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Transmission Charging Methodologies Forum



Tuesday 15th January 2013

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Introduction & Welcome

Patrick Hynes

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Safety Moment



Adelle McGill

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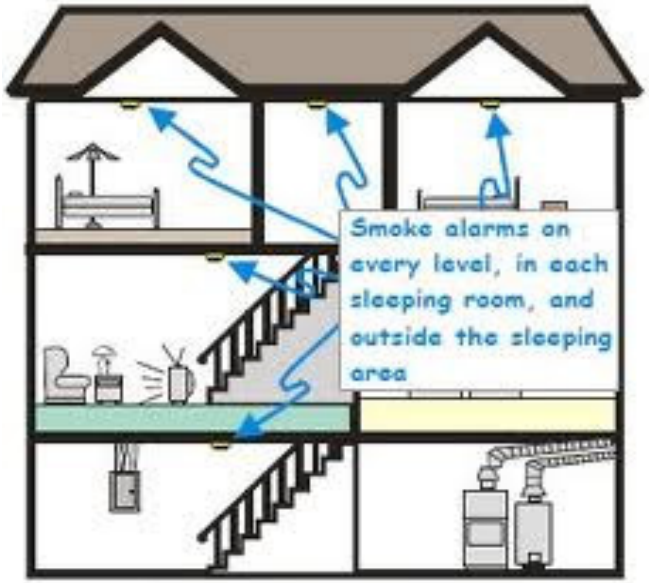
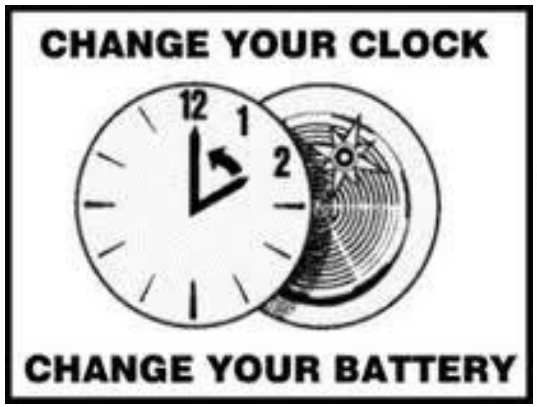
Safety moment – Fire Alarms

- Twice as likely to die in house fire if no working smoke alarm.
- Only 80% GB population own smoke alarms
- 1 in 8 house fires where alarms installed, alarms failed to work (mainly due to flat/missing batteries)





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Safety moment – Carbon Monoxide

- Kills around 15 people in the UK each year (HSE)
- Can't been seen, smelt or tasted
- Safety actions
  - Buy an alarm and keep well maintained.
  - Be aware of the following symptoms
    - Boiler pilot light flames burning orange, instead of blue
    - Sooty stains on or near appliances
    - Excessive condensation in the room
    - Coal or wood fires that burn slowly or go out
    - Families suffering prolonged flu-like symptoms
  - Check for safety recalls on appliances (e.g. gas cookers)
    http://www.gassaferegister.co.uk/advice/safety_notices_and_recalls.aspx

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Agenda

- Actions from Previous TCMF
- Ongoing modification proposals and recent modification decisions
- Update on User Commitment for Non-Generation Users
- Update on 2013/14 TNUoS charges and rezoning consultation
- Lunch
- Proposed future modification topics
  - Follow on actions from licence condition C13 change (charging for embedded generation)
- Any other business

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Actions from previous TCMF



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Actions from previous TCMF

- To send invitations to CMP213 Workshop
- To update application fees two pager with further clarification on BELLA / BEGA issues

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Ongoing Modification Proposals and Recent Modification Decisions

Adelle McGill

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Ongoing Modification Proposals

- CMP201: Generation BSUoS
  - Revised report with Workgroup for comment
  - Due to be resubmitted to CUSC panel in February
    - Note: BSC Panel recommended approval of P285 / P286 (RCRC)

- CMP207: Limit changes to TNUoS tariffs
  - Currently awaiting determination from Ofgem

- CMP208: BSUoS forecasting
  - Draft final modification report to CUSC panel in December 2012
  - Alternative preferred by majority of CUSC panel
  - Due to be sent to the Authority shortly

- CMP209/10: Embedded TNUoS payment process
  - Currently awaiting determination from Ofgem

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Recently published modification decisions

CMP214: TNUoS charging parameter updates

- Proposed to delay implementation of updates to start of 2nd charging year within new price control period

- Ofgem's direction:
  - Proposal should not be implemented
  - It would create windfall gains/losses for generators and suppliers who would have assumed forecast changes within pricing structures

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CMP213 – TransmiT TNUoS Modification



Andy Wainwright

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TransmiT Process to date

Call for Evidence and Academic Reports	Oct. '10 – June '11
Industry Technical WG develop options	July '11 – Oct.'11
Economic Assessment of 3 options	Aug.'11 – Dec.'11
Ofgem SCR consultation	Dec.'11 – Feb. '12
Ofgem conclusions and direction to NGET	May'12
NGET raise CUSC modification proposal	20th June 2012

- Development, debate and consultation has taken place
- Direction set out elements included in modification proposal and Workgroup terms of reference
- First Workgroup meeting held in July 2012

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Elements of the Original Modification Proposal

- Modification to reflect network investment cost impact of different generation technologies (capacity sharing)

1 **Capacity Sharing**

- Addition of parallel HVDC circuits

2 **Parallel HVDC**

- Addition of sub-sea island connections

3 **Islands**

Drafted to provide flexibility in addressing defect

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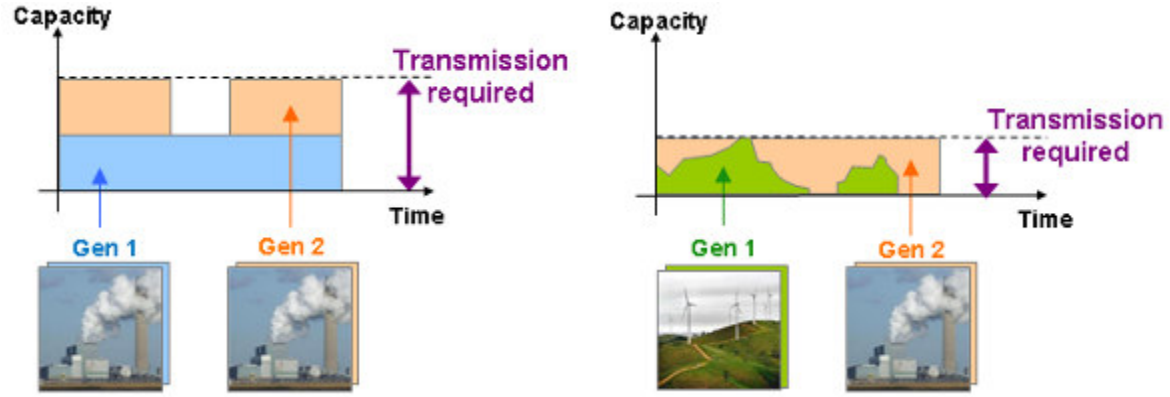
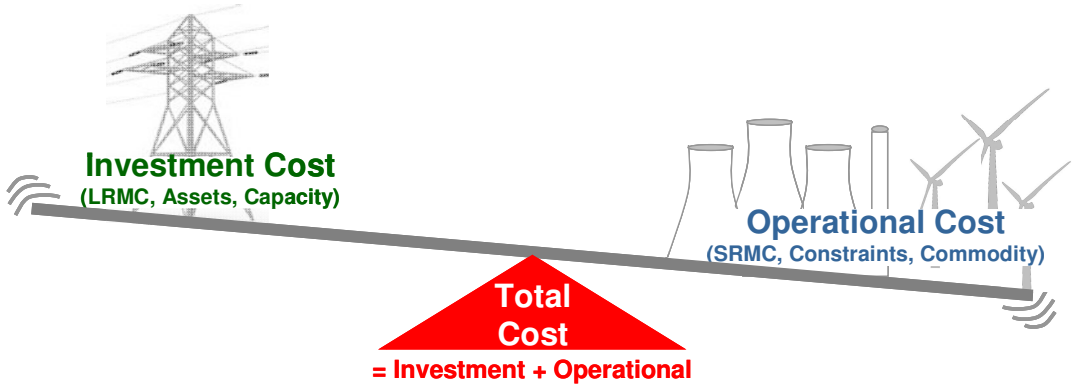
Sharing

