the order of 1%. However, this has not been included in this forecast because cold spells in February and March could reverse this under-recovery.

The largest proportional increase is for Offshore Transmission Owner (OFTO) revenues. When an offshore network is transferred from the developer to the appointed OFTO, the OFTO revenue stream is collected on their behalf by National Grid through TNUoS charges. Typically three quarters is collected as local use of system charges to the associated offshore wind farm with the remainder collected through wider tariffs.

- Existing OFTOs include Barrow, Gunfleet, Walney 1 & 2, Robin Rigg, Sheringham Shoal, Ormonde, Greater Gabbard, and London Array. These OFTOs will have their revenues increased in line with inflation to £143.4m.

- OFTOs due to transfer during 2014/15 include Thanet, Lincs, Gwynt Y Mor and West of Duddon Sands. During 2014/15 they will receive a partial year of revenue with 2015/16 being the first full year of revenue, increased in line with inflation to £100.4m.

- OFTOs due to transfer during 2015/16 include Humber Gateway and Westermost Rough. 2015/16 will be the first year they receive revenue collected though TNUoS charges. This is estimated to be £32.6m but could change as the asset values and transfer dates have yet to be confirmed.

Ofgem can award up to £27m (2009/10 prices) per year under the Network Innovation Competition Fund. National Grid collects the revenue for this fund on behalf of the successful bidders. Ofgem awarded funding worth £17.8m for 2014/15 and a mid view of £16.7m has been included in the forecast for 2015/16.

Revenues are recovered through TNUoS charges and ongoing connection charges for assets already installed when the industry was privatised (Pre-vesting connections). Pre-vesting connection income of £47.0m has been forecast and deducted to calculate the revenue to be recovered from TNUoS charges.

4.3 Charging bases for 2015/16

Generation

The generation base for 2015/16 has been forecast using the 20th December 2013 contracted background for 2015/16 excluding interconnectors which do not pay TNUoS charges (see below). The generation base has then been reduced by a further 3% to allow for possible delays in the completion of new power stations.

The generation charging base is subject to change and, as we approach 2015/16, a clearer view will develop. Whilst National Grid expects to provide the industry with further updates on the generation charging base, it may be necessary to withhold sensitive information to protect individual generation project's commercial interests.

Demand

The demand base and the split between Half-Hourly metered and Non-Half-Hourly demand are unchanged from demand used to set 2014/15 charges. This assumes a peak system demand of 55.3GW; HH demand at triad of 15.9GW; and chargeable NHH demand of 28.6TWh[1]. National Grid will continue to review the demand charging base and, in particular, take into account any changes arising from BSC amendment proposal P272 which, if approved, would transfer some NHH demand to HH demand. Ofgem has recently consulted on P272 and implementation could occur in April 2014 or April 2015.

It should be noted that the actual peak demand (and therefore the timing of the triads in any given year) will depend on a number of factors including the prevailing weather and the behaviour of commercial and industrial loads.

Adjustments for Interconnectors

When determining the flows on the transmission system at peak demand, the interconnectors are included within the transport model. However, since interconnectors are not liable for generation or demand TNUoS charges, they are not included in the generation or demand charging bases. Therefore, when calculating the generation charging base from the contracted TEC background, the following reductions are made to reflect the charging treatment.

Interconnector	Zone	Adjustment (MW)
French Interconnector	24	1988
Britned	24	1200
East-West	16	500
Moyle	10	80

4.4 Other changes

The charging methodology requires the expansion constant to be updated each year for inflation. For the purpose of preparing the initial view of tariffs, the 14/15 expansion constant has been increased by 3% to £13.288/MWkm for the 15/16 forecast.

[1] TNUoS charges for NHH demand is based on the annual consumption between 4pm and 7pm

