

Transmission Charging Methodologies Forum



Wednesday 13th November 2013

Introduction & Welcome



Adam Sims

Agenda

- 10:00 Safety moment – Amy Boast
- 10:15 Statement of Works / Modification application fees update – Martin Moran
- 10:30 Code modifications update – Amy Boast
- 11:00 2014 Quarterly update including CMP 213 update – Damian Clough
- 11:45 Load Factor update – Stuart Boyle
- 12:00 Lunch
- 12:30 Embedded update – Andrew Wainwright
- 13:00 Future Modification topics – Adam Sims

Safety moment



Amy Boast

Safety Moment



Customer survey

- Conducted twice yearly – current round Nov 13
- Customers will be randomly selected and contacted by telephone for a 10 minute discussion
- If you are contacted active participation is appreciated to help us improve our service
- Thank you to those who have already participated



Embedded connections



Martin Moran, Customer Service Manager – England & Wales

Embedded generation update

- Ofgem lead DG Forums;
- Embedded Developers have difficulty understanding their impact on the Transmission network
- That the Statement of Works process; **(Small Embedded)**
 - Took too long & expensive
 - There was a lack of transparency in the process
- The connection process; **(Large Embedded)**
 - Requires two applications & associated fees
 - No single point of contact

Industry actions & proposals

- Working collaboratively SO, TO's, DNO's
- Number of working group meetings
- Brainstorm issues & identify potential solutions
- Proposals for implementation;

Small embedded generator:

- Remove Stage 1 – Statement of Works process
 - Reduce timescales by around 3 months
 - Save Developer ~£2,000 per application
 - Provide earlier notice of Transmission reinforcements

Industry actions & proposals

Large embedded generator

- Allow the generator to make one application via National Grid – BELLA / BEGA
 - One application / application fee
 - NGET as the single point of contact
 - No payment of a Modification Application to the DNO
 - Potential up front saving of ~£30k per application

Implementation

- In discussion with Ofgem – very supportive
- SoW process - comfort with non compliance of CUSC
- Large embedded – seeking charging on a indicative basis to establish actual cost of application
- Seeking to implement on a trial basis – 1 year
- Commence 1 November 2013 (subject to approvals)

Next Stage – post implementation

- Review with wider industry the SoW process

Ongoing modification proposals



Amy Boast

CMP213: Project Transmit TNUoS Developments

- Ofgem's impact assessment consultation has now closed.
- Minded to position: Diversity 1, 100% HVDC / Islands (WACM2).
 - To be implemented 2014/15.
- Determination expected later this calendar year
- Indicative tariffs for 2014/15 published
 - Contains specific load factors

User Commitment Modification Proposals

- **CMP219: Clarifications to User Commitment Methodology**
 - Received 3 responses supporting the implementation
 - To be presented at November CUSC Panel
- **CMP222: User Commitment for non-generation users**
 - Workgroup meetings have begun
- **CMP223: Arrangements for Relevant Distributed Generators Under the Enduring Generation User Commitment**
 - Workgroup meetings have commenced

Ongoing Modification Proposals

- **CMP201: Removal of BSUoS charges from Generation**
 - Ofgem minded to position: reject
- **CMP224: Cap on the total TNUoS target revenue to be recovered from generation users**
 - 1 work group meeting held so far
 - Main discussion surrounded inclusion/exclusion of local charges on the proposed cap

Indicative TNUoS Charges for 2014/15



Damian Clough

Content

- Key updates made to the charging model, including changes to
 - generation background
 - demand background
 - allowed revenues
 - the network and cost of building this network
- November Update
 - impact of changes in power flows
 - impact of parameter updates
- WACM2
- Next Steps
- Feedback
 - how can we improve next years quarterly updates
 - What do you want to see in the condition 5 forecasts

Key changes

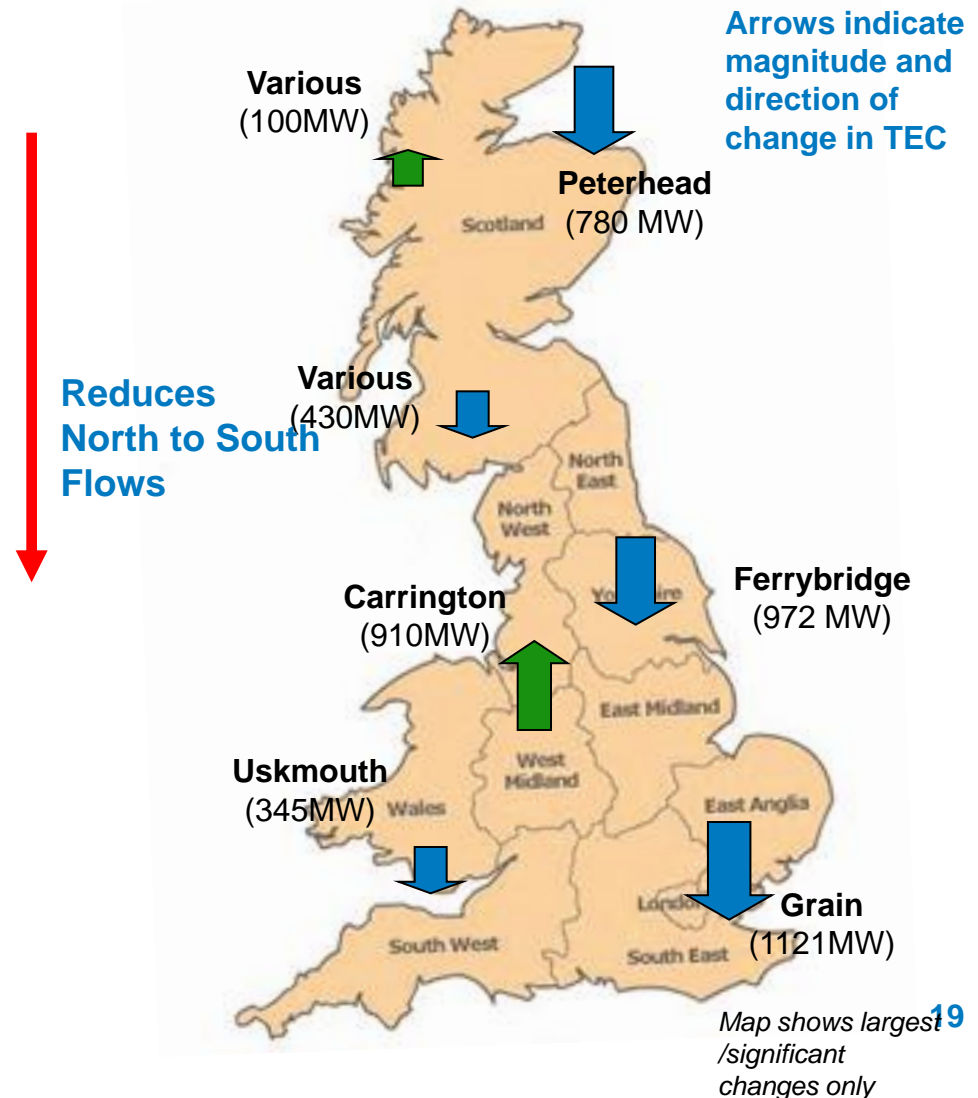
Generation Background

Zone	Zone Name	Modelled Generation 13/14	Modelled Generation 14/15 Initial View	Modelled Generation 14/15 Updated	Difference between 13/14 and Updated 14/15	Difference between 14/15 Initial View and Updated 14/15
1	North Scotland	747.76	956.76	843.46	95.7	-113.3
2	East Aberdeenshire	1180	1180	400	-780	-780
3	Western Highlands	286	286	285.9	-0.1	-0.1
4	Skye and Lochalsh	41.4	41.4	41.4	0	0
5	Eastern Grampian and Tayside	324.8	334	324.8	0	-9.2
6	Central Grampian	63.5	63.5	63.5	0	0
7	Argyll	81.7	131.6	131.6	49.9	0
8	The Trossachs	562.5	562.5	520	-42.5	-42.5
9	Stirlingshire and Fife	2380	2380	2380	0	0
10	South West Scotlands	2457.8	2532.8	2027	-430.8	-505.8
11	Lothian and Borders	2138.95	2825.95	2021.95	-117	-804
12	Solway and Cheviot	404	473.3	310	-94	-163.3
13	North East England	1351	1393	1348	-3	-45
14	North Lancashire and The Lakes	3521	3691	3547	26	-144
15	South Lancashire, Yorkshire and Humber	15497	16202	14940	-557	-1262
16	North Midlands and North Wales	12407	13459	13345	938	-114
17	South Lincolnshire and North Norfolk	2179	3019	2194	15	-825
18	Mid Wales and The Midlands	7754.9	9074.9	7739.9	-15	-1335
19	Anglesey and Snowdon	2134	2134	2084	-50	-50
20	Pembrokeshire	2199	2199	2199	0	0
21	South Wales & Gloucester	3509	3509	3164	-345	-345
22	Cotswold	1234	1399	1399	165	0
23	Central London	144	144	144	0	0
24	Essex and Kent	13832	14672	12723	-1109	-1949
25	Oxfordshire, Surrey and Sussex	2070	2070	1970	-100	-100
26	Somerset and Wessex	2539	2539	2539	0	0
27	West Devon and Cornwall	1045	1045	1045	0	0
Totals and Differences		82084.31	88317.71	79730.51	-2353.8	-8587.2

Key changes

Generation Background

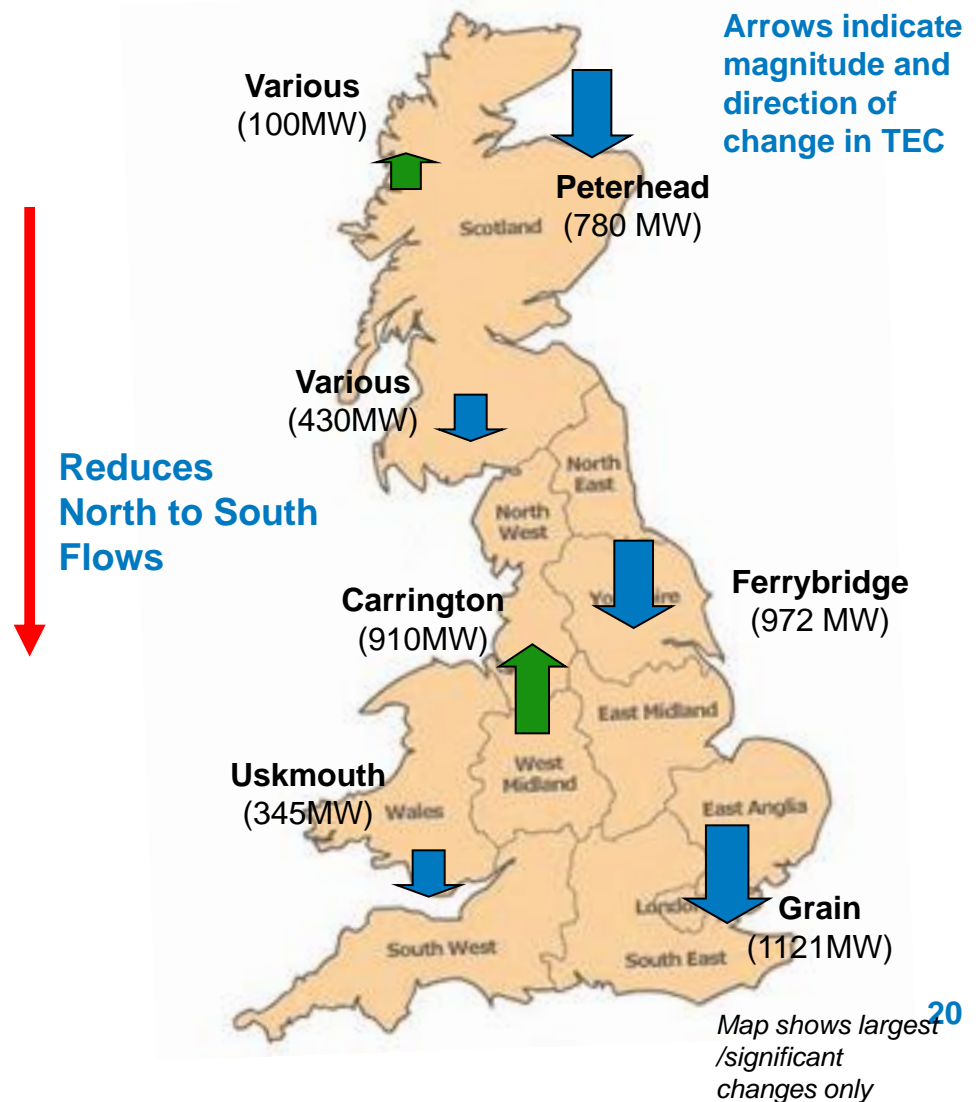
- A significant update to the charging model from 2013/14 is the change in the generation landscape
- 82GW in total was contracted for 13/14
- There is a total reduction of ~2.3GW in the contracted generation for 2014/15 compared to 2013/14
 - 1.8GWh net reductions in TEC North of the Pennines
 - 0.5GWh net reductions below Pennines



Key changes

Generation Background (cont)

- The changes are up to **OCTOBER 1ST**
- Any changes in contracted generation since the date above have not been included in this forecast but may well affect Draft/Final tariffs;
- Any reduction in contracted generation in the South may push up Generation prices in the North and Scotland and vice versa



