November 2018 Forecast of 2019/20 TNUoS Tariffs Webinar

Wednesday 12 December 2018

10:30 – 11:30

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Agenda

1	Introduction
2	Timetable
3	CUSC modifications
4	Forecast Inputs
	Charging bases
	Demand Tariffs
	Generation Tariffs
	Onshore and offshore local circuits
	Revenue
5	2019/20 Final Tariffs
6	Q&A and Feedback

Revenue team

Paul Wakeley

Forecasting, setting and billing TNUoS to recover £2.7bn of TO revenue per year from generators, demand and suppliers

Tom Selby	Jo Zhou	Alice Grayson	Jennie Groome	Andrew Havvas	Jessica Rivalland	Paul Hitchcock	Anthony Tichivangana	Luke Craddock
								

TNUoS Tariff forecasting and setting

TNUoS Billing

Connection charging

Tariff Timetable

2019/20 TNUoS

- ✓ Draft tariffs 30 November 2018
- Final tariffs 31 January 2019

Changes to 2019/20 Methodology

With the Authority:
Small Generator Discount (see next slide…)

Modification in workgroup:
- **CMP280:** Removing liability for TNUoS demand residual charges from generation and storage users
- **CMP286 & CMP287**: Improving TNUoS Predictability through Increased Notice of TNUoS Inputs
- **CMP292**: Introducing a Section 8 cut-off date for changes to the Charging Methodologies
- **CMP301:** HVDC local circuit charging

Rejected:
- **CMP251**: Removing the error margin in the TNUoS generation revenue cap calculation

Potential extension of the Small Generator Discount

Ofgem announced a consultation into the extension of the Small Generator Discount, closing 4 January 2019

https://www.ofgem.gov.uk/ofgem-publications/143676

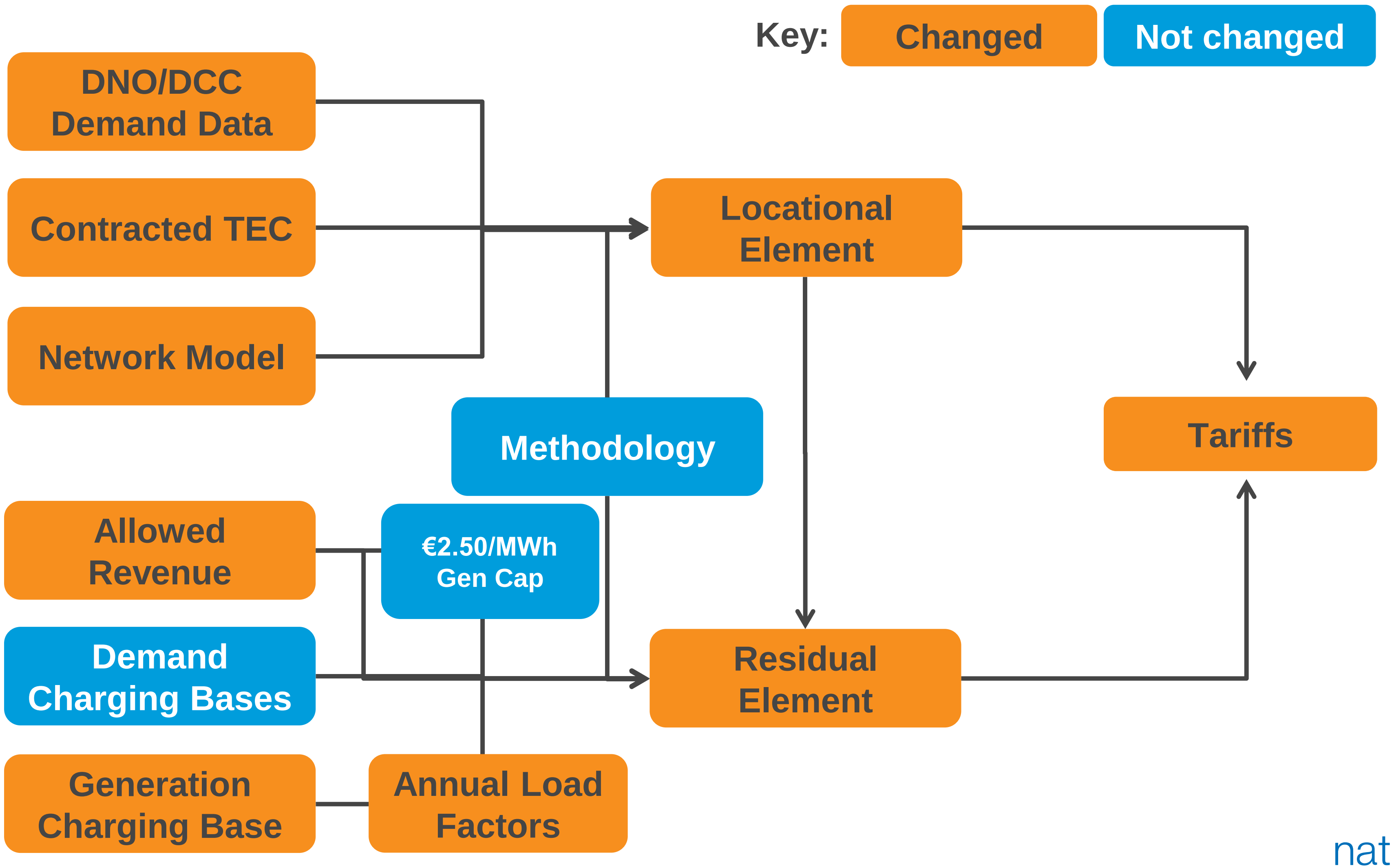
Section 22 of the report provides a breakdown of the forecasted discount/additional demand charges, should the discount be extended into 2019/20:

- Forecast Small Generator Discount: £11.82/kW
- Additional charge to HH customers: £0.64/kW
- Additional charge to NHH customers: 0.083p/kWh

Updated values will be published in the Final tariffs report if the SGD is extended

Forecast Inputs

Changes since the June Forecast



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Generation and demand volumes

- Contracted TEC has reduced by 2GW.
- Chargeable TEC has increased by 1.4GW (confidential information)
- Prior to Draft tariffs, locational tariffs are derived from Best View TEC
- Draft & Final locational tariffs are based on contracted TEC as of 31 October.

