

Quarterly update of forecast TNUoS tariffs for 2014/15

This information paper provides an update to the initial forecast of Transmission Network Use of System (TNUoS) tariffs for 2014/15. These tariffs apply to generators and suppliers.

The forecasts tariffs for 2014/15 will be refined throughout the year ahead of being finalised in January 2014.

April 2013

Contents

1	Executive Summary	1
2	Introduction	2
2.1	Transmission Charges.....	2
2.2	Project TransmiT / CMP213	2
2.3	Uncertainties.....	3
2.4	Future Updates to tariff forecasts	3
3	Updates to the Charging Model	4
3.1	Changes influencing the locational element of tariffs.....	4
3.1.1	Generation.....	4
3.1.2	Demand.....	4
3.1.3	Transmission network	5
3.2	Changes to ensure the correct revenue recovery	5
3.2.1	Allowed Revenues	5
3.2.2	Charging bases	5
4	Forecast generation tariffs	7
4.1	Wider zonal generation tariffs.....	7
4.1.1	Changes compared to 2013/14.....	8
4.1.2	Changes between initial and updated views for 2014/15	9
4.2	Onshore Local Circuit Tariffs.....	10
4.3	Onshore Local Substation Tariffs	10
4.4	Discount for Small Generation	10
5	Forecast demand tariffs	11
5.1	Wider demand tariffs	11
5.1.1	Changes compared to 2013/14.....	12
5.1.2	Changes between initial and updated views for 2014/15	13
6	Sensitivities & Uncertainties	14
6.1	Changes to transmission revenue requirements.....	14
6.2	Changes to the charging base	15
7	Tools and Supporting Information	16
7.1	Discussing tariff changes.....	16
7.2	Publication of charging models	16
7.3	Tools and Useful Guides	16
8	Comments & Feedback	17
9	Appendices	18



Any Questions?

Contact:

Damian Clough



Damian.Clough@nationalgrid.com



01926 656416

Disclaimer

This report is published without prejudice and whilst every effort has been made to ensure the accuracy of the information, it is subject to several estimations and forecasts and may not bear relation to either the indicative or actual tariffs National Grid will publish at later dates.

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 is designed to update our initial view of 2014/15 tariffs that was published in January 2013.

Tariff forecasts are based on the current charging methodology and take 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.

This updated view of tariffs reflects changes to the contracted generation since October 2012. Since this time, the contracted generation for 2014/15 has fallen by roughly 6GW. This has caused most generation tariffs in England & Wales to increase compared to both 2013/14 and the initial view of 2014/15 tariffs; and most generation tariffs in Scotland to decrease. These reductions are most notable in East Aberdeenshire and South West Scotland.

Forecast demand tariffs for 2014/15 are expected to increase by £3.66/kW on average compared to current tariffs. Compared to the initial view there is little change in the forecast tariffs other than in Scotland where tariffs increase more than previously anticipated due to the reduction in generation in this region.

2 Introduction

2.1 Transmission Charges

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 locationally varying component of TNUoS tariffs using a model of power flows on the transmission system. This model considers the impact that changes 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 therefore 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. These charges are therefore locational and specific to individual generators.

2.2 Project TransmiT / CMP213

Following Ofgem's review of the charging arrangements to ensure these properly take into account the changing use of the transmission network and facilitate the move to a low carbon energy sector (Project TransmiT¹), National Grid was directed to raise a CUSC modification proposal to enhance the current locational charges (CMP213)². The proposal covers:

- sharing transmission network capacity by different type of generator;

¹ [Project TransmiT](#) is a Significant Code Review looking at the options for reforming the GB charging arrangements.

² [CUSC Amendment CMP213](#)

- ❑ taking account of HVDC circuits that run parallel to the existing AC system; and
- ❑ island connections that use sub-sea cable technology.

Since July 2012, the CMP213 Working Group has been developing and assessing the proposal. In December 2012, the Working Group published a consultation on its findings and responses to this were received in mid-January. The Working Group has now considered these; developed alternatives to the original proposal; and undertaken detailed modelling of the impact of these proposals³.

The Working Group has also considered and consulted upon possible implementation and transition arrangements, although it is for the Authority to determine the implementation date. Against this background, it is possible that if CMP213 were approved it could be implemented at the start or during 2014/15. However, as it is unclear which (if any) any of the options developed will be approved, **this forecast is based on the current charging methodology**. To understand the range of possible impacts of CMP213, please refer to the CMP213 Working Group Report.

2.3 Uncertainties

In addition to known possible changes to the charging methodology related to CMP213, other proposals to change the charging methodology could be raised by industry participants. Furthermore, changes to the generation (and demand) connected to the onshore and offshore transmission system and the consequential impact on network investment and revenue TO requirements, will also impact the level of transmission charges.

2.4 Future Updates to tariff forecasts

Noting these uncertainties and our desire to provide timely and accurate information on the future path of tariffs, National Grid will further update the forecast of 2014/15 tariffs throughout 2013 according to the timetable below:

31 July 2013	2 nd update of forecast tariffs for 2014/15
1 November 2013	3 rd update of forecast tariffs for 2014/15
24 December 2013	Draft tariffs for 2014/15
31 January 2014	Final tariffs for 2014/15

This will allow customers to gauge the impact of changes to the key inputs into the charging model ahead of the publication of draft and final TNUoS tariffs.