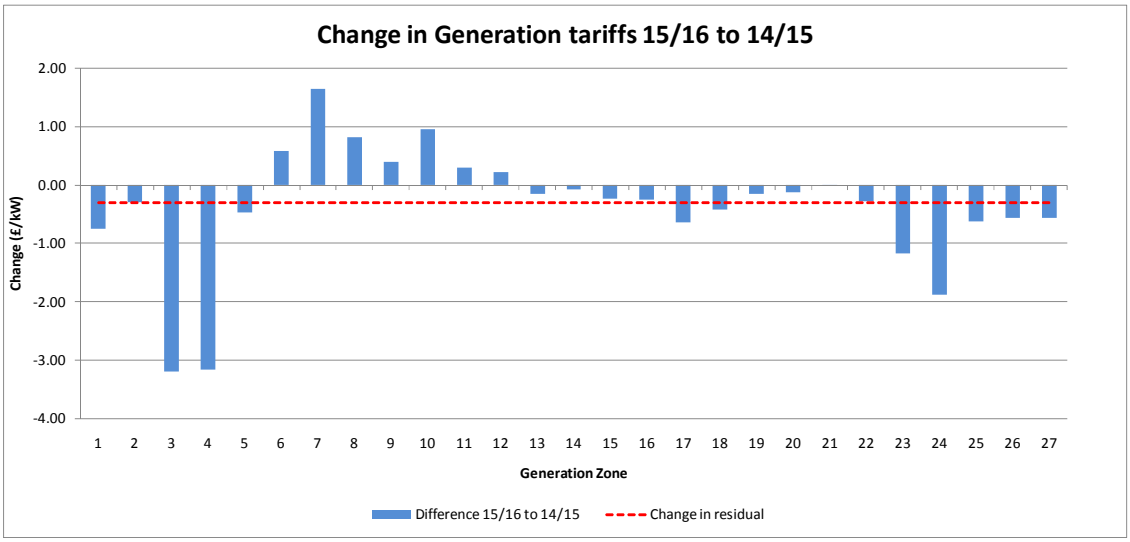
5 Forecast generation tariffs for 2015/16 – Current Methodology

The following section provides details of the forecast wider and local generation tariffs for 2015/16 using the current methodology

5.1 Wider zonal generation tariffs

The following table and chart show the changes to generation zonal TNUoS tariffs, together with the absolute change from 2014/15.

Zone	Zone Name	2014/15 Tariff (£/kW)	2015/16 Tariff (£/kW)	Tariff Change (£/kW)
1	North Scotland	27.68	26.91	-0.76
2	East Aberdeenshire	22.97	22.67	-0.30
3	Western Highlands	28.35	25.15	-3.20
4	Skye and Lochalsh	33.79	30.61	-3.18
5	Eastern Grampian and Tayside	24.02	23.55	-0.48
6	Central Grampian	21.97	22.54	0.57
7	Argyll	20.85	22.49	1.64
8	The Trossachs	18.42	19.24	0.82
9	Stirlingshire and Fife	18.02	18.40	0.38
10	South West Scotland	16.46	17.41	0.95
11	Lothian and Borders	14.18	14.47	0.29
12	Solway and Cheviot	12.73	12.94	0.21
13	North East England	9.87	9.71	-0.16
14	North Lancashire and The Lakes	9.15	9.06	-0.08
15	South Lancashire, Yorkshire and Humber	7.61	7.37	-0.24
16	North Midlands and North Wales	6.17	5.90	-0.26
17	South Lincolnshire and North Norfolk	4.65	4.00	-0.65
18	Mid Wales and The Midlands	3.55	3.12	-0.43
19	Anglesey and Snowdon	8.57	8.42	-0.16
20	Pembrokeshire	6.55	6.42	-0.13
21	South Wales	3.78	3.76	-0.02
22	Cotswold	0.75	0.46	-0.29
23	Central London	-3.78	-4.95	-1.17
24	Essex and Kent	1.43	-0.46	-1.89
25	Oxfordshire, Surrey and Sussex	-0.83	-1.47	-0.64
26	Somerset and Wessex	-2.71	-3.27	-0.56
27	West Devon and Cornwall	-4.70	-5.27	-0.57



Explanation

There has been a significant change in tariffs in Scotland and the South of England.

Whilst increasing generation in Northern Scotland increases tariffs in that area, this is outweighed by a reduction in tariffs in Zones 1 to 4 due to the new Beauly - Denny circuit and lower demand in the South of England.

The forecast reduction in Southern England tariffs are the result of generation changes reducing flows across London resulting in lighter flows on expensive circuits. Also the circuit improvements in London serve to reduce costs across all nodes, but in particular reduce the tariffs in Central London (Zone 23) and Essex and Kent (Zone 24).

The generation residual element, which ensures the correct total revenue is recovered from generation, has decreased by £0.30/kW to £5.51/kW. The increase in revenue that TNUoS seeks to recover from generators has been offset by additional revenues from offshore local tariffs and the forecast increase in the generation charging base, as shown in the table below.

