

Explanation of Final TNUoS tariffs for 2011/12

This document details the final Transmission Network Use of System (TNUoS) tariffs that will apply from 1 April 2011 and explains how and why these have changed from those set previously in 2010/11.

Tariffs have been calculated according to the current Charging Methodology¹ and updates have been made that affect both the locational and non-locational elements of tariffs. In summary, the charging model has been updated to include:

- ❑ generation changes reflecting contracts Users have entered with National Grid Electricity Transmission (National Grid) and detailed in the October update of the 2010 Seven Year Statement² (SYS);
- ❑ demand information provided by Distribution Network Owners (DNOs) and directly connected customers, as detailed in the October update of the SYS;
- ❑ the transmission network data included in the SYS;
- ❑ the allowed transmission revenues, which are comprised of
 - forecast allowed revenue of onshore transmission owners (TOs), taking into account inflation on price controlled revenues; allowances for investment to connect renewable generation; and various other items detailed later in this document; and
 - forecast revenue of offshore TOs (OFTOs), taking into account those projects where asset transfer is expected to occur in 2011/12;
- ❑ an RPI inflationary increase of 4.8% to the expansion constant and local substation tariffs;
- ❑ the forecast revenue recovery in 2010/11 which indicates a relatively small over-recovery of about £9m and is therefore adjusted for in 2011/12 through the prior year correction mechanism (also called kt-mechanism); and
- ❑ the generation and demand charging bases in 2011/12, which represents National Grid's view of chargeable generation and demand in this year.

Throughout this note, tariffs have been quoted to 2 decimal points to aid clarity. However, customers' actual charges are calculated using tariffs calculated to 6 decimal points. These can be found in separate tables that accompany this document.

ALLOWED REVENUES

Tariffs have been set to collect the allowed revenue of onshore and offshore transmission owners. In 2011/12 this is forecast to be £1771m, which is an increase of £161m over the revenue tariffs were set to recover in 2010/11. Draft tariffs for 2011/12 published in December 2010 were set to recover a maximum allowed revenue of £1774m.

¹ The Charging Methodology is included in Section 14 of the Connection and Use of System Code (CUSC)

² [Seven Year Statements](#)

The following table shows the current estimate of the allowed revenues for 2010/11 and 2011/12, together with a breakdown of the main components and the expected change between years. The main factors increasing the allowed revenue in 2011/12 are the impact of inflation on core price-controlled allowed revenues for all onshore TOs and additional revenues to be collected for offshore TOs.

Allowed Revenue Item (£m)	2010/11	2011/12	Change
NGET Core Allowance	1233	1317	84
NGET Renewables Allowances	15	16	1
NGET Pass Through items	-3	-10	-7
NGET Incentive Allowances	16	17	1
NGET Other items	-4	0	4
NGET Transmission Investment Incentives ³	3	19	16
Revenues collected on behalf of Offshore TOs	288	322	34
Revenues collected on behalf of Onshore TOs	15	100	85
Prior year correction* (kt)	-47	9	56
Maximum Allowed Revenue	1610	1771	161
Total revenue collected for Other TOs	303	422	119

* this relates to a revenue over / (under) recovery from the prior year

TNUoS tariffs are set to recover the maximum allowed revenue after deducting the revenue expected to be collected from connection charges for pre-Vesting assets. For 2011/12 these connection charges are expected to collect £47m, leaving £1724m to be recovered from generation and demand TNUoS tariffs.

Offshore revenues in 2011/12

In order to determine revenues for offshore TOs, National Grid requires information about the accepted revenue streams bid for offshore assets and the date when each OFTO is expected to take ownership of the offshore assets (the so-called asset transfer date).

Ofgem has provided National Grid, in its capacity as National Electricity Transmission System Operator (NETSO), details of the revenue streams bid by the preferred bidders and where these have been provided it is on the understanding they remain confidential. National Grid has also sought views from Ofgem and, where appointed, preferred bidders about when asset transfer might be expected to occur. In addition, where asset transfer has not occurred on the dates expected, National Grid has reviewed the extent of the delays and included project specific adjustments for potential asset transfer delays in the future. Against this background, the following table shows the asset transfer assumptions made by National Grid to set tariffs.