Generation (GW)	2018/19	2019/20 November Forecast	2019/20 April Forecast	2019/20 June Forecast	2019/20 Draft Forecast
Contracted TEC	79.0	85.5	85.9	83.9	80.6
Modelled Best View TEC	79.0	77.7	77.5	77.7	80.6
Chargeable TEC	71.9	73.8	71.7	71.9	73.3

Demand Charging Bases	2019/20 April	2019/20 June	2019/20 Draft
NHH Demand (4pm-7pm TWh)	25.5	25.5	25.5
Total Average Gross Triad (GW)	51.3	51.3	51.3
HH Demand Average Gross Triad (GW)	18.0	18.0	18.0
Embedded Generation Export (GW)	7.8	7.8	7.8

Demand Tariffs

Demand Tariffs

- **Decrease in demand tariffs**
- **Decrease in overall revenue**
- **Changes to generation and updates to Week 24 demand data has affected network flows, impacting zonal tariffs**
- **£111m payable to Embedded Exports (7.75GW) through EET**

Zone	Zone Name	HH Demand Tariff (£/kW)	NHH Demand Tariff (p/kWh)	Embedded Export Tariff (£/kW)
1	Northern Scotland	20.395103	2.745374	0.000000
2	Southern Scotland	30.179224	3.950803	0.000000
3	Northern	40.450515	5.138436	7.604902
4	North West	47.255413	6.126991	14.409800
5	Yorkshire	47.463150	6.040941	14.617537
6	N Wales & Mersey	48.769200	6.148322	15.923587
7	East Midlands	50.863602	6.663329	18.017989
8	Midlands	52.351899	6.902240	19.506286
9	Eastern	53.212159	7.421820	20.366546
10	South Wales	49.149475	5.797504	16.303862
11	South East	55.534682	7.870880	22.689070
12	London	58.599620	6.215107	25.754007
13	Southern	56.762613	7.510850	23.917000
14	South Western	55.110511	7.692623	22.264898

Residual charge for demand:	50.822881

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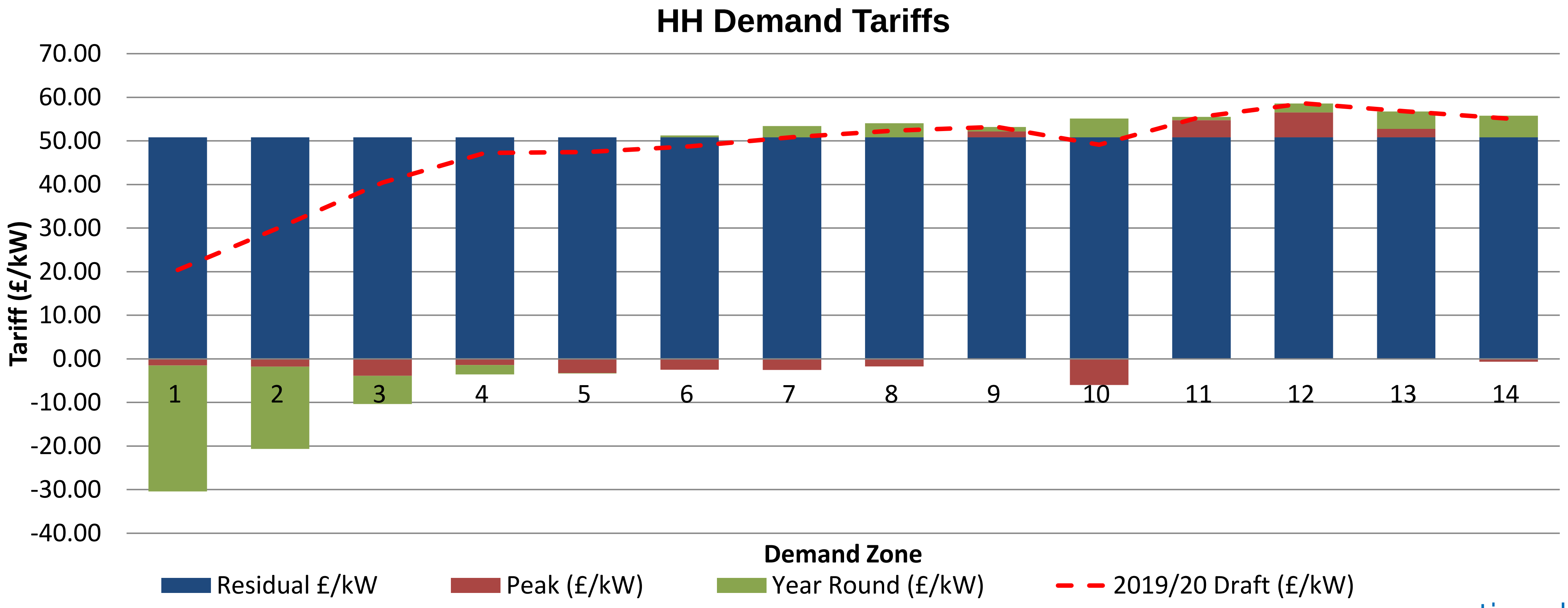
HH Gross Demand Tariff

The average tariff is £49.94/kW, a decrease of £0.80/kW due to the £39.7m decrease in revenue to be recovered from demand tariffs compared to the June forecast.