Item (£m, unless stated)		**14/15**	**15/16**	**Δ**
Revenue recoverable through TNUoS	*A*	2,477	2,650	173
Revenue to collect from generation	*B = 0.27 x A*	699	716	17
Revenue from zonal tariffs	*C*	54	60	6
Revenue from onshore local tariffs	*D*	30	34	4
Revenue from offshore local tariffs	*E*	160	207	47
Revenue to recover from residual	*F = B-C-D-E*	424	415	-9
Generation charging base (GW)	*G*	73.0	75.3	2.3
Residual (£/kW)	*F / G*	**5.81**	**5.51**	**-0.30**

5.2 Onshore local generation tariffs

In addition to changes in the zonal locational charges, there have been changes in the local onshore circuit charges that generators not connected to the MITS are liable to pay. The following table presents the changes in onshore local circuit tariffs for generators.

Substation	14/15 (£/kW)	15/16 (£/kW)	Change (£/kW)
Aberdeen Bay		0.82	New
Achruach	3.02	2.43	-0.59
Aigas	0.57	0.59	0.02
An Suidhe	0.00	-0.29	-0.29
Arecleoch	0.27	0.28	0.01
Baglan Bay	0.57	0.64	0.07
Afton		3.66	New
Blacklaw Extension		2.16	New
Black Law	0.87	0.90	0.03
Bodelwyddan	-0.02	-0.02	-0.00
Carrington	0.13	0.06	-0.07
Clyde (North)	0.10	0.10	-0.00
Clyde (South)	0.11	0.11	0.00
Corriegarth		2.28	New
Corriemoillie	2.40	2.48	0.08
Coryton	0.05	0.32	0.27
Cour		0.41	New
Cruachan	1.67	1.72	0.05
Crystal Rig	0.36	-0.01	-0.37
Culligran	1.52	1.56	0.04
Deanie	2.49	2.56	0.07
Dersalloch	1.60	1.65	0.05
Didcot	0.22	0.22	0.00
Dinorwig	2.10	2.16	0.06
Brochloch		3.37	New
Edinbane	5.98	6.16	0.18
Ewe Hill	2.27	2.33	0.06
Farr Windfarm	2.05	2.00	-0.05
Fallago	0.95	0.07	-0.88
Carraig Gheal	3.85	3.96	0.11
Ffestiniogg	0.22	0.23	0.01
Finlarig	0.28	0.29	0.01
Foyers	0.67	0.69	0.02
Glendoe	1.61	1.66	0.05
Glenmoriston	1.15	1.19	0.04
Gordonbush	3.44	2.19	-1.25
Griffin Wind	1.39	1.68	0.29
Hadyard Hill	2.41	2.48	0.07
Harestanes	4.43	4.80	0.37
Hartlepool	0.52	0.54	0.02
Hedon	0.17	0.17	-0.00
Invergarry	1.24	-0.62	-1.86
Killgallioch		1.32	New
Killingholme	0.48	0.27	-0.21
Kilmorack	0.17	0.18	0.01
Langage	0.58	0.59	0.01
Lochay	0.32	0.33	0.01
Luichart	0.99	1.02	0.03
Mark Hill	-0.77	-0.79	-0.02

Substation	14/15 (£/kW)	15/16 (£/kW)	Change (£/kW)
Marchwood	0.33	0.34	0.01
Millennium Wind	1.42	1.46	0.04
Mossford	3.47	3.57	0.10
Nant	2.19	-1.11	-3.30
Neilston		0.79	New
Quoich	3.79	3.90	0.11
Rocksavage	0.02	0.02	-0.00
Saltend	0.30	0.30	-0.00
South Humber Bank	0.74	0.76	0.02
Spalding	0.27	0.27	-0.00
Kilbraur	1.70	1.95	0.25
Strathy Wind		3.87	New
Aikengall II		1.10	New
Whitelee	0.09	0.10	0.01
Whitelee Extension	0.26	0.27	0.01

Local tariffs have reduced significantly in the following areas:

- Gordonbush due to flow changes caused by new local generation.
- Invergarry due to a change in flow direction on local circuits.
- Nant due to new generation and circuit changes at Crossaig
- Fallago due to new local generation.

5.3 Onshore local substation tariffs

Local substation tariffs have been updated from 2014/15 by RPI. The tariff in £/kW depends on the substation rating, connection type and connection voltage of the substation. If you are unsure which Local Substation Tariff may apply to you, please contact National Grid.