³ The CMP213 Working Group has prepared illustrative tariffs under a number of scenarios and alternative charging methodologies. The status quo scenario in Working Group report is not directly comparable to the information included in this information paper, which has been prepared using the contracted generation background and the updated generation charging zone boundaries. Tariffs in this paper have also been presented in outturn prices, including the impact of inflationary changes to the expansion constant, whereas the CMP213 document is in constant prices.

3 Updates to the Charging Model

In order to update the forecast generation and demand tariffs a number of changes must be made to the charging model. This update focuses on:

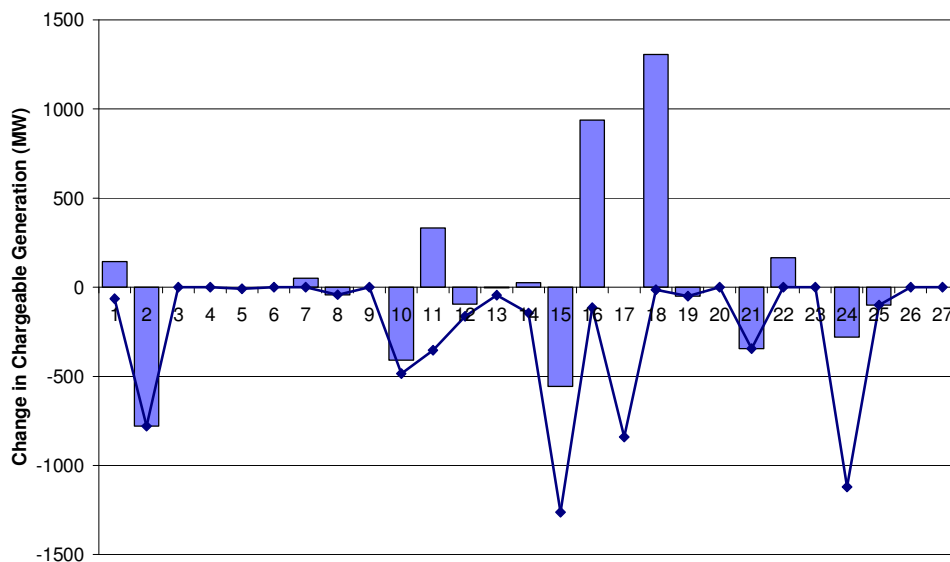
- ❑ changes to the generation that affects the locational element of tariffs; and
- ❑ the resulting impact on the generation charging bases.

Unless otherwise stated, all other model parameters remain unchanged from the Initial View prepared in February 2012.

3.1 Changes influencing the locational element of tariffs

3.1.1 Generation

For this quarterly update, the chargeable generation has been updated to reflect the changes made to contracted position for 2014/15 between 31 October 2012 and 15 April 2013. In this period, 38 power stations have decreased capacity for 2014/15 either by reducing their TEC; delayed commissioning; or terminating their contract. The chart below shows the updated changes in generation that have been incorporated in the updated view for 2014/15. The line on the chart shows a total reduction of 5.9GW in chargeable generation since the initial view. This substantial reduction in contracted capacity results in a 0.3GW increase in generation compared to 2013/14, which is shown by the chart bars. Appendix A and B provides the same data in tabular form on a station and zonal basis. For reference, Zones 1 to 12 represent Scotland and Zones 13 to 27 represent England & Wales.



3.1.2 Demand

Information for peak demand at each Grid Supply Point (GSP) has been sourced from the 2012 Ten Year Statement (TYS), which is based on information received from the DNOs and directly connected demand sites such as steelworks and other heavy industry.

No changes have been made since the previous forecast.

3.1.3 Transmission network

No changes have been made to the transmission network.

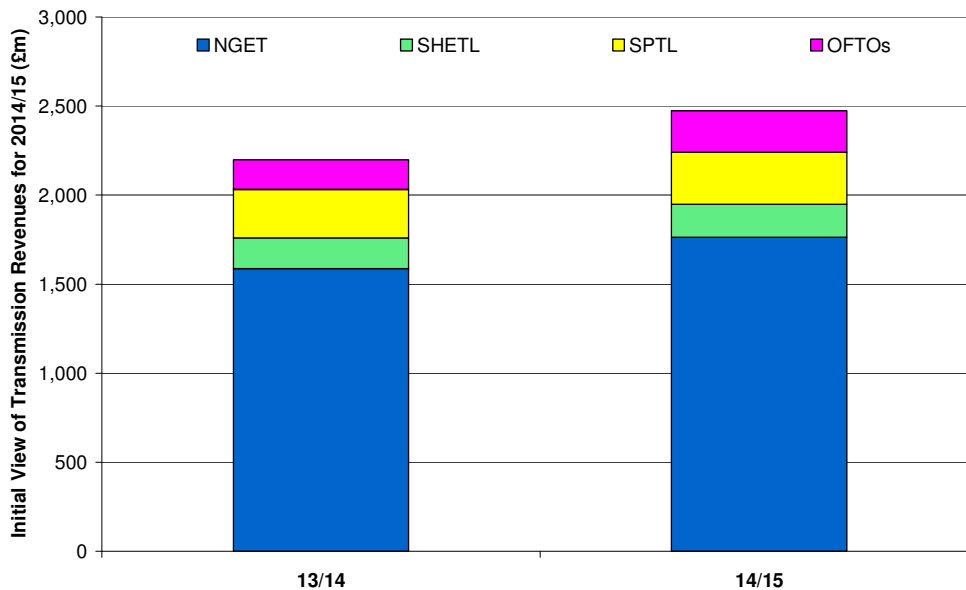
3.2 Changes to ensure the correct revenue recovery

3.2.1 Allowed Revenues

TNUoS charges are set to recover the revenues for all onshore and offshore TOs. The revenues of the onshore TOs are subject to a price control set by Ofgem; whilst offshore TO revenues are determined following a competitive tender.

