nationalgrid

Transmission Charging Methodologies Forum



Wednesday 17th September 2014

Introduction & Welcome

Stuart Boyle

Agenda

11:00	Introduction – Stuart Boyle
11:10	Safety Moment and Fire Procedure
11:15	Code modifications update – David Corby
11:30	User Commitment for Generator Focused Anticipatory Investment Update – Wayne Mullins
12:15	Islands Connections – Nick Screen
12:45	Lunch
13:15	Update on potential options for TNUoS charging arrangements for exporting GSPs– Andy Wainwright
13:30	July TNUoS Forecast – Mary Owen
14:10	Statement of Works timescales – David Corby
14:25	Flexible Access Review Conclusion – Nick Pittarello
14:40	Future Topics Prioritisation – Nick Pittarello
14:50	AOB
15:00	Close

Ongoing modification proposals



David Corby

nationalgrid

Ongoing modification proposals page 1 of 4

- **CMP201: Removal of BSUoS charges from Generation**
  - Ofgem believe the mod better meets CUSC objectives, but not their wider statutory duties. Ofgem minded to reject
- **CMP213: Project Transmit TNUoS Developments**
  - Ofgem approved WACM2
  - We are working towards implementation in April 2016
- **CMP222: User Commitment for Non-Generation Users**
  - The Ofgem impact assessment was published on 26/08/14
  - Ofgem have indicated they are minded to approve WACM1
  - Responses to the impact assessment are requested by 23/09/14

nationalgrid

Ongoing modification proposals page 2 of 4

- **CMP223: Arrangements for Relevant Distributed Generators Under the Enduring Generation User Commitment**
  - Sent to Ofgem in July
  - Ofgem published an open letter on 01/09/14
  - Ofgem have indicated they are minded to not approve the original and have sought further information and views in order to inform an overall view
  - Responses to the published letter are requested by 03/10/14

- **CMP224: Cap on the total TNUoS target revenue to be recovered from generation users**
  - The Ofgem consultation on their `minded-to' implement position closed in August
  - Currently we await Ofgem's decision

Ongoing modification proposals page 3 of 4

- **CMP227 - Reduce the G:D split of TNUoS charges, for example to 15:85**
  - The Workgroup decided to consult the industry on a number of alternatives
  - The Workgroup consultation issued in August
  - Workgroup to report to November CUSC panel

- **CMP231 – EMR Preparatory Costs (Fast Track)**
- **CMP232 – Demand Side Balancing Reserve and Supplemental Balancing Reserve Cost recovery Restriction (Fast Track)**
  - These modifications were implemented on 22/07/14

Ongoing modification proposals page 4 of 4

- **CMP234 – Incorporation of Biddable Indexation of OFTO revenues in TNUoS**
  - This new CUSC Mod was raised to the August CUSC panel
  - The Code Administrator Consultation is currently open
  - Responses are requested by 23/09/14