The residual element of the tariffs has decreased by £0.87/kW.



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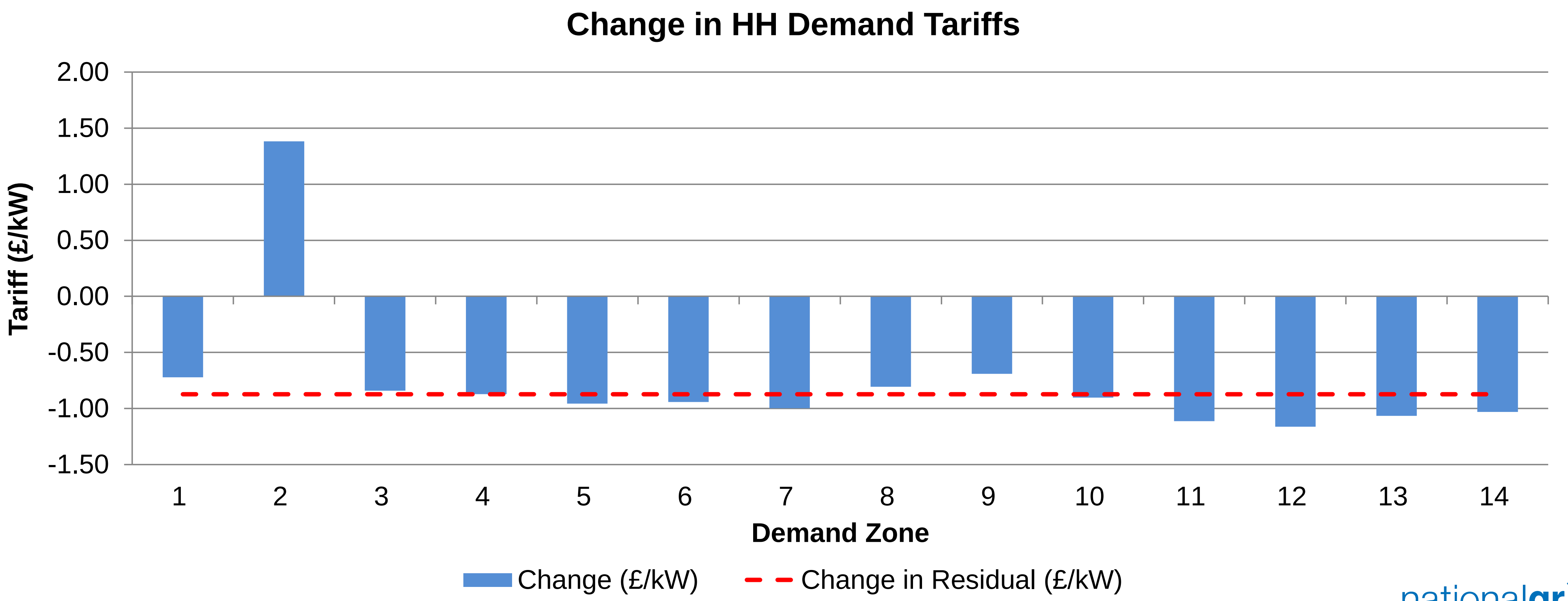
Changes to HH tariffs

The tariff in most zones decrease the same amount as the residual.

Demand increases in Scotland and generally decreasing demand elsewhere has caused significant changes in Zone 2, due to changes to system flows.



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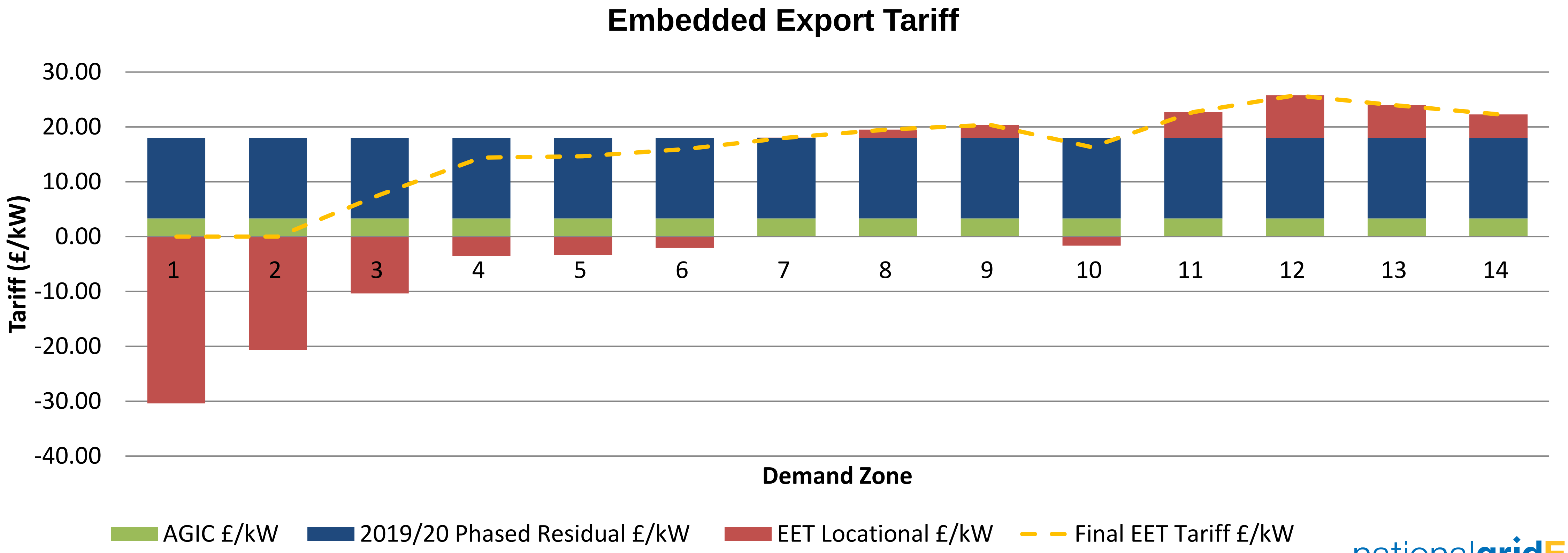
Embedded Export Tariff