No changes have been made to National Grid's assumptions for the revenues recoverable from TNUoS charges since the Initial View prepared in February. For ease of reference, the following table shows the revenue assumptions included within this Quarterly Update.

£m outturn	13/14	14/15	Change
NGET	1,587	1,763	176
SHETL	172	185	13
SPTL	271	293	21
Offshore TOs	167	232	65
Total Transmission Revenue	2,198	2,473	275
Pre-Vesting Connection	43	40	-3
TNUoS Charges	2,155	2,433	278



National Grid will look to refine this forecast as the year progresses. Against this background, under the RIIO price control, Ofgem will determine a revenue adjustment in November, which will feed into allowed revenues for 2014/15.

3.2.2 Charging bases

Generation

The generation charging base has been updated to reflect the updated contracted position for 2014/15. This has reduced the charging base by approximately 6GW compared to the Initial View.

When setting tariffs for 2013/14 an assessment was made on possible delays in the completion of new power stations. Following this assessment the contracted generation (after adjustments for interconnectors) was adjusted by 96.1%⁴ to ensure the correct revenue recovery from connected generators. If all contracted generation was expected, this figure would have been 100% after making interconnector adjustments.

The forecast generation base for 2014/15 has been determined by taking the contracted background for each year, adjusting this for interconnectors (unchanged from the Initial View), then reducing the amended figure by this factor. Note, this is not a reflection of the likelihood of any specific generation connecting.

Demand

The demand base and the split between HH and NHH demand have remained unchanged from when setting charges for 2013/14 and the Initial View of 2014/15. This assumes a peak system demand of 56GW; half-hourly demand at triad will be 16.1GW; and chargeable NHH demand of 28.6TWh⁵.

National Grid will continue to review the demand charging bases. In the Initial View we noted that BSC amendment proposal P272⁶, would, if approved, increase the HH demand chargeable over the triads (and reduce annual NHH consumption). Given no decision has yet to be made, it is understood that the BSC Panel's recommended implementation date is 1 April 2015/16.

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.

⁴ This factor is based on the difference between generation in the contracted background and the chargeable generation as applied when tariffs for 2013/14 were calculated.

⁵ TNUoS charges for NHH demand is based on the annual consumption between 4pm and 7pm

⁶ [BSC Amendment Proposal P272](#)

4 Forecast generation tariffs

Based on the changes outlined in this report, the following section provides details of the forecast tariffs for the year 2014/15. Please note that generation background changes do flow through to future years and subsequently affect tariffs.

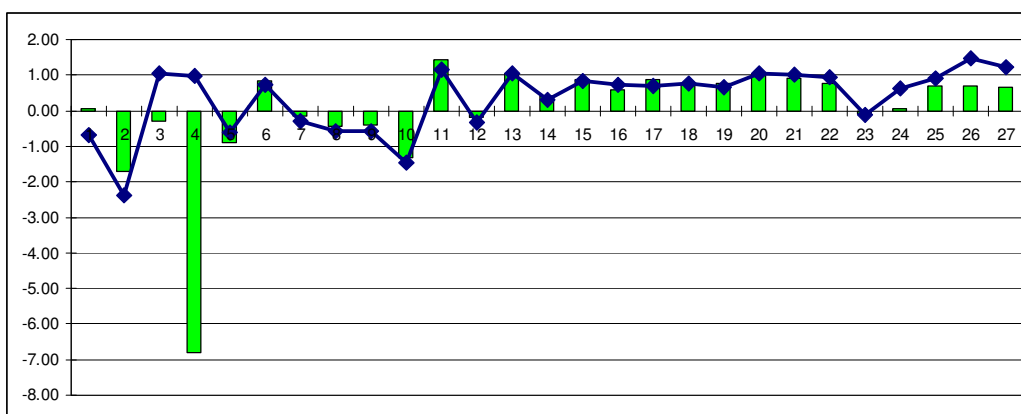
4.1 Wider zonal generation tariffs

The following table shows the forecast wider generation TNUoS tariffs for 2014/14, expressed to 2 decimal places, and the differences between the initial and updated forecasts. Tariffs are presented in outturn prices based on the changes to allowed revenue and investment costs outlined in Section 3.

Zone Name		2013/14	Updated 2014/15	Change compared to...	
				2013/14	Previous Forecast
1	North Scotland	25.42	25.49	0.07	-0.68
2	East Aberdeenshire	22.80	21.08	-1.72	-2.37
3	Western Highlands	26.15	25.84	-0.31	1.04
4	Skye and Lochalsh	30.25	23.45	-6.80	0.97
5	Eastern Grampian and Tayside	21.55	20.64	-0.91	-0.61
6	Central Grampian	19.75	20.57	0.82	0.72
7	Argyll	18.52	18.37	-0.15	-0.31
8	The Trossachs	16.49	16.07	-0.42	-0.56
9	Stirlingshire and Fife	16.40	16.00	-0.40	-0.59
10	South West Scotland	15.53	14.21	-1.32	-1.47
11	Lothian and Borders	12.84	14.28	1.44	1.17
12	Solway and Cheviot	11.07	10.89	-0.18	-0.33
13	North East England	8.64	9.68	1.04	1.04
14	North Lancashire and The Lakes	7.48	7.87	0.39	0.29
15	South Lancashire, Yorkshire and Humber	6.34	7.22	0.88	0.83
16	North Midlands and North Wales	5.18	5.77	0.59	0.74
17	South Lincolnshire and North Norfolk	3.49	4.35	0.86	0.71
18	Mid Wales and The Midlands	2.44	3.20	0.76	0.76
19	Anglesey and Snowdon	7.41	8.17	0.76	0.64
20	Pembrokeshire	5.57	6.57	1.00	1.04
21	South Wales	2.92	3.84	0.92	1.03
22	Cotswold	0.04	0.81	0.77	0.94
23	Central London	-4.44	-4.54	-0.10	-0.13
24	Essex and Kent	0.19	0.24	0.05	0.63
25	Oxfordshire, Surrey and Sussex	-1.69	-1.00	0.69	0.91
26	Somerset and Wessex	-3.05	-2.34	0.71	1.46
27	West Devon and Cornwall	-5.17	-4.52	0.65	1.22