- Increasing variable generation = increased network sharing



- NETS SQSS GSR-009
- Greater proportion of investment driven by CBA



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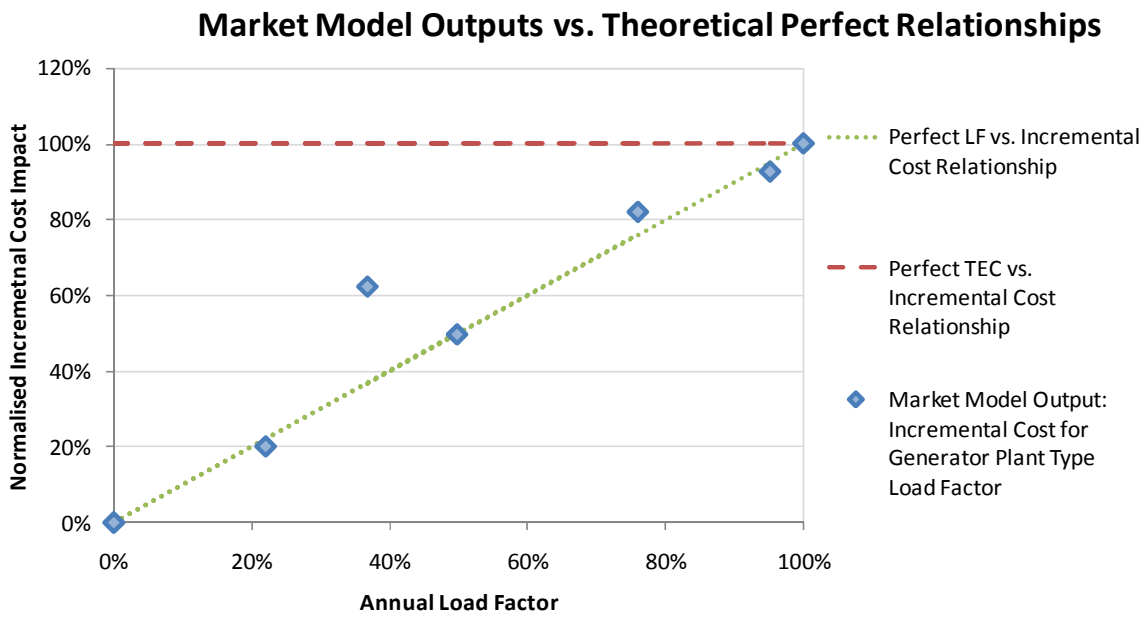
Sharing



1. Does relationship hold in areas of low generation diversity?
2. Do certain generation technologies counter correlate on islands?
3. Is historic load factor a reasonable proxy?
4. Is the relationship reflective of importing areas?

Imperfect relationship; balances simplicity with cost reflectivity

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Parallel HVDC

- Parallel HVDC circuits – ‘Bootstraps’
- Existing charging model based on passive network elements
  - HVDC represents an active component
  - High relative £/MWkm cost
  - Some precedent offshore

1. Which costs go into EF calculation?
2. Where does incremental MW flow?

Islands

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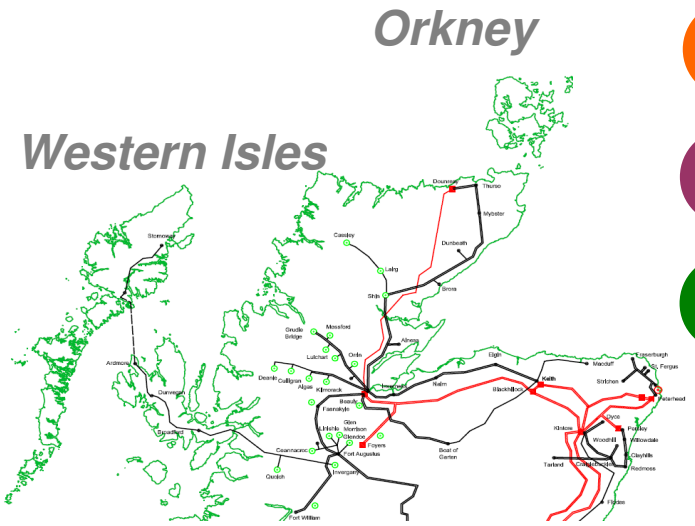
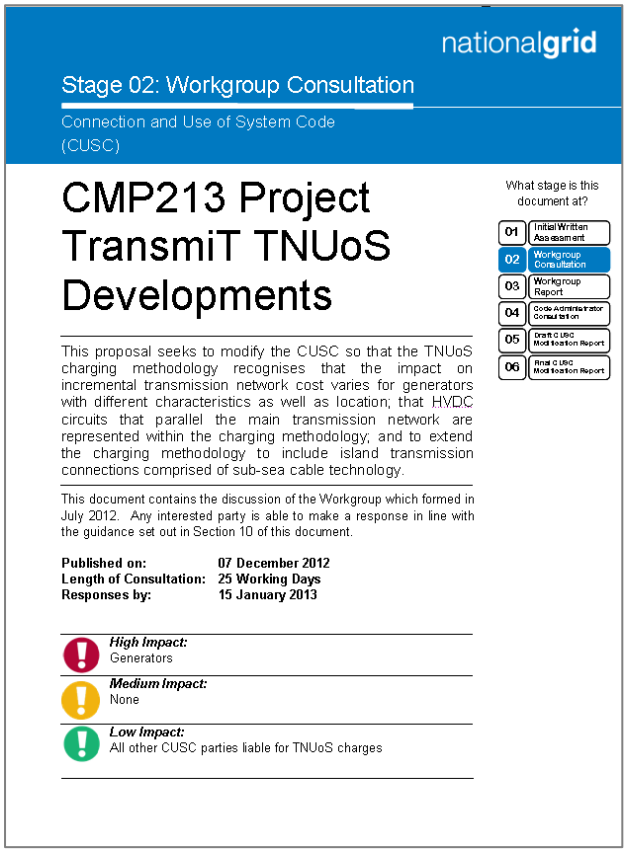
Scottish Island Connections

- Circuits proposed comprised of sub-sea cable technology
- Not accommodated in onshore charging methodology
- Configuration not envisaged when 'local circuit' charging was introduced



1. Which costs go into EF calculation?
2. Revise MITS (local/wider) definition?
3. Security factor (1.8) for MITS nodes?

Summary and next steps



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Stage 02: Workgroup Consultation

Connection and Use of System Code (CUSC)

CMP213 Project TransmiT TNUoS Developments

What stage is this document at?

01 Initial Written Assessment
02 Workgroup Consultation
03 Workgroup Report
04 Code Administrator Consultation
05 Draft CUSC Modification Report
06 Final CUSC Modification Report

This proposal seeks to modify the CUSC so that the TNUoS charging methodology recognises that the impact on incremental transmission network cost varies for generators with different characteristics as well as location; that HVDC circuits that parallel the main transmission network are represented within the charging methodology; and to extend the charging methodology to include island transmission connections comprised of sub-sea cable technology.

This document contains the discussion of the Workgroup which formed in July 2012. Any interested party is able to make a response in line with the guidance set out in Section 10 of this document.

Published on: 07 December 2012
Length of Consultation: 25 Working Days
Responses by: 15 January 2013

High Impact:
Generators

Medium Impact:
None

Low Impact:
All other CUSC parties liable for TNUoS charges

- Consultation published on 7th December 2012
  - Closing date for responses on 15th of January 2013
- Workgroup post consultation
  - Consider issues raised /evidence presented
  - Further / new analysis
  - Workgroup and consultation alternatives
  - Modelling market and environmental impact
  - Legal text
  - Assessment against objectives / vote

http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/amendments/currentamendmentproposals/

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User Commitment for Non-Generation Users



Adam Sims

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Background

- National Grid raised CMP192 in February 2011 to address enduring user commitment regime
- CMP192 only covered generation users (direct and embedded)
- Interconnectors and directly-connected demand users remain on Final Sums
- Ofgem have extended letter of comfort to the NETSO for these users until March 2015

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Non-Generation Users

- Directly-connected demand users
  - Very few new applications, only Network Rail at present
  - Normally only have a local impact on transmission
  - Estimated current level of Final Sums ≈£100M (Local)

- Interconnector users
  - Four new projects currently planned
  - Normally have significant local and wider impact
  - Estimated current level of Final Sums ≈£75M (Local) + ≈£700M (Wider)

- No liabilities for post-commissioning users

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Development of an Enduring Regime

- Any enduring regime would need to develop a methodology for calculating liability amounts (similar to CMP192)
- This presupposes that the framework for liabilities is in place
- However, interconnectors are now considered as if they were TOs, and therefore the regulatory framework will also need development (consistent with GB and Europe)

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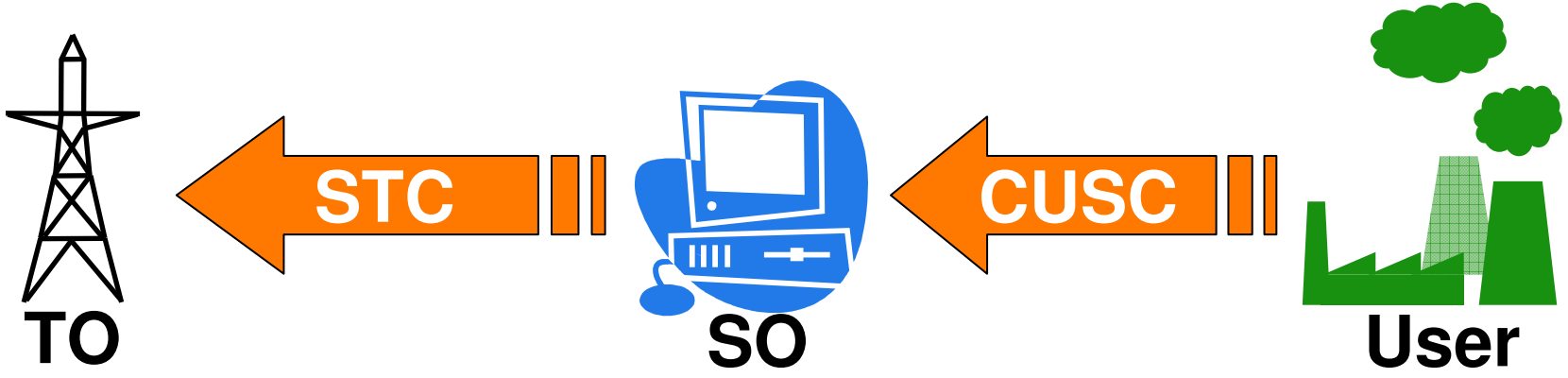
Regulatory Framework