The average tariff is £14.26/kW, decreased by £0.04/kW from June.

The total volume of embedded export remains 7.75GW.

Zones 1 and 2 have an EET of £0.00/kW due to the scheduled reduction in the phased residual.



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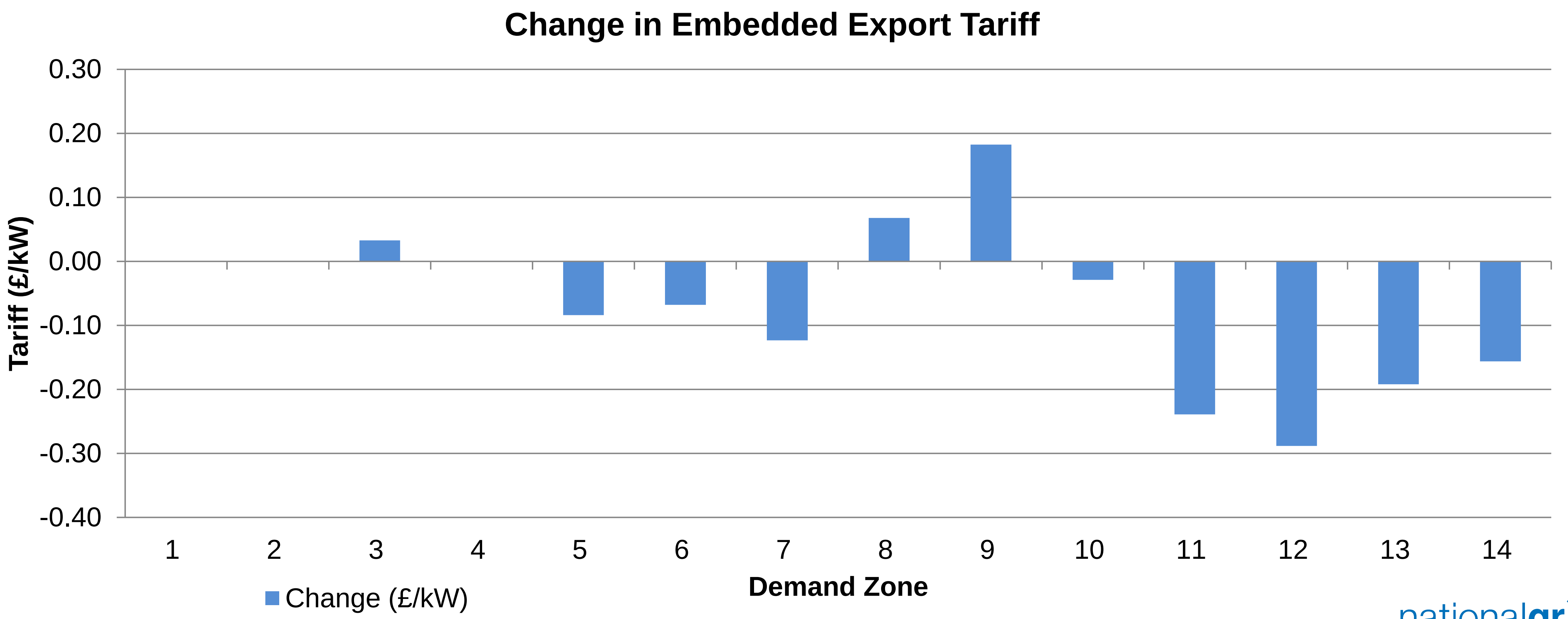
Changes to EETs

