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Dear Industry Participant

Mid-year update to TNUoS tariffs

On 1 September 2010 National Grid Electricity Transmission (National Grid) wrote to the industry setting out its intention to undertake a mid-year update to Transmission Network Use of System (TNUoS) tariffs for 2010/11. Since then National Grid has received a number of comments from the industry raising their concern about the update and, in particular, the uncertainty created by the change. Whilst National Grid understands these concerns, given the current charging and regulatory framework, we believe it is right to proceed with the update for 2010/11 on 1 December 2010 but subsequently review how tariff stability can be enhanced going forward.

This letter sets out the background for the tariff change; the factors National Grid has taken into account when deciding to change tariffs and the scope of this update; details of the tariff change and the factors driving these; aspects of the practical arrangements associated with the update; and our initial thoughts on providing tariff stability going forward.

Background

In September 2009 National Grid raised the prospect of needing to undertake a mid-year tariff change during 2010/11¹. This was because there was unprecedented uncertainty regarding the impact and timing of the Government's transmission access reforms and Ofgem's tender process to appoint offshore transmission owners (OFTOs), which were both expected to conclude after National Grid had set TNUoS tariffs for 2010/11 in January 2010.

It was noted at the time that whilst the regulatory regime allowed National Grid to change tariffs mid-year, the charging methodology required clarification on how customers' annual and monthly liabilities would be determined if multiple tariffs applied throughout the year. Therefore GB ECM-21 was raised in December 2009² to address this issue and in April 2010, following industry-wide consultation, the Authority decided not veto the proposal³.

¹ [Presentation to TCMF on multiple tariffs within year, September 2009](#)

² [GB ECM-21 Proposal](#)

³ [GB ECM-21 Authority Decision](#)

Against this background, when TNUoS tariffs were set in January 2010, National Grid forecast the potential offshore costs and revenues that would be recovered from offshore users, as this was expected to reduce the impact of any mid-year update. These forecasts were premised on preferred bidders being appointed in April / May 2010 and go-live occurring on 24 June 2010 (six months after go-active, which occurred on 24 December 2009)⁴. It was also noted that National Grid expected to update TNUoS tariffs once preferred bidders were appointed. This finally occurred on 5 August 2010⁵.

National Grid subsequently published draft updated tariffs on 1 September 2010⁶ with an implementation timetable that would mean final tariffs would be published on 1 October 2010 for implementation two months later on 1 December, in accordance with the notice periods set out in the Connection and Use of System Code (CUSC). National Grid stated that this was contingent on receiving consent from the Authority to reduce the 150 day notice period set out in National Grid's transmission licence. This consent was subsequently received.

Decision to change tariffs during 2010/11

The case for changing tariffs during 2010/11

National Grid has considered the case for undertaking a mid-year tariff change verses relying upon the existing revenue correction mechanism in regulatory framework (the so-called kt mechanism). In considering whether or not to undertake a mid-year tariff update National Grid has taken account of:

- the revenue that will be recovered from generation and demand customers during 2010/11 with and without a tariff change;
- the impact on stability of the tariff change; and
- the information that had previously been provided to the industry.

National Grid considers the kt-mechanism would only provide a partial solution to changes in allowed revenue, as it considers the total over or under revenue recovery position and does not take account of how this position was derived from generation and demand charges. The nature of the changes to offshore revenues and the proportion recoverable from offshore generators during 2010/11 means that without a tariff change all generation would benefit from lower transmission charges and all suppliers would be disadvantaged by higher transmission charges. The magnitude of the deviation from the target G / D split would be significant and much greater than any variances seen before. This would not be addressed in future years thereby providing a windfall benefit to some customers at the expense of others. Such circumstances were envisaged in the development of GB ECM-21 i.e. tariff changes to maintain the G / D split defined in the charging methodology, although the magnitude of the actual required change is larger than expected, for the reasons set out in this letter.

⁴ [Guidance note on the process to asset transfer](#)

⁵ [Publication of Preferred Bidders, 5 August 2010](#)

⁶ [Notice of draft updated tariffs for 2010/11](#)

Against this background, National Grid considers a mid-year tariff change is appropriate given the current charging and regulatory framework, as the kt-mechanism would not address the significant deviation from the target G / D split. However, it should be noted that in future years the overall revenue over / under recovery might be a significant driver in the decision to undertake a mid-year update, regardless of the G / D split.

National Grid understands the value that customers place on a stable charging regime. We have therefore set out our thoughts in this letter on the steps that we propose taking, or that are already being taken, which are intended to reduce the potential for future mid-year tariff changes. We also believe there is scope to provide more information that will help customers forecast tariffs more accurately going forward and we have set out our thoughts on this.

Changes since setting tariffs in January 2010

Since setting tariffs in January 2010 a number of changes have occurred. These include:

- ❑ OFTO revenue requirements have substantially reduced for 2010/11 due to:
 - changes to underlying project-specific costs of the OFTOs compared to those forecast in January 2010;
 - significant and unexpected delays to the commencement of the offshore regime. OFTOs are now expected to own the offshore assets from mid-December 2010 rather than 24 June – a delay of nearly 5 months – which reduces the revenue needed by OFTOs to fund their operations; and
 - the tender of the offshore transmission assets for Greater Gabbard has been re-started, to simplify the asset transfer arrangements in accordance with the revised offshore commencement arrangements, and this means one less OFTO will be appointed in 2010/11 than expected;
- ❑ both Scottish TOs costs have increased unexpectedly and therefore they are seeking to recover additional revenue from National Grid during 2010/11. The Scottish TOs believe these changes are exceptional and were unknown during the normal charge setting timelines. These incremental costs have subsequently been 'passed through' to National Grid under arrangements set out in the SO-TO Code;
- ❑ the generation charging base for 2010/11 has reduced following a number of TEC reductions that were unknown when tariffs were set in January 2010 but are effective during 2010/11; and
- ❑ the demand charging base for 2010/11 has been forecast to increase.