Appendix E contains a geographic map of the generation zone boundaries that have been assumed to apply throughout the forecast period.

The following chart shows the generation tariff changes between 2013/14 (chart bars) and the change between our initial and updated view of tariffs for 2014/15 (chart line). The blue line effectively highlights the changes in forecasted tariffs for the year 2014/15 due to the changing generation background.



4.1.1 Changes compared to 2013/14

Summary explanation

Generation tariffs have risen due to an increase in the revenue to be collected from generators with little increase in the charging base. These rises are offset in those zones where reductions in generation capacity reduce tariffs i.e. the majority of Scotland (Zones 1 to 12) and Zone 23.

The tariff reduction in Zone 4 has occurred because the generator in this zone reduces modelled power flows on a long circuit spur, which results in a lower tariff, whereas previously it added to the flows.

Detailed explanation

Whilst the above is a high-level summary of the changes, the following provides a more detailed explanation of the tariff changes:

- the generation **residual element**, which ensures the correct total revenue is recovered from generation, has increased by £0.31/kW to £5.12/kW. This has mainly been caused by the increase in revenue, as shown in the table below. For those zones with no specific changes due to circuits, demand or generation updates, this will cause tariffs to increase.

Item (£m, unless stated)		13/14	14/15	Δ
Revenue recoverable through TNUoS	<i>A</i>	2,153	2,433	280
Revenue to collect from generation	$B = 0.27 \times A$	581	657	76
Revenue from zonal tariffs	<i>C</i>	55	53	-2
Revenue from onshore local tariffs	<i>D</i>	34	33	-1
Revenue from offshore local tariffs	<i>E</i>	131	184	53
Revenue to recover from residual	$F = B - C - D - E$	361	387	25
Generation charging base (GW)	<i>G</i>	75.1	75.5	0.3
Residual (£/kW)	F / G	4.81	5.12	0.31

- in **Zone 4** (in which there is one generator) and, to a lesser extent in **Zone 3**, the decrease in the tariff has been caused by power flows reversing direction on a long radial spur. The power exported by this generator now reduces flows along this circuit, resulting in a lower tariff, whereas previously it added to them. The change in power flows arises from a combination of factors including local demand changes and generation increases throughout GB.

- ❑ A TEC reduction at Peterhead of 780MW reduces tariffs in most zones in Scotland, particularly **Zones 2**. New generation in **Zone 1** totalling 144MW offsets the reductions that would otherwise have been seen in this zone due to the Peterhead TEC reduction.
- ❑ The generation scheme at Neart Na Gaoithe Offshore Wind Farm (450MW) increase tariffs in **Zone 11** in which it connects. This more than offsets any decreases due to Peterhead and other TEC reductions in Scotland.
- ❑ The reduction in generation capacity at Grain offsets the increase in **Zones 23 and 24** that would otherwise have been seen due to the increase in the residual.

4.1.2 Changes between initial and updated views for 2014/15

Summary explanation

Generation tariffs have risen between forecasts due to the reduction in the generation charging base and subsequent rise in the residual tariff. The residual tariff ensures the correct revenue is collected from generators. The exceptions to this rule are where generation reductions have affected tariffs, for example, at Peterhead (Zone 2) and in the south-west of Scotland (Zone 10).

Detailed explanation

Whilst the above is a high-level summary of the changes, the following provides a more detailed explanation of the tariff changes between the initial and updated view of tariffs:

- ❑ the generation **residual element**, which ensures the correct total revenue is recovered from generation, has increased by £0.43/kW to £5.12/kW. This is down to the reduction in the generation charging base, as the revenue has stayed the same from the Initial View report.

Item (£m, unless stated)		Initial View	Update View	Δ
Revenue recoverable through TNUoS	<i>A</i>	2,433	2,433	280
Revenue to collect from generation	$B = 0.27 \times A$	657	657	76
Revenue from zonal tariffs	<i>C</i>	57	53	-4
Revenue from onshore local tariffs	<i>D</i>	35	33	-2
Revenue from offshore local tariffs	<i>E</i>	184	184	0
Revenue to recover from residual	$F = B - C - D - E$	381	387	6
Generation charging base (GW)	<i>G</i>	81.3	75.5	5.8
Residual (£/kW)	F / G	4.69	5.12	0.43

- ❑ A TEC reduction at Peterhead of 780MW not included in the Initial view reduces tariffs in all zones in Scotland, particularly **Zone 2**. However new generation schemes in **Zone 1** totalling 144MW offsets the reduction that would otherwise occurred due to the reduction of capacity at Peterhead.
- ❑ **Zone 10** sees a significant reduction in generation capacity (485MW in total) compared to the initial view, which results in a decrease in the forecast tariff for this zone.

