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Transmission Charging Methodologies Forum



Wednesday 22nd January 2014

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Introduction & Welcome

Stuart Boyle

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Agenda

10:00 Introduction and meeting Objectives – Stuart Boyle

10:15 Code modifications update – David Corby

10:30 2014/15 TNUoS Charges – Damian Clough

11:00 Coffee

11:15 TNUoS Forecast Tariff Timetable and Form of Forecast Tariffs – Stuart Boyle

11:45 Charging for Integrated Offshore Networks – Adam Sims

12:30 Lunch

13:00 GSR010 Review of Onshore Entry Criteria: Implications for TNUoS Tariffs – Amy Boast

13:30 Embedded Generation update – Andrew Wainwright

14:00 AOB

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Safety moment



David Corby

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Safety Moment

Ongoing modification proposals



David Corby

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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 2015/16.
- Determination expected in the Spring.

User Commitment Modification Proposals

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- **CMP219: Clarifications to User Commitment Methodology**
  - Implemented on 9th January 2014.

- **CMP222: User Commitment for Non-Generation Users**
  - Workgroup consultation closed on 20th January 2014.

- **CMP223: Arrangements for Relevant Distributed Generators Under the Enduring Generation User Commitment**
  - Workgroup consultation now live,
  - Consultation closes 14th February 2014.

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Ongoing Modification Proposals

- **CMP201: Removal of BSUoS charges from Generation**
  - Ofgem minded to position: reject,
  - Ofgem's consultation closed 16th January 2014,
  - Ofgem believe the mod better meets CUSC objectives, but not their wider statutory duties.

- **CMP224: Cap on the total TNUoS target revenue to be recovered from generation users**
  - Workgroup consultation currently live, but closes 23rd January 2014 (tomorrow),
  - The final workgroup meeting will be held on 30th January 2014.

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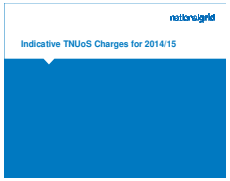
Draft TNUoS Charges for 2014/15



Damian Clough

Introduction

- Publication of Draft Tariffs
  - 20th December
  - http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission/Transmission-Network-Use-of-System-Charges/Tools-and-Data/
- Discuss changes since November and affect on tariffs;
- November TCMF slides on tariffs



- Affect on tariffs since November
  - Northern Generation zones see tariff increase with a reduction in demand tariffs
- Next Steps

Inputs:

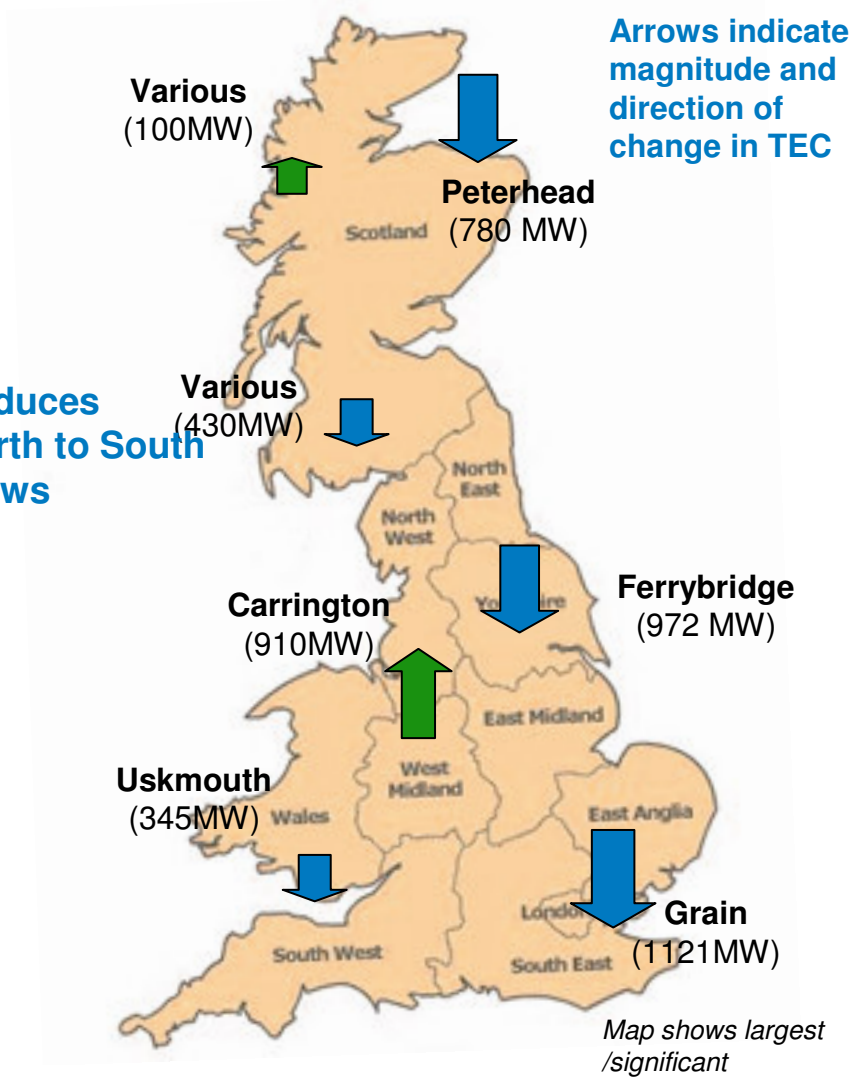
- **Locational Charges FIXED**
  - Contracted Generation: FIXED as of 31st October
    - Changed since November as that was based on contracted position as of 1st October
    - Tilbury 891MW
    - Hornsea 500MW
    - Appendix A of Draft Tariff publication
  - Demand: FIXED
    - Minimal change since November
  - Circuit: FIXED
    - Minimal change since November
- **Residual element of Charge**
  - Allowed Revenue reduced by £46m since November NOT FIXED
  - Peak Demand reduced from 56 to 55.3 GWh since November NOT FIXED
    - Subsequent reduction in Triad demand: Pro Rata

Key changes

Generation Background (NOVEMBER)

- 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 as of **1ST OCTOBER**
  - 1.8GWh net reductions in TEC North of the Pennines
  - 0.5GWh net reductions below Pennines