Scope of the changes incorporated in updated tariffs

National Grid would not normally expect to update tariffs mid-year where the only changes are to the charging base or its own allowed revenue, as this rightly retains an incentive on National Grid to make accurate forecasts when setting tariffs. National Grid expects TOs to act in a

similar matter, so they also have the same incentive to make accurate forecasts about their own businesses.

However, whilst the original trigger for raising GB ECM-21 was the anticipation of updating tariffs for offshore changes, it was noted that the mechanism could be used for other changes that might materialise and that the underlying charging methodology was not being altered. Against this background, the charging methodology does not currently provide the flexibility or an agreed basis to include some changes but exclude others when updating tariffs mid-year where these may either compound or lessen the overall tariff changes for different classes of customer. Therefore, having decided it was appropriate to change tariffs during 2010/11, National Grid also considers it appropriate to include all changes outlined above, as there is little justifiable and objective basis to do otherwise. Furthermore, if we were to use only partial information, it may be unclear to some customers what changes have been delayed for inclusion in future charges.

Timetable for the mid-year tariff update

National Grid has sought to balance the competing desires to give as much notice of the tariff change and to spread the change over as long a period as possible (by applying a shorter notice period). The timetable for updating tariffs has been driven by the availability and firmness of offshore revenue information. As National Grid received this in mid-August, there was limited scope to include a tariff change in 2010/11, particularly if the standard 150 day notice period requirement was maintained. National Grid therefore considered timetables that were based on shorter notice periods, noting this would require consent from the Authority.

National Grid also considered the availability and firmness of other information needed to update tariffs, taking into account the revised (longer) process for offshore asset transfer and the anticipated decision on GB ECM-26. We believe that beyond 1 October 2010 limited additional information will become available that would significantly impact tariffs, accordingly the earliest that final tariffs could be published is 1 October 2010. In this instance, National Grid believes that retaining the standard two-month notice period for changes to charges is most likely to enable customers to plan to accommodate the mid-year update. Therefore, given the earliest notification date and the desire to retain a two month notice, the updated tariffs will be implemented on **1 December 2010**.

Having developed this timetable and sought consent from the Authority to amend the standard notice periods, National Grid communicated this through the provision of draft tariff information on 1 September 2010. The notice was published as soon as possible to provide the greatest opportunity for parties to prepare and comment on the tariff change.

Updated TNUoS tariffs for 2010/11

The tariff changes that National Grid is seeking to make in 2010/11 affect:

- generation TNUoS tariffs applicable to all generation; and
- demand TNUoS tariffs for half-hourly (HH) and non half-hourly (NHH) demand.

The combination of changes to these tariffs will ensure that the correct total revenue is recovered in 2010/11 and, moreover, in the right proportions between onshore and offshore users, and also between generation and demand users. For the avoidance of doubt, there will be no change to the local onshore circuit and substation tariffs published in January 2010.

National Grid will provide separate information on the implementation of local offshore TNUoS tariffs in due course, as the process to offshore asset transfer progresses.

Updated tariffs for 2010/11

National Grid has published updated TNUoS tariffs for 2010/11 to take effect from 1 December 2010. For each generation and demand zone (as applicable), we have published:

- ❑ **updated generation, HH demand and NHH energy consumption tariffs**, which shall be included in the updated Statement of Use of System Charges, and reflect the tariffs that must be applied from 1 December 2010 in order to have the intended impact on revenue collection for the remaining months in 2010/11 – see Appendix A; and
- ❑ **effective generation and HH demand tariffs**, which are the weighted average tariffs for the year⁷, and are used to determine annual and monthly liabilities for 2010/11. The effective tariff also is the tariff that would have been applied from 1 April 2010 had all the information available now been known when tariffs were set in January 2010 – see Appendix B.
- ❑ an **average NHH energy consumption tariff** that a typical supplier would expect to pay over the course of the year assuming a stable demand portfolio – see Appendix B. It should be noted that each supplier's actual charging liability will be determined according to the volume consumed during each tariff period.

The zonal tariffs for short-term TEC (STTEC) and limited duration TEC (LDTEC) have been recalculated and are shown in Appendix C.

As the updated tariffs change the generation and demand residuals, the effective small generator discount has been recalculated to be £5.46/kW.

Summary of tariff changes during 2010/11

The following table summarises the key changes to effective tariffs, which reduce the total revenue collectable through generation and demand TNUoS charges by £38m.

	Change (£/kW)
Zonal Generation Tariffs	0.50
Zonal HH Demand tariffs	-0.68

⁷ The effective tariff / weighted average tariff is determined using the initial tariff and any updated tariff, and weighting these for the duration that the tariffs have applied.

In addition, average annual energy consumption tariffs have decreased by 0.09p/kWh on average, with zonal differences arising because of revised forecast revenue collection from half-hourly demand and charging bases in each demand zone.

The table shows that demand tariffs have reduced, due to the reduction in the demand target revenue. In contrast generation tariffs have increased, despite the reduction in generation target revenue. This is because whilst generation target revenue is reduced, this is more than offset by the reduction in revenues that are expected to be recovered from offshore generators. This means that the generation residual tariff must increase to ensure that generation as a whole (onshore plus offshore) pay 27% of total TNUoS revenues.