User Commitment for Generator Focused Anticipatory Investment - Update

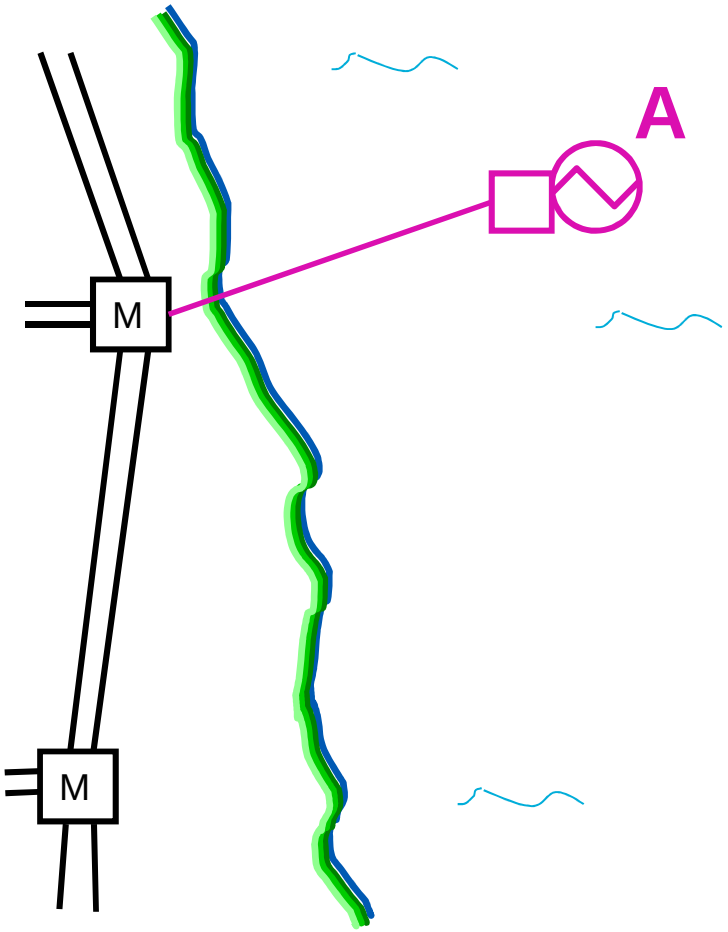


Wayne Mullins

Overview

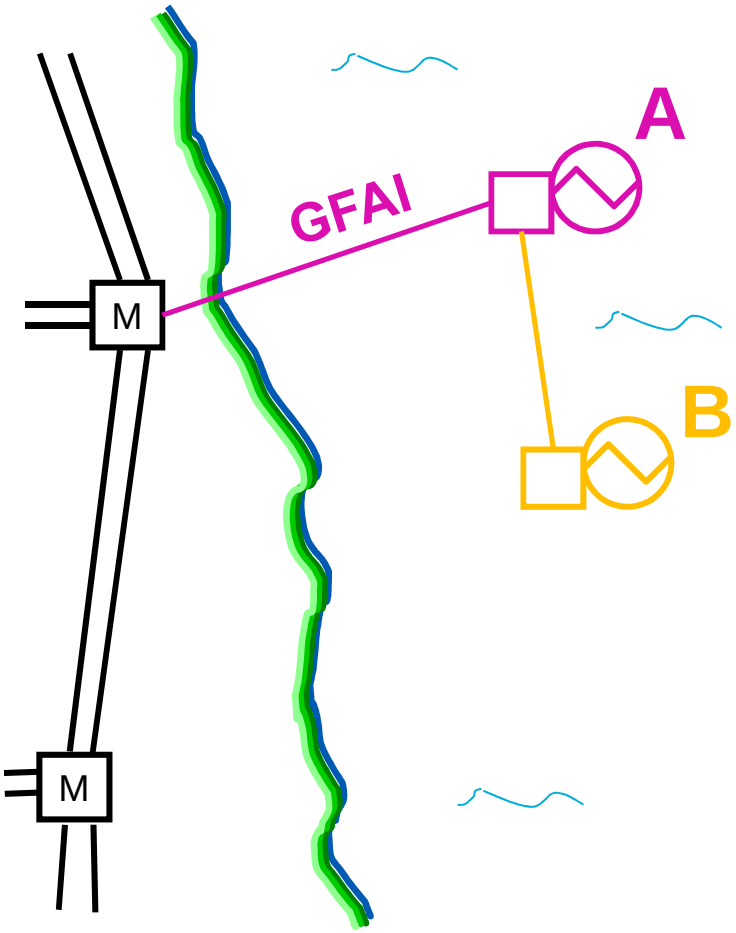
- Re-cap – what is Generator Focused Anticipatory Investment?
- Progress & views received to date
- Initial thoughts/outstanding questions
  - Views welcome
- Next steps

Offshore Development to date



- Offshore developers have a liability for any onshore TO works.
- Also have a liability for offshore works under OFTO-build.
- Developer-build projects internalise risk.

Multiple Offshore Projects – Generator Focused Anticipatory Investment



- Developer A upsizes investment as GFAI to facilitate Developer B
- Both would have a liability for onshore works through their Construction Agreement
- No arrangements for GFAI user commitment at present
- Ofgem consider GFAI should have “user commitment type arrangements” to protect consumers

Progress to date

- Presented to TCMF in May
  - Four principles for a potential solution were established:
    1. GFAI cost risk sits with the parties best placed to manage it;
    2. Consumers protected to the same extent as they are for generator driven investment onshore
    3. For multiparty GFAI, the initiating developer should be no worse off for than if limiting the works to their own project.
    4. Information flows in an effective manner
- Open letter issued seeking views on a number of straw-man options issued in June.

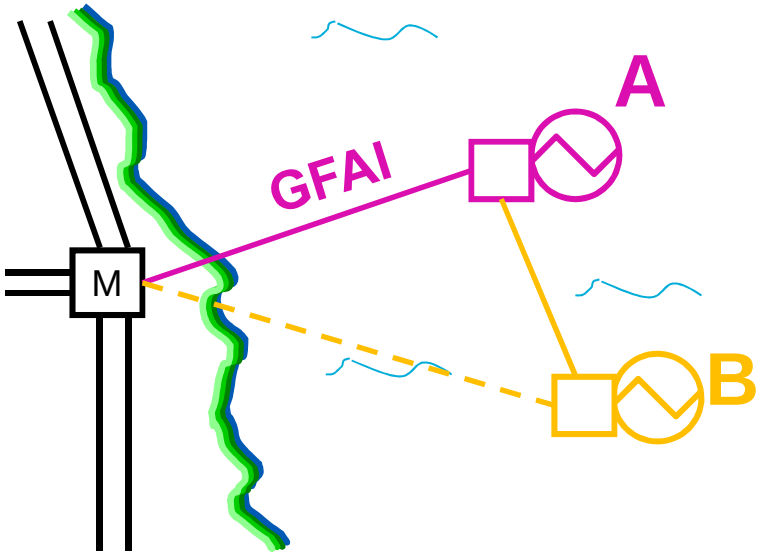
Open Letter Responses

- 5 Responses:
  - 4 representing views of OFTOs; and
  - 1 representing an offshore developer.

- Some support for:
  - basing liability on MW share of GFAI assets;
  - a bilateral contract based on CUSC template pre-Asset Transfer; and
  - passing post-Asset Transfer cancellation charge receipts into TNUoS.

Open Letter Responses (2)

- Concerns highlighted:
  - OFTO Revenues being affected by cancellation;
  - Placing full risk on developers likely limit GFAI to a single developer; and
  - Security requirement prior to final investment decision:



- Gen A is due to commission in year y, and is due to commence network investment in year y-4.
- Gen A could facilitate Gen B via GFAI.
- Gen B is due to commission in year y+2, but is not financially committed in y-4.
- Gen B may choose not to place security for GFAI and would prefer to build own works.

Initial National Grid Thinking (1)

- Pre and Post Commissioning liabilities for GFAI should be comparable to existing arrangements.
- Basing liability relating to GFAI assets on MW share seems logical.
- Treatment of cancellation charge income should be comparable to that relating to the onshore system:
  - Difference between cancellation charge income and developer costs/OFTO termination charge fed into TNUoS.
- Can apply above to Post-Asset Transfer scenario relatively easily.

nationalgrid

Initial National Grid Thinking (2)

- A solution to the Pre-Asset Transfer scenario appears less straightforward:
  - There seems to be no need for User Commitment arrangements for single developer GFAI.
  - CUSC based bilateral or NETSO administered arrangement possible.
  - Additional developers should be liable for an amount relating to GFAI assets should be based on its MW share.
  - Further consideration needed:
    - Risks faced by additional developers (e.g. economy of scale vs stranding risk); and
    - Arrangements with developer of GFAI assets to recover any uncollected costs.