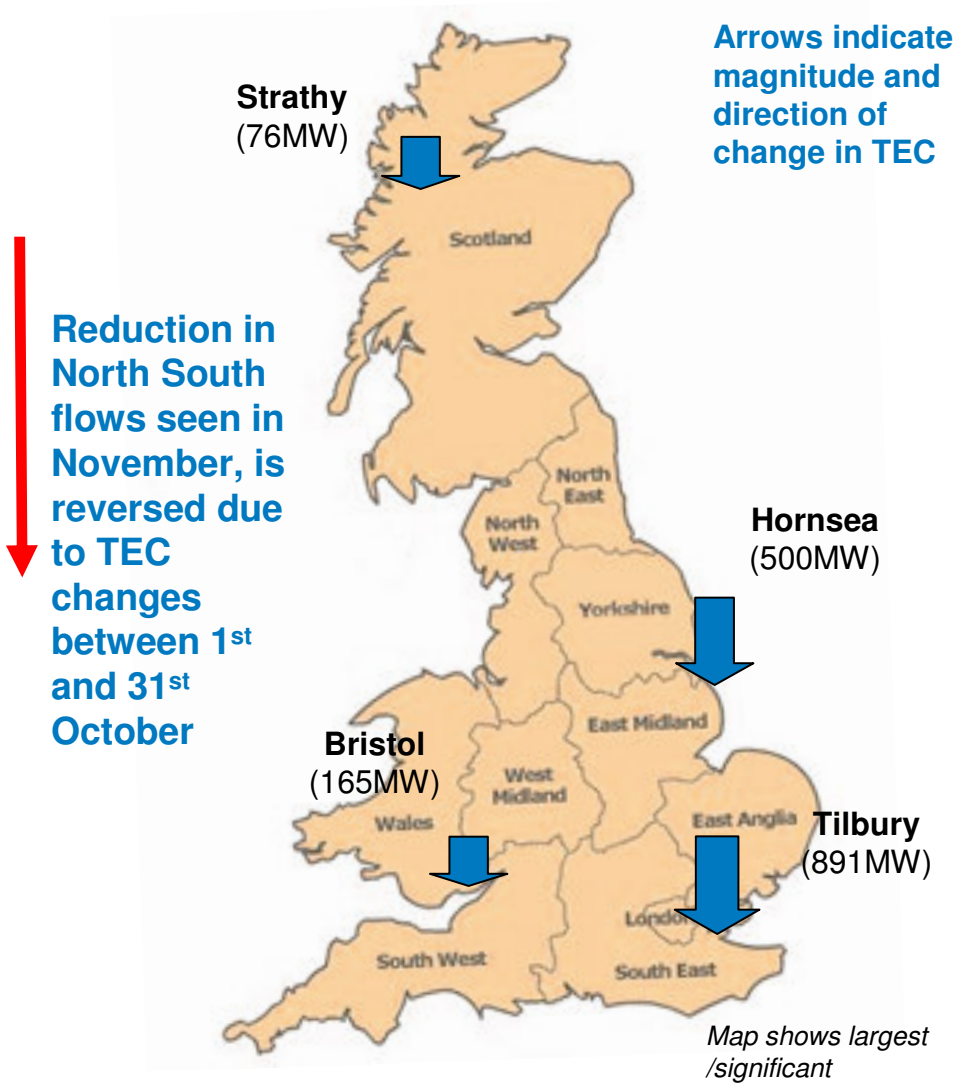
Reduces North to South Flows



Key changes

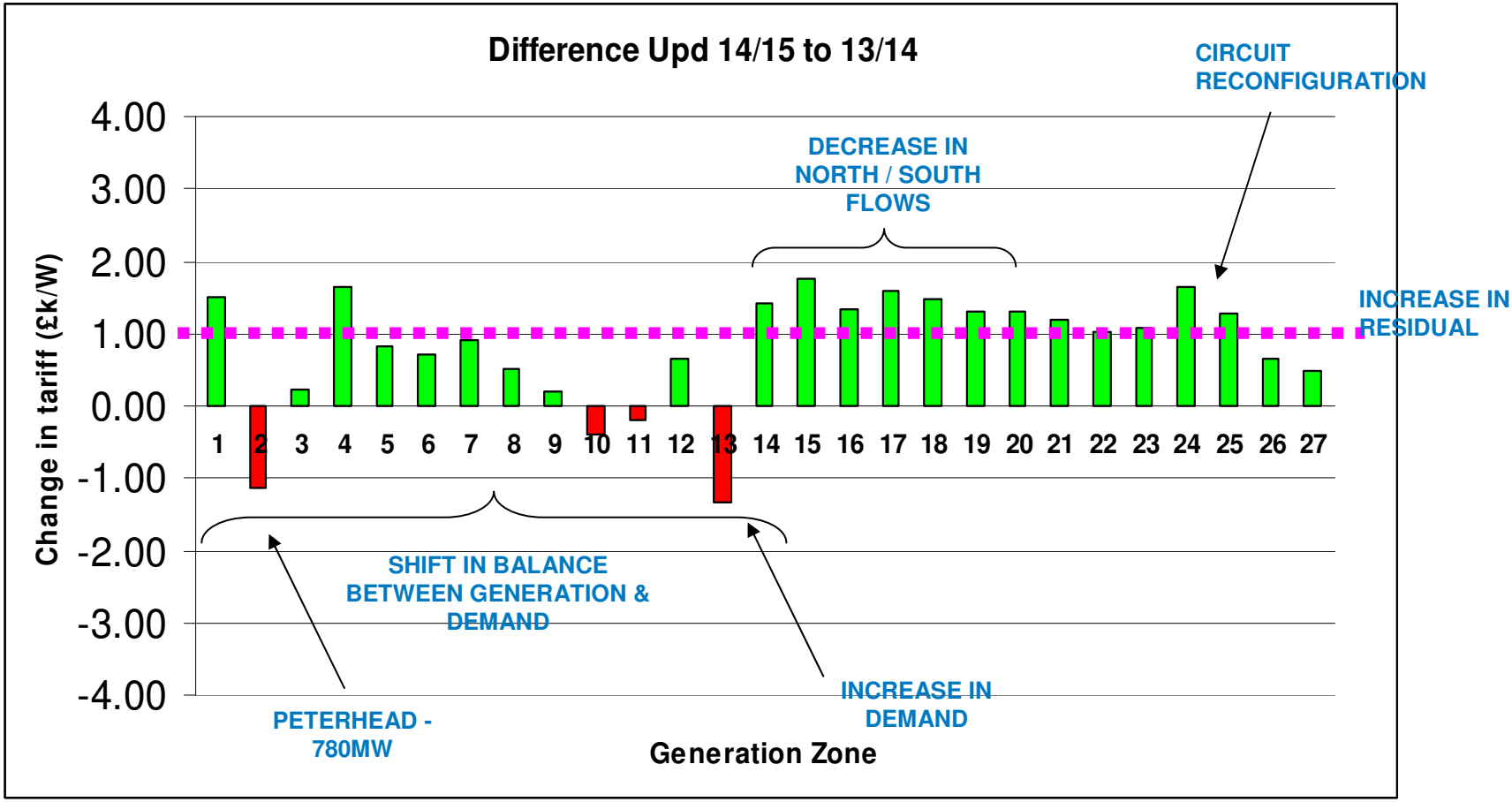
Generation Background (DRAFT)

- Locational Charges are now fixed
- The reduction in contracted generation in the South since October 1st has pushed up Generation prices in the North and Scotland and vice versa



Change in Generation Tariffs

Changes to 13/14 Tariffs (NOVEMBER)