The final generation tariffs are lower than those published at the draft stage, as the generation charging base is higher than previously assumed because the Authority has yet to make a decision on GB ECM-26⁸ (which had been assumed to be not vetoed when draft tariffs were prepared). Demand tariffs are lower than draft tariffs primarily because of our revised forecast of the demand charging base, which has increased.

Information for Suppliers with non-half hourly (NHH) demand

In order to calculate suppliers' revised annual and monthly liabilities with NHH demand, suppliers' zonal consumption during each tariff period is required. National Grid will forecast the consumption of each supplier for the period that the initial tariff applied and will then derive the consumption during the period that updated tariff applies using suppliers' own forecast of total annual energy consumption. National Grid's forecast will be based on actual metered data, where available, and suppliers' consumption during the equivalent months in the previous year, using a similar methodology to that described in Appendix TN-7 in the Statement of the Use of System Charging Methodology.

National Grid intends to write to all suppliers during November with the data it has used to derive this forecast and suppliers will have the opportunity to comment on this forecast and, if necessary, discuss potential amendments. To the extent that either National Grid's or suppliers' energy consumption forecasts are different from the actual consumption during the relevant periods, an adjustment will be made during the initial demand reconciliation.

Generation and Initial Demand Reconciliation

National Grid will undertake generation and initial demand reconciliation in the timescales set out in the CUSC. These will continue to adjust for actual exports for generation in negative generation zones and for actual triad demand and consumption for all suppliers.

Calculation of revised TNUoS liabilities and Examples

Appendix D details how customers can calculate revised monthly and annual TNUoS liabilities. National Grid has also provided in Appendix E examples of how revised annual and monthly charging liabilities will be determined before and after the tariff change for generation and demand. These also show how reconciliation will be undertaken.

⁸ If the Authority subsequently makes a decision to 'not veto' GB ECM-26 for 2010/11, National Grid does not intend to further update TNUoS tariffs within 2010/11.

Changes to Backing Sheets

National Grid has amended the format of the backing sheets that accompany monthly invoices for use of system charges. These changes have been necessary to enable customers to clearly see how annual and monthly liabilities have been determined when multiple tariffs apply during the year. A sample of the updated backing sheets for generation and demand that will be included with invoices dated 1 December 2010 has been placed on National Grid's website⁹. Customers are encouraged to familiarise themselves with the revised layout before receiving invoices for December, which become due for payment on or before 15th December.

Updates to the Statement of Use of System Charges

The Statement of Use of System Charges is designed to ensure that customers can make a reasonable estimate of these charges. Against this background, National Grid believes several revisions to this statement will be required throughout 2010/11 as and when TNUoS tariffs are updated. Accordingly, National Grid envisages updating the statement on 1 December 2010 to align with the changes to wider generation and demand tariffs. Further revisions will be needed when each local offshore tariff is determined. Where data availability permits, National Grid will seek to limit the number of revisions by making several changes at once.

Improving stability in charges

National Grid recognises the importance of a stable charging regime and continues to believe this is an important aspect of facilitating competition between generators and between suppliers. National Grid is keen to work with the industry, onshore / offshore TOs, and Ofgem to develop the charging and regulatory framework to promote stability in TNUoS charges whilst also facilitating the achievement of the other charging objectives.

Greater experience of operating in the offshore regime should enable better forecasts of offshore revenues to be made and the exceptional events that delayed the commencement of the offshore regime are unlikely to be repeated. However, the project specific nature of the offshore tenders and the associated timetables mean that there may still be instances where a mid-year tariff change could be considered. If events similar to 2010/11 transpire in future years and a mid-year tariff update is potentially required, National Grid believes greater industry engagement to develop the timetable for any change is highly desirable. However, there may be instances, as in 2010/11, where the opportunity to do this is limited by virtue of when updated information becomes available within the year.

We anticipate recent changes to the user commitment arrangements that require generators to provide longer periods of notice for TEC reductions (without payment of a TEC reduction charge) are likely to improve the firmness of the information National Grid uses to set the generation charging base, which is likely to reduce the impact that any TEC reductions would have on a future within-year tariff change. National Grid is also already working with the Scottish TOs and Ofgem to clarify the arrangements by which they can change their revenue requirements mid-year and this will be extended to include the offshore TOs.

⁹ [Sample backing sheet changes](#)

National Grid will also consider how greater transparency can be provided over the revenue assumptions and uncertainties when setting tariffs. Clearly, any confidentiality issues that might arise will need to be respected. Nevertheless, we hope to include additional information in the 2010 5-Year Information Paper, which we anticipate publishing in December 2010. We will also consider arrangements to update revenue information during the year. We believe this should help customers better forecast the future path of tariffs.

National Grid would welcome views on how improved stability in charges can be achieved, either through the existing charging regime or through framework changes that could be progressed as part or outside Ofgem's recently announced transmission charging review¹⁰.

Yours faithfully,

Anne Bennett
Charging & Revenue Manager

¹⁰ <http://www.ofgem.gov.uk/networks/trans/pt/pages/projecttransmit.aspx>

Appendix A: Updated tariffs for 2010/11

Tariffs quoted to 2dp for clarity

Generation Tariffs

Zone No.	Zone Name	Current Tariff (£/kW)	Updated Tariff (£/kW)	Difference (£/kW)
1	North Scotland	20.08	21.56	1.49
2	Peterhead	18.71	20.19	1.49
3	Western Highland & Skye	22.79	24.28	1.49
4	Central Highlands	17.63	19.12	1.49
5	Argyll	13.34	14.82	1.49
6	Stirlingshire	13.44	14.92	1.49
7	South Scotland	12.49	13.97	1.49
8	Auchencrosh	10.91	12.40	1.49
9	Humber & Lancashire	5.42	6.90	1.49
10	North East England	8.79	10.28	1.49
11	Anglesey	6.17	7.66	1.49
12	Dinorwig	5.50	6.98	1.49
13	South Yorks & North Wales	3.59	5.08	1.49
14	Midlands	1.56	3.05	1.49
15	South Wales & Gloucester	0.39	1.88	1.49
16	Central London	-6.41	-4.93	1.49
17	South East	0.81	2.29	1.49
18	Oxon & South Coast	-1.36	0.12	1.49
19	Wessex	-2.64	-1.15	1.49
20	Peninsula	-5.87	-4.39	1.49