Asset Transfer	Project
Q4 2010/11	Robin Rigg [†]
Q1 2011/12	Barrow*, Gunfleet Sands*, Walney I*, Thanet*
Q2 2011/12	Ormonde*
Q3 2011/12	Greater Gabbard, Sheringham Shoal*, Walney II*
Q4 2011/12	London Array, Lincs

* Preferred Bidder identified

[†] Process to appoint Successful Bidder commenced

³ Transmission investment incentives for 2011/12 include revenues for Deeside substation, the Western HVDC link, and IPC-related costs, as work continues to develop these projects in a timely manner. These revenues are based on the adjustments sought by NGET and SPTL; depreciation over 20 years; and a return of 6.25%, consistent with Ofgem's final proposals on Transmission Investment Incentives (Ref 04/10). If Ofgem does not make a retrospective licence changes consistent with these assumptions, the relevant kt-mechanisms will correct this in 2012/13.

Clearly, some projects may proceed more quickly to asset transfer than assumed and conversely others more slowly. However, this approach is expected to steer a central path and therefore minimise the overall impact of possible delays during 2011/12 and hence avoid the need to undertake a mid-year tariff update if asset transfer dates change.

Information updates during 2011/12

National Grid expects to publish updated information on the maximum allowed revenue for 2011/12 later in the year. This will help customers better understand the evolution of tariffs between years. The information will be published on National Grid's website and there will be an opportunity for customers to discuss any changes at future transmission charging methodologies forum⁴ (TCMF) or customer forums.

GENERATION TNUoS TARIFFS

Generation TNUoS tariffs are comprised of a wider zonal tariff and a local tariff, which itself contains a substation element for directly connected generators and may also contain a circuit element where the generator is not connected to the Main Interconnected Transmission System (MITS).

Wider zonal tariffs

The following table presents the wider zonal generation TNUoS tariffs for 2011/12 (which, for the avoidance of doubt, include the non-locational residual tariff component of £3.61/kW). A comparison with the effective tariff for 2010/11 is given⁵. It should also be noted that final tariffs are slightly higher (by about 17p/kW) than draft tariffs published on 23 December 2010, to take account of changes made to the expected generation based in 2011/12.

Zone	Zone Name	2010/11 Tariff (£/kW)	2011/12 Final Tariff (£/kW)	Tariff Changes	
				Absolute	%
1	North Scotland	20.57	21.49	0.92	4%
2	Peterhead	19.20	19.77	0.57	3%
3	Western Highland & Skye	23.29	22.93	-0.35	-2%
4	Central Highlands	18.13	18.18	0.05	0%
5	Argyll	13.83	14.05	0.21	2%
6	Stirlingshire	13.93	14.23	0.30	2%
7	South Scotland	12.98	12.56	-0.42	-3%
8	Auchencrosh	11.40	12.28	0.88	8%
9	Humber, Lancashire	5.91	5.58	-0.33	-6%
10	North East England	9.29	8.86	-0.43	-5%
11	Anglesey	6.67	6.43	-0.24	-4%
12	Dinorwig	5.99	5.72	-0.27	-5%
13	South Yorks & North Wales	4.09	3.91	-0.18	-4%
14	Midlands	2.06	1.72	-0.34	-16%
15	South Wales & Gloucester	0.89	0.69	-0.20	-22%
16	Central London	-5.92	-6.85	-0.93	16%
17	South East	1.30	0.67	-0.63	-49%
18	Oxon & South Coast	-0.87	-1.88	-1.01	117%
19	Wessex	-2.14	-3.67	-1.53	71%
20	Peninsula	-5.38	-7.04	-1.67	31%

⁴ More information on the TCMF can be found at: <http://www.nationalgrid.com/uk/Electricity/Charges/TCMF/>

⁵ The effective tariffs represent the weighted average of the tariffs that applied during 2010/11. Details of these tariffs are can be found at: <http://www.nationalgrid.com/uk/Electricity/Charges/usefulinfo/>

Most wider generation tariffs have fallen compared to 2010/11 as the non-locational residual component, which is the same in all generation zones, has reduced between these years. This is because although the overall revenue collectable from generation during 2011/12 has increased, a larger proportion of this is expected to be collected through locational charges and, in particular, local offshore charges.

Regional variations to these overall changes are due to the locational components of wider generation TNUoS tariffs, which in Scotland have generally increased whilst in England and Wales these have generally decreased. This is largely due to the increase to the expansion constant, which reflects the annual increase in the cost of providing additional transmission infrastructure and tends to increase the spread of tariffs between northern and southern zones. However, there are exceptions to this general trend, which are caused by changes in generation and demand in different locations.