Change in Generation Tariffs

Comparison between Draft Tariffs and 13/14 Tariffs and November forecasts

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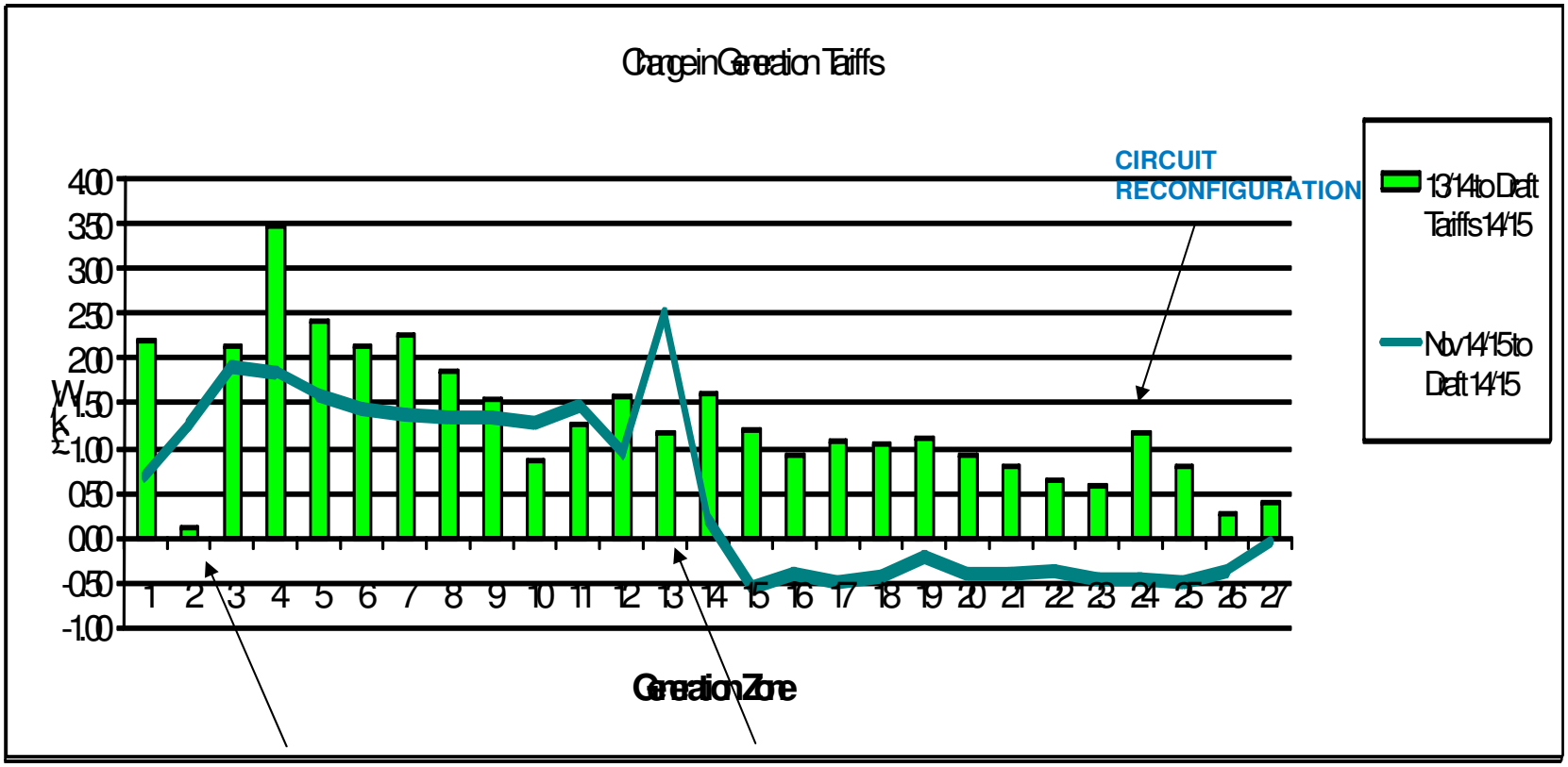
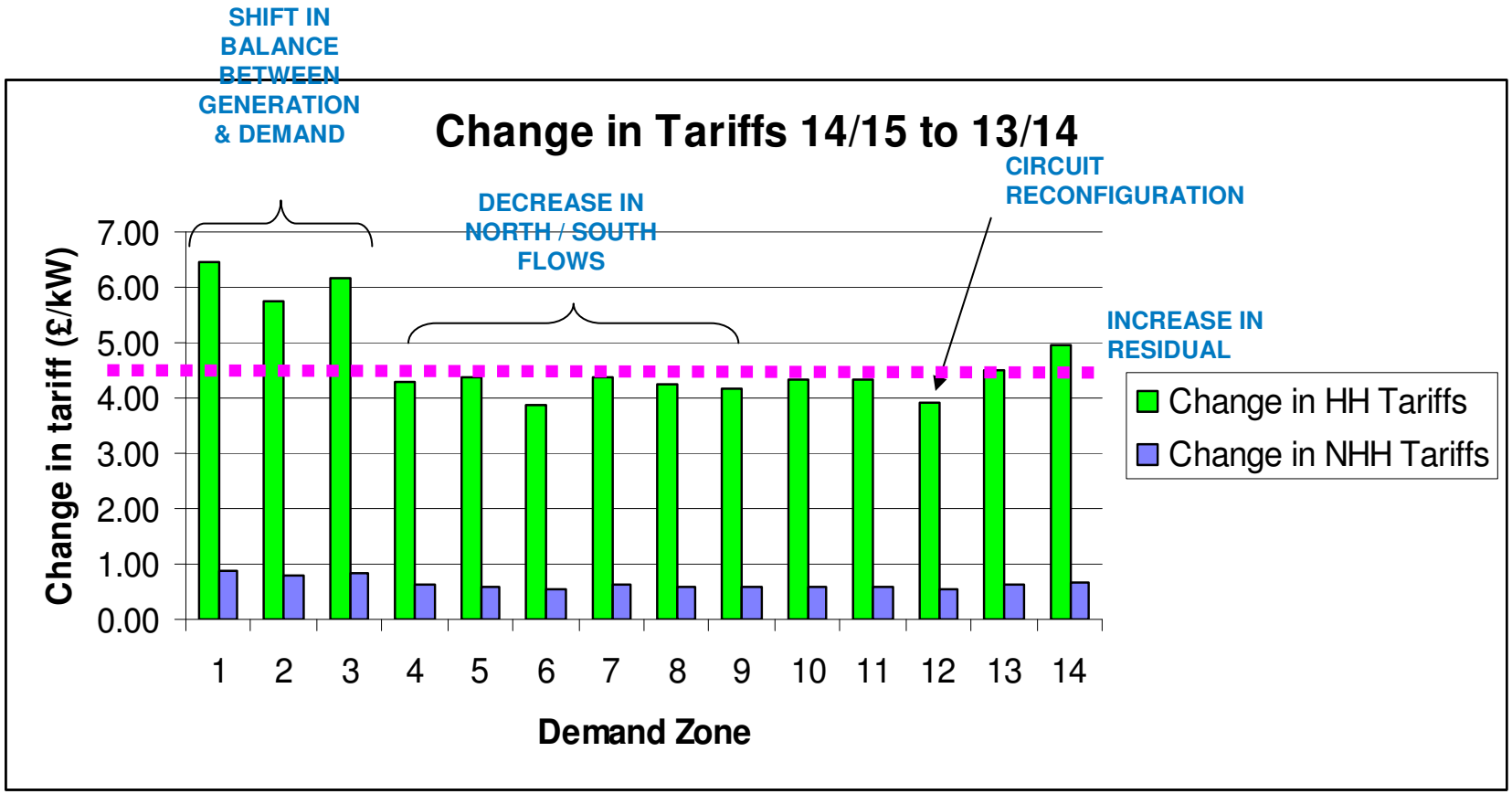