HH Demand Tariffs (includes Small Generators adjustment)

Zone No.	Zone Name	Current Zonal Tariff (£/kW)	Updated Tariff (£/kW)	Difference (£/kW)
1	Northern Scotland	5.87	3.84	-2.03
2	Southern Scotland	11.22	9.19	-2.03
3	Northern	14.52	12.50	-2.03
4	North West	18.43	16.40	-2.03
5	Yorkshire	18.34	16.32	-2.03
6	N Wales & Mersey	18.89	16.87	-2.03
7	East Midlands	20.93	18.91	-2.03
8	Midlands	22.69	20.67	-2.03
9	Eastern	21.84	19.81	-2.03
10	South Wales	22.52	20.50	-2.03
11	South East	24.63	22.61	-2.03
12	London	26.76	24.73	-2.03
13	Southern	25.49	23.47	-2.03
14	South Western	26.06	24.03	-2.03

NHH Energy Consumption Tariffs (includes Small Generators adjustment)

Zone No.	Zone Name	Current Zonal Tariff (p/kWh)	Updated Tariff (p/kWh)	Difference (p/kWh)
1	Northern Scotland	0.79	0.58	-0.21
2	Southern Scotland	1.55	1.33	-0.22
3	Northern	1.99	1.78	-0.22
4	North West	2.55	2.34	-0.22
5	Yorkshire	2.52	2.25	-0.27
6	N Wales & Mersey	2.63	2.47	-0.16
7	East Midlands	2.89	2.65	-0.24
8	Midlands	3.18	2.96	-0.23
9	Eastern	3.03	2.75	-0.28
10	South Wales	3.03	2.77	-0.26
11	South East	3.38	3.17	-0.20
12	London	3.60	3.29	-0.31
13	Southern	3.54	3.33	-0.21
14	South Western	3.55	3.38	-0.17

Small generator discount = £5.37/kW

Appendix B: Effective tariffs for 2010/11

Tariffs quoted to 2dp for clarity

Generation Tariffs

Zone No.	Zone Name	Current Zonal Tariff (£/kW)	Updated Effective Tariff (£/kW)	Difference (£/kW)
1	North Scotland	20.08	20.57	0.50
2	Peterhead	18.71	19.20	0.50
3	Western Highland & Skye	22.79	23.29	0.50
4	Central Highlands	17.63	18.13	0.50
5	Argyll	13.34	13.83	0.50
6	Stirlingshire	13.44	13.93	0.50
7	South Scotland	12.49	12.98	0.50
8	Auchencrosh	10.91	11.40	0.50
9	Humber & Lancashire	5.42	5.91	0.50
10	North East England	8.79	9.29	0.50
11	Anglesey	6.17	6.67	0.50
12	Dinorwig	5.50	5.99	0.50
13	South Yorks & North Wales	3.59	4.09	0.50
14	Midlands	1.56	2.06	0.50
15	South Wales & Gloucester	0.39	0.89	0.50
16	Central London	-6.41	-5.92	0.50
17	South East	0.81	1.30	0.50
18	Oxon & South Coast	-1.36	-0.87	0.50
19	Wessex	-2.64	-2.14	0.50
20	Peninsula	-5.87	-5.38	0.50

HH Demand Tariffs (includes Small Generators adjustment)

Zone No.	Zone Name.	Current Zonal Tariff (£/kW)	Updated Effective Tariff (£/kW)	Difference (£/kW)
1	Northern Scotland	5.87	5.19	-0.68
2	Southern Scotland	11.22	10.54	-0.68
3	Northern	14.52	13.85	-0.68
4	North West	18.43	17.75	-0.68
5	Yorkshire	18.34	17.67	-0.68
6	N Wales & Mersey	18.89	18.22	-0.68
7	East Midlands	20.93	20.26	-0.68
8	Midlands	22.69	22.02	-0.68
9	Eastern	21.84	21.16	-0.68
10	South Wales	22.52	21.85	-0.68
11	South East	24.63	23.96	-0.68
12	London	26.76	26.08	-0.68
13	Southern	25.49	24.82	-0.68
14	South Western	26.06	25.38	-0.68

NHH Energy Consumption Tariffs (includes Small Generators adjustment)

Zone No.	Zone Name	Current Zonal Tariff (p/kWh)	Annual Average Tariff (p/kWh)	Difference (p/kWh)
1	Northern Scotland	0.79	0.71	-0.08
2	Southern Scotland	1.55	1.46	-0.09
3	Northern	1.99	1.91	-0.09
4	North West	2.55	2.47	-0.09
5	Yorkshire	2.52	2.41	-0.11
6	N Wales & Mersey	2.63	2.56	-0.06
7	East Midlands	2.89	2.79	-0.10
8	Midlands	3.18	3.09	-0.09
9	Eastern	3.03	2.92	-0.11
10	South Wales	3.03	2.92	-0.10
11	South East	3.38	3.30	-0.08
12	London	3.60	3.48	-0.13
13	Southern	3.54	3.45	-0.08
14	South Western	3.55	3.48	-0.07