Key changes

Demand Background

Zone	Zone Name	13/14	14/15 C5	14/15 Update	Diff to 13/14	Diff to C5	% Diff to 13/14	% Diff to 14/15 C5
1	Northern Scotland	1,247	1,259	876	-371	-383	-30%	-30%
2	Southern Scotland	3,921	3,907	3,756	-165	-151	-4%	-4%
3	Northern	2,676	2,863	2,939	263	76	10%	3%
4	North West	4,242	4,417	4,011	-231	-406	-5%	-9%
5	Yorkshire	5,213	5,248	4,787	-426	-461	-8%	-9%
6	N Wales & Mersey	3,553	3,503	2,546	-1,007	-957	-28%	-27%
7	East Midlands	5,699	5,755	5,188	-511	-567	-9%	-10%
8	Midlands	5,144	5,194	4,808	-336	-386	-7%	-7%
9	Eastern	6,925	7,137	6,680	-245	-457	-4%	-6%
10	South Wales	2,169	2,188	2,110	-59	-78	-3%	-4%
11	South East	4,188	4,293	3,883	-305	-410	-7%	-10%
12	London	6,053	6,259	5,944	-109	-315	-2%	-5%
13	Southern	6,387	6,447	6,236	-151	-211	-2%	-3%
14	South Western	2,801	2,829	2,810	9	-19	0%	-1%
		<u>60,218</u>	<u>61,299</u>	<u>56,574</u>				

Key changes

Demand Background

- Peak demand forecasts come from DNO submissions
- Peak forecasts now more closely matched to actual peaks
- Overall Peak demand has reduced from ~61GW's to 56.5GW's
- Decreases less pronounced in the North & Scotland

Increased
Embedded
Generation in
North of
Scotland and
West Coast

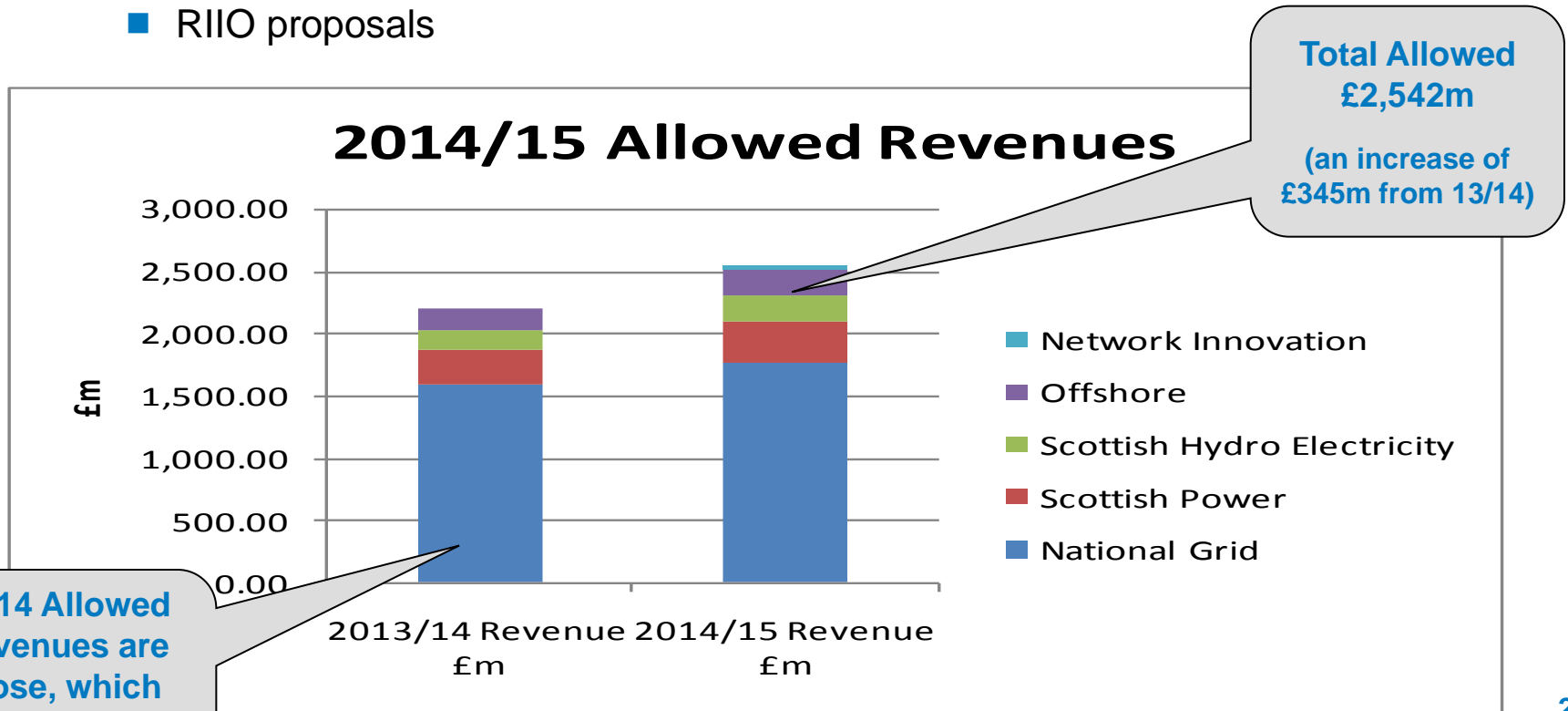


Map shows largest /significant changes only

Key changes

Total Allowed Revenue

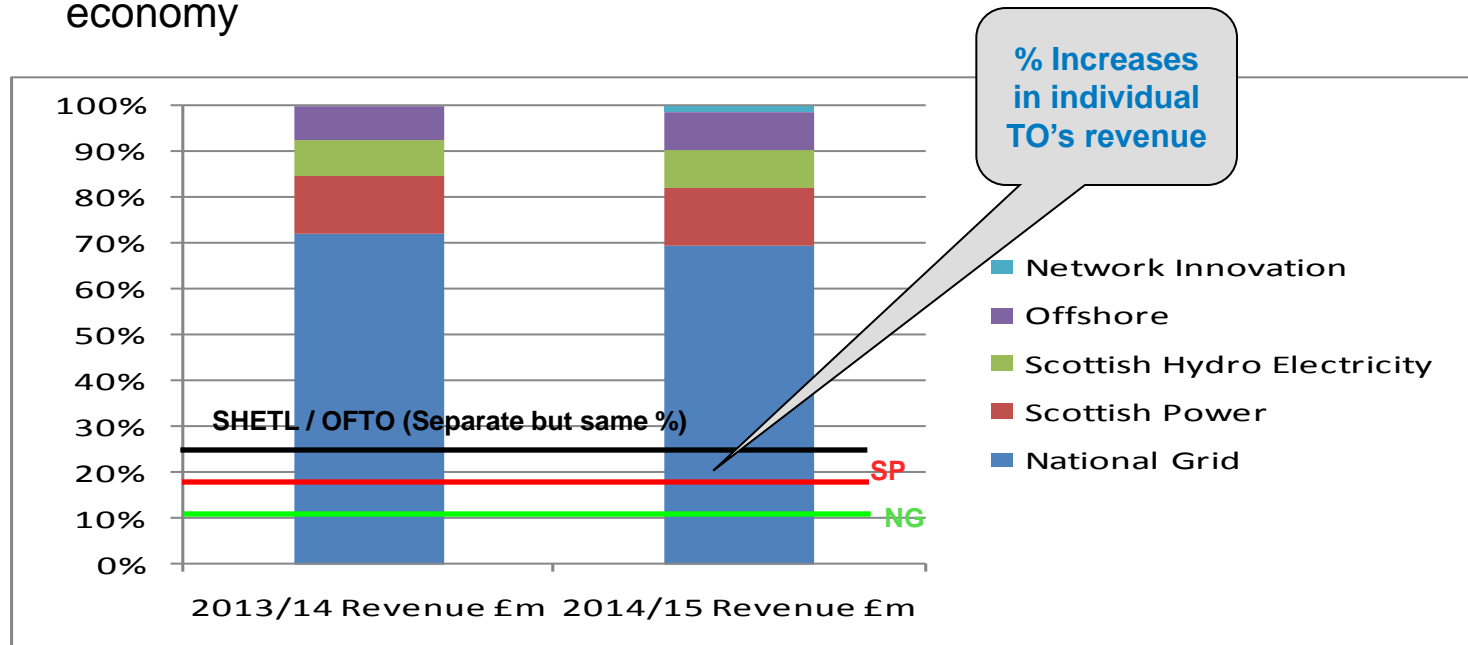
- Total Transmission Allowed Revenue based on
 - information provided by SHETL, SPTL, and existing OFTOs
 - a forecast of new OFTO revenues (informed by Ofgem & Developers)
 - RIIO proposals



Key changes

Total Allowed Revenue

- Total Transmission Allowed Revenue based on
 - The rise in revenue reflects the first year of RIIO and the move to a low carbon economy
 - % of different TO's revenue requirements compared to allowed revenue remains roughly the same
 - % increase in other TO's revenues higher, reflects the move to a low carbon economy

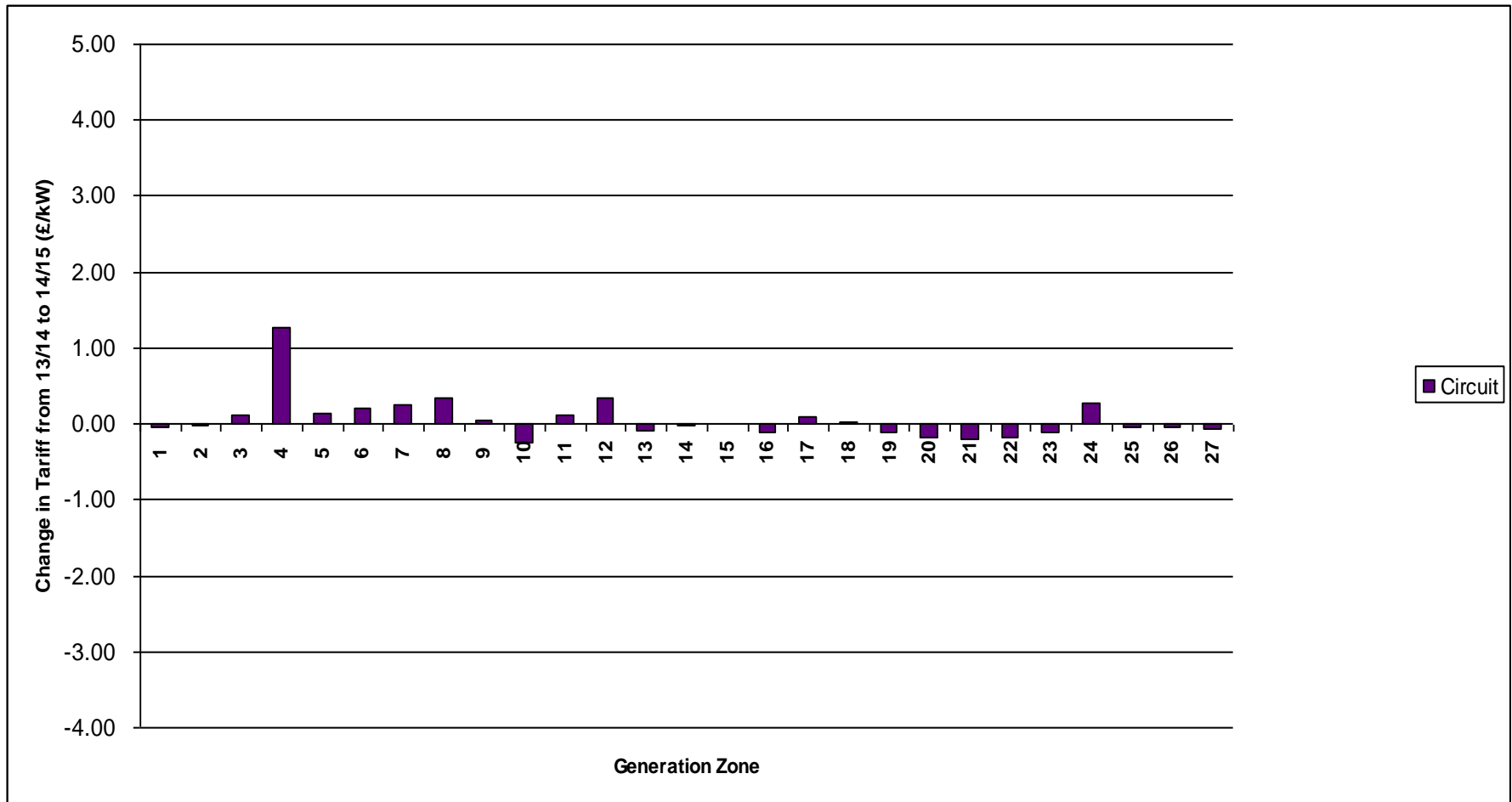


Circuit Changes

- Data comes from TO's
 - Received in latter part of summer
 - Reflects updated Generation background and network requirements
 - Key changes
 - Beaulieu Denny
 - Power flows in parts of Scotland more efficient
 - Completed in 15/16 so future tariff changes expected
 - Benefit partially offset by cabling work and TEC reductions altering flows
 - Cabling work in London
 - Coupled with Generation changes alters flows in Zones 23 & 24
- Limited changes now expected in this data