Change in Demand Tariffs

Changes between13/14 Tariffs and NOVEMBER



Change in Demand Tariffs

Changes between 13/14 Tariffs and DRAFT, and November 14/15 to DRAFT

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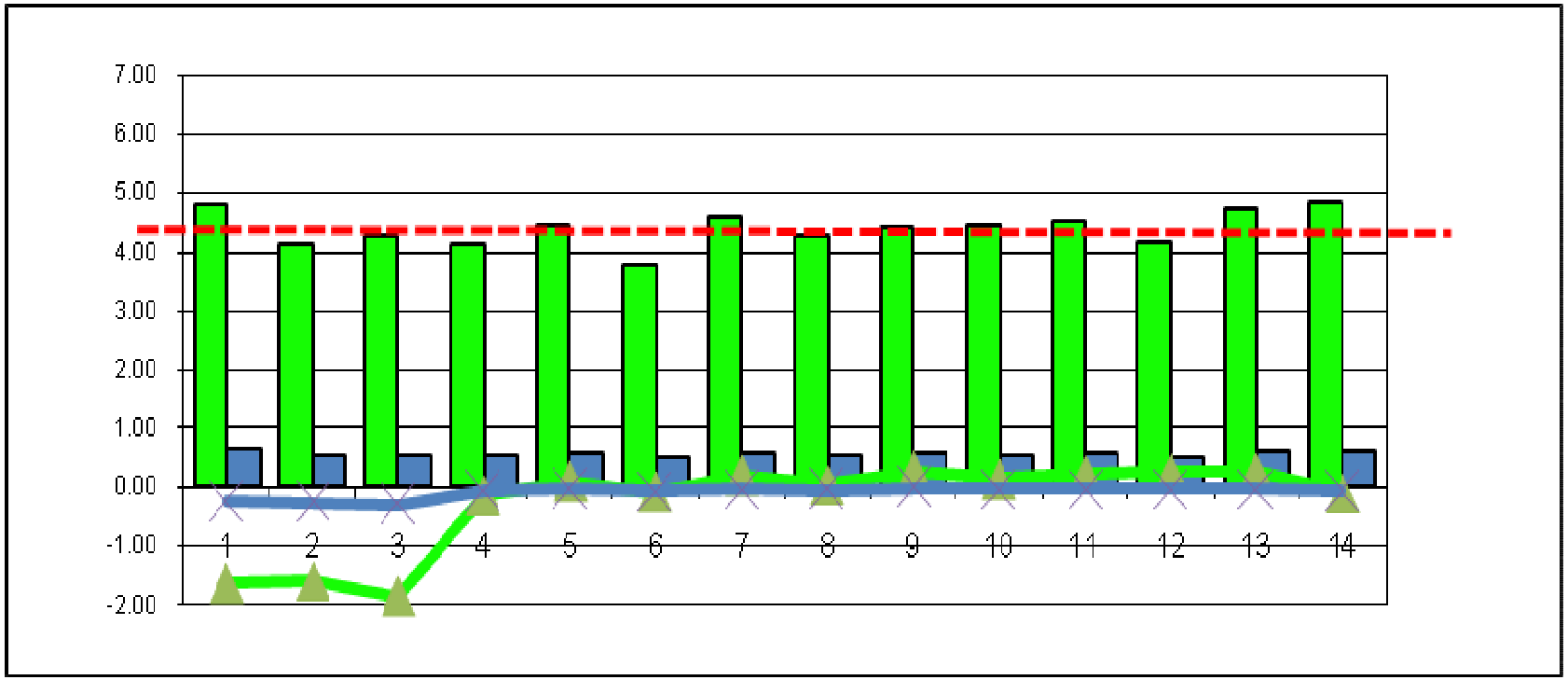
Green and Blue bars equal change between Draft and 13/14 HH/NHH Tariffs respectively

Green and Blue lines equal change between Draft and November HH/NHH Tariffs respectively



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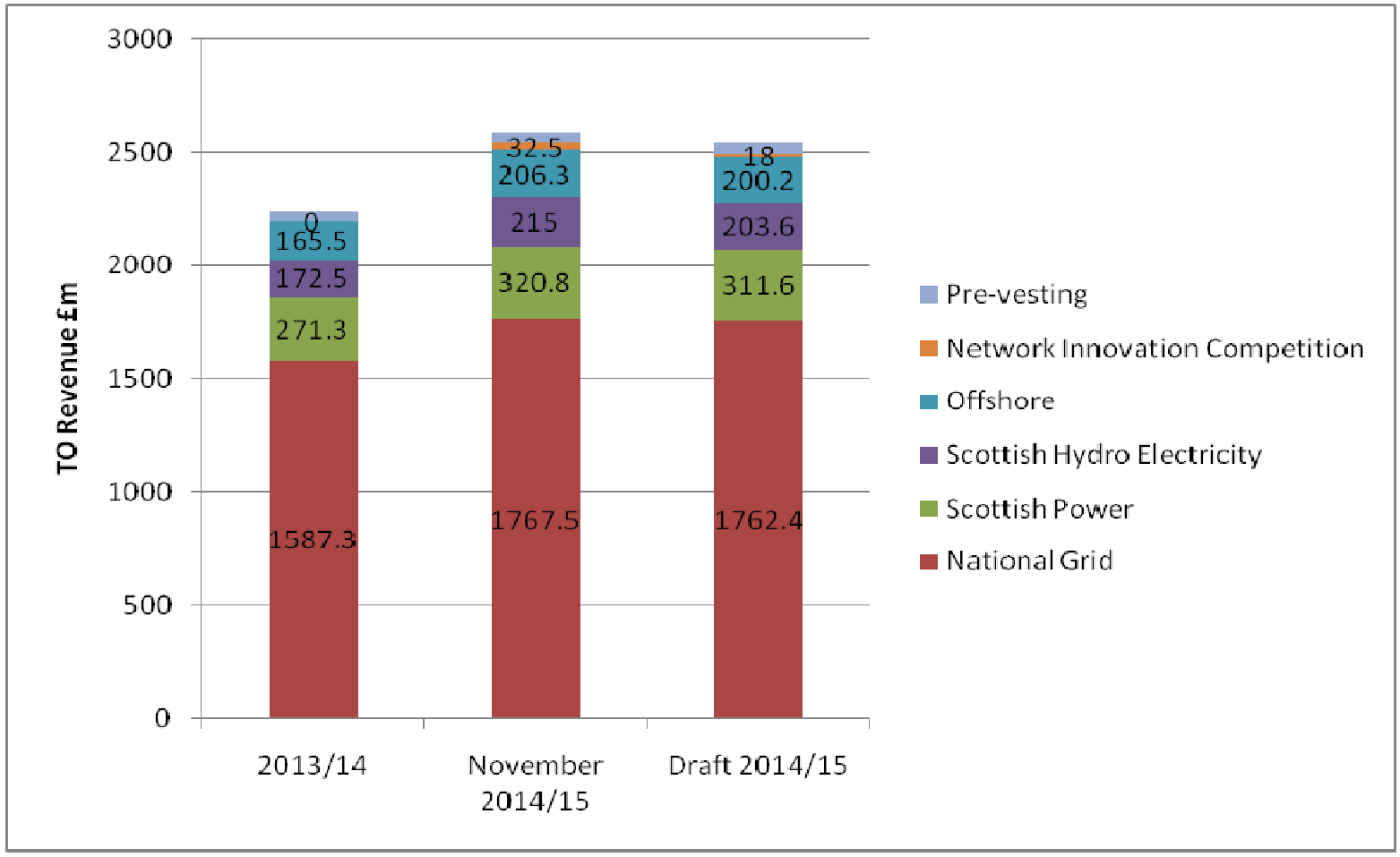
Change in Revenues



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Change in Revenues

TO Revenue (£m Nominal)	2013/14 Final Jan-13	2014/15 Initial View Jan-13	2014/15 April Update Apr-13	2014/15 July Update Jul-13	2014/15 Nov Update Nov-13	**2014/15 Draft Dec-13**
National Grid	1,587.3	1,749.5	1,749.5	1,770.9	1,767.5	**1,762.4**
Scottish Power	271.3	293.0	293.0	313.5	320.8	**311.6**
Scottish Hydro Electricity	172.5	185.0	185.0	163.1	215.0	**203.6**
Offshore	165.5	232.3	232.3	211.0	206.3	**200.2**
Network Innovation Competition	-	13.5	13.5	15.7	32.5	**18.0**
Total	2,196.6	2,473.3	2,473.3	2,474.2	2,542.1	**2,495.8**
Pre-vesting connections	43.3	40.0	40.0	43.3	44.1	**43.9**
TNUoS	2,153.3	2,433.3	2,433.3	2,430.9	2,498.0	**2,451.9**
Total	2,196.6	2,473.3	2,473.3	2,474.2	2,542.1	**2,495.8**

Draft tariffs include major revenue directions in November that were not captured in the November update.