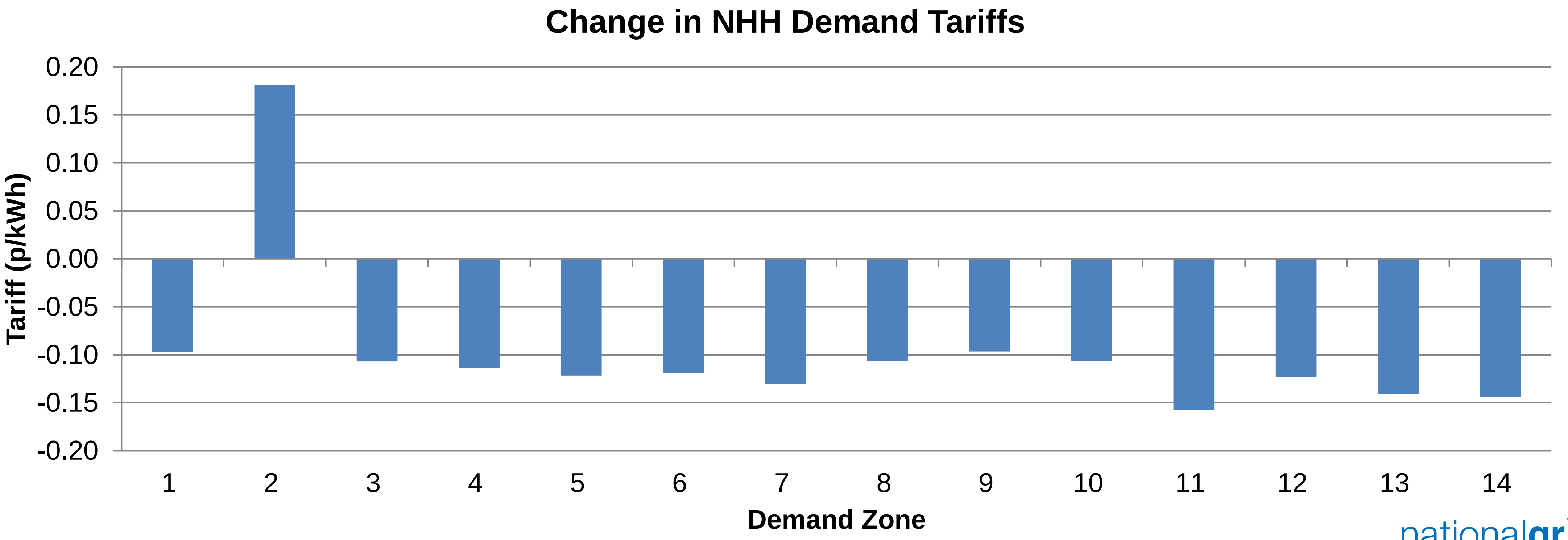
Very small changes; the changes are due to the change in the demand locational tariffs.



NHH Tariffs

Average NHH tariffs have decreased by 0.10p/kWh as the amount of revenue to be collected has decreased.

The NHH changes reflect the changes in the HH demand tariffs; there is an increase in Zone 2, all other zones show a decrease.



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Generation Tariffs

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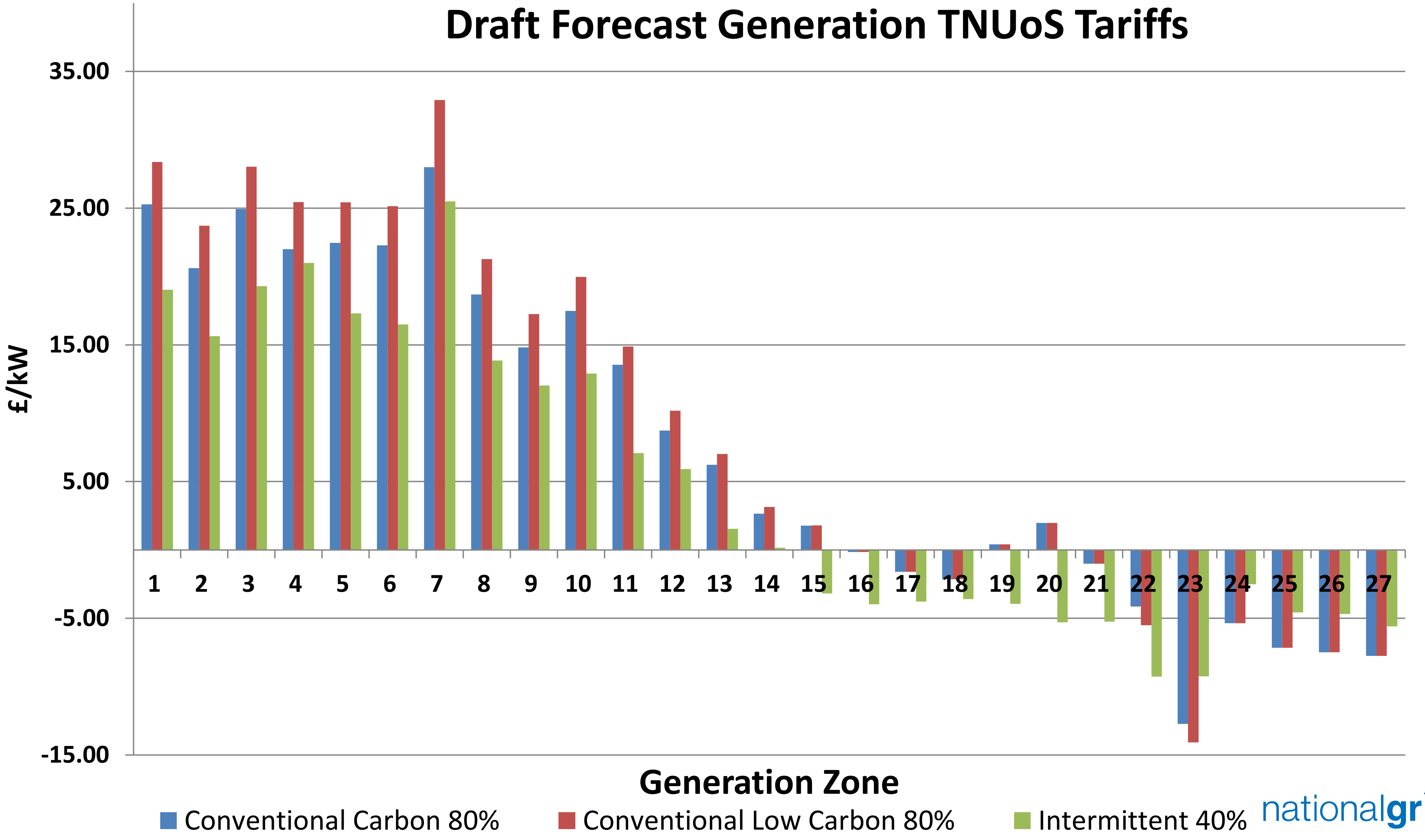
Generation tariffs