Next Steps

- Further Views welcome
- Bilateral discussions with interested parties
- Further consideration of the highlighted issues
- Establish proposed model & discuss at November's TCMF
  - Confirm strategy for progression

Treatment of strategic capacity in determining Local TNUoS for the Western Isles link

Transmission Charging Methodology Forum

CLIENT: Uisenis Power Limited
DATE: 17/09/2014

Reputation built on Results

Contents

Introduction

- We consider the treatment of strategic capacity in determining the Local TNUoS charges for the proposed Western Isles Link if such a link includes a second underground HVDC cable as a strategic anticipatory investment

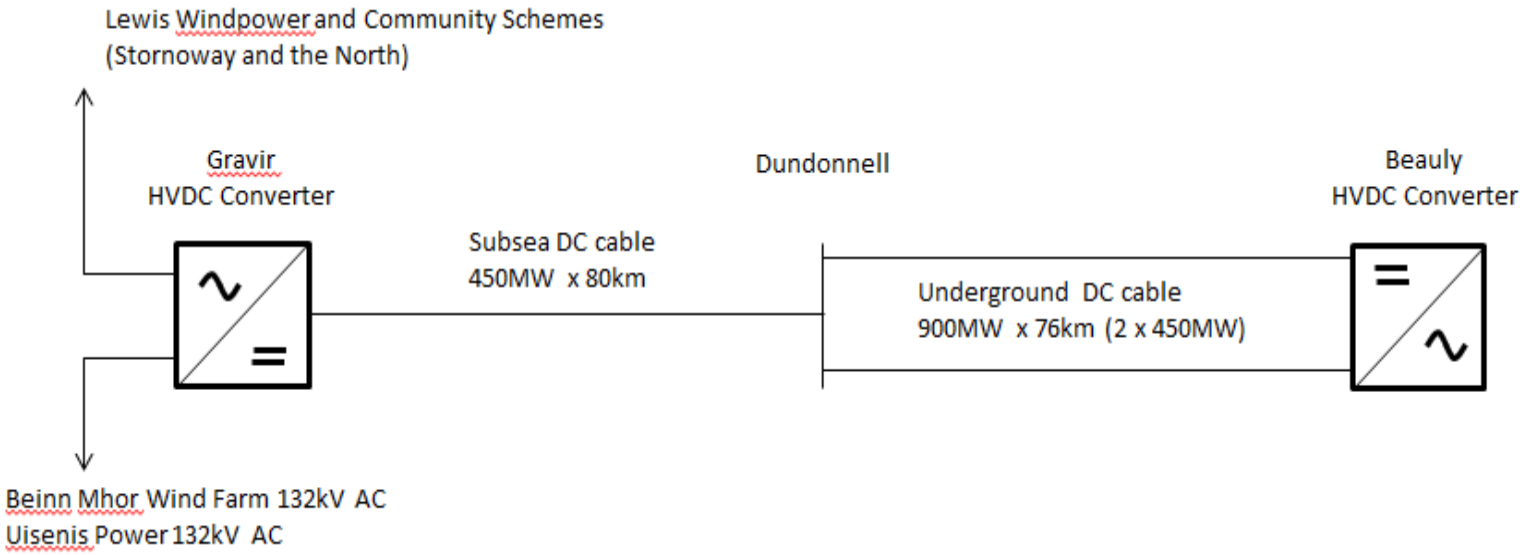
- We propose a charging treatment based on the total costs of the two underground HVDC cables

- We believe that the charging methodology proposed herein is consistent with the current approach to charging of local assets in the AC transmission network

Background - Local asset charging

- The charging methodology calculates Local Circuit Tariffs using the length of the transmission asset, and an expansion factor for the technology type used
- This expansion factor is based on average unit costs for AC assets, specific factors to be used for island links based on HVDC technology
- Users only pay for the capacity they require, with any oversizing (e.g. if transmission assets being available in a limited number of set ratings or due to anticipatory investment) being socialised via the generation and demand residuals.
- For example, if a 50 MW generator made use of a local asset with a rating of 250 MW, the generator would pay local TNUoS based on 50 MW Transmission Entry Capacity (TEC), rather than on the 250 MW rating of the transmission asset.
  - This is equivalent to the generator paying charges based on 20% (50/250) of the cost of the 250 MW asset.

Background - Proposed scheme



- The proposed Western Isles Link will be rated at 450MW, comprising HVDC converters at Beauly on the mainland and Gravir on Lewis
- We understand that the installation of two underground DC cables is proposed due to the lower incremental costs of installing a second cable in parallel, and the high environmental impacts of installing it at a later date
- This is purely a strategic anticipatory investment which would be of benefit if further generation is connected in future and a second 450 MW HVDC subsea cable is laid
- We understand that the underground section would effectively operate as a single cable, i.e. if one cable fails both are taken off line

Estimated cost breakdown

- The total cost of the Western Isles Link, including the double cable underground section between Dundonnell and Beauly, is currently estimated to be circa £750m
- The estimated breakdown for the cost elements of the link is shown in the table below
- These estimates are used to determine the figures in the following slide to illustrate the proposed charging approach

Element	Percentage of total	Estimated Cost (£m)
Single subsea HVDC cable, converters and onshore substation works	51%.	£383m
Double HVDC underground cable	49%	£367m
Total	**100%**	**£750m**
Incremental cost of installing second underground cable now	*11%*	*£83m*
Cost of installing a second underground cable in future	*N/A*	*£285m*

Charging approach for HVDC underground cables

- We propose that the approach for calculating the local TNUoS for Western Isles, should be to calculate charges using the cost of the two underground cables
  - This is equivalent to assuming a 900 MW capacity for the underground section of the link and calculating an expansion constant on this basis
  - Appropriate because we understand that the underground section would effectively operate as a single cable, i.e. if one cable fails both are taken off line