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Demand Bases

- Peak Demand reduced from 56GW to 55.3GW
  - Triad HH demand reduced as well
- Current winter peaks significantly below 56GW
  - Weather or actual reduced demand
- Analysis shows pro rata'ing demand may not be most appropriate
- 15/16 tariffs will incorporate
  - P272
  - CMP224
- If peak demand drops without a change in HH Triad demand, HH tariffs increase and NHH tariffs decrease
- Welcome any supplier feedback on demand bases

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Next Steps

- Final Tariffs to be published 31st January 2014
- 15/16 forecast to be published 31st January 2014 (Status Quo & WACM2)
- 16/17, 17/18, 18/19 forecasts published 31st March 2014 (models published dependant on Ofgem decision and timing)

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TNUoS Tariff Timetable



Stuart Boyle

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TNUoS Tariff Publication Requirements

- Licence Condition C4, 5
  - Annual tariff change on 1 April
  - 150 days notice of tariff change
- CUSC 3.14.3
  - Tariffs produced two months before they come into effect
- CUSC 3.15.1
  - Quarterly forecasts
- March 2005 Charging Methodology Approval
  - Condition 5: Publish five years forecast at least once a year

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TNUoS Tariff inputs

Transmission Owners
- STCP24-1: 5 year revenue forecasts each quarter
- STCP13-1 :Year ahead revenue requirement
- STCP22-1 : Circuit Data

Government
- ONS : Actual Inflation
- HM Treasury: Inflation forecast

DNO
- Demand Data

Ofgem
- MOD and Price Control Variables
- NICF Direction
- OFTO Asset Transfers

National Grid
- TEC register
- Actual demand
- Payments to DNOs, GB & EU Transmission Owners

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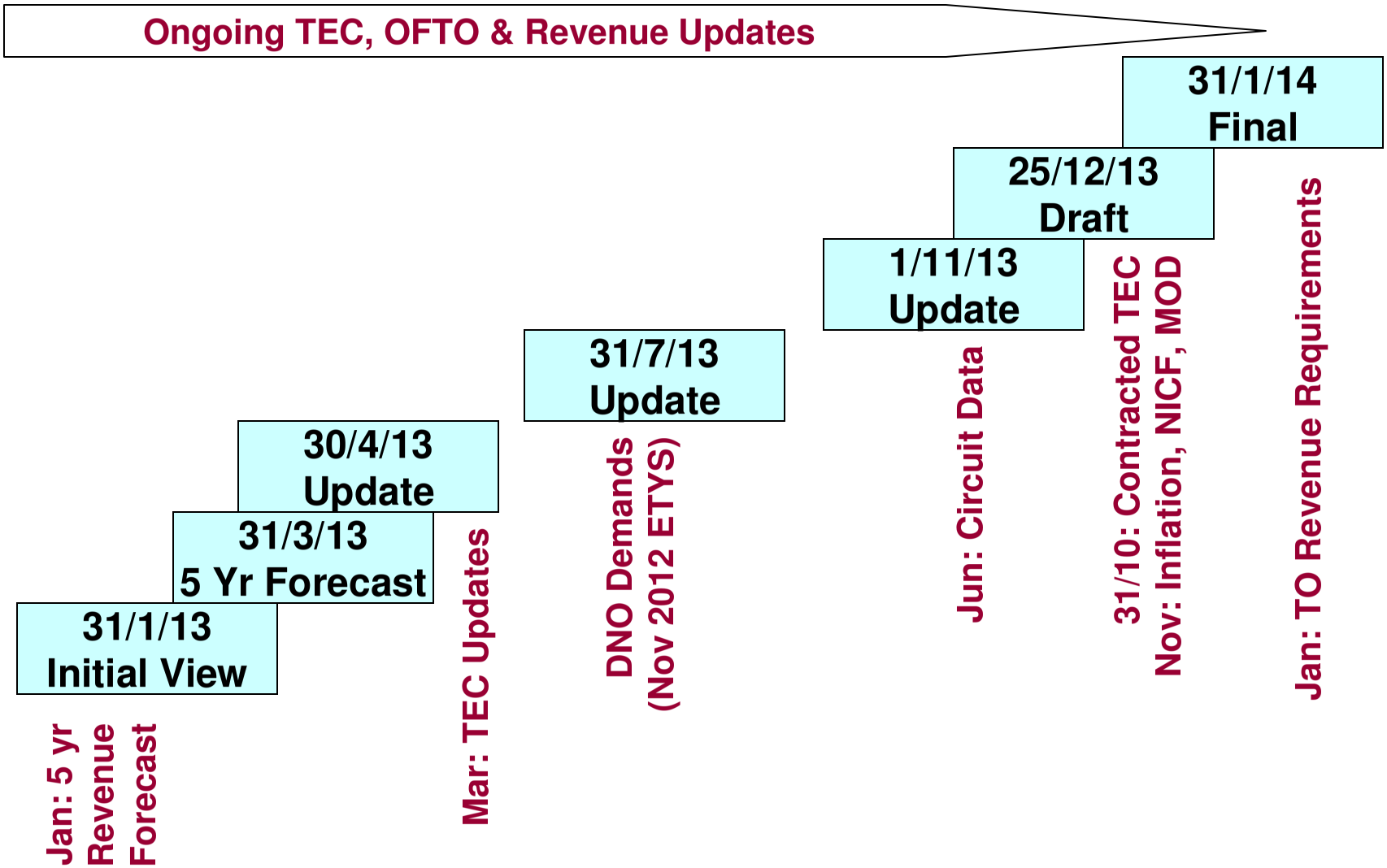
2014/15 TNUoS Tariffs



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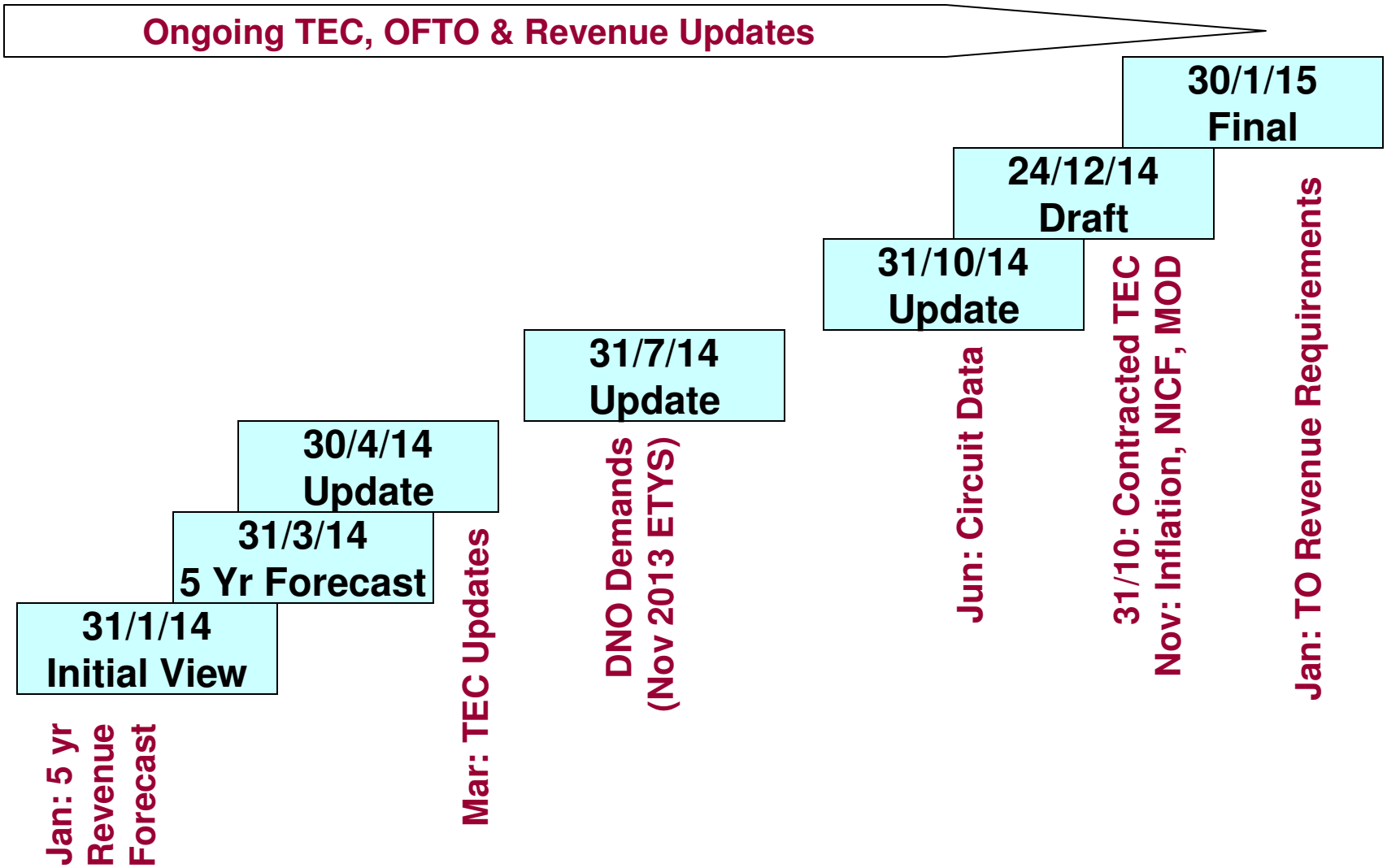
2015/16 TNUoS Tariffs