Small generator discount = £5.46/kW

Appendix C: Updated STTEC and LDTEC tariffs

Tariffs quoted to 2dp for clarity

Power Station	LDTEC tariff (£/kW per week)		STTEC tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days STTEC Period	35 Days STTEC Period	42 Days STTEC Period
Aberthaw	0.07	0.01	0.27	0.34	0.41
Aigas	1.11	0.08	4.46	5.57	6.69
An Suidhe Wind Farm, Argyll	0.78	0.06	3.14	3.92	4.71
Andershaw	0.80	0.06	3.22	4.02	4.83
Arecleoch	0.61	0.04	2.46	3.07	3.69
Baglan Bay	0.06	0.00	0.24	0.30	0.36
Barking	0.08	0.01	0.31	0.39	0.47
Barry	0.05	0.00	0.19	0.23	0.28
Black Law	0.87	0.06	3.49	4.36	5.24
Brimsdown	0.08	0.01	0.31	0.39	0.47
Britned	0.09	0.01	0.34	0.43	0.52
Clunie	0.96	0.07	3.83	4.79	5.75
Cockenzie	0.69	0.05	2.77	3.46	4.15
Connahs Quay	0.23	0.02	0.93	1.16	1.39
Corby	0.11	0.01	0.43	0.54	0.65
Coryton	0.09	0.01	0.36	0.45	0.54
Cottam	0.23	0.02	0.93	1.16	1.39
Cottam Development Centre	0.23	0.02	0.93	1.16	1.39
Cowes	0.00	0.00	0.00	0.00	0.00
Cruachan	0.79	0.06	3.18	3.97	4.76
Crystal Rig 2	0.69	0.05	2.77	3.46	4.15
Culligran	1.15	0.08	4.61	5.76	6.91
Damhead Creek	0.09	0.01	0.34	0.43	0.52
Deanie	1.19	0.09	4.78	5.97	7.16
Deeside	0.23	0.02	0.93	1.16	1.39
Derwent	0.11	0.01	0.43	0.54	0.65
Didcot	0.00	0.00	0.01	0.01	0.02
Didcot B	0.00	0.00	0.01	0.01	0.02
Didcot GTs	0.00	0.00	0.01	0.01	0.02
Dinorwig	0.52	0.04	2.09	2.62	3.14
Drax	0.33	0.02	1.31	1.64	1.97
Dungeness B	0.08	0.01	0.31	0.38	0.46
Dunlaw Extension	0.71	0.05	2.85	3.56	4.27
Edinbane Wind	1.48	0.11	5.92	7.40	8.88
Eggborough	0.33	0.02	1.31	1.64	1.97
Errochty	0.96	0.07	3.83	4.79	5.75
Fallago	0.70	0.05	2.81	3.52	4.22
Farr Windfarm	1.34	0.10	5.35	6.69	8.03
Fasnakyle G1 & G3	1.23	0.09	4.92	6.15	7.38
Fawley	0.00	0.00	0.00	0.00	0.00
Fawley CHP	0.00	0.00	0.00	0.00	0.00
Ferrybridge B	0.33	0.02	1.33	1.66	1.99
Ffestiniog	0.23	0.02	0.92	1.14	1.37
Fiddlers Ferry	0.33	0.02	1.33	1.66	1.99
Fife	0.75	0.05	2.99	3.74	4.48
Finlarig	0.97	0.07	3.88	4.85	5.82
Foyers	1.11	0.08	4.45	5.56	6.67
French Interconnector	0.09	0.01	0.34	0.43	0.52
Glandford Brigg	0.21	0.02	0.86	1.07	1.29
Glendoe	1.32	0.10	5.29	6.61	7.94
Glenmoriston	1.28	0.09	5.13	6.41	7.70