Outcomes

- Consistent with the existing approach to local asset charging described in slide 3
- Generators connecting to the first cable and those connecting to a future second cable will both pay circa £105/kW/yr (including both local & wider TNUoS)
- 75.5% of the cost of the Western Isles HVDC Link is targeted at generators connecting to the first link (assuming that the first link is fully utilised)
- Ensures that generators connected to both the first and second links to the Western Isles are charged in an equitable manner

nationalgrid

Lunch

nationalgrid

Update on potential options for TNUoS charging arrangements for exporting GSPs

Andy Wainwright

What we're doing

Discussions with associations

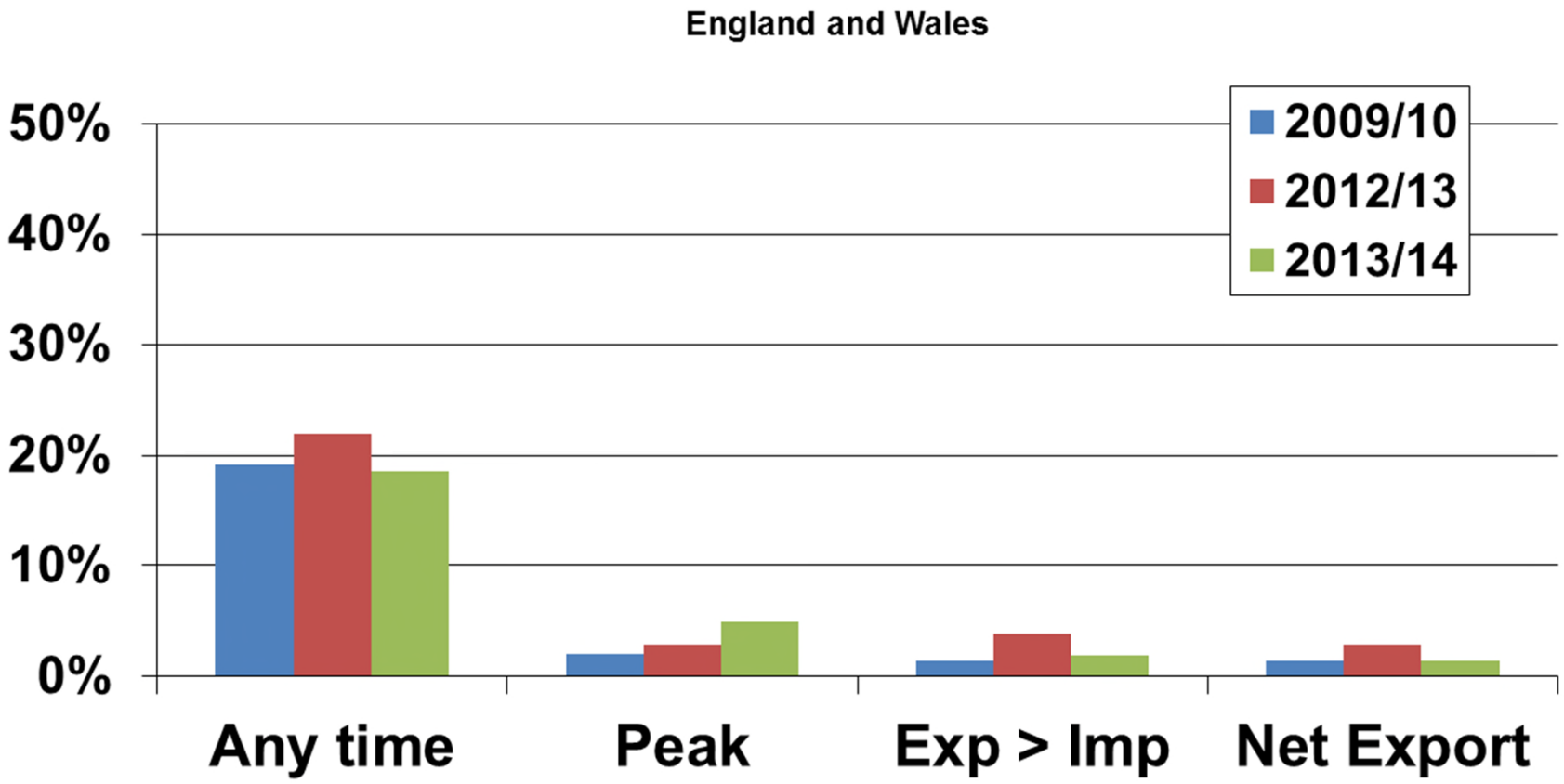
Bilateral Discussions

DNO workshop

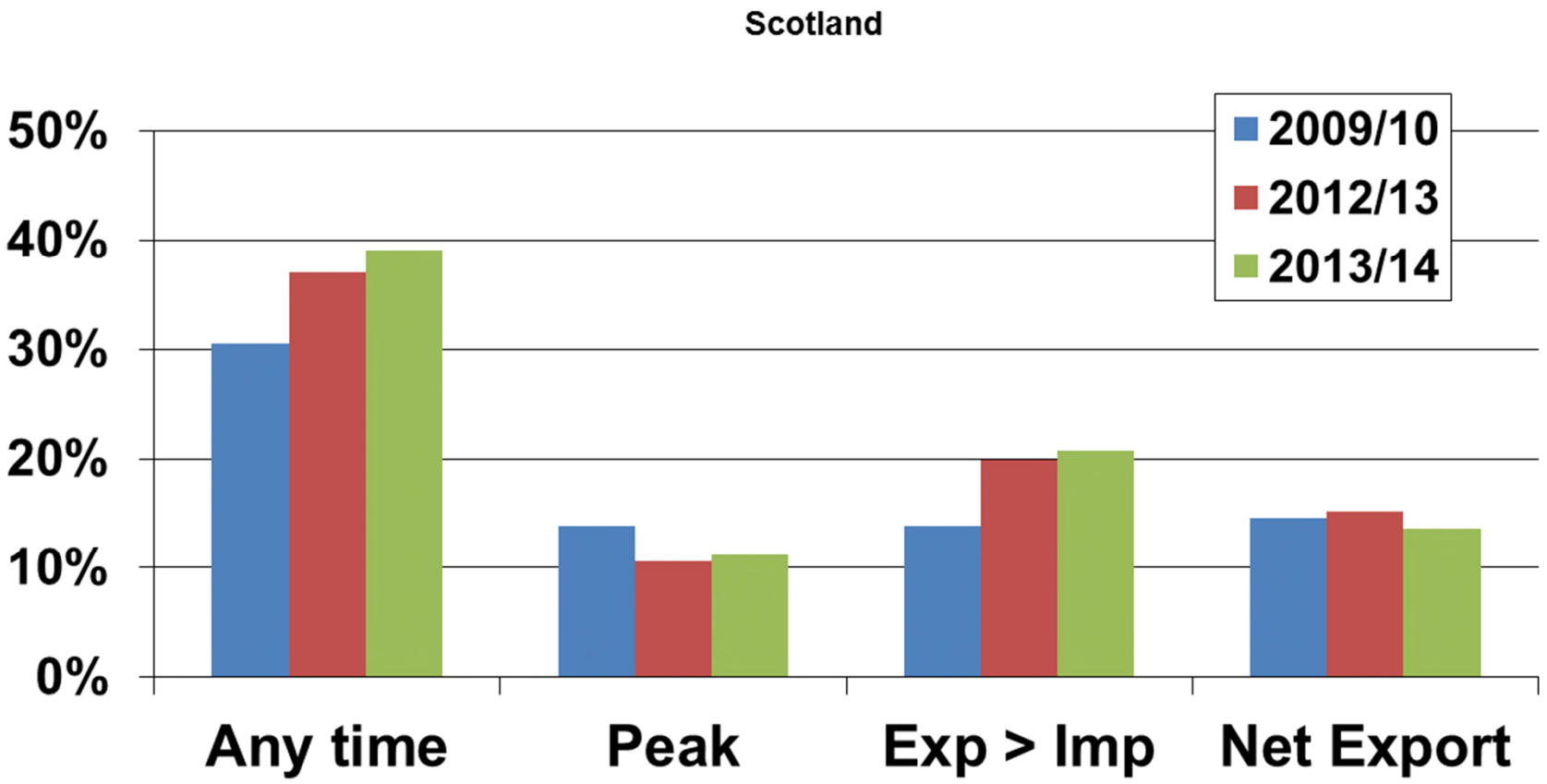
Strawman development; presentation at next TCMF