- ❑ **Zone 23** sees minimal change compared to the neighbouring zones following a decrease in TEC at Grain.
- ❑ the tariff increase in **zones 26 & 27** is higher than expected for two reasons: firstly, generation decreases in central regions of England and within Scotland have decrease the benefit these power stations provide to the wider transmission system; and secondly the increase in the residual tariff.

4.2 Onshore Local Circuit Tariffs

Appendix C shows an updated forecast of onshore local circuit tariffs from 2013/14 to 2014/15. The changing generation background has not affected flows along any of the local circuits therefore the tariffs are the same as forecast in the initial view.

4.3 Onshore Local Substation Tariffs

The table below shows the forecast onshore local substation tariffs that will apply during 2014/15. These tariffs only apply to transmission connected generators. The tariffs are indexed by RPI for each year of the price control. For the purposes of the forecast the inflation rate of 2.6% was used to inflate 2013/14 tariffs.

Sum of TEC at Substation	Connection Type	Local Substation Tariff (£/kW)		
		132kV	275kV	400kV
<1320 MW	No redundancy	0.17	0.10	0.07
<1320 MW	Redundancy	0.39	0.24	0.17
>=1320 MW	No redundancy	-	0.32	0.23
>=1320 MW	Redundancy	-	0.51	0.38

4.4 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 £7.55/kW to **£8.57/kW**. The increase is due to the increase in revenue expected to be collected from generation and demand tariffs.

5 Forecast demand tariffs

Based on the changes outlined in this report, the following section provides details of the forecast demand tariffs for the year 2014/15. Please note that generation background changes do flow through to future years and subsequently affect tariffs.

5.1 Wider demand tariffs

The following tables and charts show the forecast half-hourly and non half-hourly demand TNUoS tariffs for 2014/15 as well as the differences between 2013/14 and the Initial View expressed to 2 decimal places. Tariffs are presented in outturn prices based on the changes to allowed revenue and investment costs outlined in Section 3.

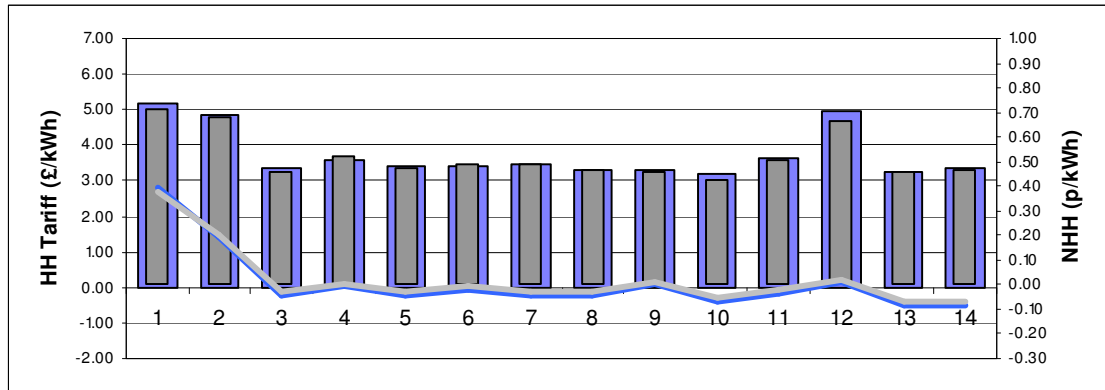
Half-hourly demand tariffs (£/kW)

Zone Name	2013/14	Updated 2014/15	Change compared to...	
			2013/14	Previous Forecast
1 Northern Scotland	11.05	16.25	5.20	1.95
2 Southern Scotland	16.79	21.64	4.85	1.50
3 Northern	22.35	25.69	3.34	-0.18
4 North West	25.18	28.76	3.58	0.09
5 Yorkshire	25.49	28.90	3.42	-0.16
6 N Wales & Mersey	25.63	29.05	3.42	0.00
7 East Midlands	28.21	31.68	3.47	-0.18
8 Midlands	29.20	32.51	3.30	-0.18
9 Eastern	29.89	33.17	3.28	-0.08
10 South Wales	27.54	30.71	3.17	-0.37
11 South East	32.83	36.46	3.63	-0.13
12 London	34.08	39.01	4.93	0.21
13 Southern	33.75	36.98	3.23	-0.49
14 South Western	33.55	36.93	3.38	-0.49

Non half-hourly demand tariffs (p/kWh)

Zone Name	2013/14	Updated 2014/15	Change compared to...	
			2013/14	Previous Forecast
1 Northern Scotland	1.52	2.23	0.71	0.27
2 Southern Scotland	2.36	3.05	0.68	0.21
3 Northern	3.08	3.54	0.46	-0.03
4 North West	3.65	4.17	0.52	0.01
5 Yorkshire	3.51	3.98	0.47	-0.02
6 N Wales & Mersey	3.67	4.15	0.49	0.00
7 East Midlands	3.96	4.44	0.49	-0.02
8 Midlands	4.15	4.62	0.47	-0.03
9 Eastern	4.15	4.61	0.46	-0.01
10 South Wales	3.69	4.11	0.42	-0.05
11 South East	4.56	5.07	0.50	-0.02
12 London	4.60	5.27	0.66	0.02
13 Southern	4.74	5.20	0.45	-0.07
14 South Western	4.60	5.06	0.46	-0.07

The following chart shows the change in HH (blue bars) and NHH (grey bars) demand tariffs between 2013/14 and the updated view of 2014/15. The change between the Condition 5 forecast of tariffs and the updated view of tariffs is shown on the (blue line) for HH and (grey line) for NHH. Since it has been assumed that the proportion of HH and NHH demand in each zone has remained constant across the forecast period, the trend in NHH tariffs mirrors that of HH tariffs.