- Flow of liability for a User connecting to a TO's network:



- Directly-connected demand falls neatly within this framework
- However, if interconnectors are to be treated as TOs, can they also be users?
- There is no TO to TO liability elsewhere

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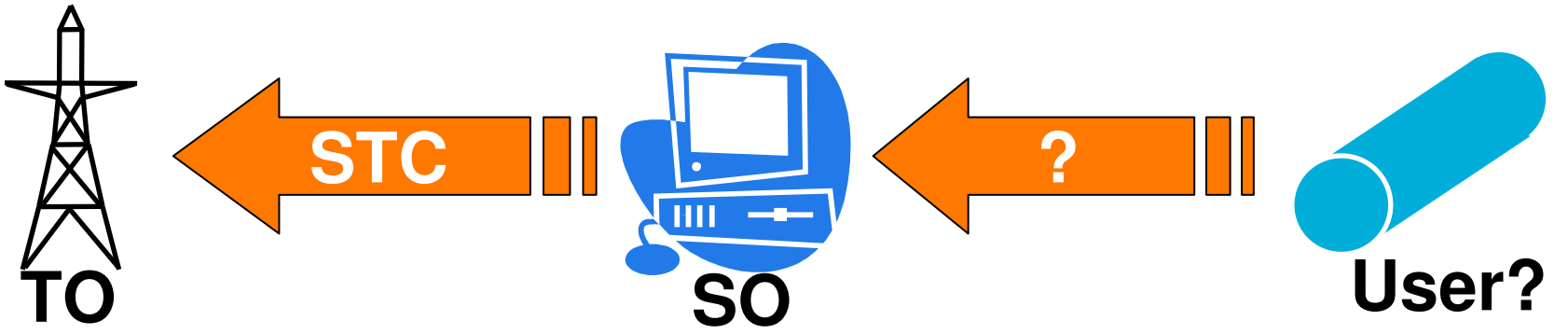
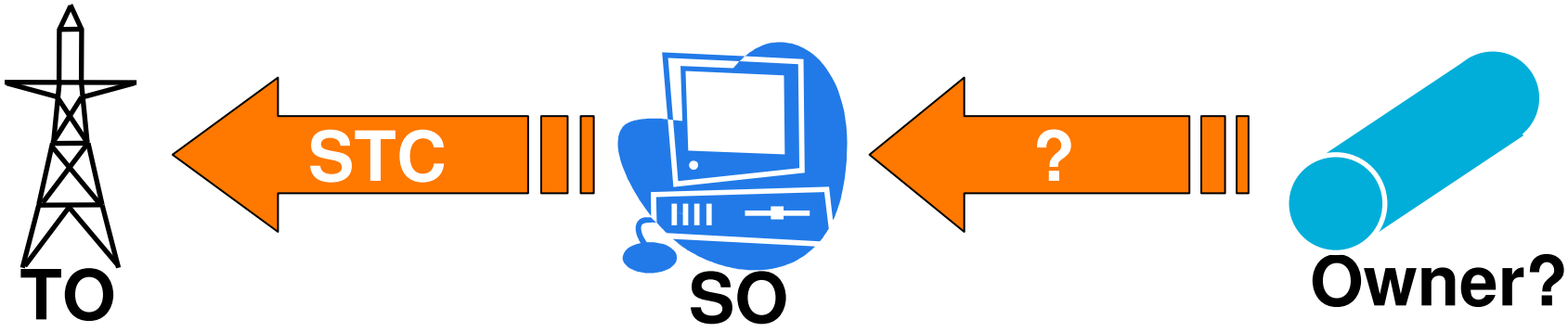
Regulatory Framework



- Who are the users before the interconnector is built?



- Can owners have a liability to the SO if they are to be treated as TOs?

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Open Letter

- National Grid published open letter (31/10/12) asking for views on progression of enduring arrangements*
- Two responses received:
  - Support for development of an enduring regime for interconnectors
  - No urgency for demand users

* http://www.nationalgrid.com/uk/Electricity/GettingConnected/PoliciesAndGuidance/

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Next Steps

- Complex issue, several potential areas of change: (CUSC/STC/Licence)
- Considerable industry engagement with other regulatory developments at present
- Therefore propose to raise industry expert group later in 2013

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Draft TNUoS Charges for 2013/14



Adam Brown

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Content

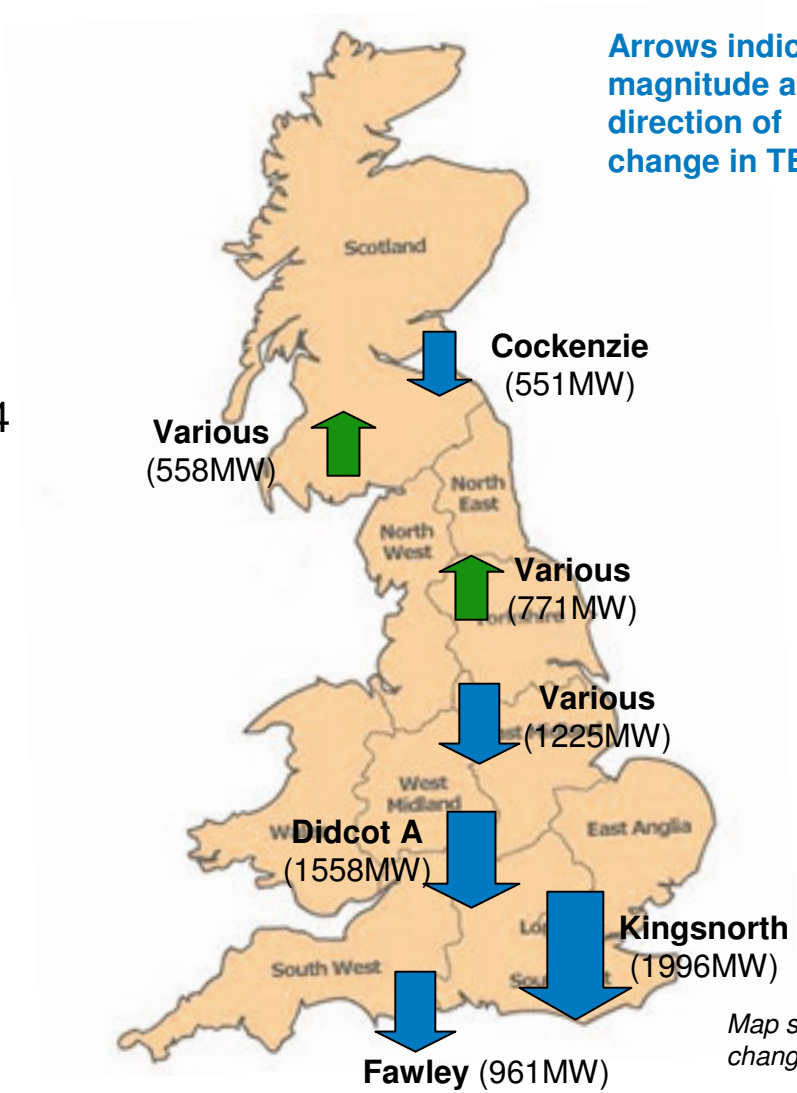
- Key updates made to the charging model, including changes to
  - generation background
  - allowed revenues
  - the cost of building network (expansion costs)
  - generation charging boundaries

- Draft tariffs
  - impact of changes in power flows
  - impact of parameter updates