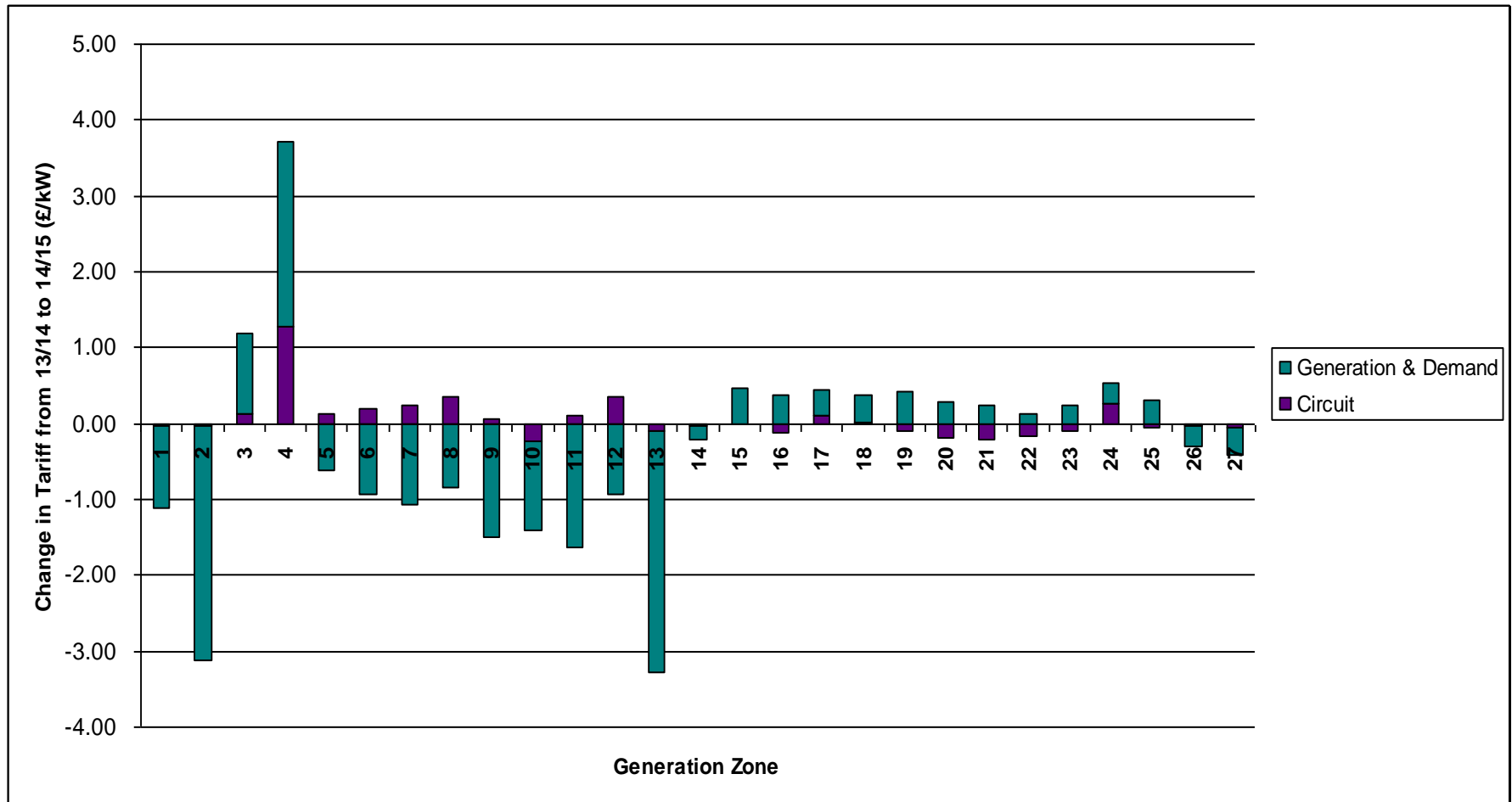
Change in Generation Tariffs

Impact due to locational changes



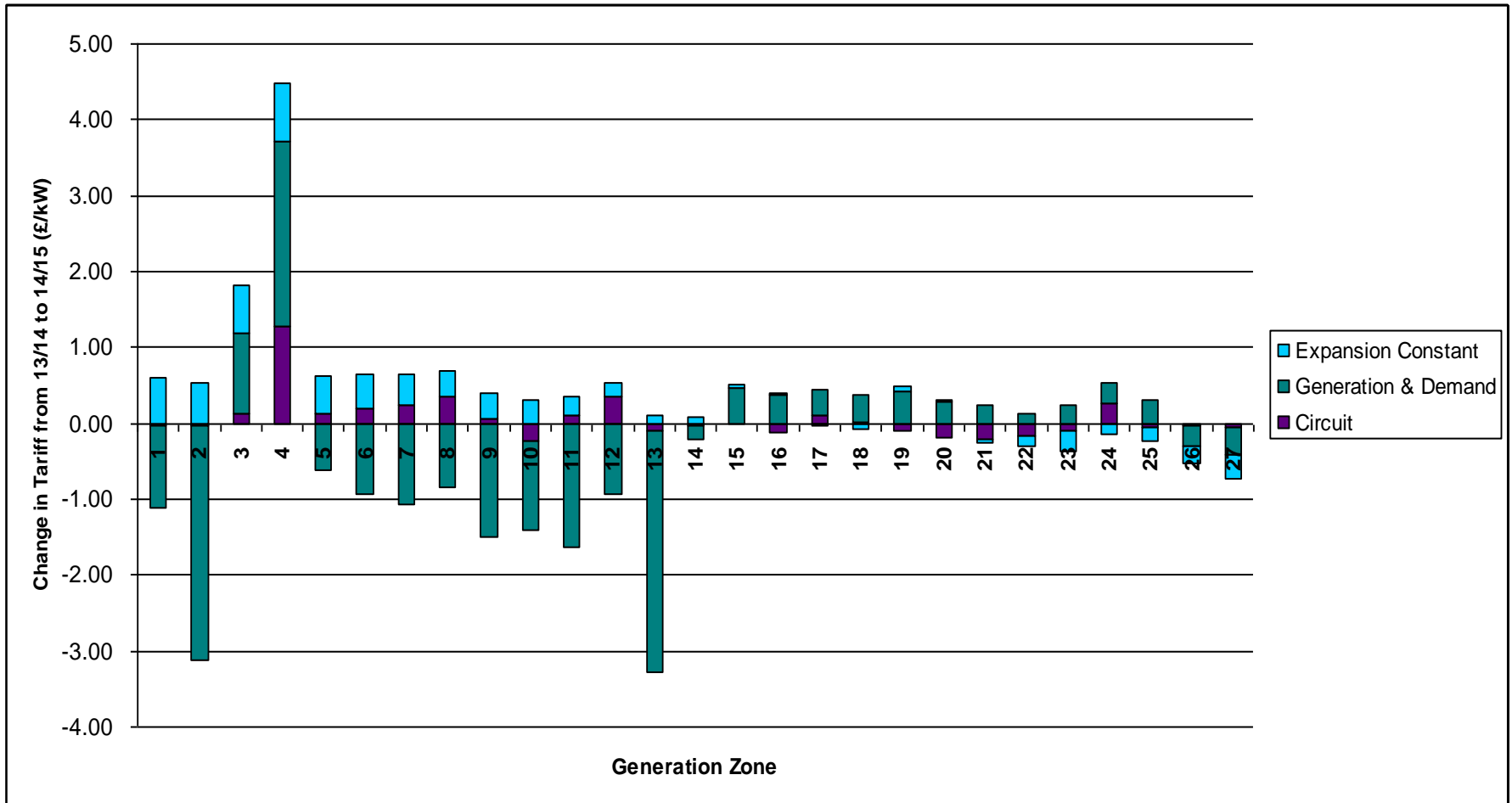
Change in Generation Tariffs

Impact due to locational changes



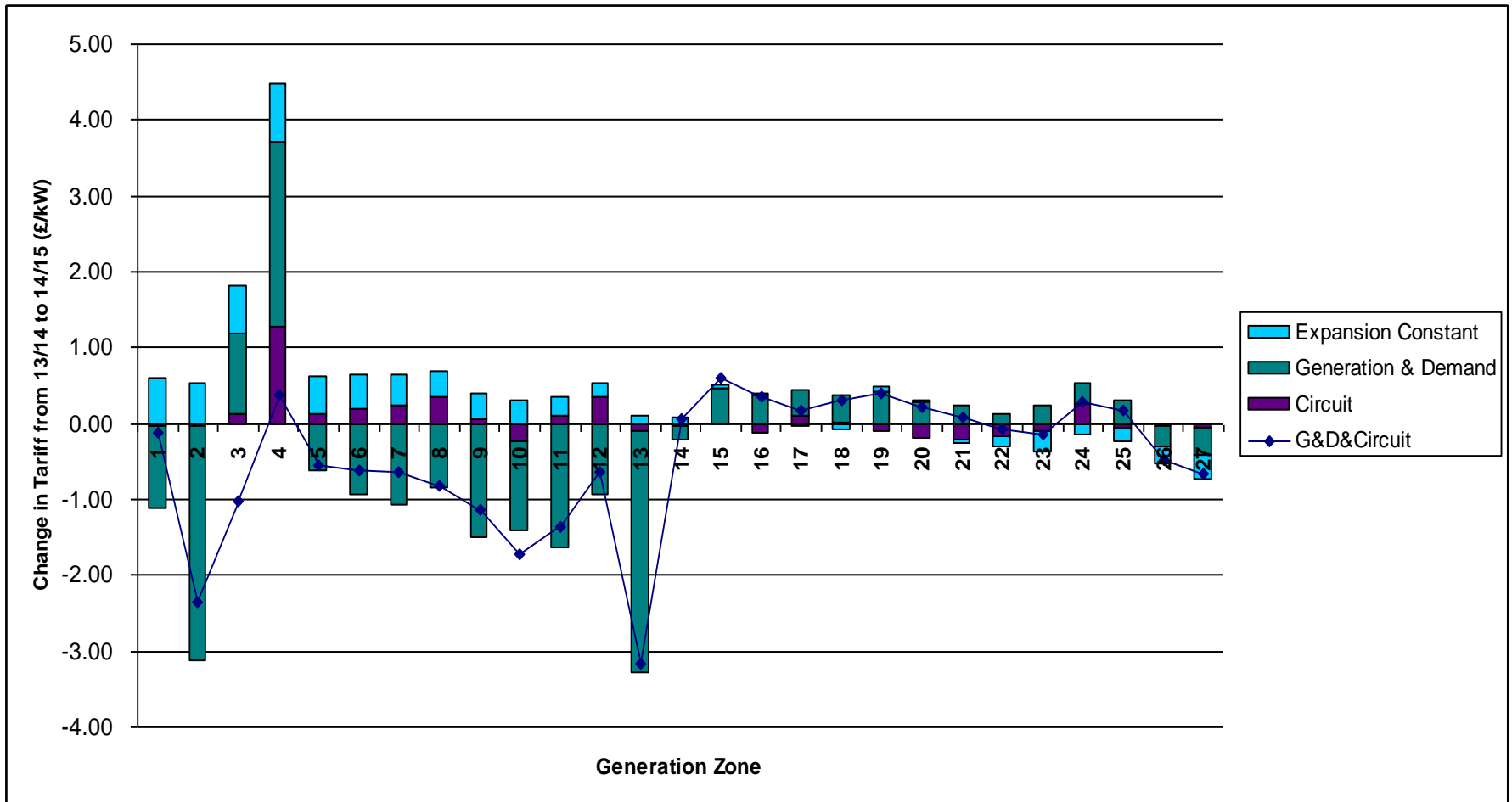
Change in Generation Tariffs

Impact due to locational changes



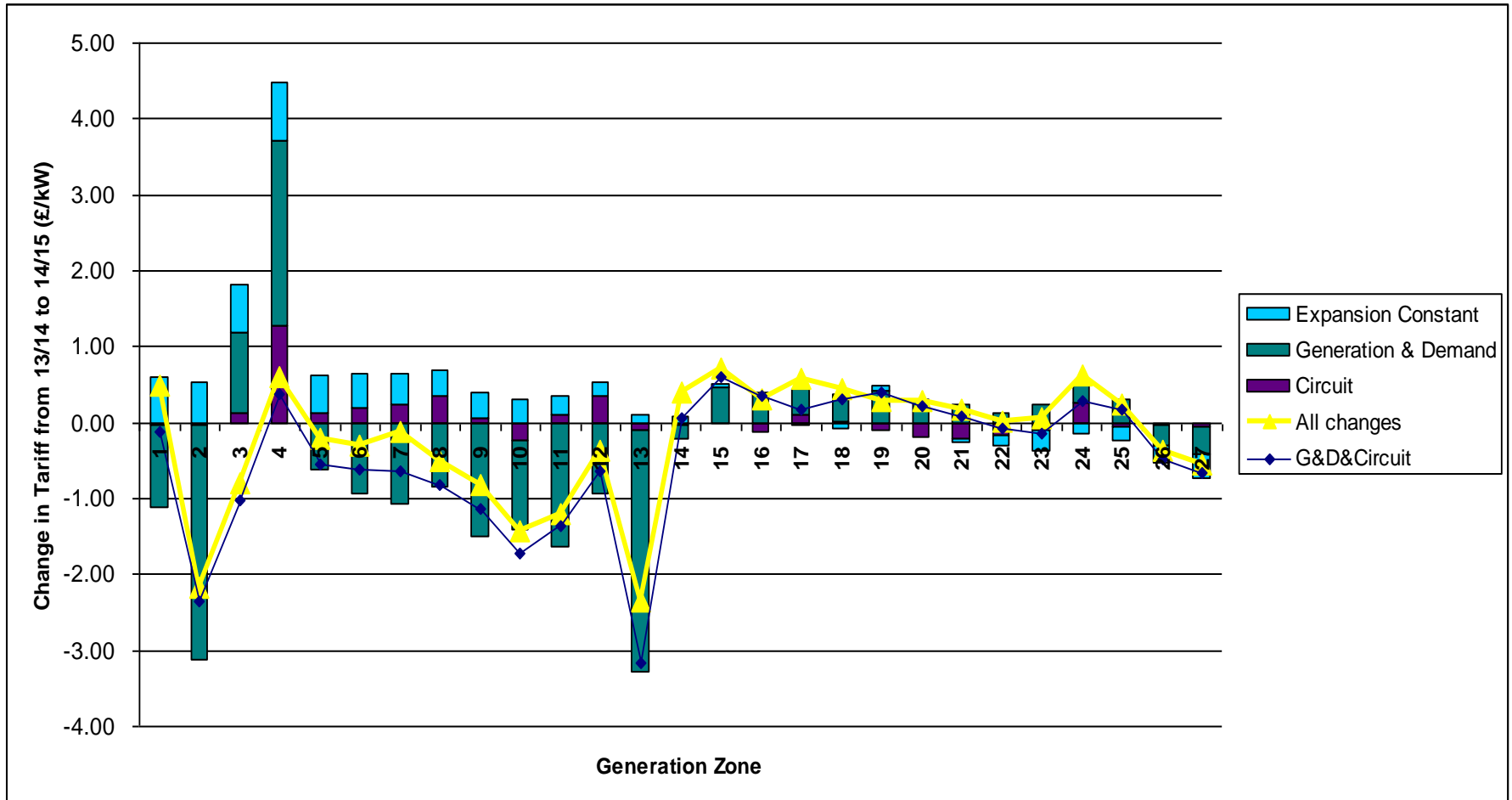
Change in Generation Tariffs

Impact due to locational changes



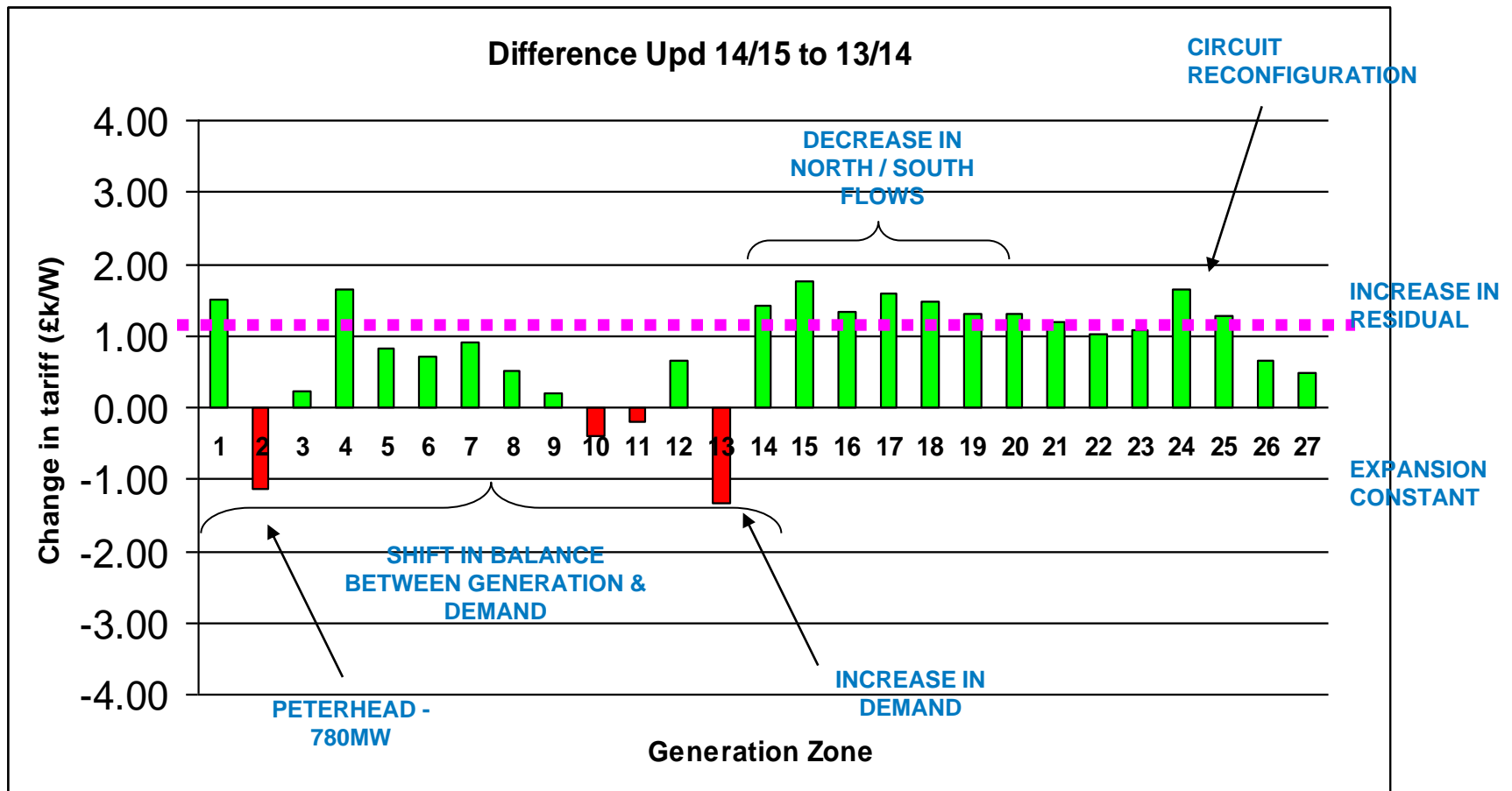
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Impact due to locational changes