The main locational changes are as follows:

- ❑ the impact of the increase to the expansion constant has been diluted in Scotland because additional generation connecting in England and Wales (for example, West Burton B 1305MW in Zone 13 and Pembroke 1350MW in Zone 15 has reduced modelled power flows from north to south);
- ❑ tariffs in the north of Scotland (Zones 1 and 2) see higher increases compared to other parts of Scotland, as a result of reduced demand in these areas compared to 2010/11;
- ❑ tariffs in Zone 8 have increased because following a reduction in forecast demand at Auchencrosh, generation at Mark Hill and Auchencrosh tend to increase network flows between Mark Hill and Coynton South whereas previously additional generation would have reduced these flows. Against this background, any additional generation in the Auchencrosh area will (all other things being equal) increase the modelled need for reinforcement and this is reflected in a higher tariff; and
- ❑ tariffs in Wessex and Peninsula (Zones 19 and 20) have reduced more significantly than other southern zones due to increased demand in these areas with no offsetting increase in contracted generation.

Onshore local tariffs

All transmission connected generation is liable to pay a local substation charge. The following table shows the 2011/12 substation local tariffs that will apply to all transmission connected generators where the first transmission substation is onshore. In accordance with the charging methodology, these have increased from those set for 2010/11 in line with inflation.

The tariff in £/kW depends on the substation rating, connection type (redundancy / no redundancy), and connection voltage of the substation.

Substation Rating	Connection Type	132kV	275kV	400kV
<1320 MW	No redundancy	0.14	0.08	0.07
<1320 MW	Redundancy	0.32	0.20	0.16
>=1320 MW	No redundancy	-	0.27	0.22
>=1320 MW	Redundancy	-	0.44	0.35

In addition, generators that are not connected to a MITS substation pay a local circuit charge. The following table presents the local circuit generation TNUoS tariffs for 2011/12 for onshore generators connected at the listed substation.

Substation Name	Local Tariff £/kW)	Substation Name	Local Tariff (£/kW)
Aigas	0.55	Hartlepool	0.42
An Suidhe	1.03	Hearthstanes	2.46
Arecleoch	1.70	Invergarry	1.06
Baglan Bay	0.03	Kilbraur	1.12
Black Law	2.68	Killingholme	0.42
Clyde	1.54	Kilmorack	0.16
Coryton	0.26	Langage	0.48
Cruachan	1.26	Leiston	0.91
Crystal Rig	0.44	Lochay	0.27
Culligran	1.30	London Array	-0.03
Deanie	2.13	Luichart	0.85
Dersalloch	1.34	Marchwood	0.39
Didcot	0.61	Mark Hill	0.63
Dinorwig	3.95	Millennium Wind	1.32
DunLaw	0.48	Mossford	2.80
Earlshaugh	2.24	Nant	-0.93
Edinbane	5.00	Oldbury-on-Severn	1.39
Fallago	0.94	Pencloe	1.31
Farr Windfarm	5.02	Quoich	3.01
Ffestiniog	0.20	Rocksavage	0.01
Finlarig	0.23	Saltend	0.26
Foyers	0.55	South Humber Bank	0.63
Glendoe	1.86	Spalding	0.23
Glenmoriston	1.07	Teesside	0.09
Griffin Wind	2.04	Waterhead Moor	1.93
Hadyard Hill	2.01	Whitelee	1.50
Harestanes	1.34		

Offshore local tariffs

Offshore local tariffs have the same structure as onshore local tariffs but are based on project specific costs. The information needed to calculate these tariffs will be provided by the OFTOs once identified through an offshore tender; however, at the point of publishing these draft tariffs, no OFTOs have been appointed. In the meantime, National Grid has sought information from the preferred bidders of offshore transmission projects. Where information has been provided, this has been on a confidential basis to enable onshore tariffs to be calculated and to provide illustrative tariffs to relevant offshore generators. National Grid expects to publish these tariffs once final offshore tariffs have been set.

Discount for small generators

Following the Authority's decision to retain the small generation discount for 2011/12⁶, this has been set to be £5.83/kW, based on 25% of the combined draft generation and demand residuals.

⁶ On 20 January 2011 National Grid's transmission licence was amended to extend the availability of a TNUoS discount for small generations - [Authority Decision](#)

DEMAND TNUoS TARIFFS

The tables below present the half-hourly (HH) and non half-hourly (NHH) demand TNUoS tariffs for 2011/12 and include the adjustment for the small generation discount. The HH demand tariffs also include the non-locational residual tariff component of £19.71/kW. Note that tariffs for HH demand have been compared to the effective tariff for 2010/11 while tariffs for NHH demand have been compared to the average tariff for 2010/11⁷. Final demand tariffs are slightly lower (7p/kW and 0.023p/kWh) than those published at the draft tariffs, which reflects changes to the maximum allowed revenue and the forecast demand based for 2011/12.