Substation Rating	Connection Type	Local Substation Tariff (£/kW)		
		132kV	275kV	400kV
<1320 MW	No redundancy	0.180769	0.103411	0.074509
<1320 MW	Redundancy	0.398220	0.246380	0.179189
>=1320 MW	No redundancy	-	0.324240	0.234492
>=1320 MW	Redundancy	-	0.532319	0.388549

5.4 Offshore local generation tariffs

The changes for the local offshore tariffs (substation and circuit) are shown in the tables below. Tariffs have increased by 3% inflation and Sheringham Shoal, Greater Gabbard and London Array have new tariffs for their first full year following asset transfer.

Offshore Generator	Tariff Component (£/kW)		
	Substation	Circuit	ETUoS
Robin Rigg East	-0.42	27.59	8.55
Robin Rigg West	-0.42	27.59	8.55
Gunfleet Sands 1 & 2	15.76	14.47	2.70
Barrow	7.28	38.10	0.95
Ormonde	22.51	41.94	0.33
Walney 1	19.43	38.69	
Walney 2	19.29	39.03	
Sheringham Shoal	25.54	21.78	0.56
Greater Gabbard	31.41	13.67	
London Array	31.59	9.28	

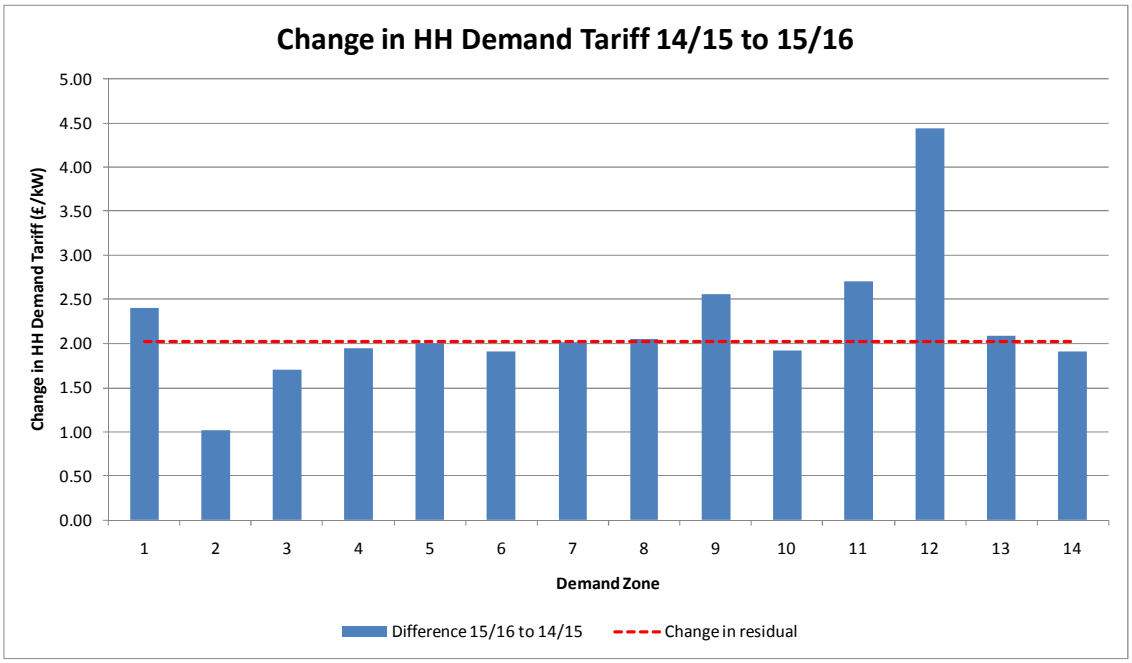
5.5 Discount for Small Generation

The discount for small generation, which is equal to 25% of the combined generation and demand residuals, is forecast to increase from £8.96/kW to £9.40/kW. The increase is due to the increase in revenue expected to be collected from generation and demand tariffs.

6 Forecast demand tariffs for 2015/16

The following table and chart show the forecast changes to half-Hourly (HH) demand tariffs; with the absolute change from 2014/15.