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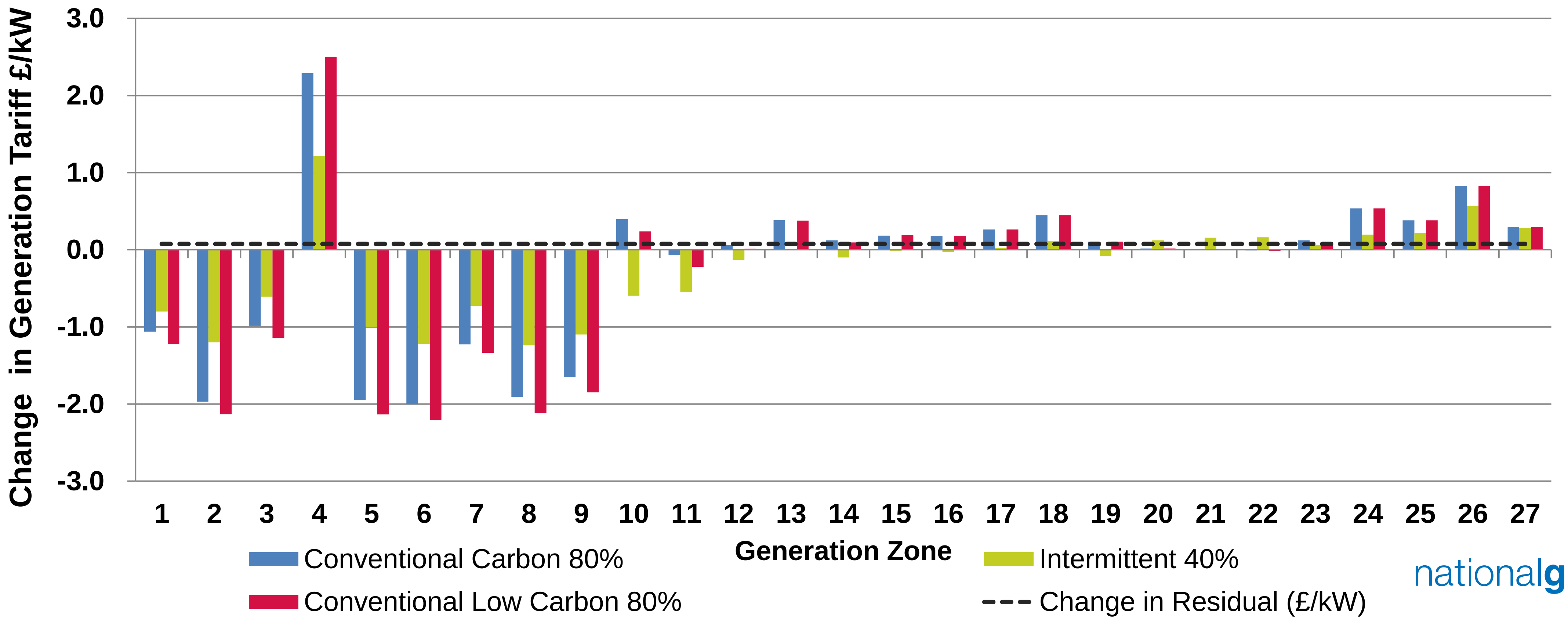
Generation tariff changes

Residual increased by £0.08

Scotland: increase in Week 24 locational demand causes general decrease to tariffs

Demand changes have minor effect on zones 24-27



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TEC changes since April

Eggborough, Carnedd Wen removed as will not be connected in 2019/20

Moyle (Auchencrosh) interconnector increases by 227MW

Power Station	MW Change	Node	Generation Zone
Auchencrosh (interconnector CCT)	227	AUCH20	10
Carnedd Wen Wind Farm	-150	TRAW40	18
CDCL	50	COTT40	16
Crookedstane Windfarm	-26.8	CLYS2R	11
Eggborough	-1870	EGGB40	15
Holyhead	-210	WYLF40	19
Marex	-1500	CONQ40	16
Millennium South	-25	MILS1Q	3
Pogbie Wind Farm	-2.2	DUNE10	11
Robin Rigg East Offshore Wind Farm	6	HARK40	12
Spalding	70	SPLN40	17
Spalding Energy Expansion	-0.01	SPLN40	17
Whitson Substation	49.9	WHSO20	21

Local Circuits

Local Circuits

- In most cases, system flow changes are minimal on local circuits, so local circuit tariffs are relatively stable.
- Generators on transit routes (i.e. having multiple circuits connecting to different parts of the wider network) are affected by system flow changes, and some have seen significant changes to their local circuit tariffs.
- Circuit parameters have been updated according to the latest ETYS data, causing tariff changes to some generators.