Zone	Zone Name (HH)	2010/11 Tariff (£/kW)	2011/12 Final Tariff (£/kW)	Tariff Changes	
				Absolute	%
1	Northern Scotland	5.19	6.54	1.35	26%
2	Southern Scotland	10.54	11.73	1.19	11%
3	Northern	13.85	15.68	1.84	13%
4	North West	17.75	19.45	1.70	10%
5	Yorkshire	17.67	19.58	1.91	11%
6	N Wales & Mersey	18.22	20.20	1.99	11%
7	East Midlands	20.26	22.21	1.95	10%
8	Midlands	22.02	23.81	1.79	8%
9	Eastern	21.16	22.67	1.51	7%
10	South Wales	21.85	22.85	1.00	5%
11	South East	23.96	26.74	2.78	12%
12	London	26.08	27.94	1.86	7%
13	Southern	24.82	27.57	2.75	11%
14	South Western	25.38	28.41	3.03	12%

Zone	Zone Name (NHH)	2010/11 Tariff (p/kWh)	2011/12 Final Tariff (p/kWh)	Tariff Changes	
				Absolute	%
1	Northern Scotland	0.71	0.89	0.18	25%
2	Southern Scotland	1.46	1.67	0.21	14%
3	Northern	1.91	2.17	0.26	14%
4	North West	2.47	2.74	0.27	11%
5	Yorkshire	2.41	2.70	0.29	12%
6	N Wales & Mersey	2.56	2.95	0.39	15%
7	East Midlands	2.79	3.10	0.31	11%
8	Midlands	3.09	3.39	0.29	10%
9	Eastern	2.92	3.13	0.21	7%
10	South Wales	2.92	3.10	0.17	6%
11	South East	3.30	3.74	0.44	13%
12	London	3.48	3.78	0.30	9%
13	Southern	3.45	3.91	0.46	13%
14	South Western	3.48	3.89	0.40	12%

Demand tariffs have risen across all zones, to reflect the proportion of the increase in allowed transmission revenue that is collected through demand charges. This impact is the same in all

⁷ This is the weighted average tariff for 2010/11 based on the consumption during the periods that each tariff applied.

demand zones. As with generation tariffs, locational variations emerge due to changes in generation and demand. Typically, demand tariffs tend to move in the opposite direction to changes in generation tariffs in the same location. However, differences do arise which are caused by the way in which costs are averaged across nodes in different geographic areas represented by demand and generation tariff zones. The following points are note worthy:

- ❑ tariffs in South Wales (Zone 10) have fallen with arrival of additional generation capacity at Pembroke; and
- ❑ increases in demand have driven increases in the demand tariffs in the South and South West (Zones 13 and 14).

UNCERTAINTIES IN 2011/12

As set out above there is uncertainty about offshore costs in 2011/12. However, National Grid believes the approach used to factor in possible delays to the asset transfer dates means that we do not expect to undertake a mid-year tariff change during 2011/12 resulting from our offshore assumptions.

In parallel, National Grid and Ofgem have started to consider how interactions between the offshore tender and charge setting process can be enhanced; and National Grid and Scottish TOs have started discussion on the circumstances where they can change the charges they levy on National Grid mid-year. These activities are expected to minimise the need to undertake future mid-year tariff changes.

If in the unlikely event there were the potential need to undertake a mid-year tariff change, National Grid would first consult Ofgem and users, to discuss the need, timing, and other options that might be considered.

FORECAST OF FUTURE TARIFFS

National Grid has separately published a forecast of future tariffs, the so-called Condition 5 report, which is prepared each year to assist generators' and suppliers' understanding of how tariffs might change over a five-year period.

To build on previous customer feedback, in addition to our forecast changes to locational tariff elements for generation and demand, this year's report includes further information on how the non-locational residual tariff elements might evolve and a view of the uncertainties that might affect tariffs in future years.

The report and supporting information, including data files that customers can use in conjunction with the publicly available charging models, can be found at:

<http://www.nationalgrid.com/uk/Electricity/Charges/gbchargingapprovalconditions/5/>

SUPPORTING TOOLS

National Grid makes available the model used to set tariffs to customers. 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.

If you would like a copy of the model to be emailed to you and a guide for its use, please contact the Charging & Revenue team on charging.enquiries@uk.ngrid.com.

GETTING IN TOUCH

If you require any further information, or wish to provide feedback, about the publication of TNUoS tariffs or the Condition 5 Report please contact the Charging & Revenue team on 01926 654633.