Power Station	LDTEC tariff (£/kW per week)		STTEC tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days STTEC Period	35 Days STTEC Period	42 Days STTEC Period
Gordonbush Wind	1.15	0.08	4.58	5.73	6.87
Grain	0.09	0.01	0.34	0.43	0.52
Grangemouth	0.73	0.05	2.93	3.66	4.39
Great Yarmouth	0.11	0.01	0.43	0.54	0.65
Greater Gabbard Offshore Wind Farm	0.15	0.01	0.61	0.77	0.92
Hadyard Hill	0.69	0.05	2.75	3.44	4.13
Hartlepool	0.52	0.04	2.07	2.59	3.11
Heysham	0.33	0.02	1.31	1.64	1.97
Hinkley Point B	0.00	0.00	0.00	0.00	0.00
Hunterston	0.68	0.05	2.74	3.42	4.11
Immingham	0.32	0.02	1.27	1.59	1.91
Indian Queens	0.00	0.00	0.00	0.00	0.00
Invergarry	1.20	0.09	4.81	6.02	7.22
Ironbridge	0.12	0.01	0.47	0.58	0.70
Keadby	0.22	0.02	0.89	1.11	1.34
Kilbraur	1.14	0.08	4.55	5.69	6.83
Killingholme (NP)	0.35	0.03	1.40	1.74	2.09
Killingholme (Powergen)	0.35	0.03	1.40	1.74	2.09
Kilmorack	1.10	0.08	4.38	5.48	6.57
Kings Lynn A	0.21	0.02	0.86	1.07	1.29
Kingsnorth	0.09	0.01	0.34	0.43	0.52
Langage	0.00	0.00	0.00	0.00	0.00
Little Barford	0.12	0.01	0.47	0.58	0.70
Littlebrook D	0.08	0.01	0.31	0.38	0.46
Lochay	0.97	0.07	3.89	4.86	5.83
Longannet	0.75	0.06	3.01	3.77	4.52
Luichart	1.13	0.08	4.52	5.65	6.78
Marchwood	0.00	0.00	0.00	0.00	0.00
Mark Hill Wind Farm	0.60	0.04	2.41	3.01	3.62
Medway	0.09	0.01	0.34	0.43	0.52
Millennium Wind	1.30	0.09	5.18	6.48	7.77
Mossford	1.23	0.09	4.91	6.14	7.37
Moyle Interconnector	0.56	0.04	2.25	2.81	3.37
Nant	0.83	0.06	3.31	4.13	4.96
Oldbury-on-Severn	0.12	0.01	0.49	0.62	0.74
Orrin	1.09	0.08	4.35	5.44	6.52
Peterborough	0.21	0.02	0.86	1.07	1.29
Peterhead	1.03	0.08	4.12	5.15	6.18
Quoich	1.23	0.09	4.92	6.15	7.38
Ratcliffe-on-Soar	0.13	0.01	0.50	0.63	0.75
Rocksavage	0.22	0.02	0.87	1.09	1.31
Roosecote	0.31	0.02	1.24	1.55	1.86
Rugeley B	0.12	0.01	0.47	0.58	0.70
Rye House	0.08	0.01	0.31	0.38	0.46
Saltend	0.33	0.02	1.33	1.67	2.00
Seabank	0.05	0.00	0.22	0.27	0.33
Sellafield	0.31	0.02	1.24	1.55	1.86
Severn Power	0.06	0.00	0.23	0.28	0.34
Sheringham Shoal Offshore Windfarm	0.11	0.01	0.43	0.54	0.65
Shoreham	0.00	0.00	0.00	0.00	0.00
Shotton	0.21	0.02	0.86	1.07	1.29
Sizewell B	0.12	0.01	0.47	0.58	0.70
Sloy G2 & G3	0.73	0.05	2.93	3.67	4.40
South Humber Bank	0.35	0.03	1.40	1.75	2.10

Power Station	LDTEC tariff (£/kW per week)		STTEC tariff (£/kW)		
	Higher Rate	Lower Rate	28 Days STTEC Period	35 Days STTEC Period	42 Days STTEC Period
Spalding	0.23	0.02	0.94	1.17	1.41
Staythorpe	0.23	0.02	0.93	1.16	1.39
Sutton Bridge	0.22	0.02	0.89	1.11	1.34
Taylor's Lane	0.00	0.00	0.00	0.00	0.00
Teesside	0.51	0.04	2.06	2.57	3.08
Thanet Offshore Windfarm	0.07	0.00	0.27	0.34	0.41
Tilbury B	0.08	0.01	0.31	0.39	0.47
Toddleburn	0.71	0.05	2.85	3.56	4.27
Torness	0.69	0.05	2.76	3.45	4.14
Uskmouth	0.06	0.00	0.25	0.31	0.37
Walney I Offshore Windfarm	0.31	0.02	1.24	1.55	1.86
West Burton	0.23	0.02	0.93	1.16	1.39
West Burton B Power Station	0.23	0.02	0.93	1.16	1.39
Whitelee	0.76	0.06	3.04	3.80	4.56
Wilton	0.51	0.04	2.06	2.57	3.08
Wylfa	0.36	0.03	1.43	1.79	2.15

Appendix D: Calculation of revised monthly and annual liabilities

Generation liabilities

The following information is needed to calculate revised annual and monthly generation TNUoS liabilities:

- payments made to date;
- in positive charging zones (based on the effective tariff), the highest TEC in the charging year, and in negative charging zones (based on the effective tariff) the average of the three peak exports, each separated by 10 days; and
- effective tariff for the relevant generation zone.

In positive generation zones, the revised annual and remaining monthly liabilities are given by:

$$\text{Revised Annual Liability} = \text{TEC} \times \text{effective tariff}$$

$$\text{Remaining Monthly Liability} = \frac{\text{Revised Annual Liability} - \text{Payments made to date}}{\text{Months remaining in 2010/11}}$$

In negative generation zones, the overall approach is as outlined above albeit generators' annual payments are based on the average of the three peak exports between 1 November and 28 February, each peak separated by at least 10 clear days. During the year payments are generally based on TEC but, to the extent the generators average export is less than TEC, an adjustment will be made during generation reconciliation.

HH demand liabilities

For suppliers with half-hourly (HH) demand within their portfolio, the following information is needed to calculate revised annual and monthly liabilities:

- payments made to date;
- triad demand; and
- effective tariff for the relevant demand zone.

The revised annual and remaining monthly HH demand liabilities are given by:

$$\text{Revised Annual Liability} = \text{Triad demand} \times \text{effective tariff}$$

$$\text{Remaining Monthly Liability} = \frac{\text{Revised Annual Liability} - \text{Payments made to date}}{\text{Months remaining in 2010/11}}$$

Throughout the year charges will remain based on the suppliers' own forecast triad demand. To the extent that the supplier's actual triad demand is different from that forecast, an adjustment will be made during initial demand reconciliation.

NHH Demand liabilities

For suppliers with non half-hourly (NHH) demand within their portfolio, the following information is needed to calculate revised annual and monthly liabilities:

- annual energy consumption;
- energy consumption before and after the tariff update;
- payments made to date; and
- the initial and updated tariffs in the relevant demand zone.