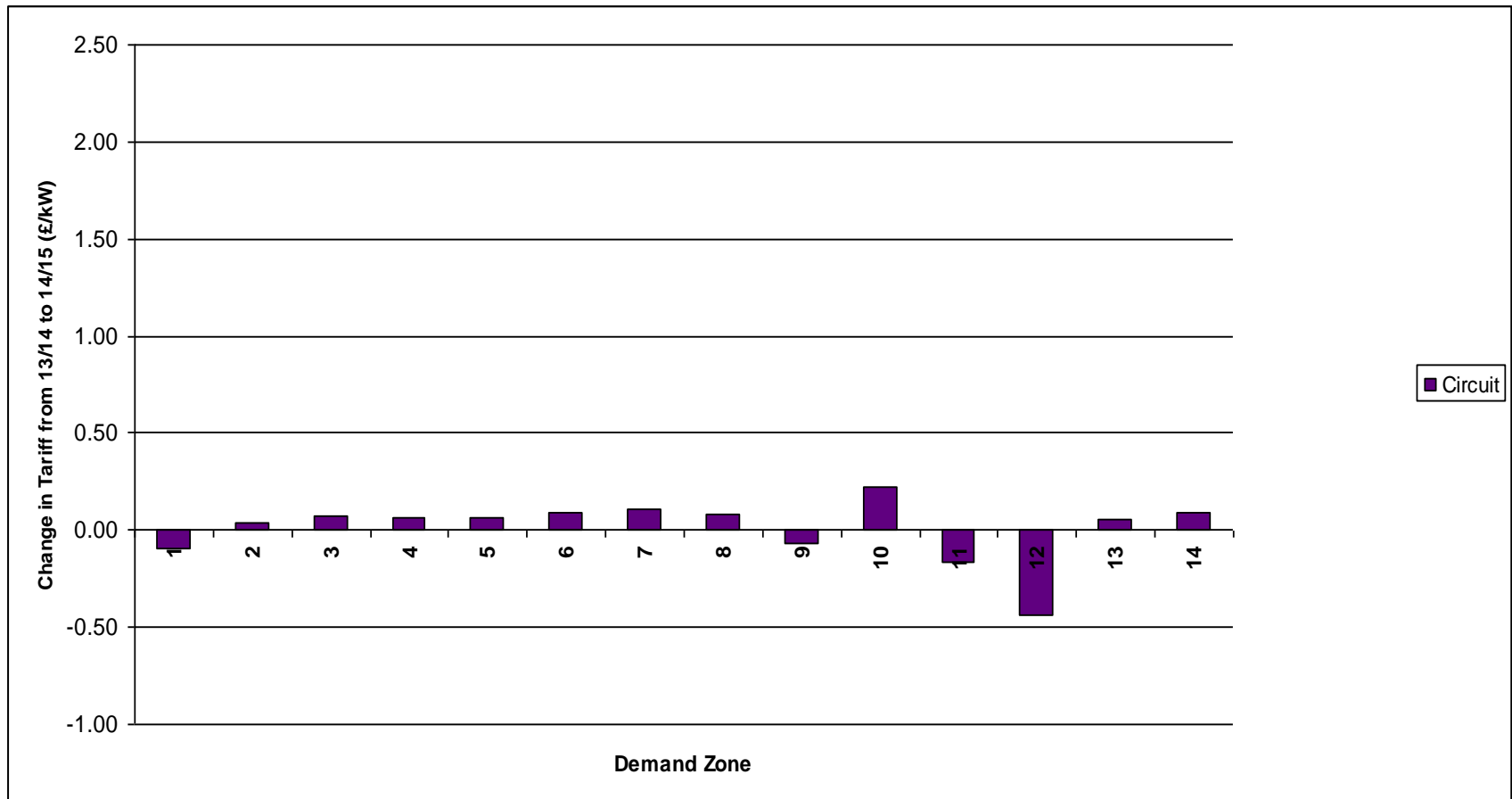
Change in Generation Tariffs

Changes in 13/14 Tariffs



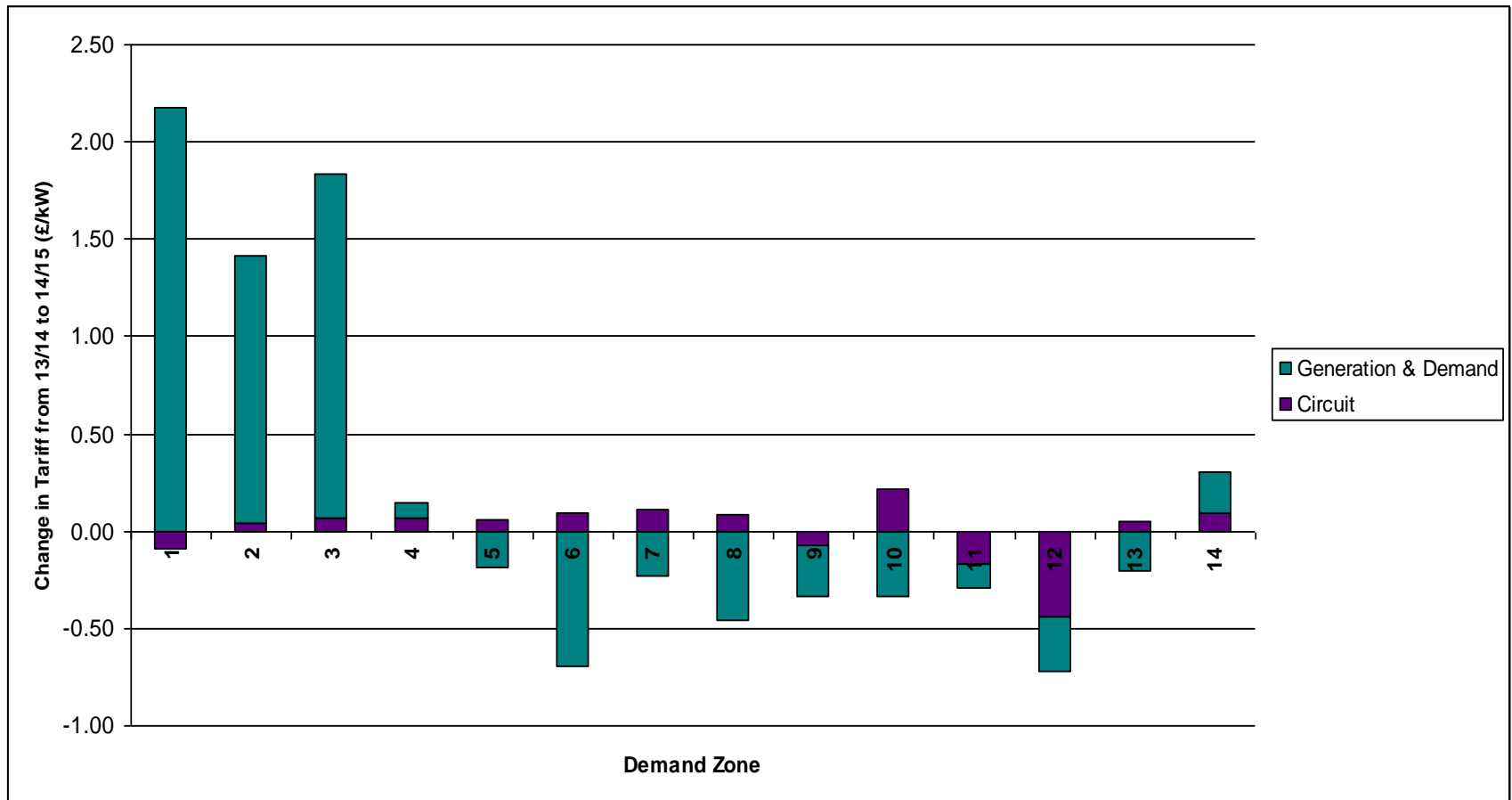
Change in Demand Tariffs

Impact due to locational changes



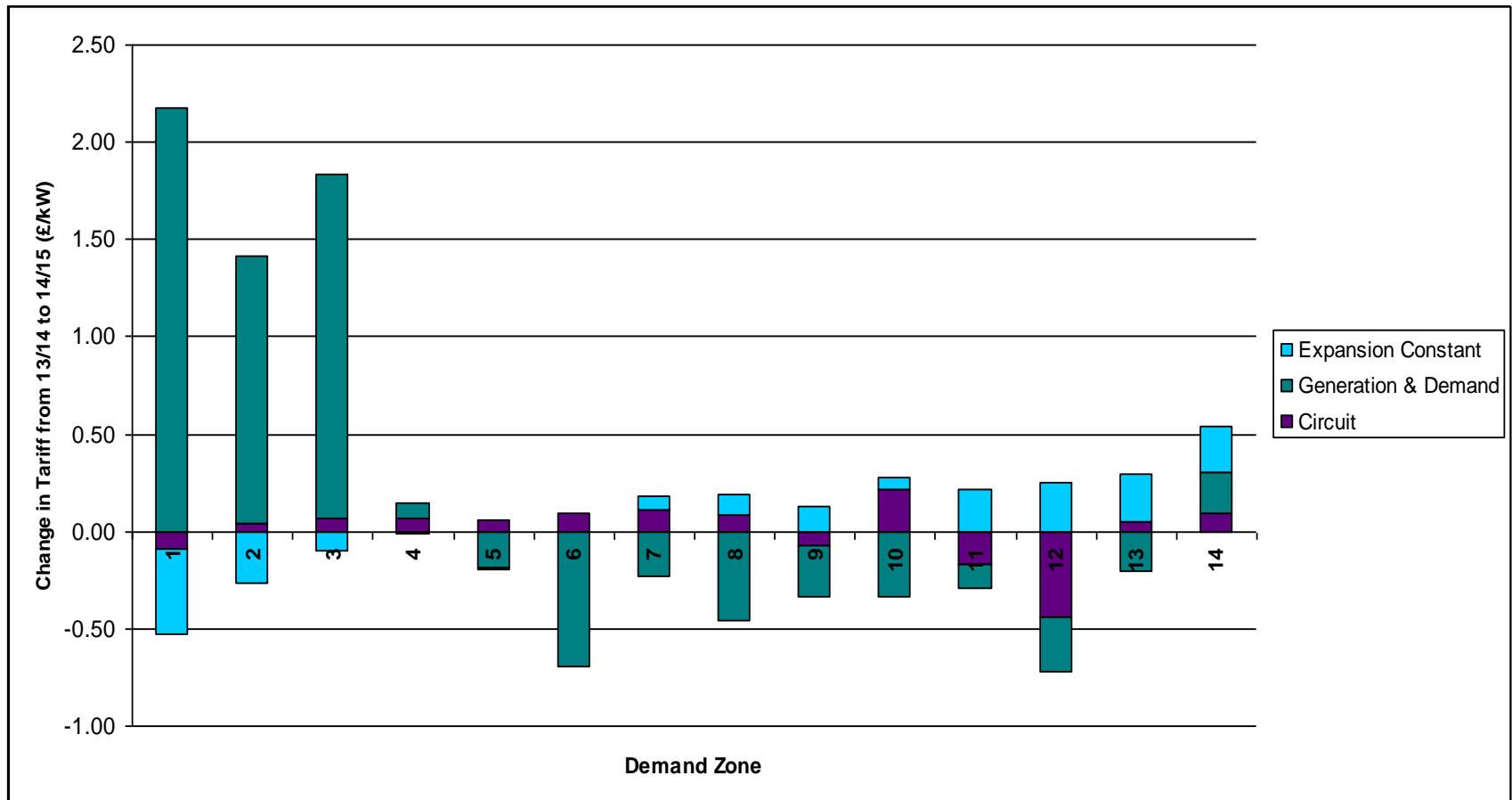
Change in Demand Tariffs

Impact due to locational changes



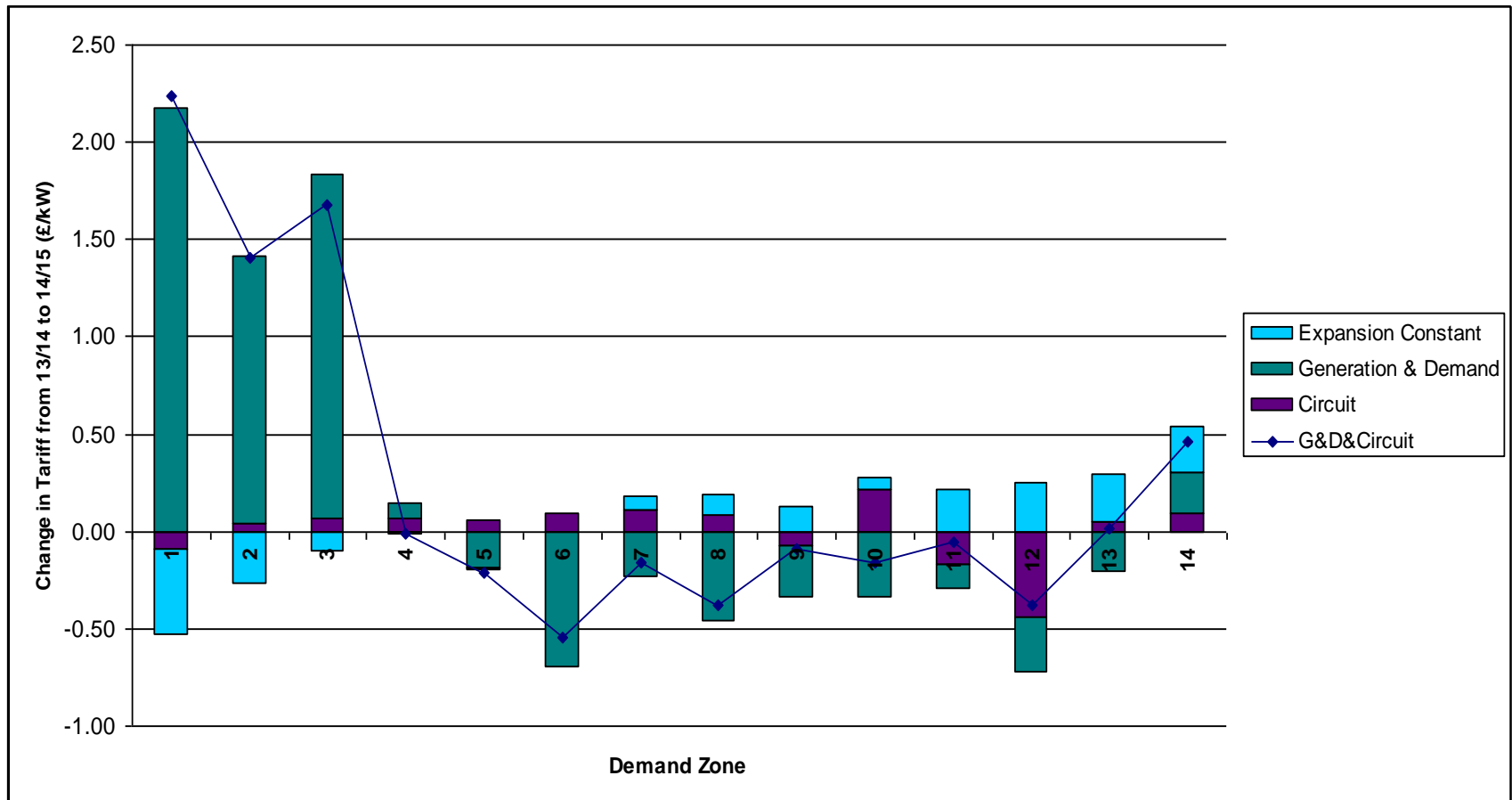
Change in Demand Tariffs

Impact due to locational changes



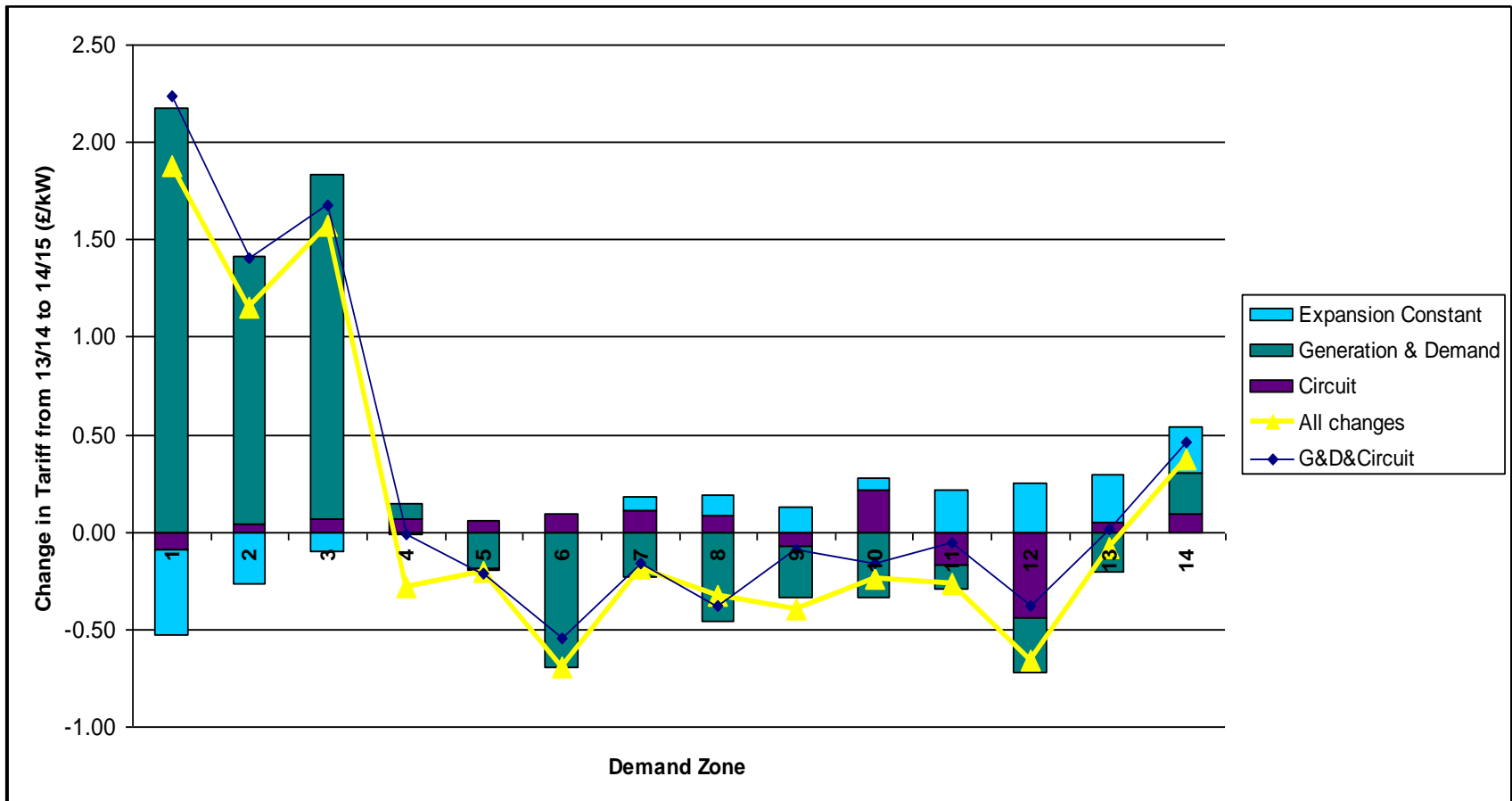
Change in Demand Tariffs

Impact due to locational changes



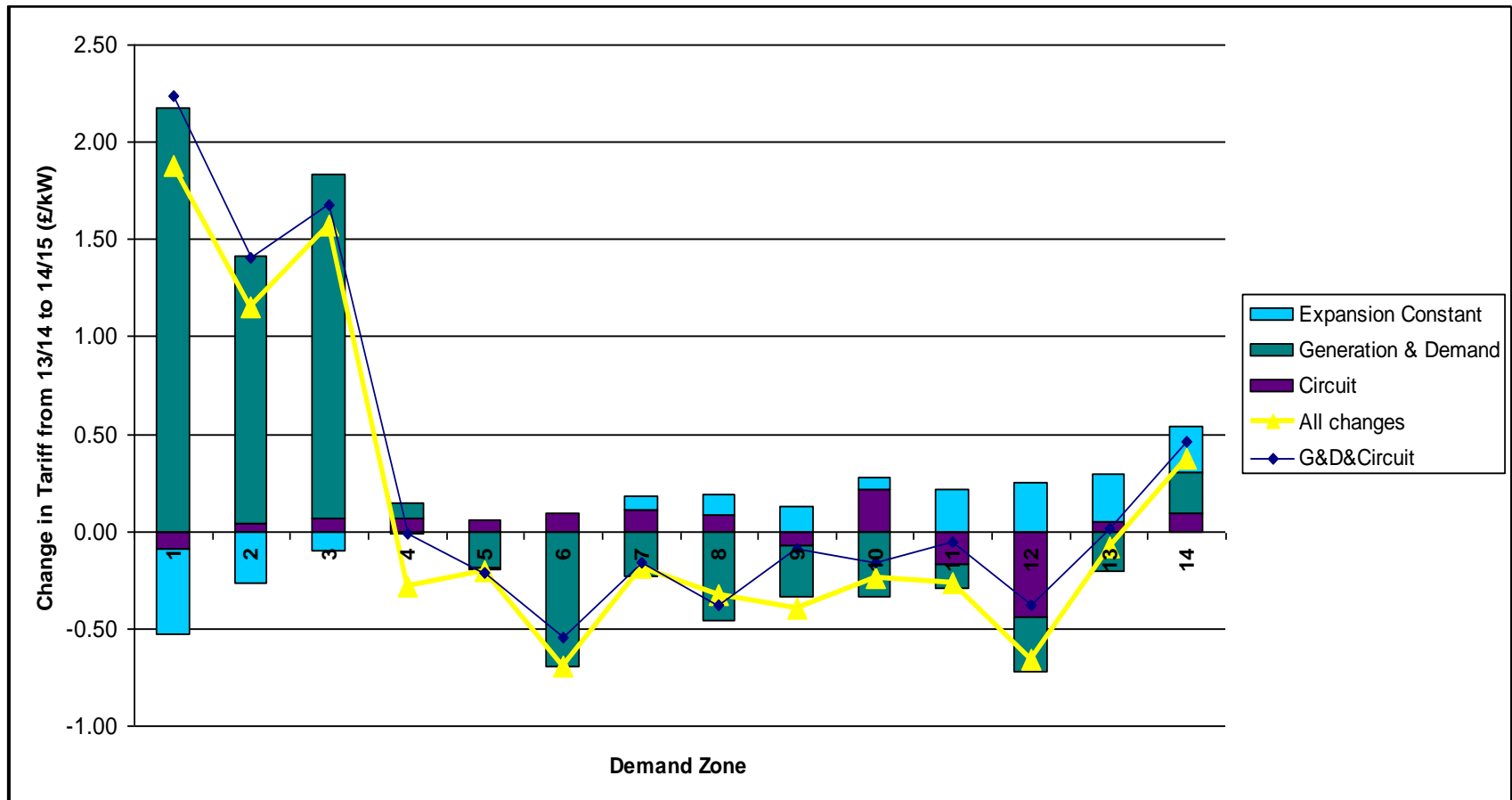
Change in Demand Tariffs

Impact due to locational changes



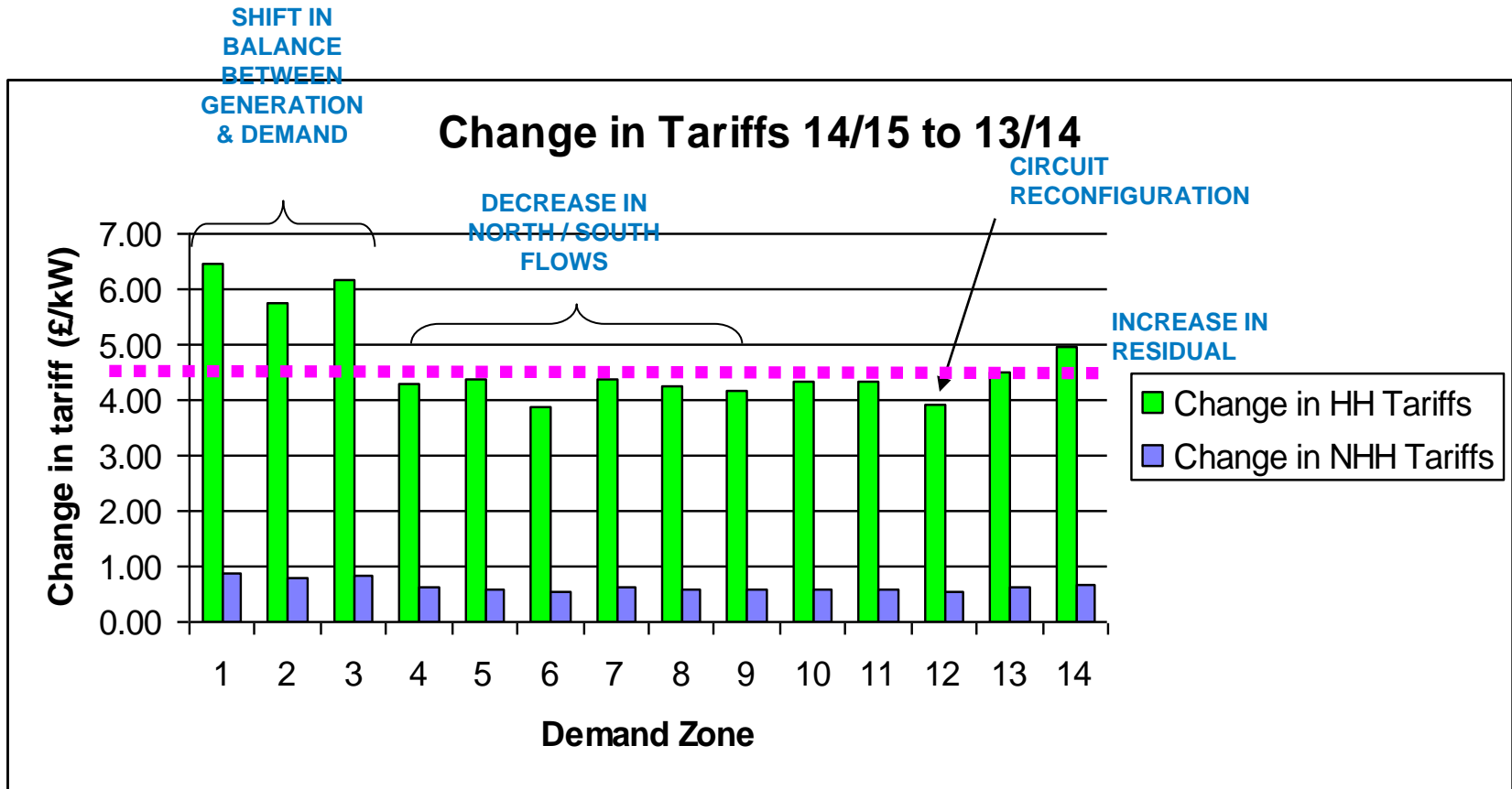
Change in Demand Tariffs

Impact due to locational changes



Change in Demand Tariffs

Changes in 13/14 Tariffs



Movements throughout year

- Updates have taken into account
 - 8GW changes in generation
 - 4.5GW changes in demand
 - £70m revenue
 - Circuit changes e.g. Beaulieu & London
- Tariffs have been updated to take these into account

Data Inputs

- Limited change expected in
 - Circuit
 - Demand
- Two asset transfers expected next year
 - Gwynt Y Mor
 - Thanet
 - Therefore limited variance in revenues if we choose to alter expected asset transfer date (+/- £10m)
- Revenues from 12/13 currently being assessed for efficiency by Ofgem
 - No K factor from 13/14 feeding into 14/15 so adverse weather will not affect revenues
- Generation Background;
 - Data based on October 1st
 - Final Data based on October 31st.
- Recommend looking at Appendix A of Quarterly Update Generation Background

WACM2

- Ofgem's minded to position on CUSC Modification Proposal CMP213
- Uses same input data as Status Quo

Additional Changes

- Scaling factors produce differing generation backgrounds to Status Quo
- Annual Load Factors specific to each generator
 - Quarterly Update used indicative ALF's
 - These can be found in Appendix G of November Quarterly Update
 - Still subject to change
 - Limited change in residual element expected if indicative ALF's do alter
- No comparison has been made for WACM2 tariffs

WACM2 Generation Tariffs

Generation Tariffs		Peak Security	Shared Year Round	Not Shared Year Round	Residual
Zone	Zone Name	Tariff (£/kW)	Tariff (£/kW)	Tariff (£/kW)	Tariff (£/kW)
1	North Scotland	2.95	16.01	5.50	3.50
2	East Aberdeenshire	3.98	9.81	5.50	3.50
3	Western Highlands	2.56	16.39	5.50	3.50
4	Skye and Lochalsh	-1.36	16.39	7.19	3.50