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Charging for Integrated Offshore

Adam Sims

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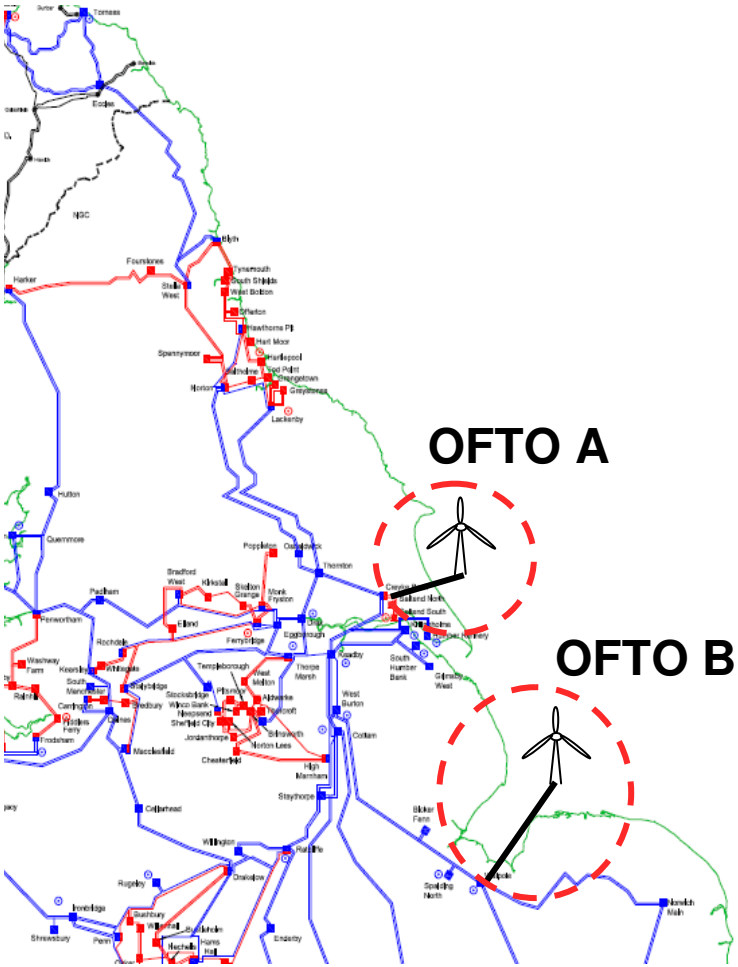
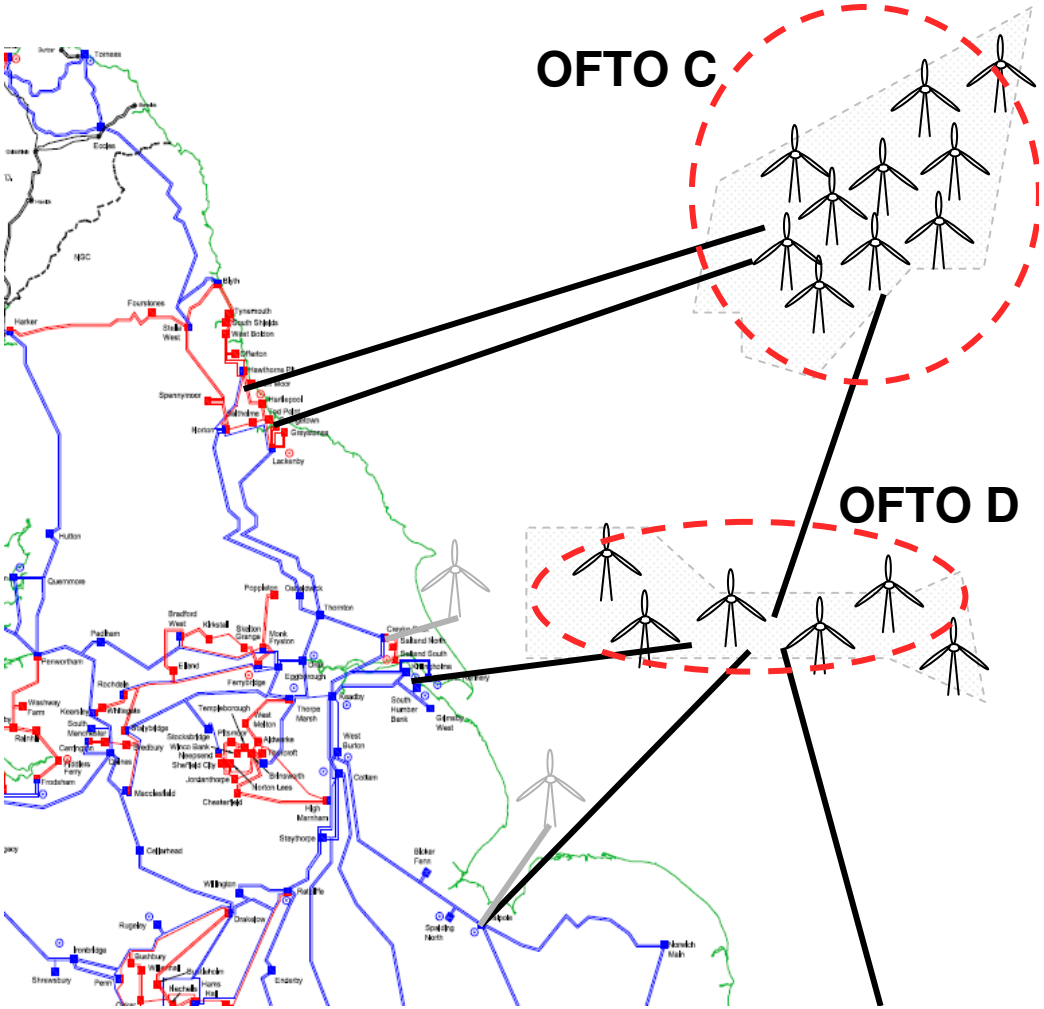
Background

- Round 1&2



- Round 3



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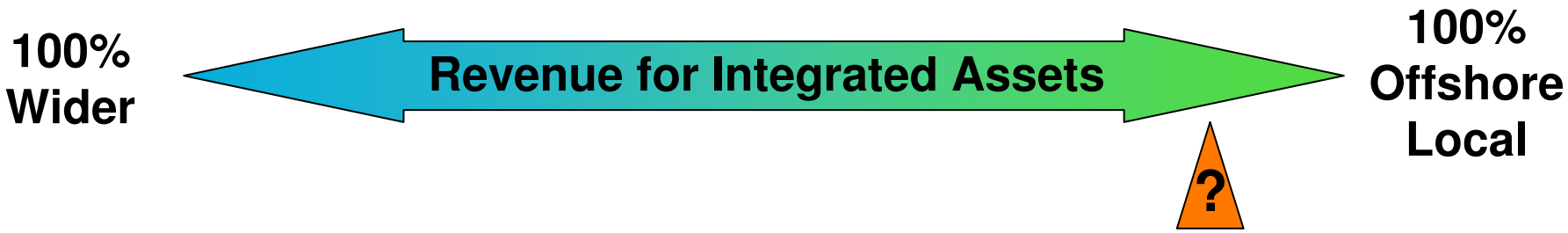
Cost Sharing of Integrated

- All offshore assets charged through Local TNUoS at present
- Circa 80% of OFTO revenue recovered from offshore users
- What is the appropriate level of cost-sharing for integrated offshore assets?