The revised annual and remaining monthly NHH demand liabilities are given by:

$$\text{Revised Annual Liability} = (\text{Consumption with initial tariff} \times \text{initial tariff}) + (\text{Consumption with updated tariff} \times \text{updated tariff})$$

$$\text{Remaining Monthly Liability} = \frac{\text{Revised Annual Liability} - \text{Payments made to date}}{\text{Months remaining in 2010/11}}$$

National Grid will forecast consumption of each supplier for the period that the initial tariff applied and will then derive the consumption during the period that updated tariff applies using suppliers' own forecast of total annual energy consumption. National Grid's forecast will be based on actual metered data, where available, and suppliers' consumption during the equivalent months in the previous year, using a similar methodology to that described in Appendix TN-7 in the Statement of the Use of System Charging Methodology. National Grid intends to write to all suppliers with the data it has used to derive this forecast and suppliers will have the opportunity to amend this. To the extent that either National Grid's or suppliers' energy consumption forecasts are different from the actual consumption during the relevant periods, an adjustment will be made during the initial demand reconciliation.

Appendix E1: Example - Generation tariff changes

A 1000MW generator in Zone 10 currently has a tariff of £8.79/kW and this will change to £10.28/kW on 1 December 2010. Prior to the tariff update the effective tariff is £8.79/kW, as it was expected to apply for the full 12 month period, and following the tariff change the effective tariff will be £9.29/kW. The resulting annual and monthly liabilities are shown in the following table.

Month	TEC (MW)	Effective Tariff (£/kW)	Annual liability (£m)	Payment to date (£m)	Monthly Payment (£m)
Apr	1000	8.79	8.8	0.00	0.73
May	1000	8.79	8.8	0.73	0.73
Jun	1000	8.79	8.8	1.47	0.73
Jul	1000	8.79	8.8	2.20	0.73
Aug	1000	8.79	8.8	2.93	0.73
Sep	1000	8.79	8.8	3.66	0.73
Oct	1000	8.79	8.8	4.40	0.73
Nov	1000	8.79	8.8	5.13	0.73
Dec	1000	9.29	9.3	5.86	0.86
Jan	1000	9.29	9.3	6.72	0.86
Feb	1000	9.29	9.3	7.57	0.86
Mar	1000	9.29	9.3	8.43	0.86
Total					9.29

Negative charging zones

A 1000MW generator in Zone 19 currently has a tariff of -£2.64/kW and this will change to -£1.15/kW on 1 December 2010. Prior to the tariff update the effective tariff is -£2.64/kW, as it was expected to apply for the full 12 month period, and following the tariff change the effective tariff will be -£2.14/kW. The resulting annual and monthly liabilities are shown in the following table.

Month	TEC (MW)	Effective Tariff (£/kW)	Annual liability (£m)	Payment to date (£m)	Monthly Payment (£m)
Apr	1000	-2.64	-2.6	0.00	-0.22
May	1000	-2.64	-2.6	-0.22	-0.22
Jun	1000	-2.64	-2.6	-0.44	-0.22
Jul	1000	-2.64	-2.6	-0.66	-0.22
Aug	1000	-2.64	-2.6	-0.88	-0.22
Sep	1000	-2.64	-2.6	-1.10	-0.22
Oct	1000	-2.64	-2.6	-1.32	-0.22
Nov	1000	-2.64	-2.6	-1.54	-0.22
Dec	1000	-2.14	-2.1	-1.76	-0.10
Jan	1000	-2.14	-2.1	-1.85	-0.10
Feb	1000	-2.14	-2.1	-1.95	-0.10
Mar	1000	-2.14	-2.1	-2.04	-0.10
Total					-2.14

The generator's average 3 export peaks between 1 November 2010 and 28 February 2011, separated by 10 days, was 900MW. This reduces the actual payments that should have been made to the generator and this is recovered through generation reconciliation, as shown in the following table.

Month	Actual Export (MW)	Monthly Liability based on actual export (£m)	Previously invoiced (£m)	Reconciliation (£m)
Apr	900	-0.20	-0.22	0.02
May	900	-0.20	-0.22	0.02
Jun	900	-0.20	-0.22	0.02
Jul	900	-0.20	-0.22	0.02
Aug	900	-0.20	-0.22	0.02
Sep	900	-0.20	-0.22	0.02
Oct	900	-0.20	-0.22	0.02
Nov	900	-0.20	-0.22	0.02
Dec	900	-0.09	-0.10	0.01
Jan	900	-0.09	-0.10	0.01
Feb	900	-0.09	-0.10	0.01
Mar	900	-0.09	-0.10	0.01
Total		-1.93	-2.14	0.21

Note in practice, interest is payable / refundable on a monthly basis.

Appendix E2: Example – HH Demand tariff changes

A supplier has a portfolio of HH demand in Zone 6. The supplier's forecast expected triad demand is 300 MW. A mid-year tariff update takes effect on 1 December 2010, changing the TNUoS tariff from £18.89/kW to £16.87/kW. Prior to the tariff update the effective tariff is £18.89/kW, as it was expected to apply for the full 12 month period. The effective tariff from 1 December 2010 is £18.22/kW. The resulting annual and monthly liabilities are shown in the following table.

Month	Forecast Triad (MW)	Effective Tariff (£/kW)	Forecast Annual liability (£m)	Payment to date (£m)	Monthly Payment (£m)
Apr	300	18.89	5.7	0.00	0.47
May	300	18.89	5.7	0.47	0.47
Jun	300	18.89	5.7	0.94	0.47
Jul	300	18.89	5.7	1.42	0.47
Aug	300	18.89	5.7	1.89	0.47
Sep	300	18.89	5.7	2.36	0.47
Oct	300	18.89	5.7	2.83	0.47
Nov	300	18.89	5.7	3.31	0.47
Dec	300	18.22	5.5	3.78	0.42
Jan	300	18.22	5.5	4.20	0.42
Feb	300	18.22	5.5	4.62	0.42
Mar	300	18.22	5.5	5.04	0.42
Total					5.46

Annual Reconciliation

The supplier's actual triad demand was 310MW, which results in an initial demand reconciliation. The supplier's actual liability is £5.65m (310MW × £18.22/kW). The amount paid is £5.46m therefore the reconciliation is £0.18m, which is shown in more detail below.