5	Eastern Grampian and Tayside	2.22	12.81	5.07	3.50
6	Central Grampian	3.74	11.51	4.61	3.50
7	Argyll	2.83	8.92	6.20	3.50
8	The Trossachs	2.88	8.92	3.58	3.50
9	Stirlingshire and Fife	3.33	7.98	3.45	3.50
10	South West Scotlands	2.14	9.36	3.45	3.50
11	Lothian and Borders	2.56	9.36	-0.24	3.50
12	Solway and Cheviot	1.65	5.71	2.51	3.50
13	North East England	2.90	3.19	1.08	3.50
14	North Lancashire and The Lakes	1.46	3.19	1.76	3.50
15	South Lancashire, Yorkshire and Humber	3.66	1.24		3.50
16	North Midlands and North Wales	3.22	0.25		3.50
17	South Lincolnshire and North Norfolk	1.43	-0.20		3.50
18	Mid Wales and The Midlands	1.16	-0.23		3.50
19	Anglesey and Snowdon	4.71	1.31		3.50
20	Pembrokeshire	8.18	-3.58		3.50
21	South Wales & Gloucester	5.54	-3.60		3.50
22	Cotswold	2.62	1.60	-5.21	3.50
23	Central London	-3.26	1.60	-4.24	3.50
24	Essex and Kent	-4.00	1.60		3.50
25	Oxfordshire, Surrey and Sussex	-1.35	-2.51		3.50
26	Somerset and Wessex	-1.52	-3.53		3.50
27	West Devon and Cornwall	-0.93	-5.62		3.50

Payable by Conventional Generation only

Tariff x's Annual Load Factor

Next Steps

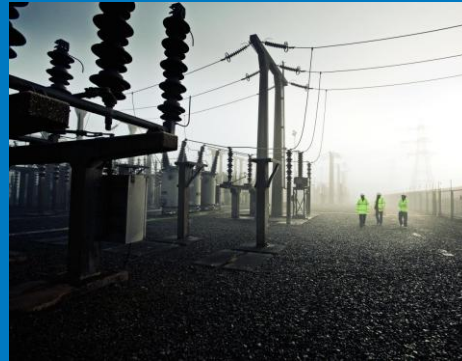
- Draft Tariffs published before Christmas 2013
- Final Tariffs published 31st January 2014
- 15/16 forecast published 31st January 2014
- 16/17, 17/18, 18/19 forecasts published 31st March 2014

- Expect updates for
 - ALFs
 - Project TransmiT communication

Feedback

- First year of quarterly updates
 - Earlier view of generation and demand changes
- What should we compare to?
 - Condition 5 / Previous forecast
 - Bear in mind gets very complicated and potentially confusing comparing to numerous updates tariffs
- Generation changes throughout year constantly change forecast
 - Is there anything we can do about that?

Indicative Annual Load Factors Under CMP213 WACM2



Stuart Boyle, Revenue Manager
13 November 2013

Introduction

- The authority is minded to implement CMP213 Working-group Alternative Code Modification 2 with effect from 1 April 2014. To facilitate this National Grid published two sets of indicative TNUoS tariffs for 2014/15 in the November 2013 update using both existing and new methodologies.
- Appendix G contains indicative Annual Load Factors under the new methodology for generic and specific generators.
- TNUoS Forecast page (Condition 5)

<http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission/Approval-conditions/Condition-5/>