- The Offshore Transmission Network Feasibility Study (OTNFS) details cost savings between integrated and radial approaches

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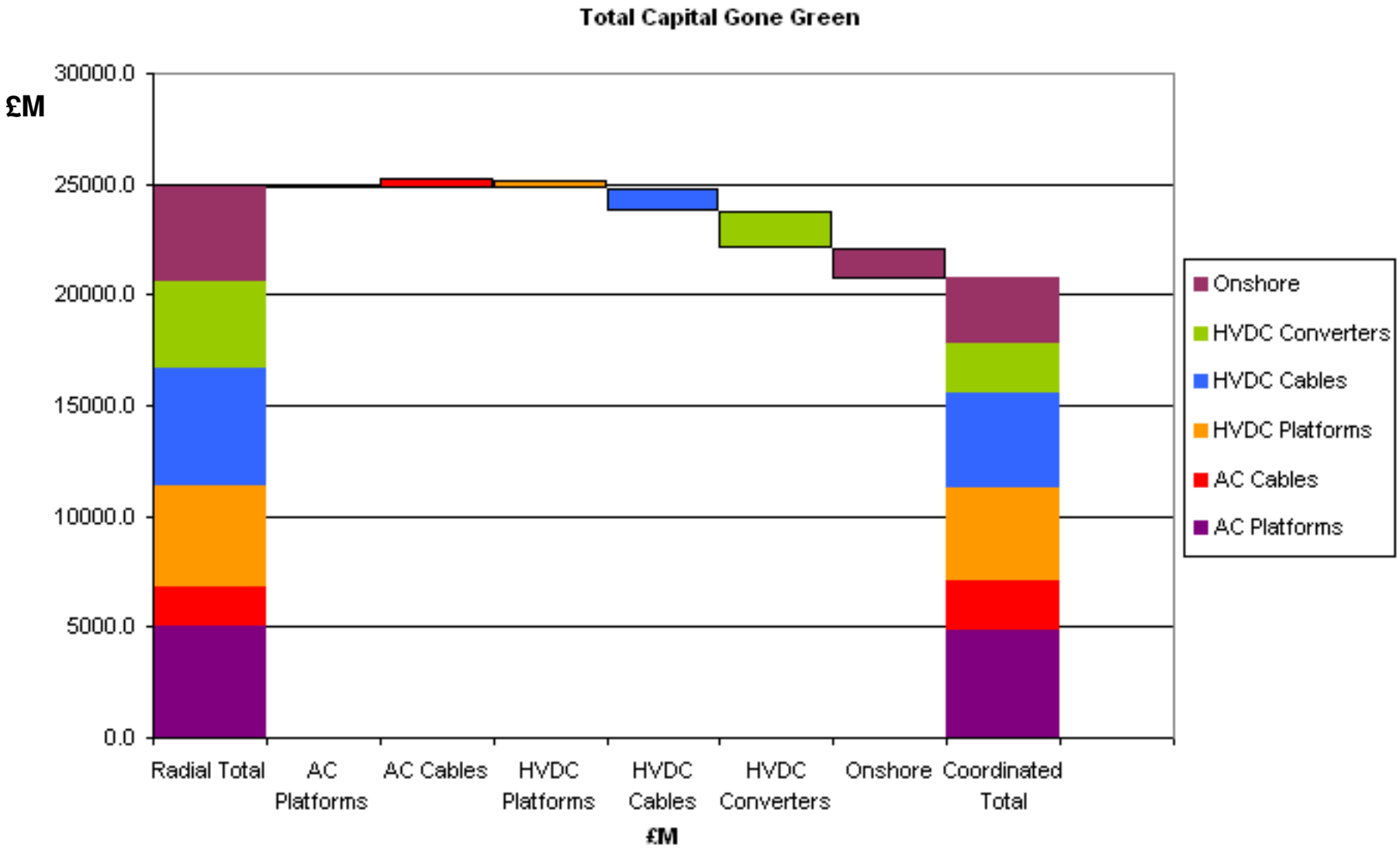
Cost Sharing for Integrated



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Cost Sharing for Integrated

- This high-level analysis indicates that, on average, the benefit of integrating is shared 60% offshore, 40% onshore
- How can we reflect that sharing better in the charging methodology?
- National Grid formed an industry group to investigate possible developments, final report was consulted on in summer 2013*
- CUSC proposal reliant on HVDC methodology under development through CMP213

*http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission/Transmission-Network-Use-of-System-Charges/Tools-and-Data/

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Possible Developments

- A number of areas were identified for possible development:
  - Lower requirement for offshore MITS substation
  - Specific Locational Security Factor for offshore wider zones
  - Relax wider zoning requirement of ±£1/kW
  - Delink offshore expansion factors from OFTO revenue
  - Use 50 year annuity factor
  - Include generation when modelling integrated HVDC circuits

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Next Steps

- Refresh analysis supporting needs case
- Confirm stable CUSC baseline after CMP213 decision
- Assess how CMP213 decision affects proposal
- Raise CUSC modification proposal

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Lunch

GSR010 Review of Onshore Entry Criteria: Implication for TNUoS

Amy Boast

GSR010 Review of Onshore Entry Criteria: What is GSR010?

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- Currently, no distinction in NETS SQSS standard for connections to power stations of differing capacities and load factors.
  - Where smaller generators are being connected, customers often choose a level of security below double circuit & double busbar.

- GSR010 proposes a range of standard configurations for different generator capacities and load factors. This would reduce the works for smaller generation projects with lower load factors.
  - Customers would then choose to deviate if they wanted a higher level of security connection.

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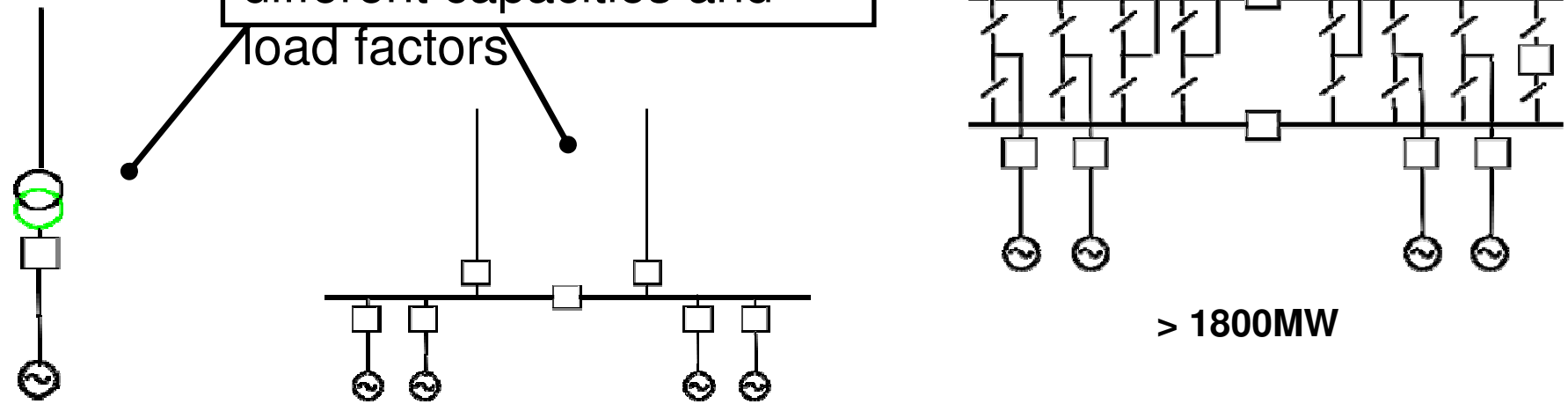
For example …

GSR010 – proposed levels of connection for different capacities and load factors



< 50MW

Up to 700MW for lower load factors

> 1800MW

GSR010 Review of Onshore Entry Criteria: Current Status

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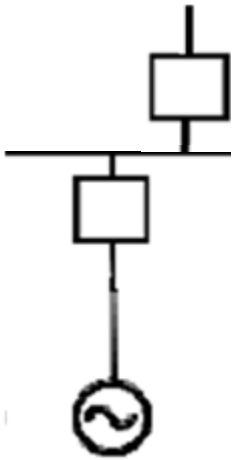
- GSR010 has been assessed by an industry workgroup. The workgroup report and conclusions have been published and consulted on.
- 4 consultees expressed mixed views on GSR010. As well as specific issues on its application, concerns were raised on how transmission charging and access would be impacted.
- Before progressing GSR010, we want to further clarify the potential implications for charging and access arrangements.
- We believe no change to the existing TNUoS methodology is required as a result of GSR010. Our logic is illustrated in the following example of a 50MW windfarm connection.