Zone	Zone Name	HH 2014/15 Tariff (£/kW)	HH 2015/16 Tariff (£/kW)	Tariff Changes (£/kW)
1	Northern Scotland	16.17	18.57	2.40
2	Southern Scotland	21.24	22.25	1.01
3	Northern	26.94	28.64	1.70
4	North West	29.64	31.58	1.94
5	Yorkshire	30.25	32.25	2.00
6	N Wales & Mersey	29.72	31.63	1.91
7	East Midlands	33.10	35.11	2.02
8	Midlands	33.78	35.84	2.05
9	Eastern	34.63	37.19	2.56
10	South Wales	32.32	34.24	1.93
11	South East	37.66	40.36	2.70
12	London	38.55	43.00	4.45
13	Southern	38.79	40.88	2.09
14	South Western	38.70	40.61	1.91



Summary explanation

Demand tariffs are expected to increase in all zones and on average[2] by £2.28/kW. This is because National Grid expects to recover around £126m more revenue through demand TNUoS charges during 2015/16 compared to the prior year. There are a few zones that have overriding influences. These are predominantly due to the impact of circuit changes in Scotland and London.

Detailed explanation

A more detailed explanation of the main changes in demand tariffs follows:

- the residual tariff element of HH demand tariffs, which is the same in each zone and ensures that the correct total revenue recovery, has increased by £2.03/kW to £32.08/kW. This reflects the expected increase in the total allowed revenue, as shown in the table below.

Item (£m, unless stated)		**14/15**	**15/16**	**Δ**
Revenue recoverable through TNUoS	*A*	2,477	2,650	173
Revenue to collect from demand	*B = 0.73 x A*	1,808	1,934	126
Revenue from zonal charges	*C*	146	160	13
Revenue from residual	*D = B – C*	1,662	1,774	113
Charging Base (GW)	*E*	55	55	0
Residual (£/kW)	*D / E*	**30.05**	**32.08**	**2.03**

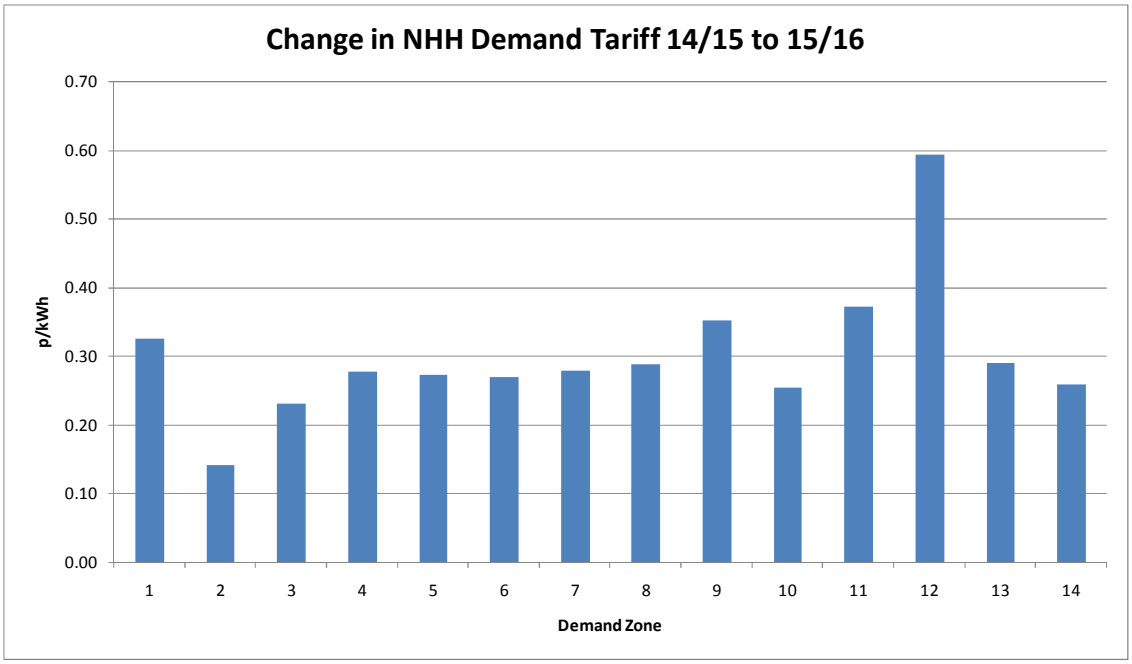
- The increase in Zone 12 (London) is greater than other parts of the country because of re-wiring works in the London area, particularly on cable circuits.