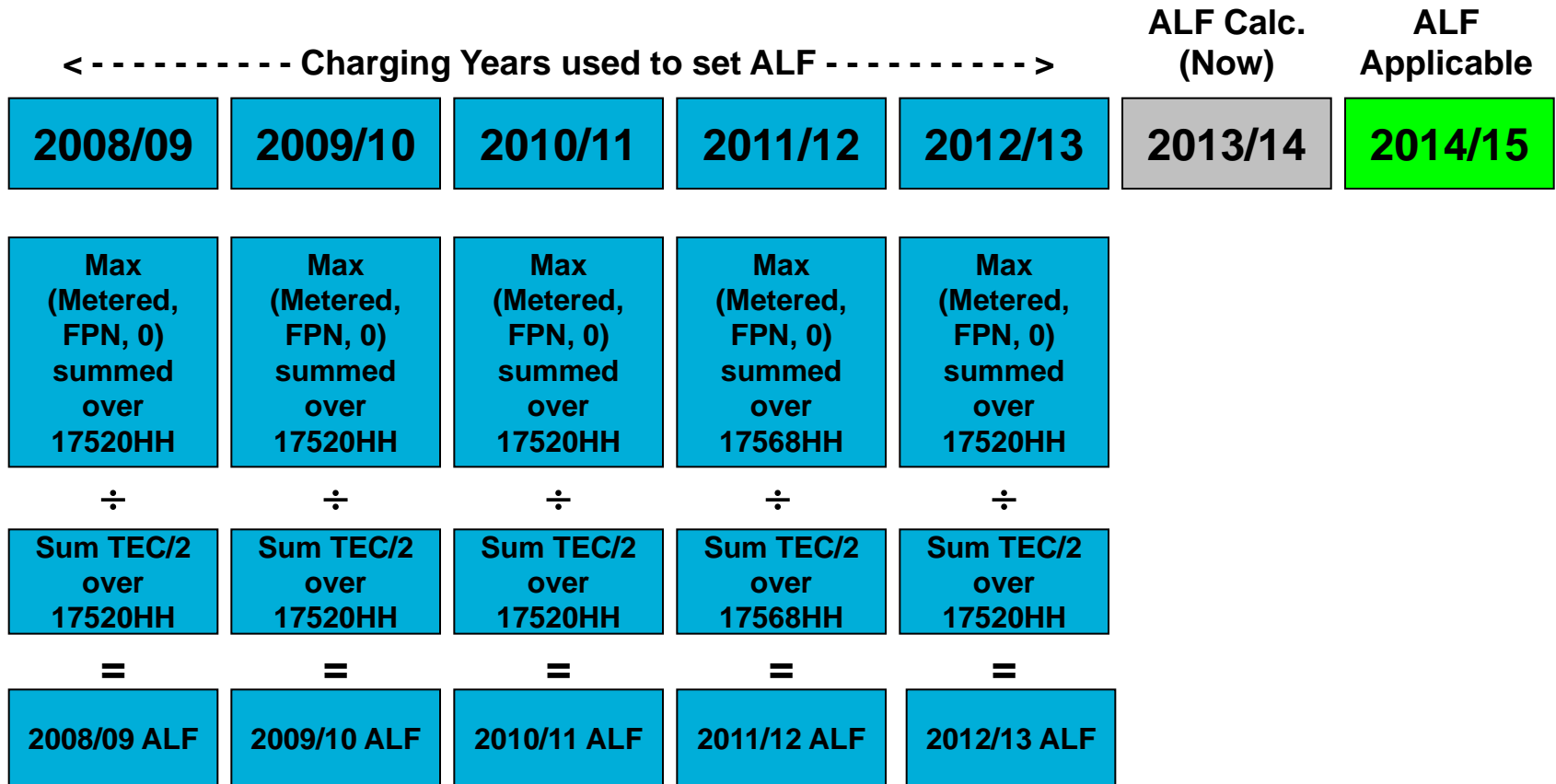
- November update

<http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=24906>

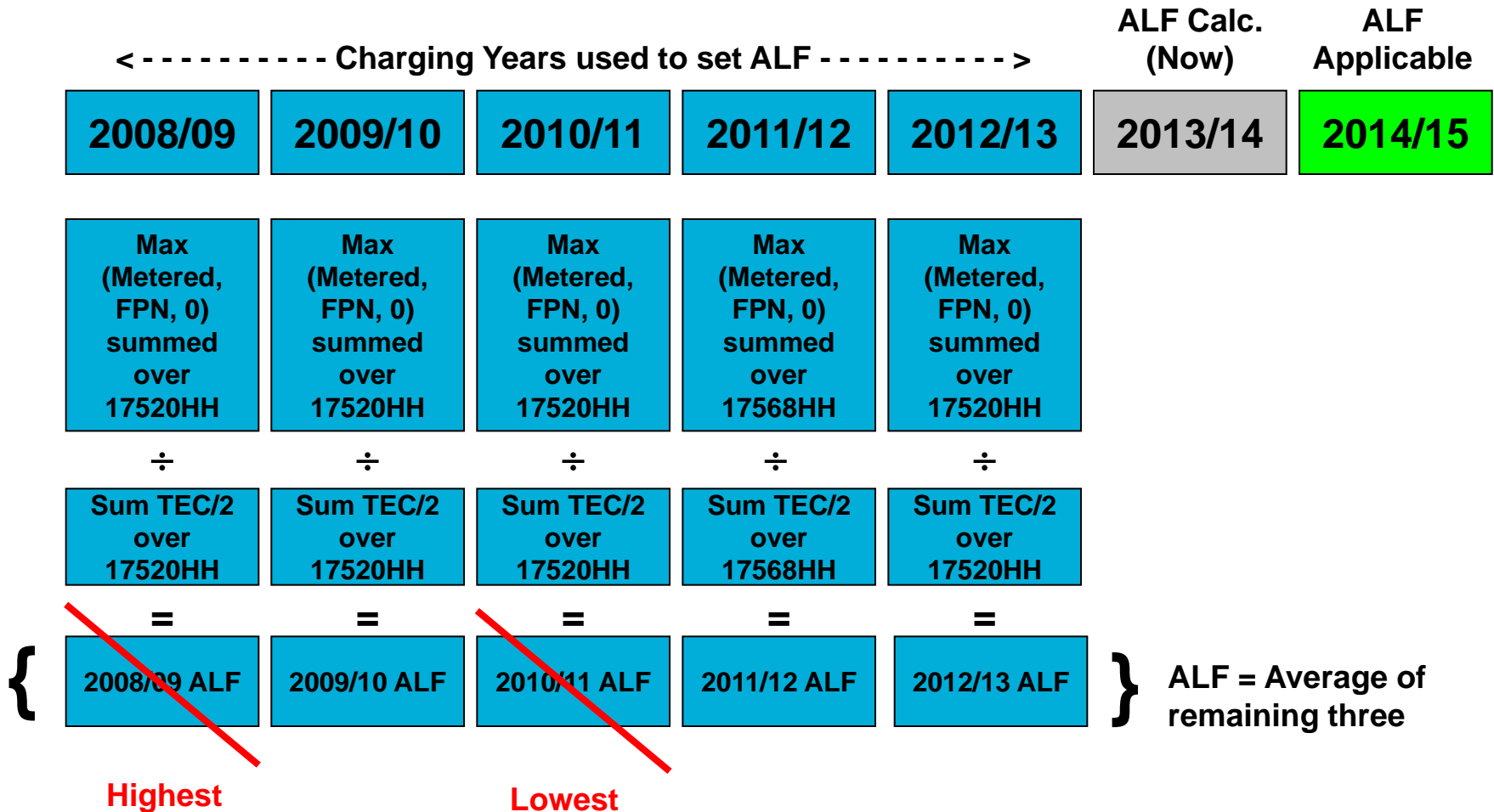
Quarterly update, 1 Nov 2013, Section 6.1

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26	Somerset and Wessex	-1.52	-3.53		3.50
27	West Devon and Cornwall	-0.93	-5.62		3.50
		Conv. Only x TEC	x ALF x TEC	x TEC	x TEC