Key changes

Generation Background

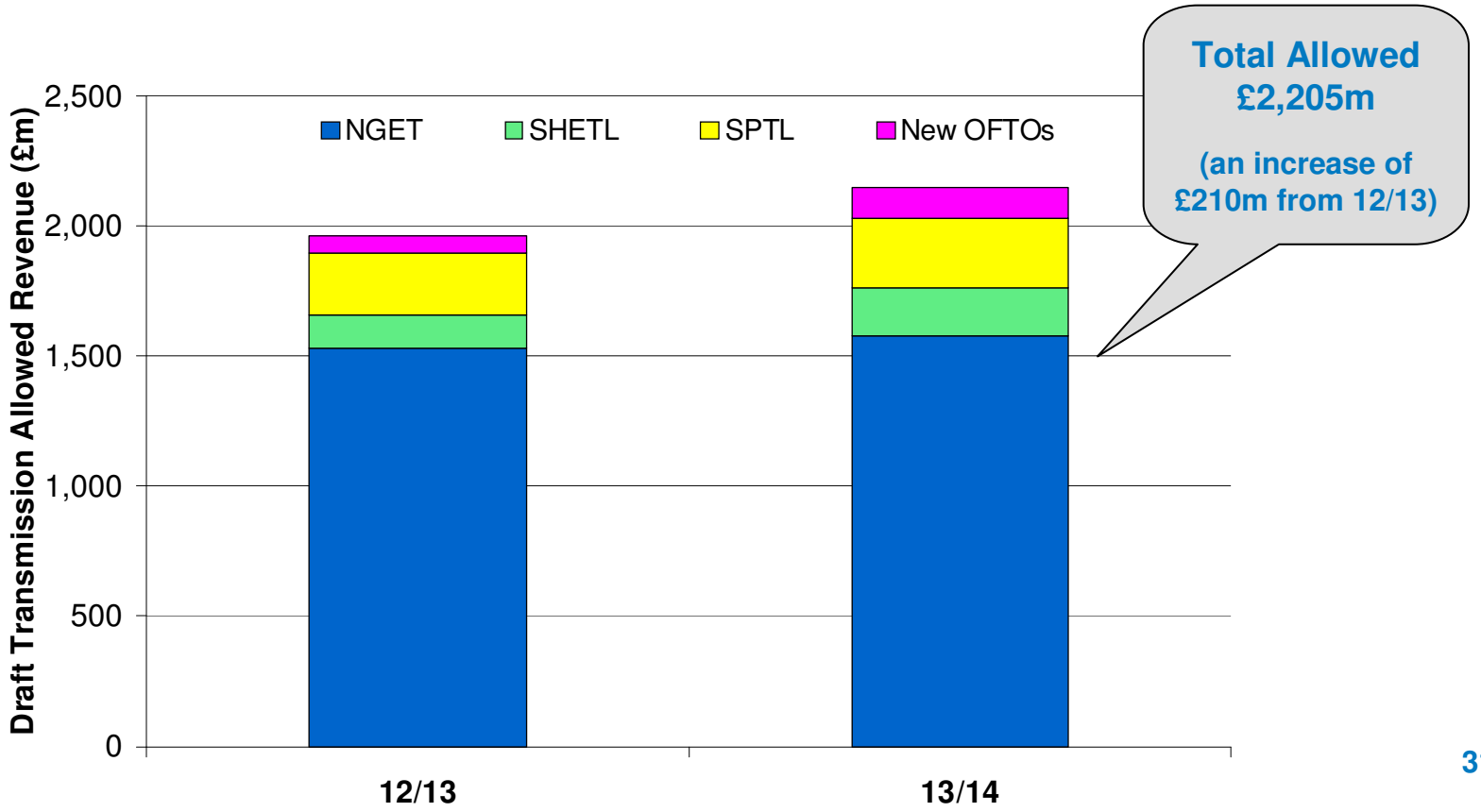
- The most significant update to the charging model is the change in the generation landscape from 2012/13
  - 82GW in total is contracted
- There is a total reduction of 7GW in the contracted generation for 2013/14 compared to 2012/13
  - virtually no net change in Scotland however there is a notable change in east – west split of generation
  - in England, there are large TEC reductions particularly in southern areas



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)
  - final RIIO-T1 proposals for NGET



Key changes

Expansion Costs

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Expansion Constant

- Represents the generic cost of transporting 1MW over 1km of 400kV OHL
- Increased from £11.7/MWkm to £12.5/MWkm

Expansion Factors

- Represents the cost of other circuit constructions relative to 400kV OHL

	NGET		SPTL		SHETL	
Relative Cost	**EF**	□	**EF**	□	**EF**	□
400kV cable factor	10.2	-12.2	10.2	-12.2	10.2	-12.2
275kV cable factor	11.5	-10.9	11.5	-10.9	11.5	-10.9
132kV cable factor	22.6	-7.6	22.6	-7.6	20.8	-7.0
400kV line factor	1.0	0.0	1.0	0.0	1.0	0.0
275kV line factor	1.2	0.1	1.2	0.1	1.2	0.1
132kV line factor	2.9	0.1	2.9	0.1	2.6	0.4