Month	Actual Triad (MW)	Monthly Liability based on actual Triad (£m)	Previously invoiced (£m)	Reconciliation
Apr	310	0.49	0.47	0.02
May	310	0.49	0.47	0.02
Jun	310	0.49	0.47	0.02
Jul	310	0.49	0.47	0.02
Aug	310	0.49	0.47	0.02
Sep	310	0.49	0.47	0.02
Oct	310	0.49	0.47	0.02
Nov	310	0.49	0.47	0.02
Dec	310	0.44	0.42	0.01
Jan	310	0.44	0.42	0.01
Feb	310	0.44	0.42	0.01
Mar	310	0.44	0.42	0.01
Total		5.65	5.46	0.18

Note in practice, interest is payable / refundable on a monthly basis.

Appendix E3: Example – NHH Demand tariff changes

A supplier has a portfolio NHH demand in Zone 6. The supplier's forecast energy consumption between 4pm to 7pm is expected to be 200 GWh. A mid-year tariff update takes effect on 1 December 2010, at which point National Grid forecasts the supplier's energy consumption to be 60% of the total annual consumption.

The TNUoS tariff changes from 2.63p/kWh to 2.47p/kWh. The chargeable energy consumption prior to the tariff update is forecast to be 120 GWh and the chargeable energy consumption following the tariff update is forecast to be 80 GWh, based on the consumption profile outlined above. Prior to the tariff update the suppliers annual NHH liability was £5.25m and this is changed to £5.12m following the tariff change. The resulting annual and monthly liabilities are shown in the following table.

Month	annual consumption (GWh)	Consumption Pre-update (GWh)	Consumption Post-update (GWh)	Applicable Tariff (p/kWh)	Annual liability (£m)	Payment to date (£m)	Monthly Payment (£m)
Apr	200	120		2.63	5.25	0.00	0.44
May	200	120		2.63	5.25	0.44	0.44
Jun	200	120		2.63	5.25	0.88	0.44
Jul	200	120		2.63	5.25	1.31	0.44
Aug	200	120		2.63	5.25	1.75	0.44
Sep	200	120		2.63	5.25	2.19	0.44
Oct	200	120		2.63	5.25	2.63	0.44
Nov	200	120		2.63	5.25	3.06	0.44
Dec	200		80	2.47	5.12	3.50	0.41
Jan	200		80	2.47	5.12	3.91	0.41
Feb	200		80	2.47	5.12	4.31	0.41
Mar	200		80	2.47	5.12	4.72	0.41
Total							5.12

Annual Reconciliation

Scenario 1 – Change in total energy consumption

The supplier's actual consumption during the year was 190 GWh but the proportion between consumption pre and post the tariff update is correct i.e. 114 GWh (60%) and 76 GWh (40%). This changes the supplier's total annual liability to £4.87m (i.e. 114 GWh × 2.63 p/kWh + 76 GWh × 2.47 p/kWh). This results in an initial demand reconciliation of -£0.26m.

Month	Actual consumption (GWh)	Consumption Pre-update (GWh)	Consumption Post-update (GWh)	Actual Monthly Liability (£m)	Invoiced Payments (£m)	Reconciliation (£m)
Apr	190	114		0.42	0.44	-0.02
May	190	114		0.42	0.44	-0.02
Jun	190	114		0.42	0.44	-0.02
Jul	190	114		0.42	0.44	-0.02
Aug	190	114		0.42	0.44	-0.02
Sep	190	114		0.42	0.44	-0.02
Oct	190	114		0.42	0.44	-0.02
Nov	190	114		0.42	0.44	-0.02
Dec	190		76	0.39	0.41	-0.02
Jan	190		76	0.39	0.41	-0.02
Feb	190		76	0.39	0.41	-0.02
Mar	190		76	0.39	0.41	-0.02
Total				4.87	5.12	-0.26

Scenario 2 – Change in consumption pre / post the tariff update

The actual demand taken by the supplier during the year was 200 GWh as the supplier forecast but the proportion between consumption prior to the tariff change was 65% (not 60% as forecast). This changes the consumption applicable to the initial and updated tariffs, which changes the supplier's total annual liability to £5.14m (i.e. 130 GWh × 2.63 p/kWh + 70 GWh × 2.47 p/kWh). This results in an initial demand reconciliation of £0.02m (rounded to 2dp).

Month	Actual consumption (GWh)	Consumption Pre-update (GWh)	Consumption Post-update (GWh)	Actual Monthly Liability (£m)	Invoiced Payments (£m)	Reconciliation (£m)
Apr	200	130		0.438	0.438	0.000
May	200	130		0.438	0.438	0.000
Jun	200	130		0.438	0.438	0.000
Jul	200	130		0.438	0.438	0.000
Aug	200	130		0.438	0.438	0.000
Sep	200	130		0.438	0.438	0.000
Oct	200	130		0.438	0.438	0.000
Nov	200	130		0.438	0.438	0.000
Dec	200		70	0.410	0.406	0.004
Jan	200		70	0.410	0.406	0.004
Feb	200		70	0.410	0.406	0.004
Mar	200		70	0.410	0.406	0.004
Total				5.139	5.123	0.016

Note in practice, reconciliation will deal with a combination of the above factors and interest is payable / refundable on a monthly basis.