Open letter consultation– Late 2014

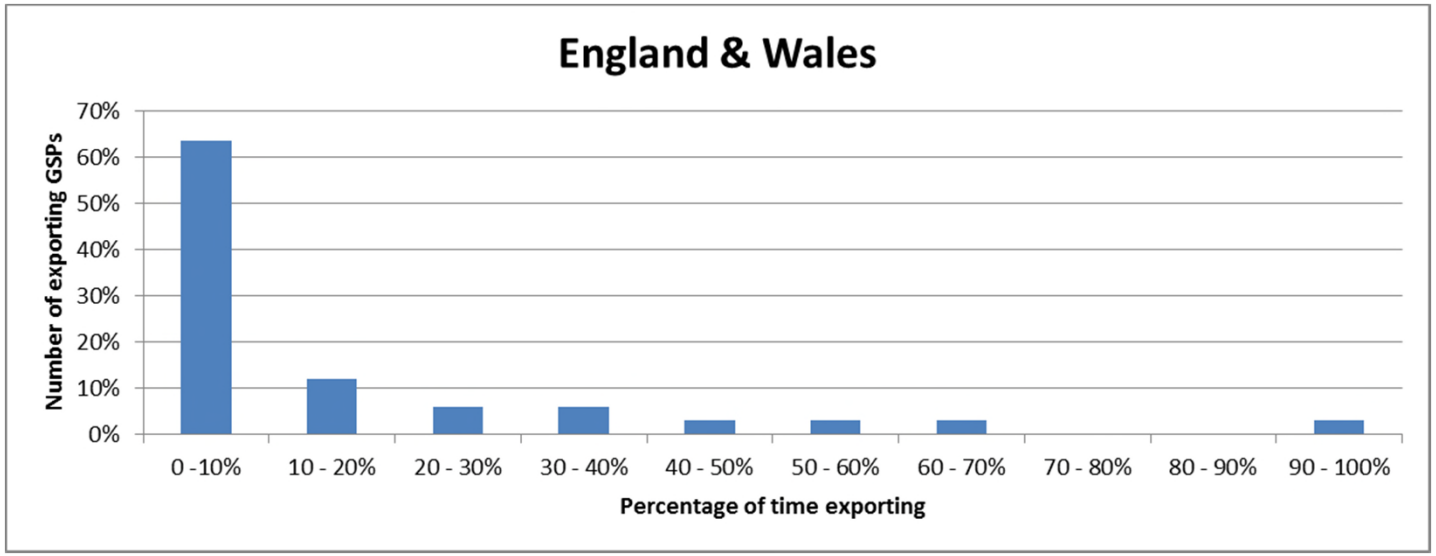
Updated Analysis: England and Wales

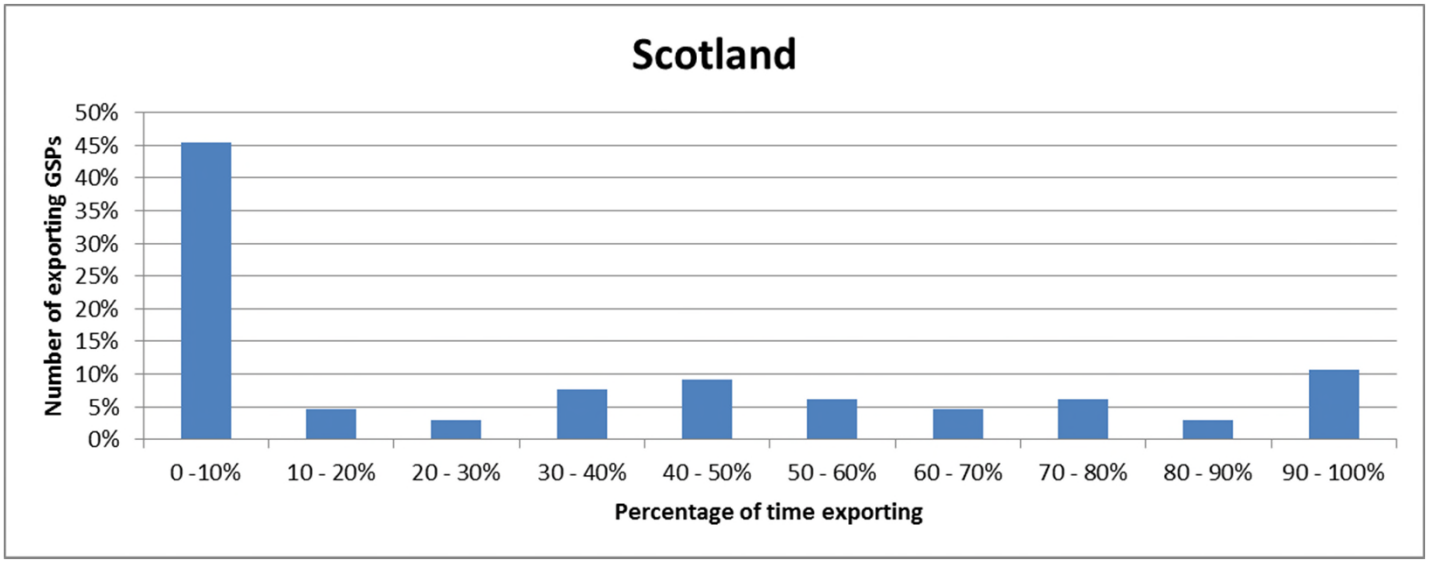


Updated Analysis: Scotland



How often do exporting GSPs export?