Substation Name	(£/kW)	Substation Name	(£/kW)	Substation Name	(£/kW)
Achruach	4.233666	Dunhill	1.412272	Luichart	0.565969
Aigas	0.644872	Dumnaglass	1.830606	Mark Hill	0.863311
An Suidhe	3.002388	Edinbane	6.749147	Marchwood	0.376298
Arecleoch	2.047871	Ewe Hill	2.399796	Millennium Wind	1.800496
Baglan Bay	0.750267	Fallago	0.018259	Moffat	0.177954
Beinneun Wind Farm	1.480658	Farr	3.515507	Mossford	2.839493
Bhlaraidh Wind Farm	0.648821	Fernoch	4.337076	Nant	-1.211205
Black Hill	1.531255	Ffestiniogg	0.249457	Necton	1.108759
BlackCraig Wind Farm	6.206946	Finlarig	0.315718	Rhigos	0.100477
Black Law	1.722917	Foyers	0.742448	Rocksavage	0.017459
BlackLaw Extension	3.653668	Galawhistle	1.458315	Saltend	0.336368
Clyde (North)	0.108132	Glendoe	1.813672	South Humber Bank	0.938014
Clyde (South)	0.125049	Glenglass	4.744186	Spalding	0.276480
Corriegarth	3.108511	Gordonbush	1.169225	Strathbrora	0.779835
Corriemoillie	1.640955	Griffin Wind	9.565045	Stronelairg	1.413146
Coryton	0.052904	Hadyard Hill	5.937499	Strathy Wind	2.003637
Cruachan	1.798572	Harestanes	2.482693	Wester Dod	0.287131
Crystal Rig	-0.048382	Hartlepool	0.596300	Whitelee	0.104644
Culligran	1.708927	Hedon	0.178507	Whitelee Extension	0.290910
Deanie	2.807523	Invergarry	-0.675138	Gills Bay	2.483116
Dersalloch	2.375095	Kilgallioch	1.037718	Kype Muir	1.462492
Didcot	0.519707	Kilmorack	0.194729	Middle Muir	1.954443
Dinorwig	2.365700	Langage	0.648712	Dorenell	2.069263
Dunlaw Extension	1.481497	Lochay	0.360820	Millennium South	0.928980
Aberdeen Bay	2.570844	Middleton	0.110030	Killingholme	0.704527

Offshore Local Tariffs

Increased each year by RPI (May-Oct average)

Burbo Bank & Dudgeon tariffs added to the list since June

Offshore Generator	Tariff Component (£/kW)		
	Substation	Circuit	ETUoS
Barrow	7.977330	41.737380	1.036396
Burbo Bank	10.335699	19.789101	0.000000
Dudgeon	14.972203	23.345723	0.000000
Greater Gabbard	14.956555	34.368691	0.000000
Gunfleet	17.264666	15.850315	2.962515
Gwynt Y Mor	18.214690	17.943720	0.000000
Humber Gateway	14.494729	32.704941	0.000000
Lincs	14.908307	58.369428	0.000000
London Array	10.148476	34.565143	0.000000
Ormonde	24.661619	45.942286	0.366121
Robin Rigg East	-0.456207	30.219789	9.366504
Robin Rigg West	-0.456207	30.219789	9.366504
Sheringham Shoal	23.827399	27.943956	0.607419
Thanet	18.145429	33.811421	0.813960
Walney 1	21.284146	42.387322	0.000000
Walney 2	21.129352	42.760756	0.000000
West of Duddon Sands	8.212971	40.525921	0.000000
Westermost Rough	17.293756	29.253635	0.000000

Revenue

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G/D Split: revenue recovered from generation fixed

= €1.98/MWh

€2.50 per MWh
x 21% Error Margin

= £1.76/MWh

€1.98 ÷
£:€ exchange rate of €1.12

(FES Generation Forecast)
230TWh

X

£1.76/MWh

= £403.5m Revenue to be recovered from generation

Summary of revenue to be recovered

Generation revenue remain unchanged, while overall revenue to be recovered has decreased by £39.7m (indicative only); resulting in a decrease in revenue recovered from demand by £39.7m (indicative only)

	2019/20 April Forecast	2019/20 June Forecast	2019/20 Draft Tariffs
Limit on generation tariff (€/MWh)	2.50	2.50	2.50
Error Margin	21.0%	21.0%	21.0%
Exchange Rate (€/£)	1.13	1.12	1.12
Total Revenue (£m)	2,835.8	2,879.3	2839.6
Generation Output (TWh)	247.0	229.8	229.8
% of revenue from generation	15.2%	14.0%	14.2%
% of revenue from demand	84.8%	86.0%	85.8%
Revenue recovered from generation (£m)	431.8	403.5	403.5
Revenue recovered from demand (£m)	2404.0	2475.7	2436.0

Revenue

Total revenue is £2839.6m, £39.7m more than the June forecast.