- Most significant change is reduction in cable costs

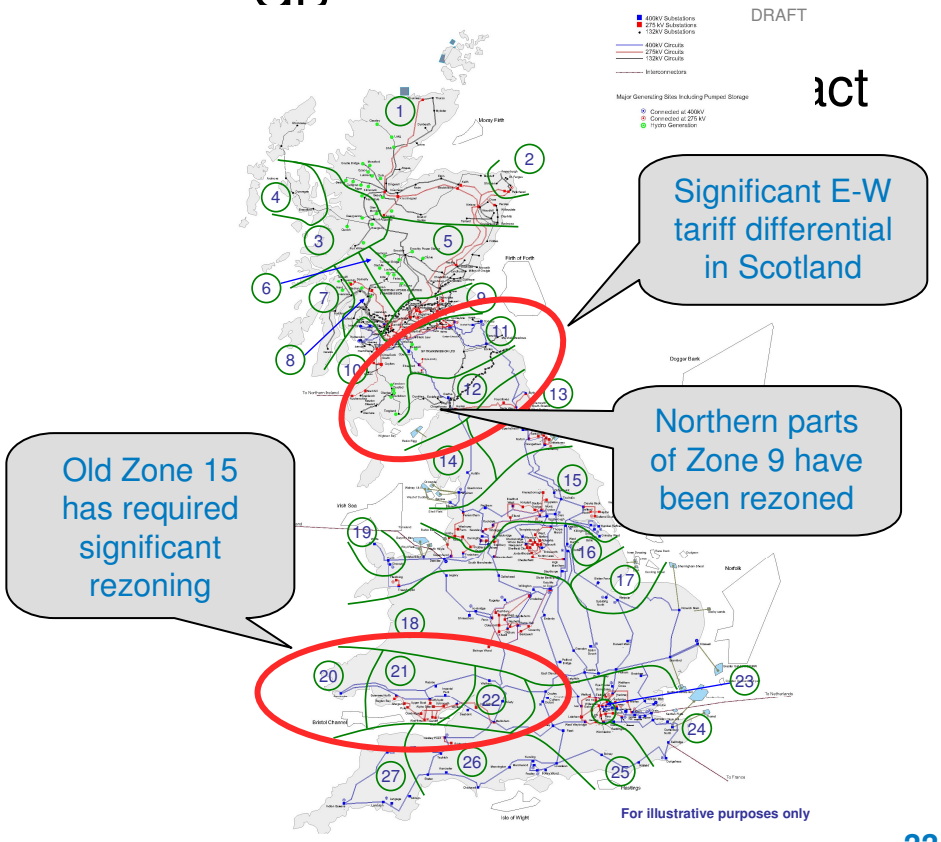
Key changes

Generation Zones

- Charging methodology states maximum spread of nodal costs within zone must not

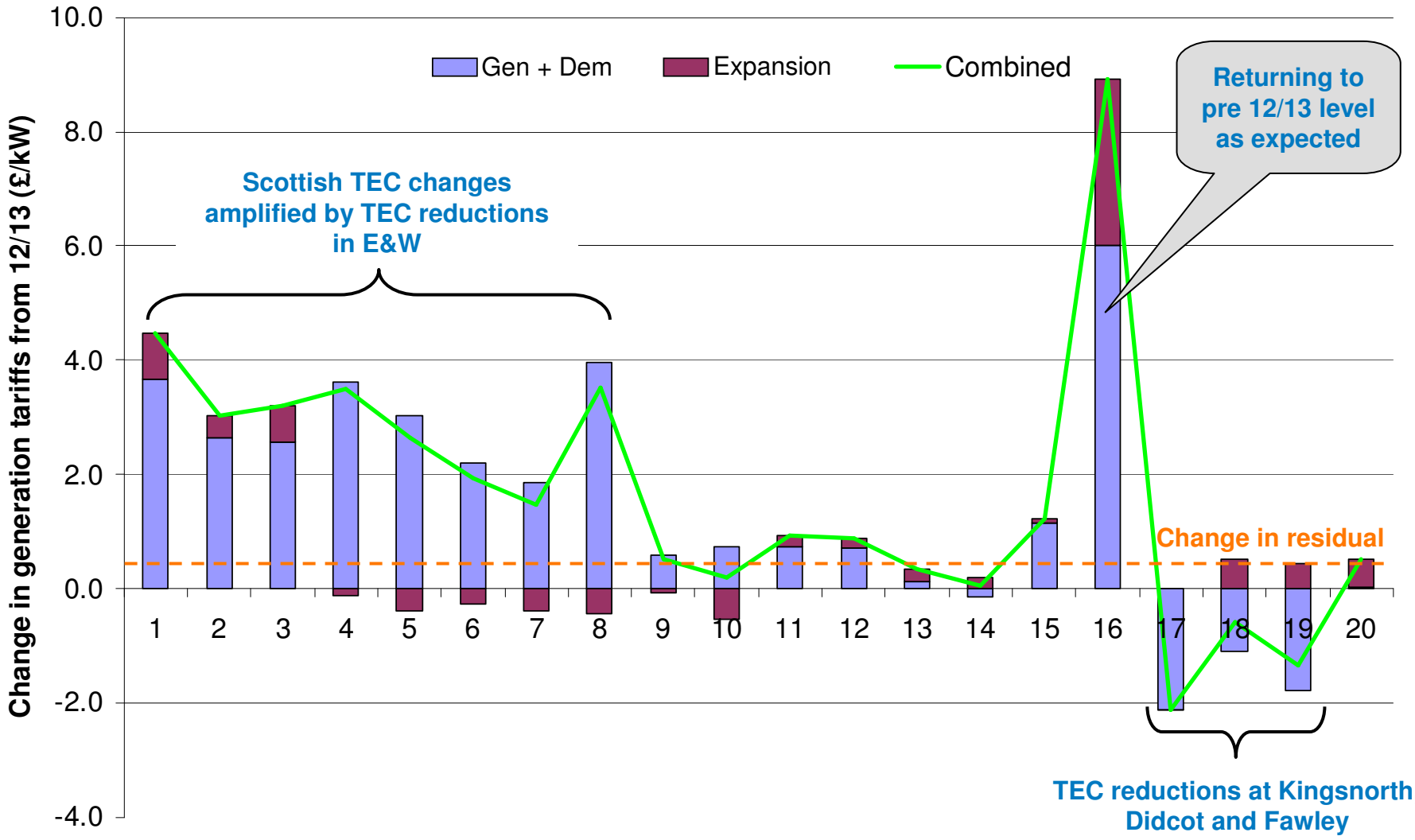
Zone	Zone Name	Zonal Spread
1	North Scotland	1.76
2	Peterhead	0.00
3	Western Highland & Skye	4.27
4	Central Highlands	3.44
5	Argyll	2.15
6	Stirlingshire	2.05
7	South Scotland	3.70
8	Auchencrosh	1.73
9	Humber & Lancashire	4.66
10	North East England	0.05
11	Anglesey	0.00
12	Dinorwig	0.00
13	South Yorks & North Wales	2.73
14	Midlands	1.55
15	South Wales & Gloucester	5.52
16	Central London	0.00
17	South East	1.74
18	Oxon & South Coast	1.23
19	Wessex	1.02
20	Peninsula	1.26