- The decrease in demand Zone 2 is a result of generation and circuit changes and reflects generation Zones 7 to 12 and 15.

The following table and chart show the forecast changes to Non-Half-Hourly (HH) demand tariffs; with the absolute change from 2014/15. As the forecast proportion of HH and NHH demand in each zone has remained constant, the trend in NHH tariffs mirrors that of HH tariffs.

[2] Weighted average based on peak demand in each zone.

Zone	Zone Name	NHH 2014/15 Tariff (p/kWh)	NHH 2015/16 Tariff (p/kWh)	Tariff Change (p/kWh)
1	Northern Scotland	2.19	2.51	0.33
2	Southern Scotland	2.95	3.09	0.14
3	Northern	3.67	3.90	0.23
4	North West	4.24	4.52	0.28
5	Yorkshire	4.11	4.38	0.27
6	N Wales & Mersey	4.20	4.47	0.27
7	East Midlands	4.58	4.86	0.28
8	Midlands	4.74	5.03	0.29
9	Eastern	4.75	5.10	0.35
10	South Wales	4.27	4.52	0.25
11	South East	5.17	5.54	0.37
12	London	5.14	5.73	0.59
13	Southern	5.38	5.67	0.29
14	South Western	5.24	5.50	0.26



7 Sensitivities & Uncertainties for 2015/16

7.1 Project Transmit

CUSC Modification Proposal 213 (CMP213) proposes a new methodology for setting wider tariffs that introduces year round locational price signals reflecting intermittency and load factor. On 16th December 2013 Ofgem informed the industry that it would decide on the future of CMP213 in March 2014. Therefore, a major uncertainty for 2015/16 is whether there will be a change to the charging methodology.

We have produced our initial view of tariffs under the CMP213 Working-group Alternative Code Modification 2 methodology (WACM2) in Appendix C. All inputs to the WACM2 model are as above plus the Draft Annual Load Factors for 2014-15 published on 13 December 2013[3].

7.2 Changes to transmission revenue requirements

The scenarios set out below are intended to illustrate the sensitivity of the forecast tariffs to various factors that affect revenue collected through the residual element of tariffs. Clearly, there are other factors that affect tariffs and these scenarios do not represent a minimum and maximum tariff range.

The following table shows the impact of a 1% change in onshore revenues upon generation and demand tariffs compared to the forecast presented. Since these changes affect only the residual tariff component, the impact is the same in all zones.

Average Tariff Change for 1% change in revenue (+/- 26m)	**15/16 Revenue**
Generation (£/kW)	+/- £0.10/kW
HH Demand (£/kW)	+/- £0.35/kW
NHH Demand (p/kWh)	+/-0.05p/kWh

7.3 Changes to the demand charging base

The following table shows the impact per 500MW increase / decrease to the demand charging base. For simplicity this has been spread in proportion to the existing demand in each zone. Note that an increase in the charging base decreases tariffs and vice versa

[3] http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission/Transmission-Network-Use-of-System-Charges/Tools-and-Data/

Tariff change for +/- 500MW HH demand change	Change to tariffs
HH Demand	-/+ £0.32/kW
NHH Demand	-/+ <0.01 p/kWh

7.4 Changes to the generation charging base

The tariffs presented are based upon the contracted generation background for 2015/16 as of 20 December 2013. The locational element of tariffs will be finalised using the contracted background as at 31 October 2014. However the residual element of generation tariffs may continue to be adjusted up to when tariffs are finalised in January 2015, to reflect known changes in the charging base.

Please review the 2014/15 tariff updates for the scale of effect changes in the generation background can have on locational signals. The following table shows the impact per 1GW increase / decrease to the generation charging base. For simplicity this has been spread in proportion to the existing generation in each zone. Note that an increase in the charging base decreases the tariff and vice versa.

Tariff change for +/- 1GW generation change	Change to tariffs
Generation Tariff	-/+ £0.12/kW

7.5 Changes to circuit parameters

Network reinforcements around Beauly – Denny and London have material impact upon tariffs in those areas. Tariffs have been calculated using projected circuit parameters but these could be updated once the projects have commissioned, with consequential changes to the locational signal in these charging zones.