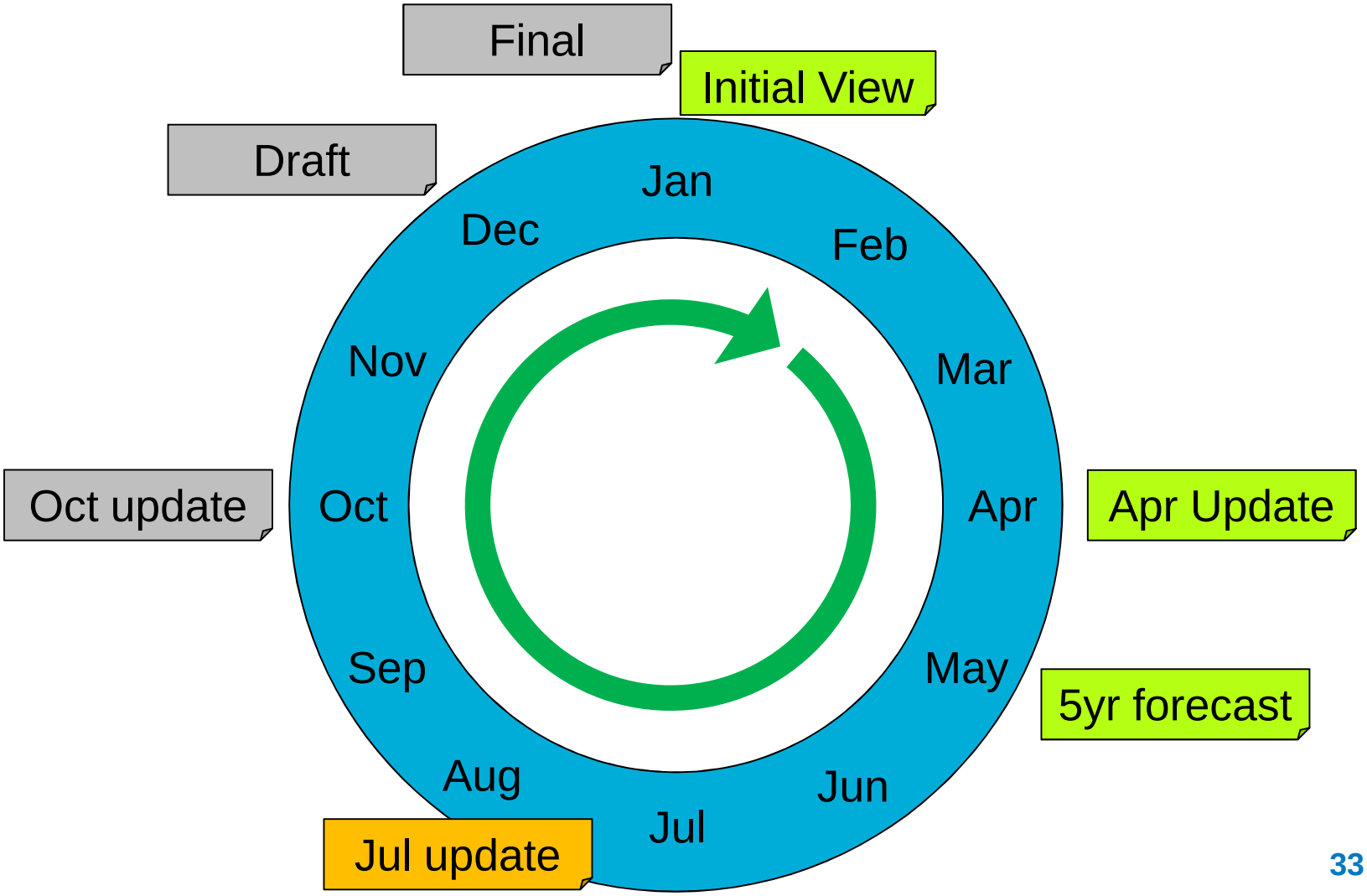
nationalgrid

July Forecast Update



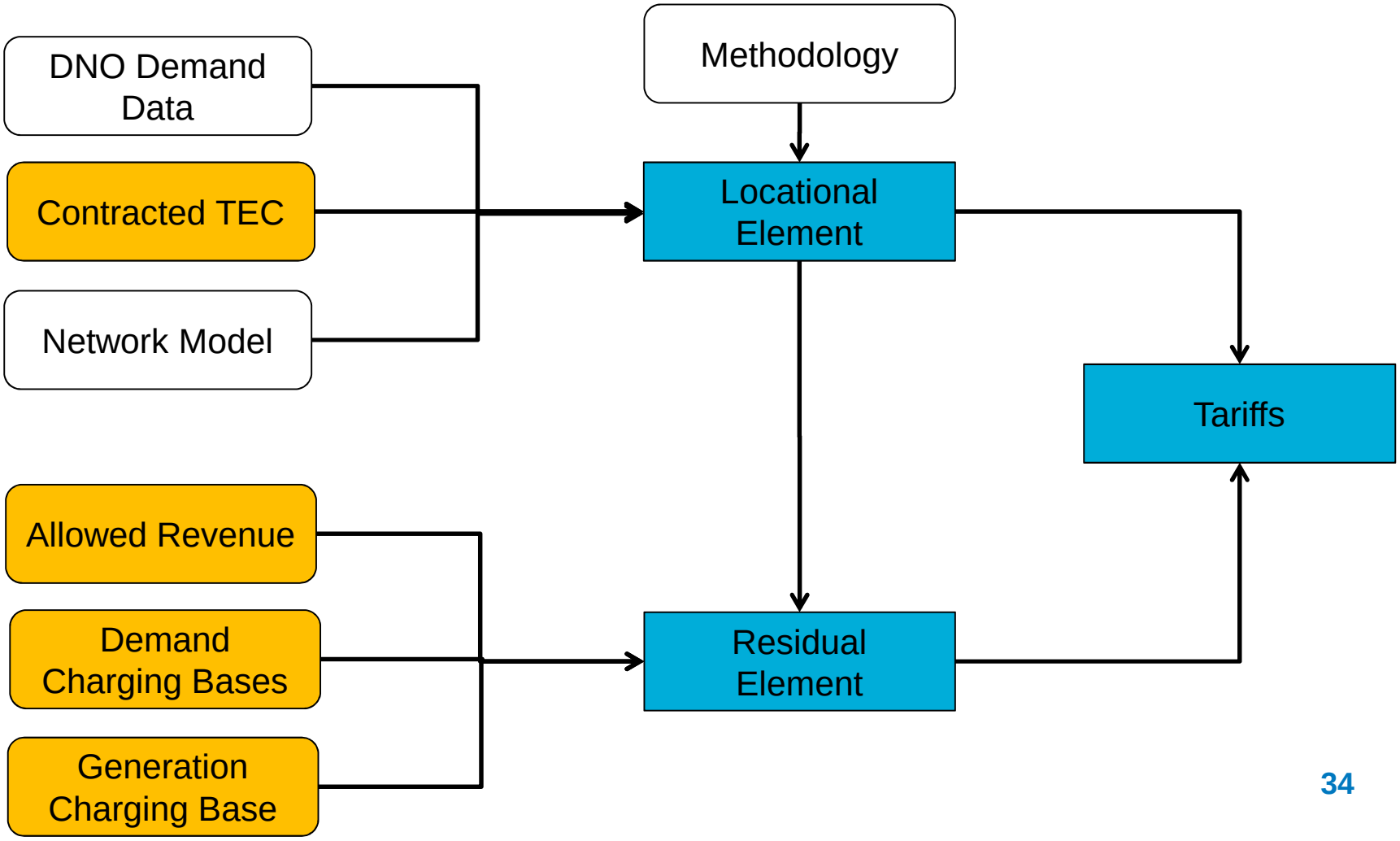
Mary Owen

2015/16 TNUoS tariff setting



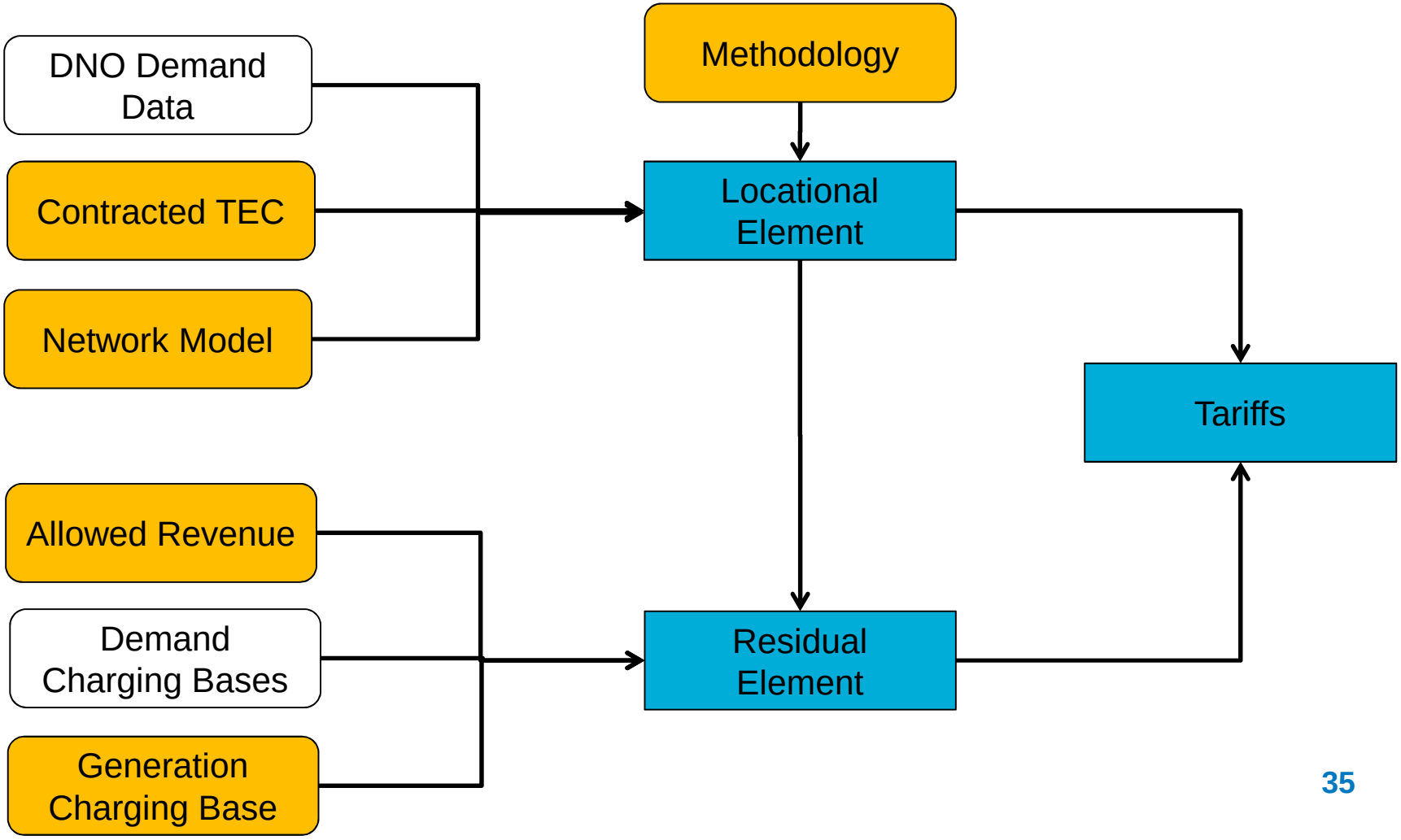
nationalgrid

What's changed since May ?



nationalgrid