- Reviewed zone boundaries
  - 7 new zones throughout GB



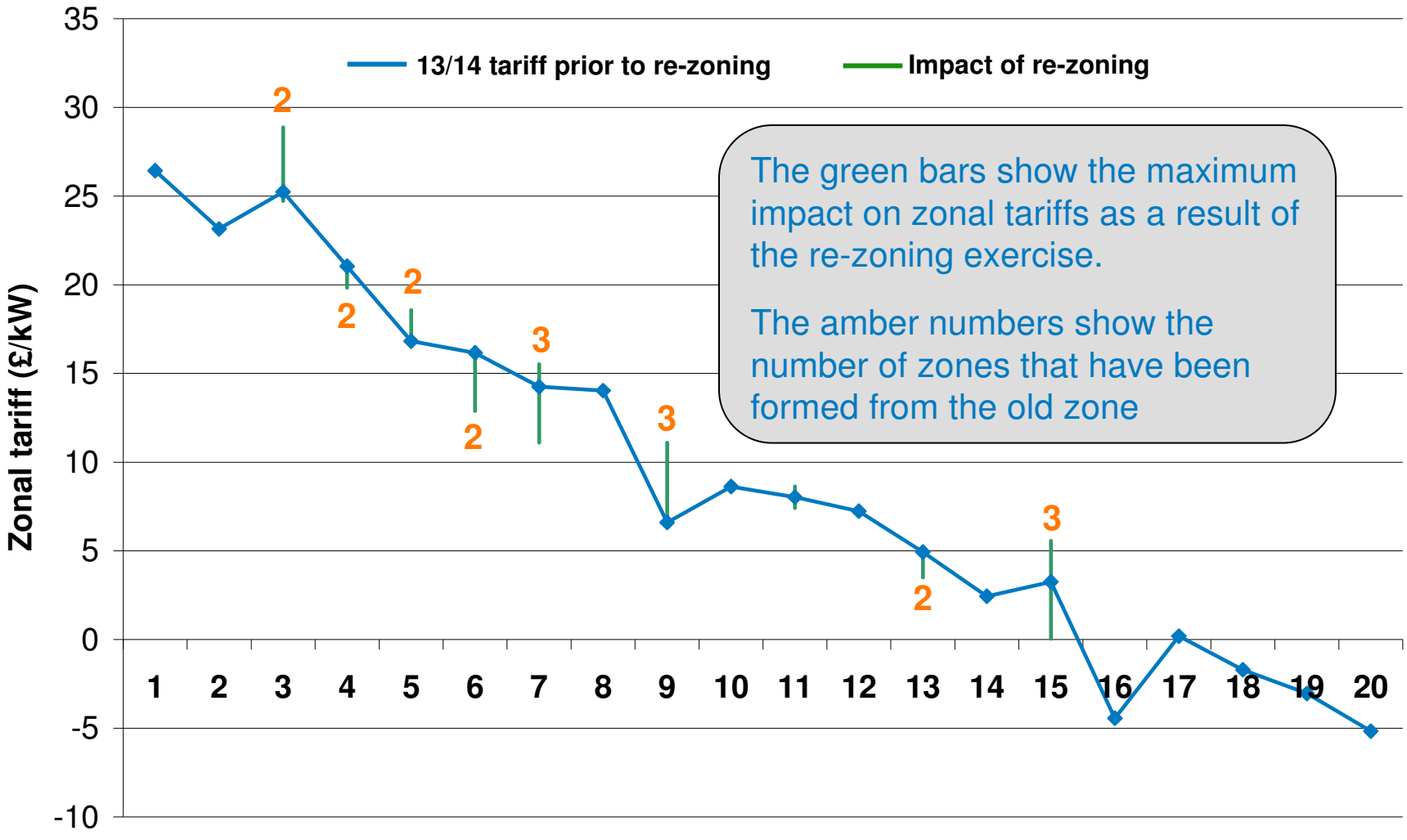
Change in Generation Tariffs

*Impact due to changes **prior** to re-zoning*



Change in Generation Tariffs

Impact due to re-zoning



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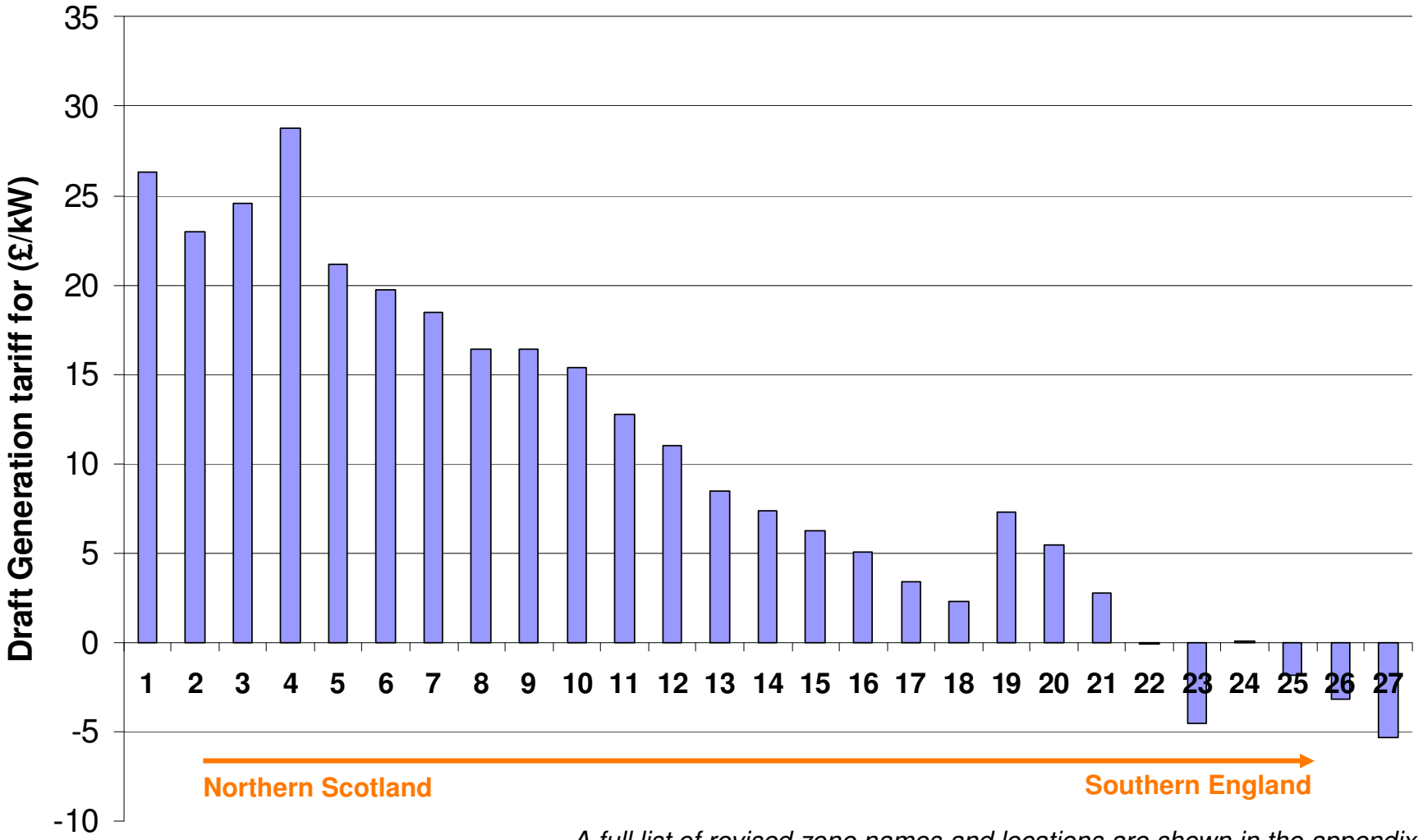
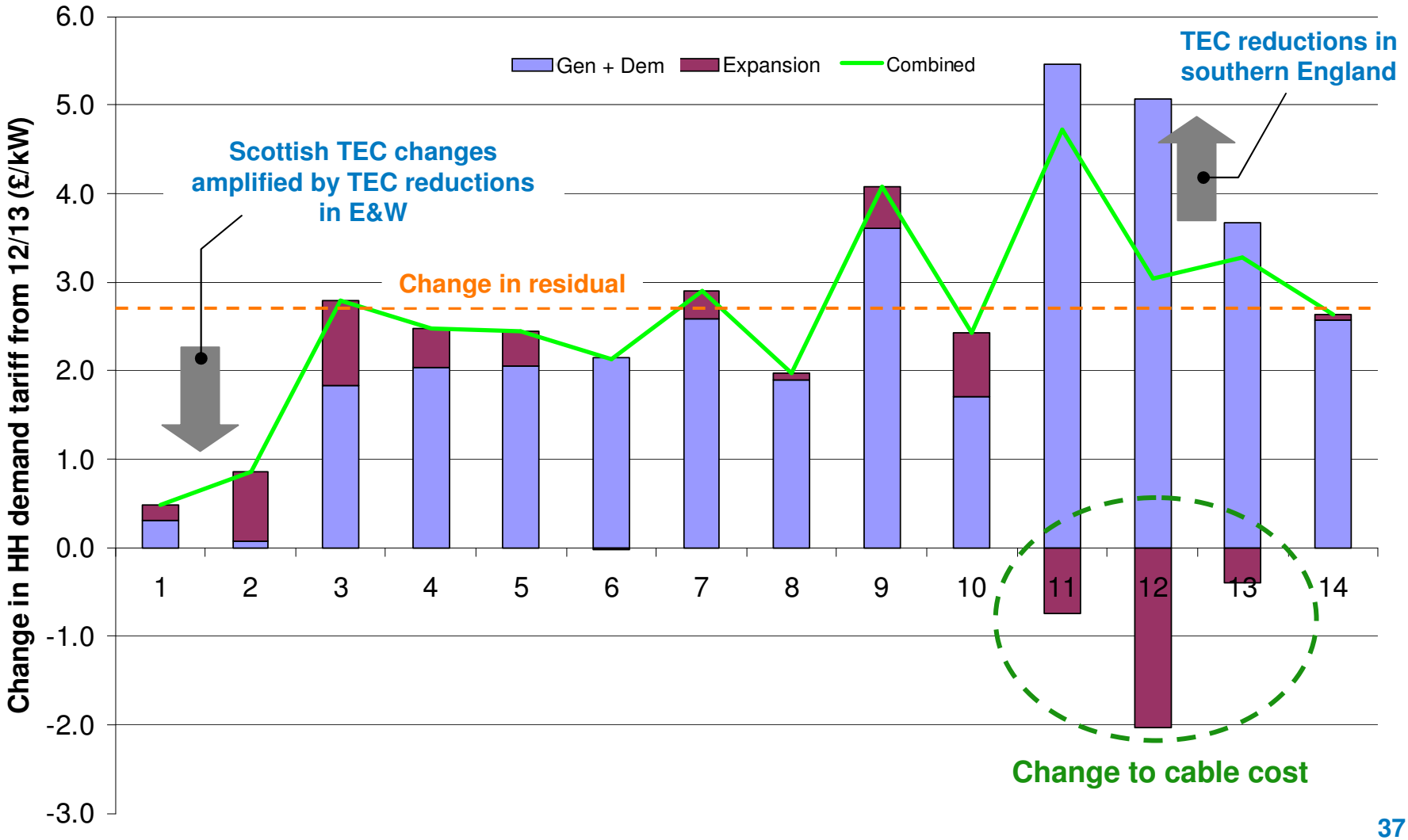
Draft Generation Tariffs for 2013/14



A full list of revised zone names and locations are shown in the appendix

Change in HH Demand Tariffs

All changes (not subject to re-zoning)



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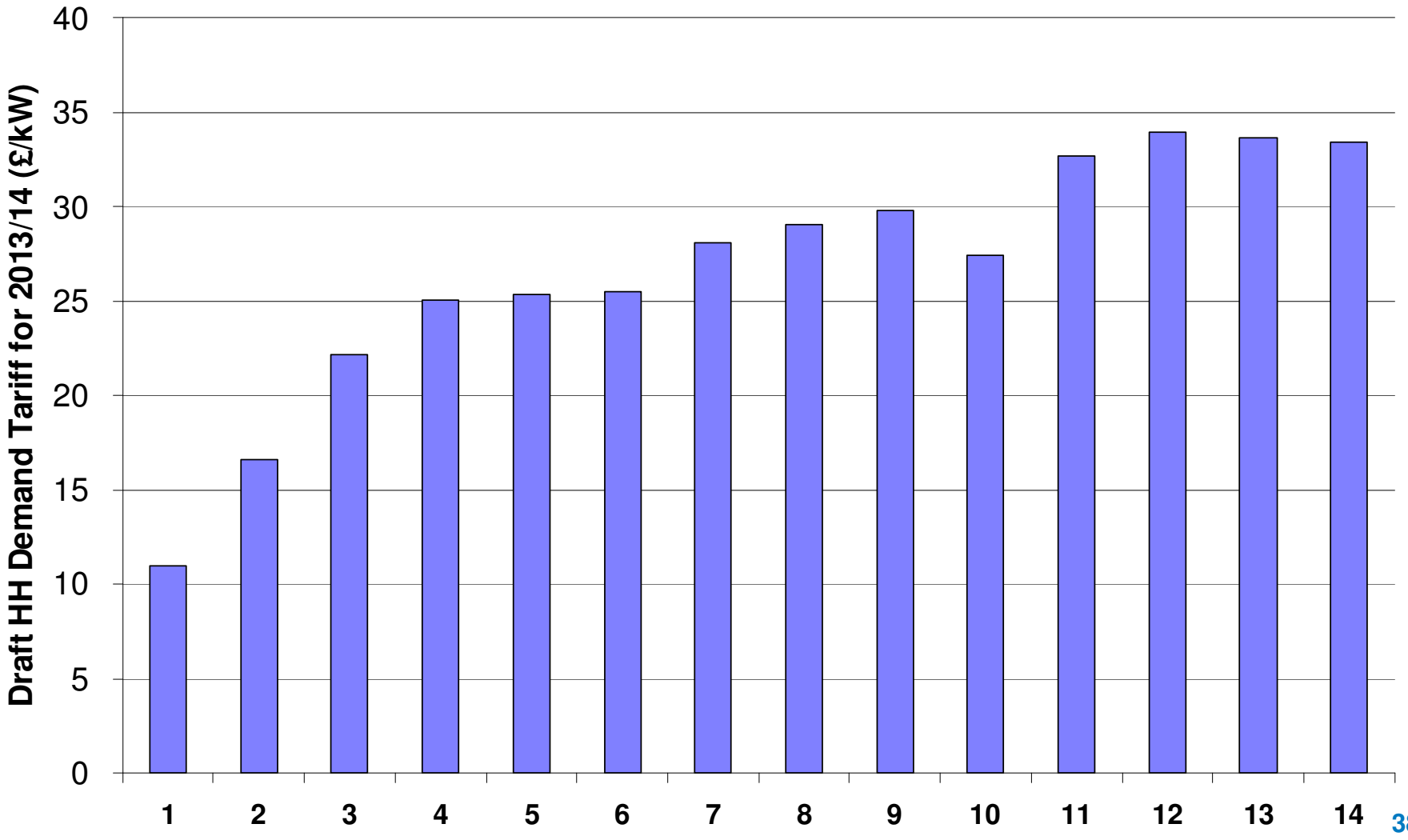
Draft HH Demand Tariffs for 2013/14