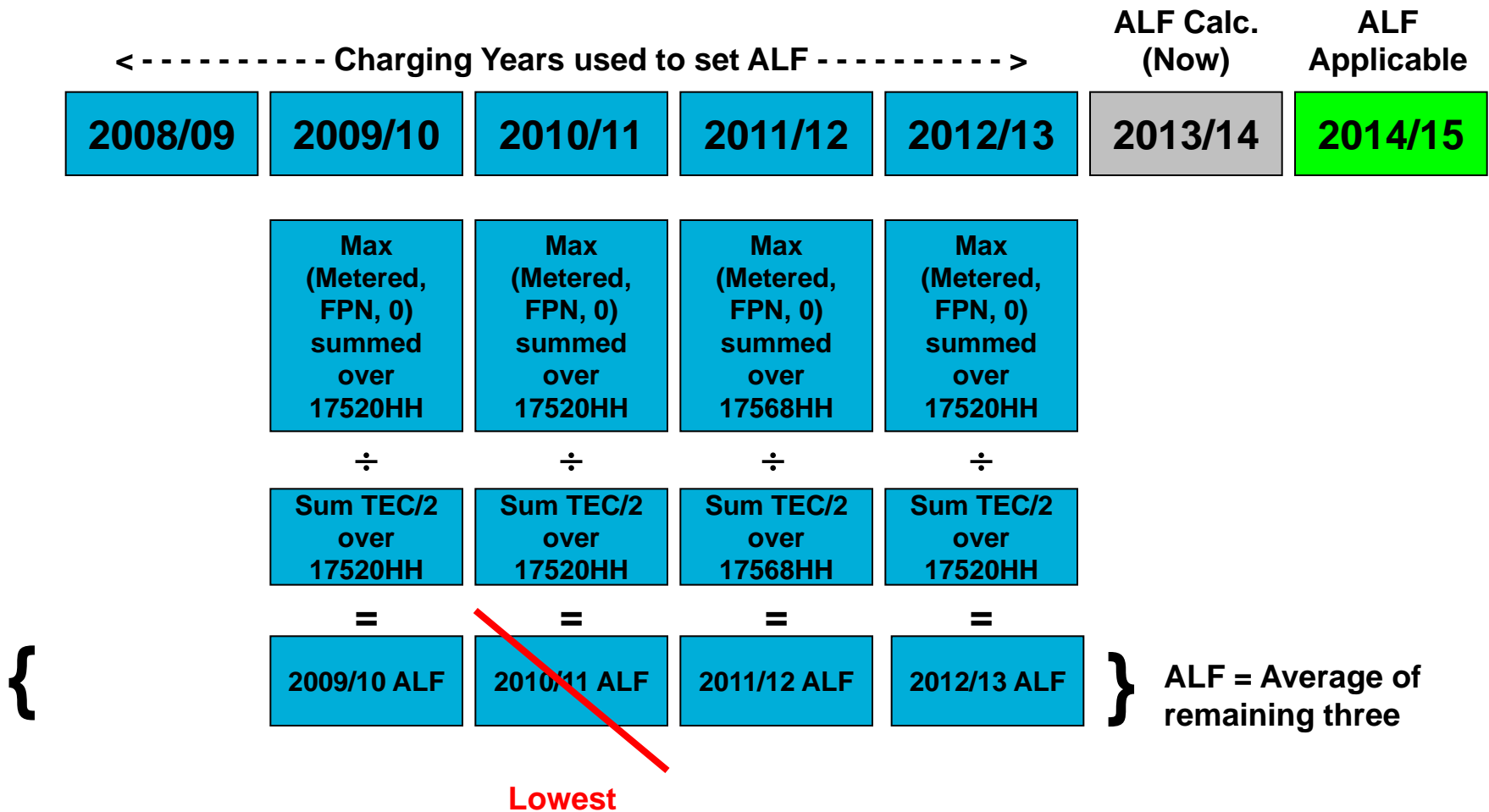
Calculation Methodology



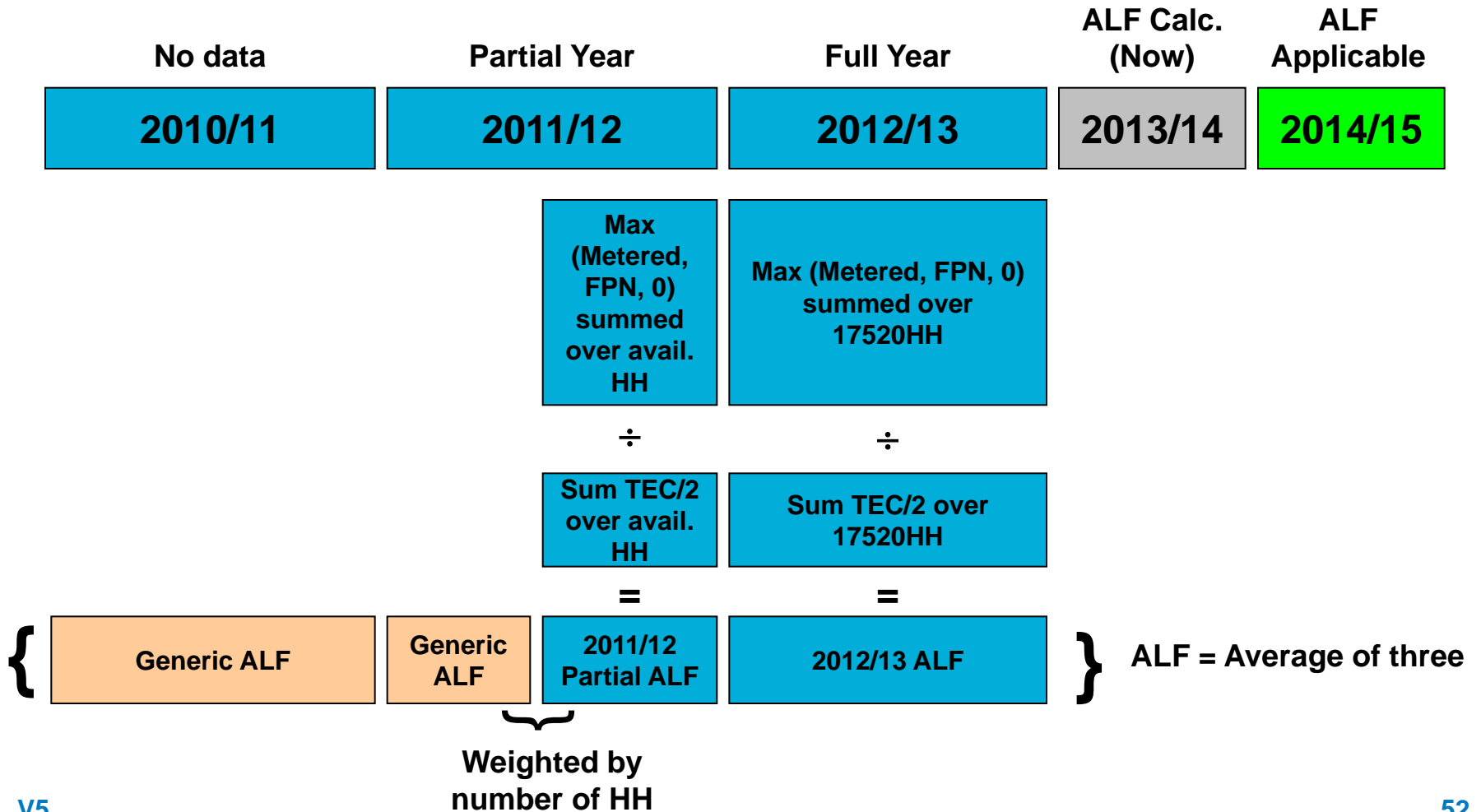
5 years data



4 years data



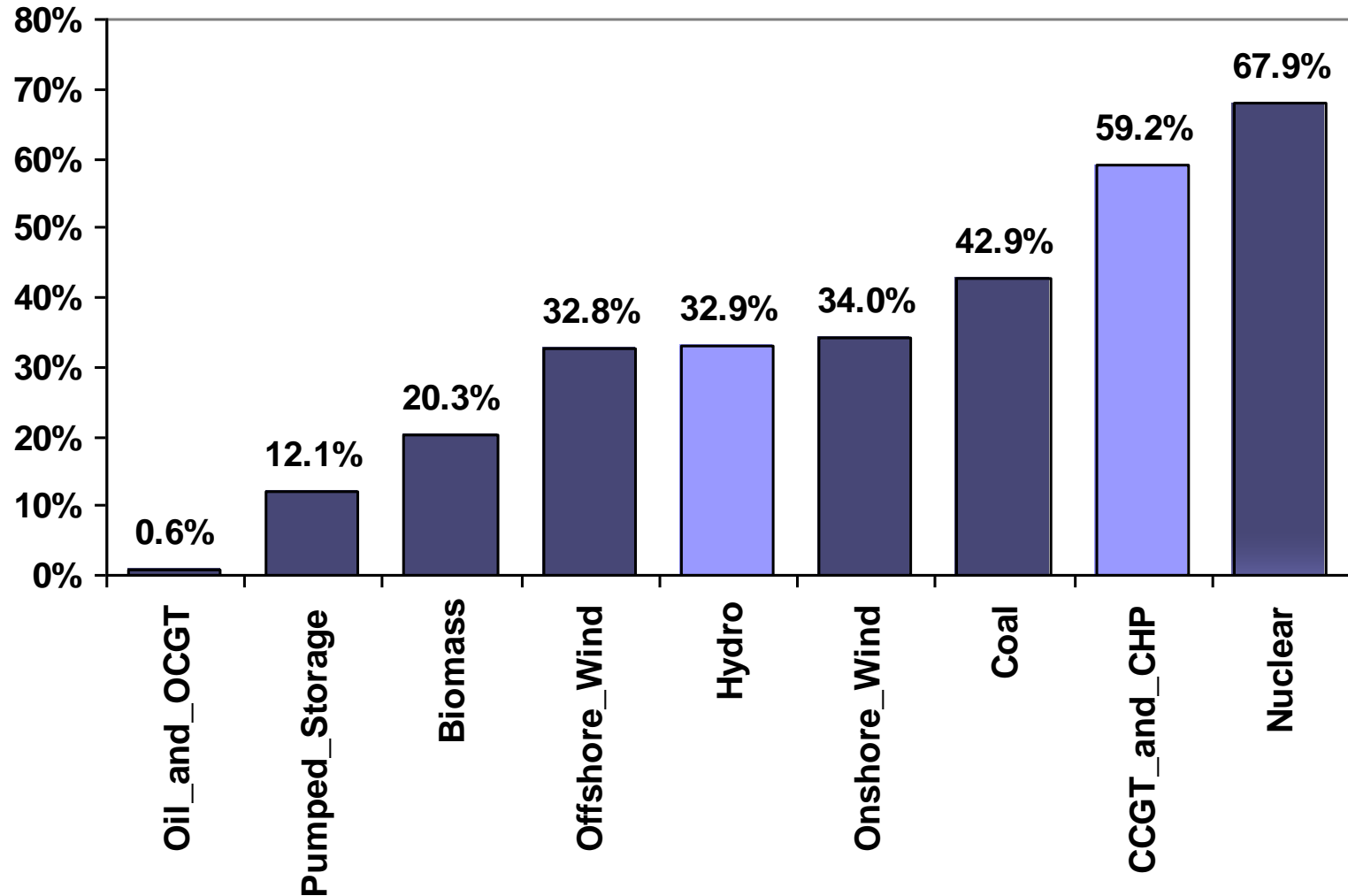
Less than three full years data



Generic ALFs

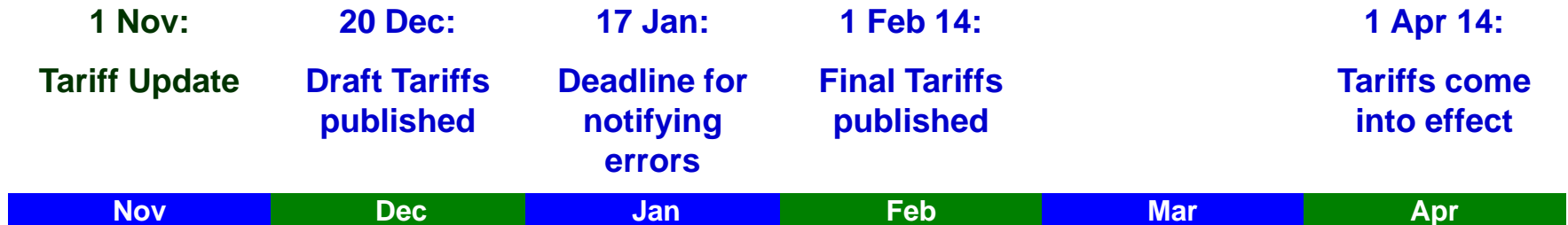
- The generic ALF is derived from the average annual output of the ten most recently commissioned GB generation of a particular generation plant type that have at least five charging years' data.
- Where less than ten GB generators of a particular generation plant type exist, then data from all existing generators of that particular generation plant type will be used.

2014/15 Indicative Generic ALFs



2014/15 Tariff and ALF Timelines

Tariff



ALF



Authority Decision?

Lunch



Review of embedded charging arrangements - update



Andy Wainwright
13th November

Background

- Standard Licence Condition C13 (Small Gens Discount)
 - Introduced at BETTA
 - Time limited – expires April 2016

- Transmission Access for Distributed Generation (2007)
 - Concluded C13 should be resolved as part of broader review of embedded benefits
 - 2013/14 value of embedded benefit is £31.25/kW

- National Grid established informal focus group earlier in year
 - Purpose; to inform any potential CUSC modification proposal

Focus Group review

- Primarily focus on embedded benefits associated with TNUoS

Remits for consideration

- Cost reflectivity of transmission charges on distribution connected generation
- Impact of transmission charges on competition between transmission and distribution connected generation.

Focus Group discussions

Does embedded generation use the transmission system?

**Physical
power
Flows?**

**Access
to
market?**

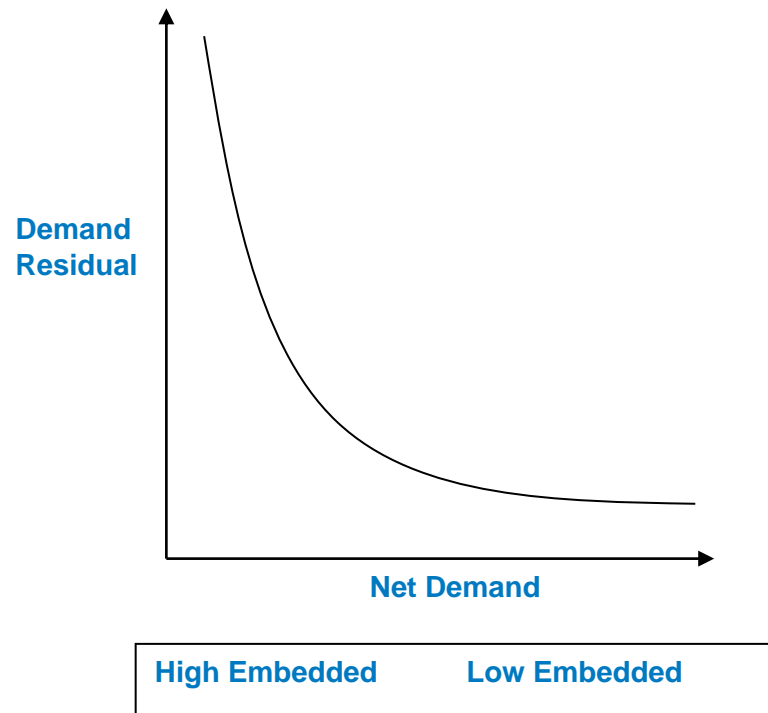
**Security &
quality of
supply?**

Focus Group discussions

Embedded benefit arising from TNUoS charges

Does the embedded benefit exist?

Are TNUoS residual elements cost reflective?



Focus Group discussions