8 Tools and Supporting Information

8.1 Discussing tariff changes

National Grid is keen to ensure that customers understand the current charging arrangements and the reasons why tariffs change from year to year. We expect to attend a future Transmission Charging Methodology Forums to discuss tariffs as they are updated through the year but also welcome bilateral discussions should you have specific queries.

8.2 Publication of charging models

Customers can receive a copy of National Grid's charging model, which will allow them to better understand how their tariffs have been calculated and conduct sensitivity analysis concerning alternative developments of generation and demand to be undertaken.

If you would like a copy of the model to be emailed to you, together with a user guide, please contact National Grid. Please note that, while the model is available free of charge, it is provided under licence to restrict, among other things, its distribution and commercial use.

8.3 Tools and Useful Guides

National Grid has prepared a number of tools and guidance notes to help customers understand the charging arrangements. These include:

- a guide to offshore local TNUoS charges,
- a tool to calculate generation TNUoS charges, and
- a guide to assist new suppliers understand monthly TNUoS charges and the annual reconciliations.

9 Comments & Feedback

9.1 Comments & Feedback

As part of our commitment to customers National Grid welcomes comments and feedback on the information contained in this statement. In particular, to ensure that information is provided and presented in a way that is of most use to customers, we would welcome specific feedback on:

- ❑ the level of numeric detail provided to explain tariff changes;
- ❑ the quality of the explanation given to describe and explain tariff changes;
- ❑ information that is not useful and could be omitted; and
- ❑ information that is missing that could be added.

These should be sent to:

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Our commitment to UK Transmission Customers
► We will work closely with you to build a foundation for trust through open and honest relationships
► We will listen, understand your needs and expectations, and seek solutions that work for you
► We will help you understand our business so that we can work better together
► We will be accountable for delivering a clear and timely service
► We will seek and act upon your feedback

10 Appendices

Appendix A Generation changes for 2015/16

Appendix B Zonal generation and demand changes for 2015/16

Appendix C Tariffs for 2015/16 using the CMP213 WACM2 model

Appendix D Generation Zones

Appendix A: Generation changes for 2015/16

The following table provides details of the TEC changes between 2014/15 and 2015/16 included within the 2015/16 charging model.

Station	TEC (MW)	Change (MW)
Aberdeen Bay Wind Farm	77	77
Abernedd Power Station	500	500
Afton	68	68
Aikengall II Windfarm	108	108
Andershaw Wind Farm	35	35
Barry Power Station	235	93
Blacklaw Extension	69	69
Brockloch Rig Wind Farm	75	75
Clyde (North)	338	117
Clyde (South)	183	54
Corriegarth	69	69
Cour	23	23
Dumnaglass Wind Farm	99	99
Harelaw	80	80
Harestanes	146	20
Kilgallioch	274	274
Lynemouth Power Station	366	366
Race Bank Wind Farm	500	500
Rampion	332	332
Strathy North and South Wind	226	226
Total Change		**3,185**

Appendix B: Zonal generation and demand changes for 2015/16

Generation Changes

Zone	Zone Name	14/15 TEC (MW)	15/16 TEC (MW)	Change (MW)
1	North Scotland	766	1,159	394
2	East Aberdeenshire	400	400	-
3	Western Highlands	286	286	-
4	Skye and Lochalsh	41	41	-
5	Eastern Grampian and Tayside	325	402	77
6	Central Grampian	64	64	-
7	Argyll	132	155	23
8	The Trossachs	520	520	-
9	Stirlingshire and Fife	2,380	2,380	-
10	South West Scotland	2,027	2,444	417
11	Lothian and Borders	2,022	2,485	463
12	Solway and Cheviot	322	342	20
13	North East England	1,348	1,714	366
14	North Lancashire and The Lakes	3,547	3,547	-
15	South Lancashire, Yorkshire and Humber	14,440	14,440	-
16	North Midlands and North Wales	13,345	13,345	-
17	South Lincolnshire and North Norfolk	2,194	2,694	500
18	Mid Wales and The Midlands	7,740	7,740	-
19	Anglesey and Snowdon	2,094	2,094	-
20	Pembrokeshire	2,199	2,199	-
21	South Wales	3,164	3,757	593
22	Cotswold	1,234	1,234	-
23	Central London	144	144	-
24	Essex and Kent	11,913	11,913	-
25	Oxfordshire, Surrey and Sussex	1,970	2,302	332
26	Somerset and Wessex	2,539	2,539	-
27	West Devon and Cornwall	1,045	1,045	-
	Totals	**78,200**	**81,384**	**3,185**