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Final Tariffs

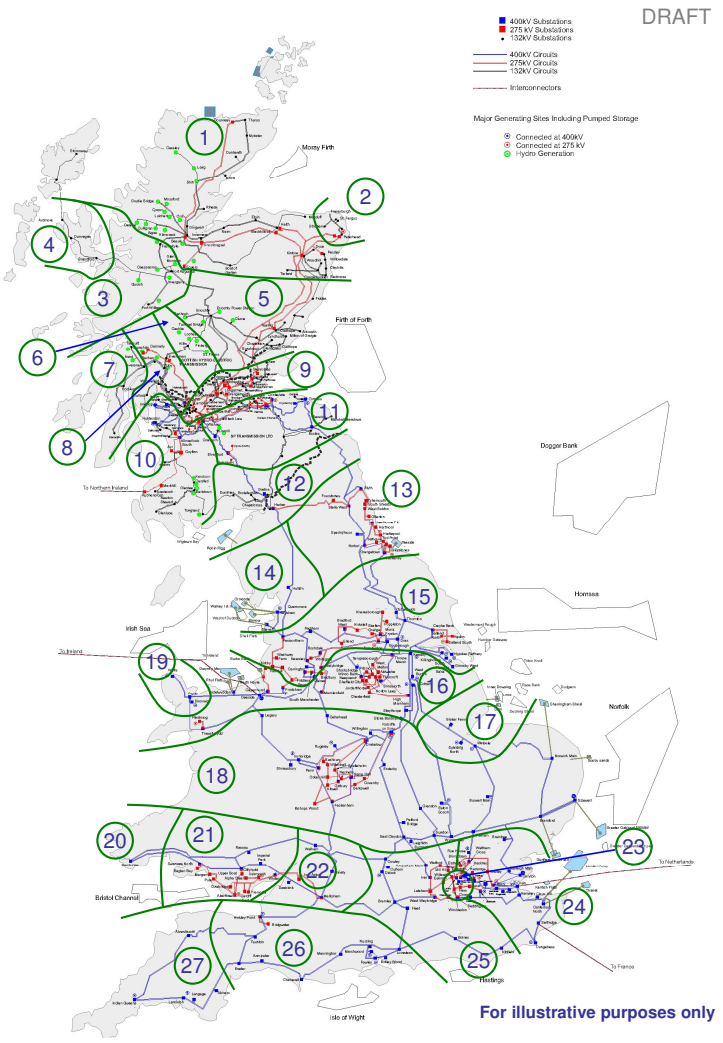
- Published by 31 January 2013

- Expect updates for
  - revenues collectable for other TOs
    - additional information provided under the STC by 25 January
  - further information revenue collection in 12/13
    - informs view of over / under recovery to be recovered in 13/14
    - informs view of charging bases for 13/14

- Also planning on publishing an initial view of tariffs for 2014/15

Appendix: Zone names

Zone No.	Zone Name
1	North Scotland
2	East Aberdeenshire
3	Western Highlands
4	Skye and Lochalsh
5	Eastern Grampian and Tayside
6	Central Grampian
7	Argyll
8	The Trossachs
9	Stirlingshire and Fife
10	South West Scotland
11	Lothian and Borders
12	Solway and Cheviot
13	North East England
14	North Lancashire and The Lakes
15	South Lancashire, Yorkshire and Humber
16	North Midlands and North Wales
17	South Lincolnshire and North Norfolk
18	Mid Wales and The Midlands
19	Anglesey and Snowdon
20	Pembrokeshire
21	South Wales
22	Cotswold
23	Central London
24	Essex and Kent
25	Oxfordshire, Surrey and Sussex
26	Somerset and Wessex
27	West Devon and Cornwall



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Lunch

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Future Modification Topics

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Follow on actions from licence condition C13 change (charging for embedded generation)

Iain Pielage

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Embedded Charging - Background

- Charging pre-consultation GB-ECM23 raised to review embedded generator benefit (linked to Standard Licence Condition SLC C13)
  - Work progressed over January – June 2010
- Project TransmiT launched : September 2010
  - Consequential impact on GB-ECM23
    - At that time, the outcome of SCR was unknown
    - CMP213 subsequently raised
- Standard Licence Condition C13 now extended to 2016
  - Allows for enduring charging solution replacement for SLC C13 based on new transmission charging baseline progressed under CMP213.
  - Expectation “that industry will begin work during this time to produce an enduring solution”

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Why Change?

- Exemptible distributed (embedded) generators avoid generation and receive demand TNUoS from the relevant supplier (subject to their own commercial contracts)
  - Due to the effect of the residual element of charges, this treatment leads to an 'embedded benefit' of ~ £25/kW (and increasing)
- Also receive BSUoS & Transmission Losses benefits

- Different definition of Transmission across GB.
  - At BETTA, a directly connected gen. at 132kV in Scotland located in close proximity to one which is embedded would arbitrarily pay ~£18/kW more
  - Ofgem introduced the time limited small gen. discount in Scotland for 132kV directly connected gen. to address this (SLC C13)
    - History of extending expiry date.

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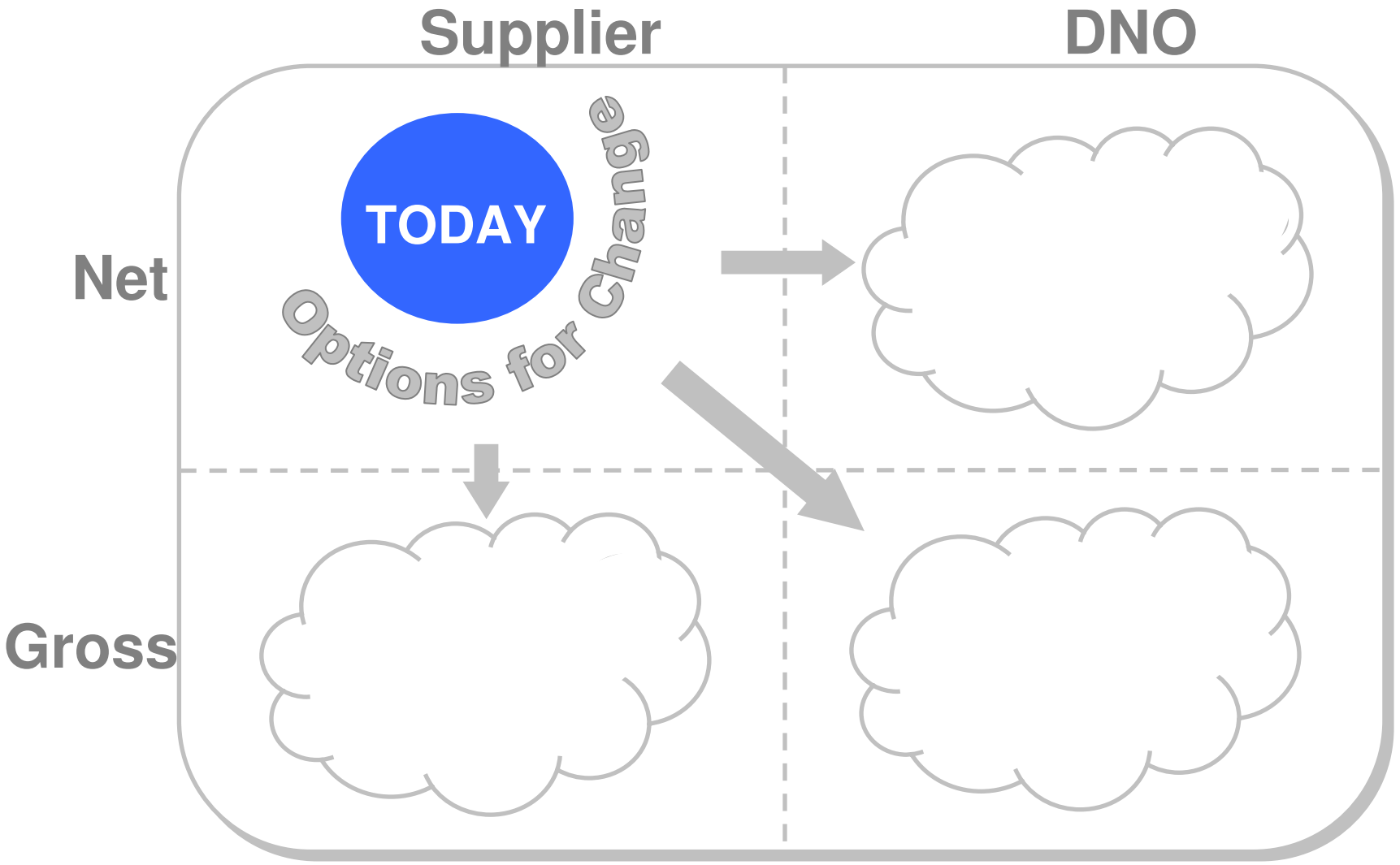
Previously Considered Options for Change