If you'd like **more information**, the GSR010 workgroup report can be found at http://www.nationalgrid.com/NR/rdonlyres/0B7065FD-CA38-44A3-9162-8E2CBEB66A6E/54246/EntryWGReportFinalJune2012.pdf .

If you wish to express any views please contact John West at John.West@nationalgrid.com

Current Onshore Entry arrangements



50MW windfarm with <40% load factor connected at 132kV in Scotland.

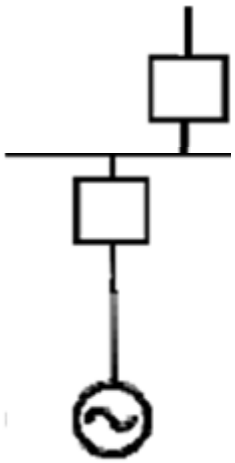
Connection Design	Charging & Access Arrangements
Double busbar, double circuit	• Pay local substation charges for double busbar • Pay local double circuit charge based on security factor of 1.8. • Firm access, receive CAP48 payments for loss of grid connections.
Single busbar, double circuit	• Only pay local substation charge for single busbar • Pay local double circuit charge based on security factor of 1.8. • Non-firm access, have specific clause 10 access arrangements
Single busbar, single circuit	•Only pay local substation charge for single busbar • Pay local single circuit charge based on security factor of 1.0. • Non-firm access, have specific clause 10 access arrangements

Key

Minimum Compliant design

Customer Choice

Arrangements under GSR010



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Key

Minimum Compliant design

Customer Choice

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Review of TNUoS Embedded Generation Benefits

Andy Wainwright

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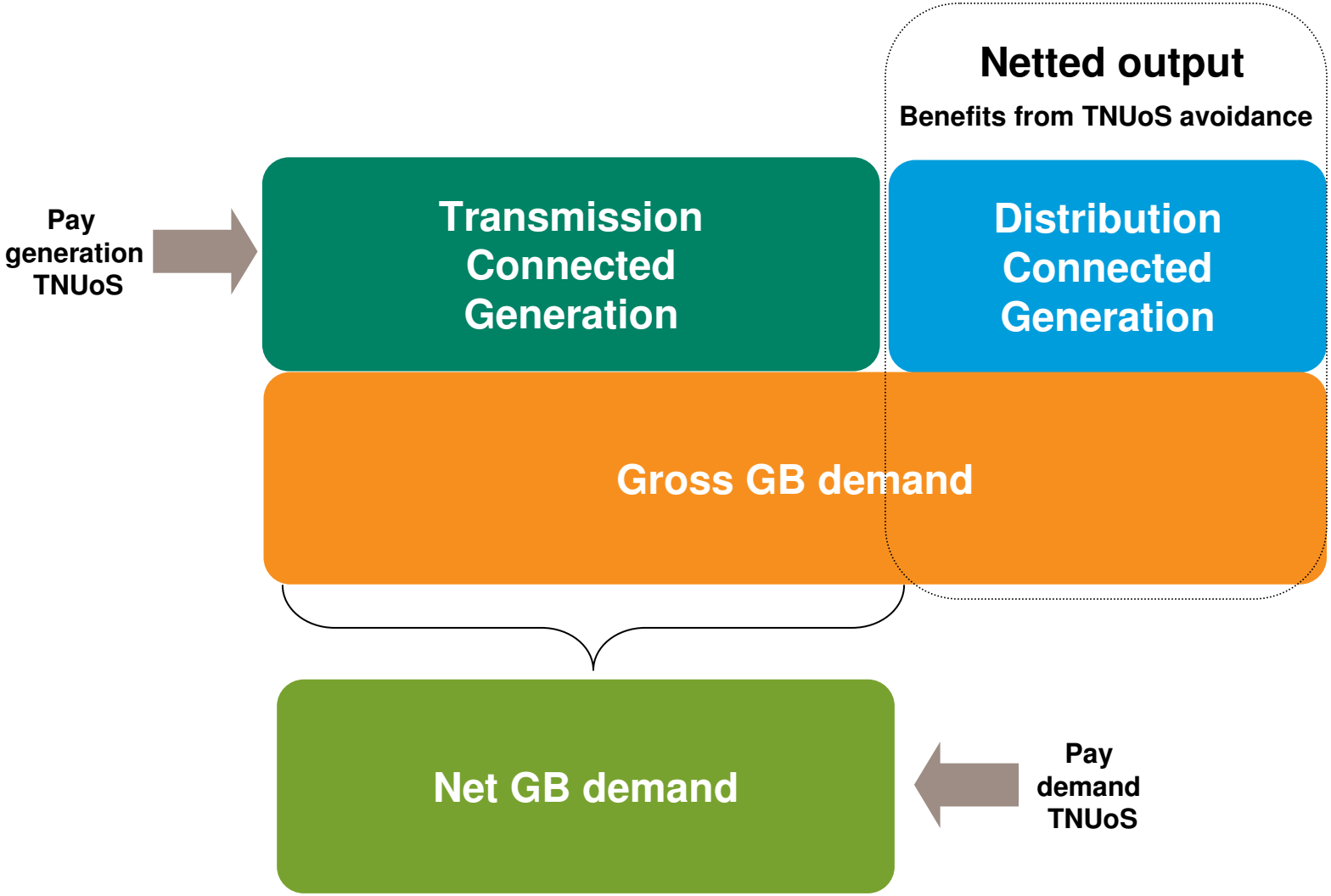
What are embedded benefits?



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Why are we reviewing?

- Standard Licence Condition C13
  - Introduced at BETTA (2005)
  - Addressed different treatment of 132kV connected small generation in Scotland (transmission) with that in England and Wales (distribution) – 'Small Gens Discount'
  - Time limited: due to expire 1st April 2016, pending broader review

What have we done?

Industry Focus Group

Stakeholder Bilaterals

Forum Presentations

20th Dec 2013 - Informal industry consultation

- **Open until 14th Feb 2014**
- **National Grid report[1]**
  - **including focus group discussions**
- **Inviting stakeholder evidence and views**

1 http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission/Transmission-Network-Use-of-System-Charges/Embedded-Benefit-Review/

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What could we do?

Impact

- **Consider C13 issue alone**
- **Consider exporting GSPs**
- **Consider demand charging on gross**
- **Explicitly charge embedded generation**

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What are we doing next?

Feb 2014 – review consultation responses

March 2014 - provide update to TCMF

Spring 2014 - potential CUSC modification proposal(s)

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Potential future modification topics

Adam Sims

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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

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Any Other Business

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Next TCMF

March

19

Wednesday

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2014 TCMF dates

May

13

Tuesday

July

17

Thursday

September

17

Wednesday

November

12

Wednesday

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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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Close