5.1.1 Changes compared to 2013/14

Summary explanation

Demand tariffs are expected to increase in all zones and on average by £3.66/kW. This is because National Grid expects to recover around £280m more revenue through charges during 2014/15 compared to the prior year. Scotland sees an increase in forecast demand tariffs because there is less contracted generation in Scotland compared to 2013/14.

Detail 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 £3.73/kW to £29.14kW. This reflects the expected increase in the total allowed revenue, as shown in the following table.

Item (£m, unless stated)		13/14	14/15	Δ
Revenue recoverable through TNUoS	A	2,153	2,433	280
Revenue to collect from demand	$B = 0.73 \times A$	1,572	1,776	204
Revenue from zonal charges	C	149	144	-5
Revenue from residual	$D = B - C$	1,423	1,632	209
Charging Base (GW)	E	56	56	0
Residual (£/kW)	D / E	25.41	29.14	3.73

- the increase in **Zones 12** (London) is greater than other parts of the country because of re-wiring works in the London area, particularly on cable circuits.
- Reductions in generation in Scotland cause increased tariffs in **Zones 1 and 2**

5.1.2 Changes between initial and updated views for 2014/15

Summary explanation

Demand tariffs have generally remained the same as those presented in the initial forecast because the amount of revenue to collect has remained the same as well as the charging bases. The exception to this is where there have been changes in the generation background, which is most notable in Scotland where demand tariffs have increased more than previously expected and an opposite effect in southerly zones albeit to a lesser extent.

Detail 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 £0.18/kW to £29.14kW between forecasts.

Item (£m, unless stated)		Initial View	Update View	Δ
Revenue recoverable through TNUoS	<i>A</i>	2,433	2,433	0
Revenue to collect from demand	<i>B = 0.73 x A</i>	1,776	1,776	0
Revenue from zonal charges	<i>C</i>	155	144	-11
Revenue from residual	<i>D = B - C</i>	1,621	1,632	9
Charging Base (GW)	<i>E</i>	56	56	0
Residual (£/kW)	<i>D / E</i>	28.96	29.14	0.18

- A reduction in the generation in Scotland has caused demand tariffs in **Zones 1 and 2** to increase more than previously expected and tariffs in **Zones 13 and 14** to decrease more than expected.

6 Sensitivities & Uncertainties

National Grid has not modelled any sensitivities due to changes in generation and demand capacities. Where a new generator causes a change in tariffs this has been noted in Sections 4 & 5. However, more often than not, it is a combination of various schemes that is the cause of the tariff changes. The charging model used to calculate TNUoS tariffs is publically available, which allows customers to consider the scenarios that they consider most likely. Please see Section 7 to obtain more information on how to obtain the model and the support available for its use.

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. There are other factors that affect tariffs and these scenarios do not represent a minimum and maximum tariff range.

6.1 Changes to transmission revenue requirements

The following table provides details of wider 2014/15 TNUoS tariffs in a high and low revenue scenario. These scenarios take into account different assumptions about the onshore TOs' allowed revenues; the offshore TO allowed revenues of OFTOs yet to be appointed; and the impact of inflation. For more details of how these scenarios have been prepared, see Appendix D.

Change to...	Scenario	
	Low Case	High Case
Allowed Revenue	-£39m	+£24m
Generation tariffs	-0.14 (£/kW)	+0.09 (£/kW)
HH Demand tariffs	-0.51 (£/kW)	+0.31 (£/kW)
NHH Demand tariffs	-0.07 (p/kWh)	+0.04 (p/kWh)

Impact of ±£50m in transmission allowed revenues

To further illustrate the impact of a change to transmission allowed revenue would have on wider zonal tariffs, the following table shows the impact that a ± £50m change has on generation and demand tariffs. As the generation base increases in future years, revenue changes have less of an impact.

Tariff	Change to tariffs
Generation	± £0.18 /kW
HH Demand	± £0.65 /kW
NHH Demand	± 0.09 p/kWh

6.2 Changes to the charging base

The following table shows the impact of an increase / decrease of 500MW on the demand charging base. For simplicity this has been spread in proportion to the existing demand in each zone.

Tariff	Change to tariffs
HH Demand	$\pm \text{£}0.28/\text{kW}$
NHH Demand	$\pm <0.02 \text{ p/kWh}$

7 Tools and Supporting Information

7.1 Discussing tariff changes

National Grid is keen to ensure that customers understand the current charging arrangements and the reasons why charges have changed from year to year. Therefore, we expect to attend a future charging methodology forum to discuss this forecast.

7.2 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 the 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.

7.3 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.
- ❑ a guide to assist new suppliers understand monthly TNUoS charges and the annual reconciliations.