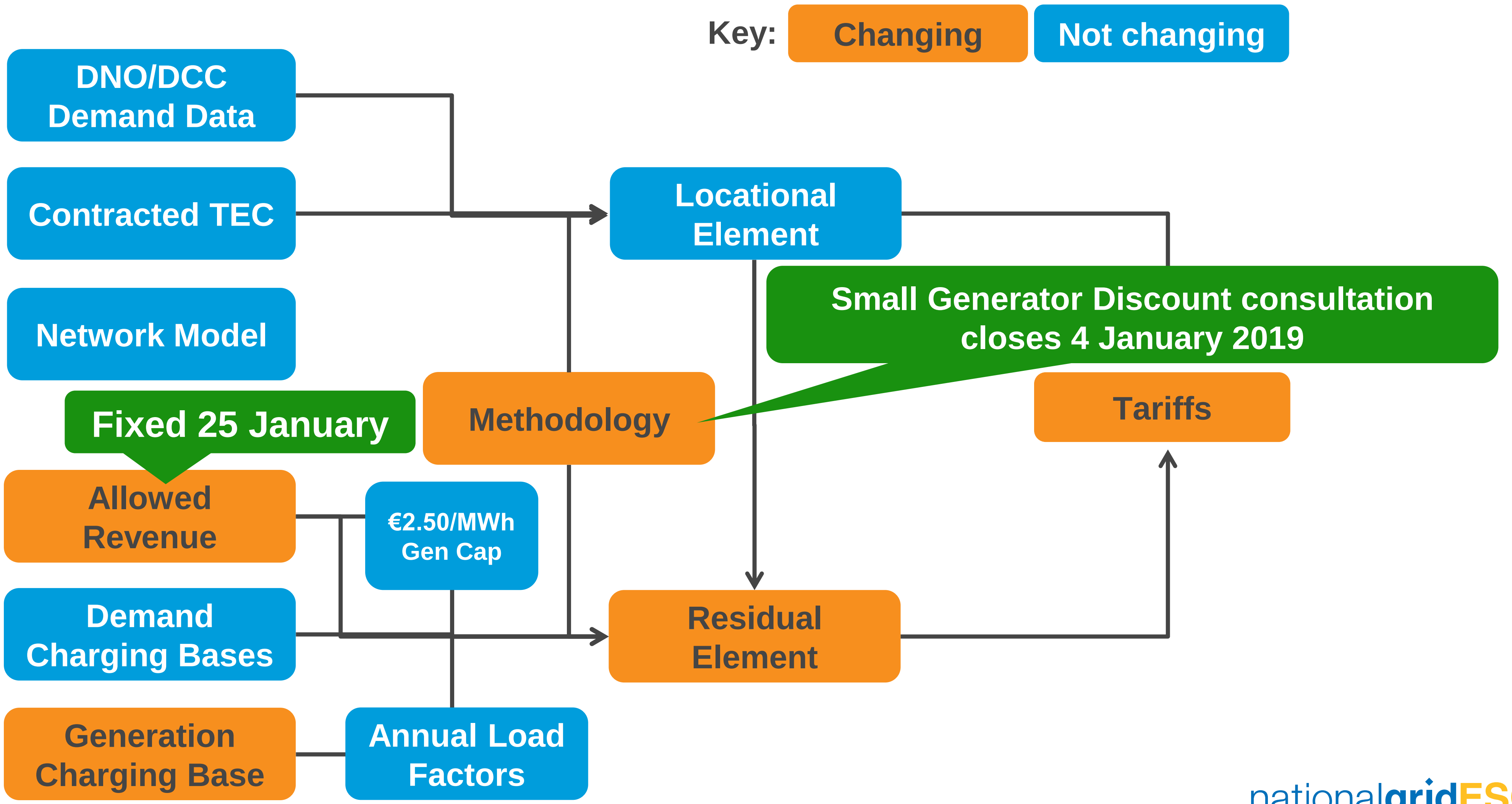
Based on TOs' October forecast, which are close to Ofgem's AIP (Annual Iteration Process) decision on 30 Nov (for onshore TOs the total difference is <5m)

Other miscellaneous items still need to be updated by TOs, and to be received by us by 25 Jan 2019.

£m Nominal Value	2018/19 TNUoS Revenue	2019/20 TNUoS Revenue				
	2018/19 (fixed forecast)	Initial Forecast	April Forecast	June Forecast	Nov Draft	Jan 2019 Final
National Grid						
Price controlled revenue	*1,653.9*	*1768.5*	*1728.1*	*1,770.6*	*1,737.7*	
Less income from connections	*44.0*	*41.9*	*44.0*	*44.0*	*31.6*	
Income from TNUoS	**1,609.9**	**1,726.6**	**1,684.1**	**1,726.6**	**1,706.1**	
Scottish Power Transmission						
Price controlled revenue	*364.8*	*404.5*	*404.5*	*404.5*	*397.5*	
Less income from connections	*14.9*	*14.5*	*14.5*	*14.5*	*14.5*	
Income from TNUoS	**350.0**	**390.0**	**390.0**	**390.0**	**383.0**	
SHE Transmission						
Price controlled revenue	*369.8*	*352.9*	*352.9*	*352.9*	*341.2*	
Less income from connections	*3.4*	*3.5*	*3.5*	*3.5*	*3.4*	
Income from TNUoS	**366.4**	**349.4**	**349.4**	**349.4**	**337.8**	
Offshore	*318.1*	*466.7*	*386.5*	*387.4*	*388.4*	
Network Innovation Competition	*32.7*	*42.5*	*32.7*	*32.7*	*32.7*	
Interconnectors (Cap & Floor)	*(6.8)*	*(6.8)*	*(6.8)*	*(6.8)*	*(8.4)*	
Total to Collect from TNUoS	**2,670.3**	**2,968.4**	**2,835.8**	**2,879.3**	**2,839.6**	

Final 2019/20 tariffs

Updates due for the Final Tariffs



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Q & A

Contact us:

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Feedback

We are continuously looking at ways we can improve the experience of all our customers

We welcome your feedback on your experiences of the TNUoS tariff forecasting and setting process

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Thank You

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