Should demand be charged on gross?

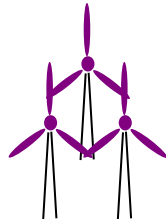
General agreement that locational signals should be based on net flows

Difference of views whether demand should be charged on gross

Focus Group discussions

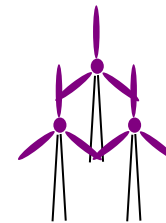
Comparison of transmission and distribution charges paid by generators

transmission connected generator



Pay

distribution connected generator



Pay



Equivalent?

DUoS

Connection

Equivalent?

Connection

What proportion locational?

Focus Group discussions

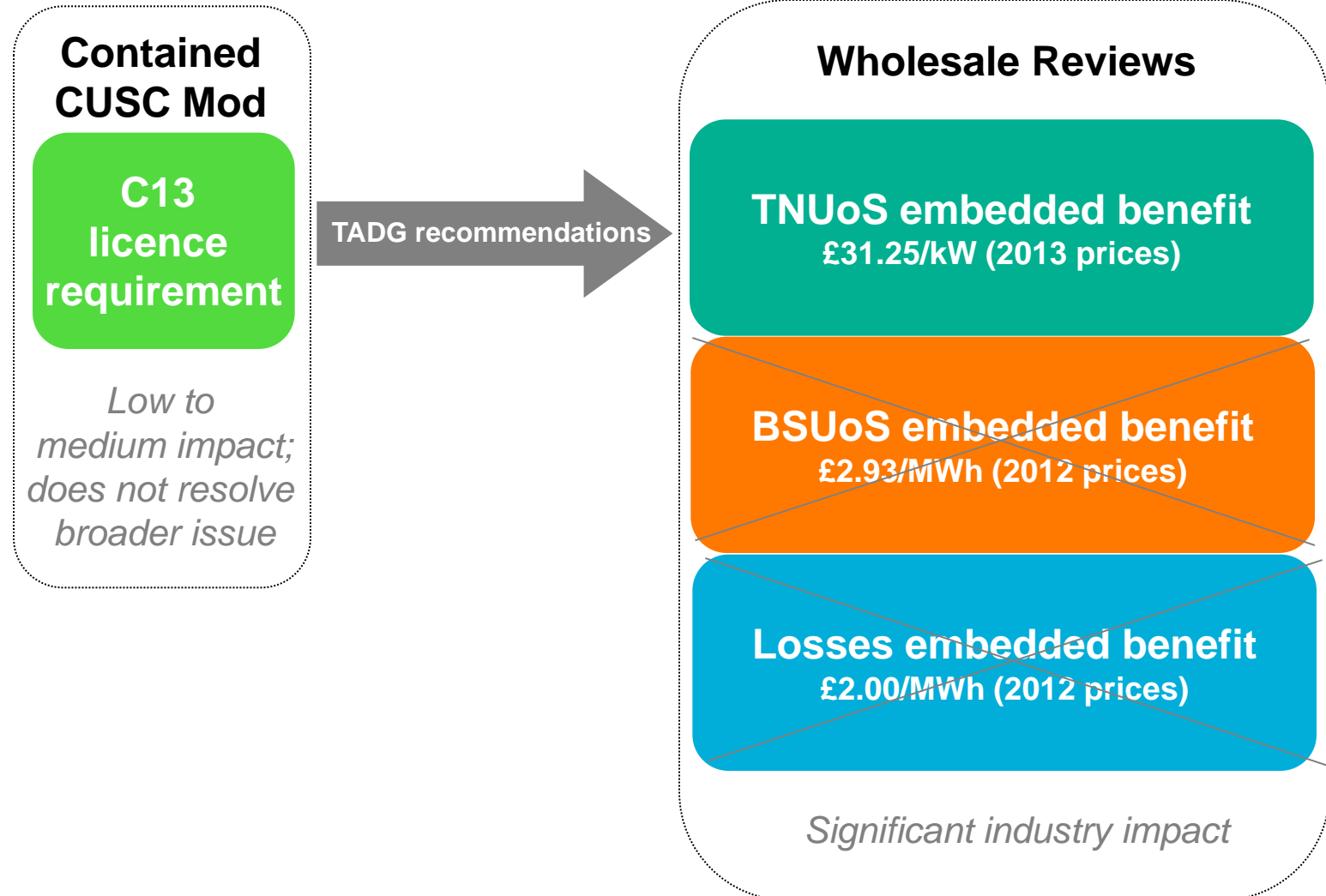
Exporting GSPs

Potential area for improvement in TNUoS charging methodology?

Is there any embedded benefit through an exporting GSP?

How would an exporting GSP be defined?

Scope of CUSC modification proposal



Next steps

- National Grid report to be published later this month
 - Includes Focus group discussions
 - Three week open letter
 - National Grid view (or range) to be presented
- CUSC modification proposal early 2014
 - Required to meet April 2016 implementation date

Potential future modification topics



Adam Sims

Prioritised potential topic list

Topic	Ranking
G/D split	1
BSUoS stability	2
8 year Price control	3
Integrated offshore	4
User Commitment (Section 15) Flexibility Developments	5
Flexible TNUoS products	5
TNUoS fixed tariffs	5
Triad	6
Embedded	6
Methodology Housekeeping	8

Any Other Business



Next TCMF

January

22

Wednesday

2014 TCMF dates

March

19

Wednesday

May

13

Tuesday

July

17

Thursday

September

17

Wednesday

November

12

Wednesday

We value your feedback and comments

If you have any ***questions*** or would like to give us ***feedback*** or share ***ideas***, please email us at:

Cusc.team@nationalgrid.com

Also, from time to time, we may ask you to participate in surveys to help us to improve our forum – *please look out for these requests*

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