8 Comments & Feedback

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:

Damian Clough

Damian.Clough@nationalgrid.com

National Grid

Warwick Technology Park

Warwick

CV34 6DA

01926 656416

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

9 Appendices

There are 4 appendices to this information paper:

- Appendix A** Generation changes for 2014/15
- Appendix B** Zonal generation and demand changes from 2014/15
- Appendix C** Onshore local circuit tariff changes from 2014/15
- Appendix D** Revenue scenarios
- Appendix E** Generation Zone Map

Appendix A: Generation changes for 2014/15

Power Station	Zone	13_14 Final Chargeable Generation	Diff between Initial View 14/15 and Final 2013/14	Reason for change	Initial View 14/15 Chargeable Generation	Diff between Updated View 2014/15 and Updated view 2014/15	Reason for change	Updated view 2014/15 Chargeable Generation	Diff between Updated View 2014/15 and Final 2013/14
Drakelow D	18	0	1320		1320	0		1320	1320
Carrington Power Station	16	0	910		910	0		910	910
Thames Haven Power Station	24	0	840		840	0		840	840
Hornsea	15	0	500		500	0		500	500
Near Na Gaoithe Offshore Wind Farm	11	0	450		450	0		450	450
Westernmost Rough Offshore Wind farm	15	220	205		425	0		425	205
Bristol Biomass	22	1234	165		1399	0		1399	165
Strathy North & South Wind	1	0	76		76	0		76	76
Corriegarth	1	0	50		50	0		49.9	50
Achruch Wind Farm	7	0	25		25	0		24.95	25
Achruch Wind Farm	7	0	25		25	0		24.95	25
West of Duddon Sands Offshore Wind Farm	14	3032	170	Increased TEC	3202	8	Increased TEC	3210	178
Wheeldiemont	1	0	2		2	-2		0	0
Lochluichart	1	51	22	Increased TEC	73	-4		69	18
Gwynn y Mor Offshore Wind Farm	16	432	142	Increased TEC	574	-9		565	133
Learney Wind Generating Station	5	0	9		9	-9		0	0
Harestanes	12	142	21		163	-37		126	-16
Brockloch Rig Wind Farm	10	0	75		75	-75		0	0
Wilton	13	144	42		186	-45		141	-3
Aultmore Wind Farm	1	0	60		60	-60		0	0
Crystal Rig	11	138	62		200	-62		138	0
Ewe Hill	12	18	48		66	-66		0	-18
Rowantree Wind Farm	11	0	67		67	-67		0	0
Aikengall II Windfarm	11	0	108		108	-108		0	0
Spalding Energy Expansion	17	880	840		1720	-840		880	0
Alton	10	68	0		68	-68		0	-68
Andershaw	11	45	0		45	-45		0	-45
Blackcraig Wind Farm	10	71	0		71	-71		0	-71
Black Law	11	121	0		121	-3	Decreased TEC	118	-3
Blacklaw Extension	11	69	0		69	-69		0	-69
Brigg	16	995	0		995	-105		890	-105
Didcot GTs	25	1650	0		1650	-100		1550	-100
Ferrybridge B	15	1986	0		1986	-972		1014	-972
Glendoe	3	100	0		100	0		99.9	0
Grain	24	4545	0		4545	-1121		3424	-1121
Great Yarmouth	18	735	0		735	-15		720	-15
Immingham	15	1855	0		1855	-290		1565	-290
Margree	10	43	0		43	-43		0	-43
Neilston	10	80	0		80	-80		0	-80
Newfield Wind Farm	12	60	0		60	-60		0	-60
Pencloe	10	63	0		63	-63		0	-63
Peterhead	2	1180	0		1180	-780		400	-780
Roosecote	14	307	0		307	-152		155	-152
Stacain Wind Farm	8	43	0		43	-43		0	-43
Ulzieside	10	57	0		57	-57		0	-57
Uskmouth	21	1195	0		1195	-345		850	-345
Whitelee	10	322	0		322	-17		305	-17
Whitelee Extension	10	238	0		238	-11		227	-11
Wylfa	19	490	0		490	-50		440	-50
Total			6233			-5935			298

Appendix B: Zonal generation and demand information

Generation changes (MW)

Generation Zone	Generation Zone Name	Chargeable Capacity Updated View 2014/15	Difference between Updated View 2014/15 and Final 2013/14	Diff between Updated View 2014/15 and Initial View 2014/15
1	North Scotland	892	144	-65
2	East Aberdeenshire	400	-780	-780
3	Western Highlands	286	0	0
4	Skye and Lochalsh	41	0	0
5	Eastern Grampian and Tayside	325	0	-9
6	Central Grampian	64	0	0
7	Argyll	132	50	0
8	The Trossachs	520	-43	-43
9	Stirlingshire and Fife	2380	0	0
10	South West Scotland	2048	-410	-485
11	Lothian and Borders	2472	333	-354
12	Solway and Cheviot	310	-94	-163
13	North East England	1348	-3	-45
14	North Lancashire and The Lakes	3547	26	-144
15	South Lancashire Yorkshire and Humber	14940	-557	-1262
16	North Midlands and North Wales	13345	938	-114
17	South Lincolnshire and North Norfolk	2179	0	-840
18	Mid Wales and The Midlands	9060	1305	-15
19	Anglesey and Snowdon	2084	-50	-50
20	Pembrokeshire	2199	0	0
21	South Wales	3164	-345	-345
22	Cotswold	1399	165	0
23	Central London	144	0	0
24	Essex and Kent	13551	-281	-1121
25	Oxfordshire Surrey and Sussex	1970	-100	-100
26	Somerset and Wessex	2539	0	0
27	West Devon and Cornwall	1045	0	0
Total		82383	298	-5935

Demand changes (MW)