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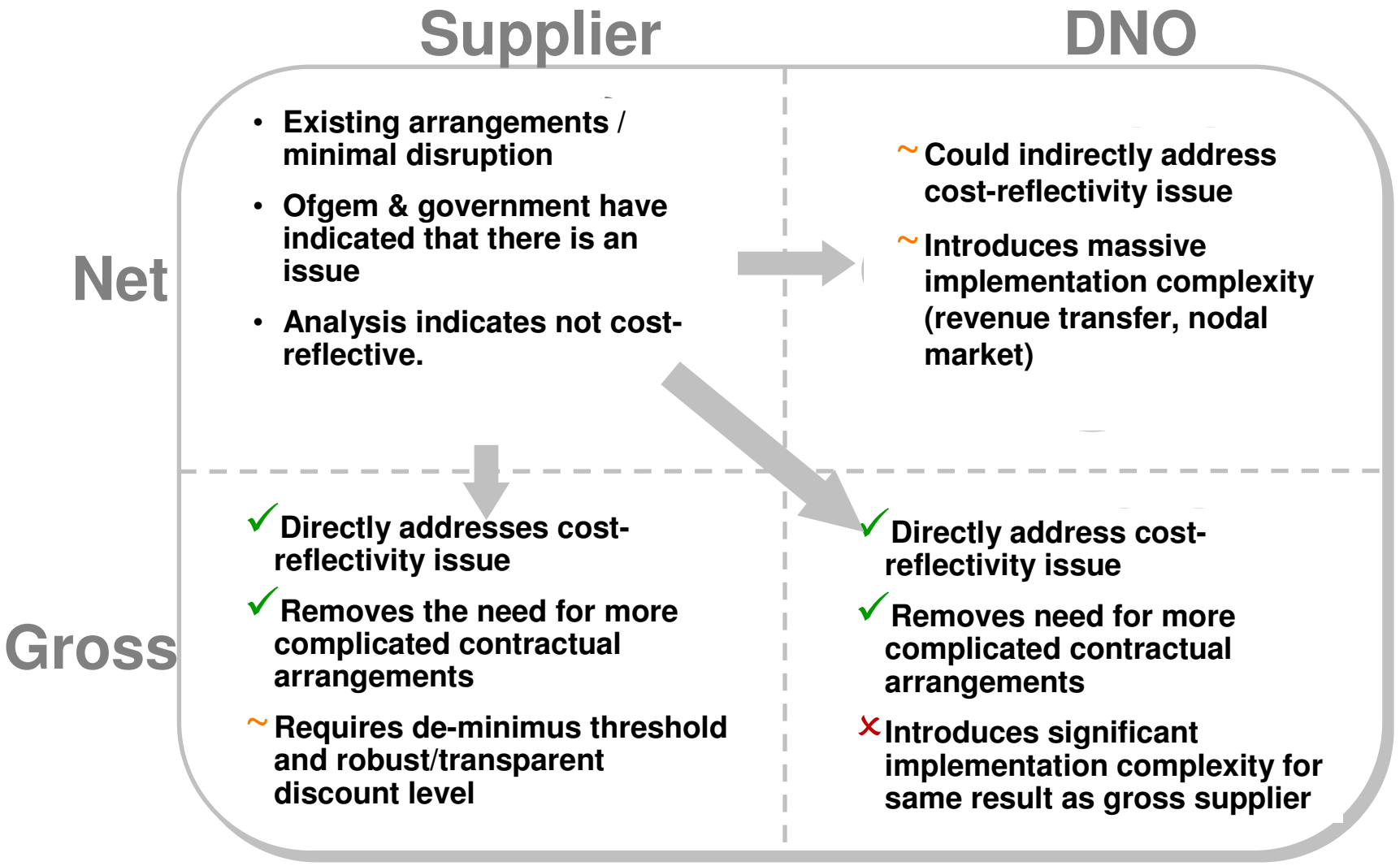
Previously Considered Options for Change



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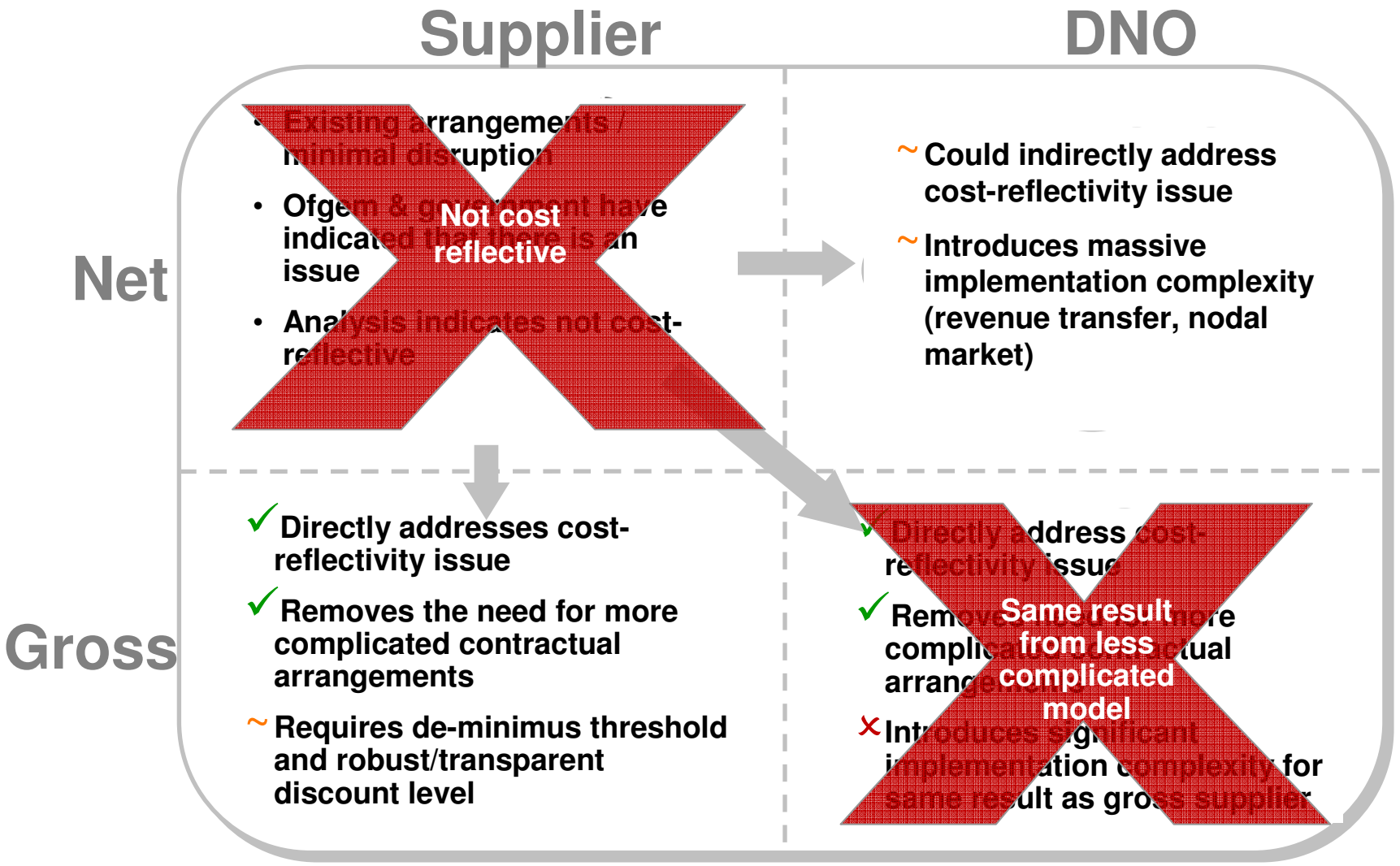
Previously Considered Options for Change



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Previous Proposal Options

- Distributed Generation Tariff + Gross Demand Tariff
  - Charge Suppliers on Gross HH imports & Gross HH metered output (versus) current net.
  - Sub-options for calculating DG Tariff
    - Average Maximum export
    - DG Capacity (e.g. over triad)
- Net Locational Tariff + Gross Residual to demand
  - TNUoS split into locational + residual elements
  - Charge locational to both Suppliers & embedded
  - Gross residual charged only to suppliers (demand)
  - Sub-options for Gross demand charges – similar to DG Tariff

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Embedded Charging – Way Forward

- Main Interaction: CUSC Modification Proposal CMP213 – Project Transmit.
  - Workgroup Consultation closed 15th January 2013
  - Expect Final Mod Report to be with Ofgem April 2013

- Proposed way forward: To establish expert group to:
  - Review previous (GB-ECM23) work;
  - Consider if other pragmatic solutions are achievable consequential to CMP213;
  - Update & raise new CUSC proposal.
    - Consequential BSUoS proposals

- Anticipated Timeline:
  - Pre CUSC proposal workgroup February / March
  - Raise CUSC modification proposal, April 2013
  - Ofgem decision, April 2014
  - Transition period April 2014 to April 2016
    - Consequential code changes

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Any Other Business

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Proposed 2013 Dates

March	May
12	21
Tuesday	Tuesday

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Close