Demand Changes

Zone	Zone Name	14/15	15/16	Diff	%
1	Northern Scotland	882	887	5	0.57
2	Southern Scotland	3,770	3,686	-84	-2.23
3	Northern	2,939	2,921	-18	-0.61
4	North West	4,011	4,091	80	1.99
5	Yorkshire	4,787	4,864	77	1.61
6	N Wales & Mersey	2,546	2,688	142	5.58
7	East Midlands	5,188	5,269	81	1.56
8	Midlands	4,808	4,512	-296	-6.16
9	Eastern	6,693	6,205	-488	-7.29
10	South Wales	2,120	1,993	-127	-5.99
11	South East	3,883	3,851	-32	-0.82
12	London	5,944	5,489	-455	-7.65
13	Southern	6,236	6,195	-41	-0.66
14	South Western	2,810	2,922	112	3.99
	Totals	**56,617**	**55,573**	**-1,044**	**-1.84**

Appendix C – Tariffs calculated using the CMP213 WACM2 model ('Project TransmiT')

2015/16 Generation Tariffs

Zone	Zone Name	System Peak Tariff (£/kW)	Shared Year Round Tariff (£/kW)	Not Shared Year Round Tariff (£/kW)	Residual Tariff (£/kW)	Final Zonal Tariff (£/kW)
1	North Scotland	2.88	13.21	6.68	3.01	25.78
2	East Aberdeenshire	3.85	7.57	6.68	3.01	21.11
3	Western Highlands	2.92	11.48	6.48	3.01	23.90
4	Skye and Lochalsh	-1.00	11.48	8.02	3.01	21.51
5	Eastern Grampian and Tayside	2.53	10.43	6.12	3.01	22.08
6	Central Grampian	4.41	9.98	5.86	3.01	23.25
7	Argyll	3.56	7.97	8.04	3.01	22.58
8	The Trossachs	3.63	7.97	4.60	3.01	19.21
9	Stirlingshire and Fife	3.83	7.41	4.44	3.01	18.70
10	South West Scotlands	2.86	8.68	4.44	3.01	18.99
11	Lothian and Borders	2.97	8.68	0.66	3.01	15.33
12	Solway and Cheviot	1.58	5.35	3.02	3.01	12.96
13	North East England	3.16	3.00	1.13	3.01	10.30
14	North Lancashire and The Lakes	1.69	3.00	1.91	3.01	9.62
15	South Lancashire, Yorkshire and Humber	3.98	0.95	0.00	3.01	7.94
16	North Midlands and North Wales	3.60	-0.06	0.00	3.01	6.55
17	South Lincolnshire and North Norfolk	1.93	-0.43	0.00	3.01	4.52
18	Mid Wales and The Midlands	1.35	-0.37	0.00	3.01	3.99
19	Anglesey and Snowdon	4.96	1.18	0.00	3.01	9.15
20	Pembrokeshire	7.81	-3.44	0.00	3.01	7.39
21	South Wales & Gloucester	5.42	-3.53	0.00	3.01	4.91
22	Cotswold	2.15	2.17	-5.57	3.01	1.76
23	Central London	-3.99	2.17	-4.88	3.01	-3.68
24	Essex and Kent	-4.64	2.17	0.00	3.01	0.55
25	Oxfordshire, Surrey and Sussex	-1.82	-2.07	0.00	3.01	-0.87
26	Somerset and Wessex	-2.15	-3.29	0.00	3.01	-2.43
27	West Devon and Cornwall	-0.03	-3.92	0.00	3.01	-0.93

2015/16 Demand Tariffs

Zone	Zone Name.	HH Zonal Tariff (£/kW)	NHH Zonal Tariff (p/kWh)
1	Northern Scotland	21.21	2.87
2	Southern Scotland	22.55	3.13
3	Northern	28.63	3.90
4	North West	31.59	4.52
5	Yorkshire	32.26	4.39
6	N Wales & Mersey	31.58	4.46
7	East Midlands	35.14	4.87
8	Midlands	35.70	5.01
9	Eastern	37.40	5.13
10	South Wales	33.72	4.46
11	South East	40.42	5.55
12	London	43.13	5.75
13	Southern	40.77	5.66
14	South Western	39.19	5.30
Tariffs include small gen tariff of:		0.26	0.04

Appendix D: Generation Zones