Zone	Zone Name	13/14	14/15	Diff	%
1	Northern Scotland	1,247	1,259	12	1.0
2	Southern Scotland	3,921	3,907	-14	-0.4
3	Northern	2,676	2,863	187	7.0
4	North West	4,242	4,417	176	4.1
5	Yorkshire	5,213	5,248	35	0.7
6	N Wales & Mersey	3,553	3,503	-50	-1.4
7	East Midlands	5,699	5,755	56	1.0
8	Midlands	5,144	5,194	51	1.0
9	Eastern	6,925	7,137	213	3.1
10	South Wales	2,169	2,188	19	0.9
11	South East	4,188	4,293	105	2.5
12	London	6,053	6,259	206	3.4
13	Southern	6,387	6,447	60	0.9
14	South Western	2,801	2,829	28	1.0

Appendix C: Onshore local circuit tariff changes for 2014/15

Substation	13/14	14/15	Change to	
			13/14	Initial View
Achruach	-	4.66	-	0.00
Aigas	0.53	0.55	0.02	0.00
Aikengall II	-	-	-	-
An Suidhe	1.17	1.20	0.03	0.00
Andershaw	2.42	-	-	-
Arecleoch	0.07	0.07	0.00	0.00
Aultmore	-	-	-	-
Baglan Bay	0.55	0.57	0.02	0.00
Black Hill	1.36	-	-	-
Black Law	0.85	0.87	0.02	0.00
BlackCraig	1.04	-	-	-
Blacklaw Extension	2.48	-	-	-
Bodelwyddan	-0.02	-0.02	0.00	0.00
Brockloch	-	-	-	-
Carraig Gheal	3.73	3.83	0.10	0.00
Carrington	-	0.01	-	0.00
Cleve Hill	0.32	0.33	0.01	0.00
Clyde (North)	0.09	0.10	0.01	0.00
Clyde (South)	0.11	0.11	0.00	0.00
Corriegarh	-	2.31	-	0.00
Corriemoillie	2.83	2.91	0.08	0.00
Coryton	0.29	0.31	0.02	0.00
Cruachan	1.52	1.56	0.04	0.00
Crystal Rig	0.35	0.41	0.06	0.00
Culligran	1.47	1.51	0.04	0.00
Deanie	2.41	2.48	0.07	0.00
Dersalloch	1.55	1.59	0.04	0.00
Didcot	0.22	0.22	0.00	0.00
Dinorwig	2.04	2.09	0.05	0.00
Edinbane	5.81	5.96	0.15	0.00
Ewe Hill	2.35	-	-	-
Fallago	0.92	0.43	-0.49	0.00
Farr Windfarm	1.9	1.95	0.05	0.00
Ffestiniogg	0.21	0.22	0.01	0.00
Finlarig	0.27	0.28	0.01	0.00
Foyers	0.65	0.66	0.01	0.00
Glendoe	1.56	1.60	0.04	0.00
Glenmoriston	1.12	1.15	0.03	0.00
Gordonbush	3.47	3.56	0.09	0.00
Griffin Wind	2.72	0.54	-2.18	0.00
Hadyard Hill	2.46	2.52	0.06	0.00
Harestanes	4.3	4.41	0.11	0.00
Hartlepool	0.5	0.51	-	0.00
Hedon	0.15	0.16	0.01	0.00
Hornsea	-	0.01	-	0.00
Invergarry	-0.58	-0.60	-0.02	0.00

Substation	13/14	14/15	Change to	
			13/14	Initial View
Kilbraur	1.72	1.76	0.04	0.00
Kilmorack	0.15	0.15	0.00	0.00
Langage	0.56	0.57	0.01	0.00
Lochay	0.31	0.32	0.01	0.00
Luichart	0.96	0.99	0.03	0.00
Marchwood	0.32	0.33	0.01	0.00
Margee	0.89	-	-	-
Mark Hill	-0.74	-0.76	-0.02	0.00
Millennium Wind	1.38	1.41	0.03	0.00
Mossford	3.17	3.26	0.09	0.00
Nant	-1.04	-1.07	-0.03	0.00
Neilston	1.05	-	-	-
Newfield	3.71	-	-	-
Quoich	1.68	3.77	2.09	0.00
Rocksavage	0.01	0.02	0.01	0.00
Rowantree	-	-	-	-
Saltend South	0.29	0.30	0.01	0.00
Spalding	0.26	0.26	0.00	0.00
Staycain Windfarm	1.29	-	-	-
Sth Humber Bank	0.71	0.51	-0.20	0.00
Strathy Wind	-	4.52	-	0.00
Teesside	0.06	0.06	0.00	0.00
Thames Haven	-	0.24	-	0.00
Ulzieside	3.83	-	-	-
Whitelee	0.09	0.09	0.00	0.00
Whitelee Extension	0.25	0.26	0.01	0.00

Appendix D: Revenue Scenarios

Low Scenario

In the low scenario we have reduced the total transmission allowed revenue by £39m, which is based on:

- ❑ Ofgem awards no additional revenues under the Network Innovation Competition;
- ❑ a delay to TR2a offshore projects until July 2014/15 and there is a 30% reduction in the tender revenues for those projects where the bidding process is ongoing; and
- ❑ a reduction in annual inflation from 2.6% to 2.4%.

High Scenario

In the high scenario we have increased the total transmission allowed revenue by £24m, which is based on:

- ❑ Ofgem awards the full amount of additional revenues under the Network Innovation Competition;
- ❑ all offshore projects complete as expected during 2013/14 but there is a 30% increase in tender revenues where the bidding process is still ongoing; and
- ❑ an increase in annual inflation from 2.6% to 2.8%.

Appendix E: Generation Zone Map