What could change before January?

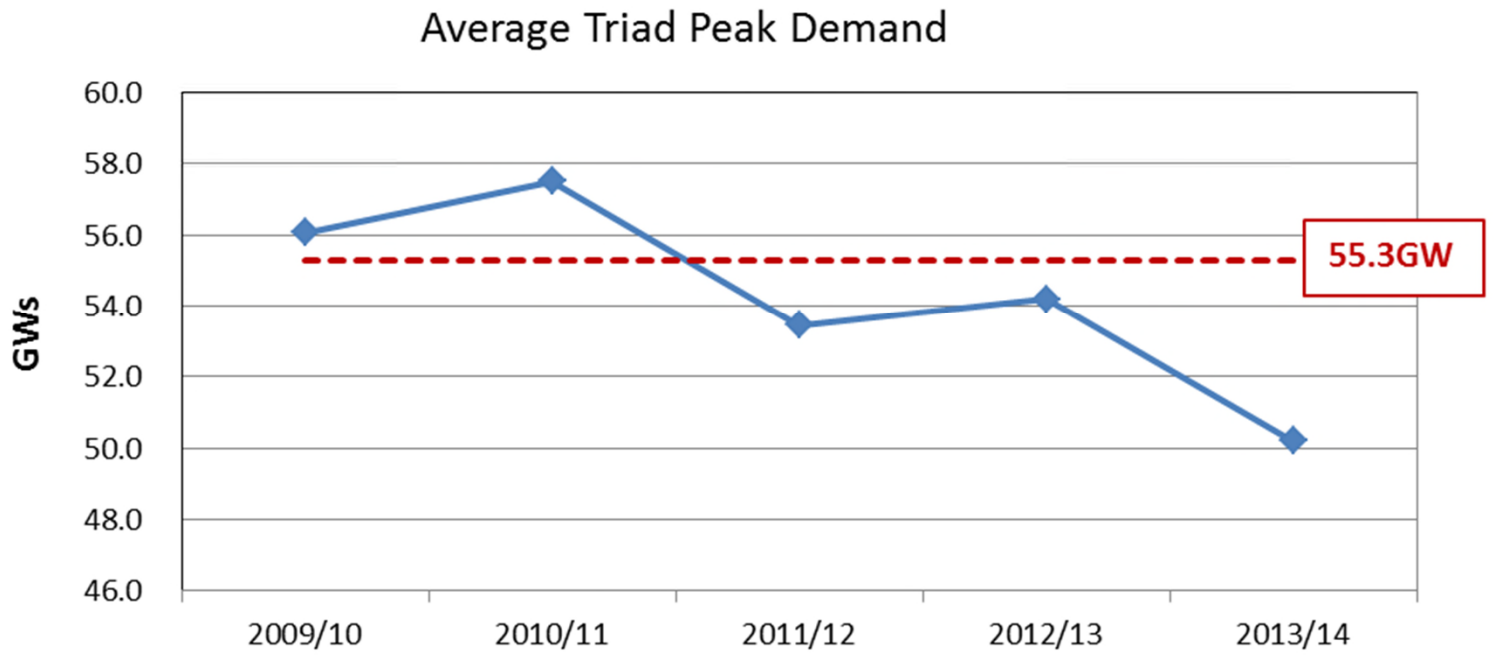


EU Regulation 838/2010

- Annual average generator charges limited to €2.5/MWh.
- The July forecast assumed 27% of revenue would continue to be recovered from generation.
- Appendix C showed the effect of only collecting 23% from generation to remain within the limit (now more likely).
- Consequential changes to the charging methodology:
  - CMP224 (Adjust G/D) - with Ofgem for decision.
  - CMP227 (15/85) - being consulted on.

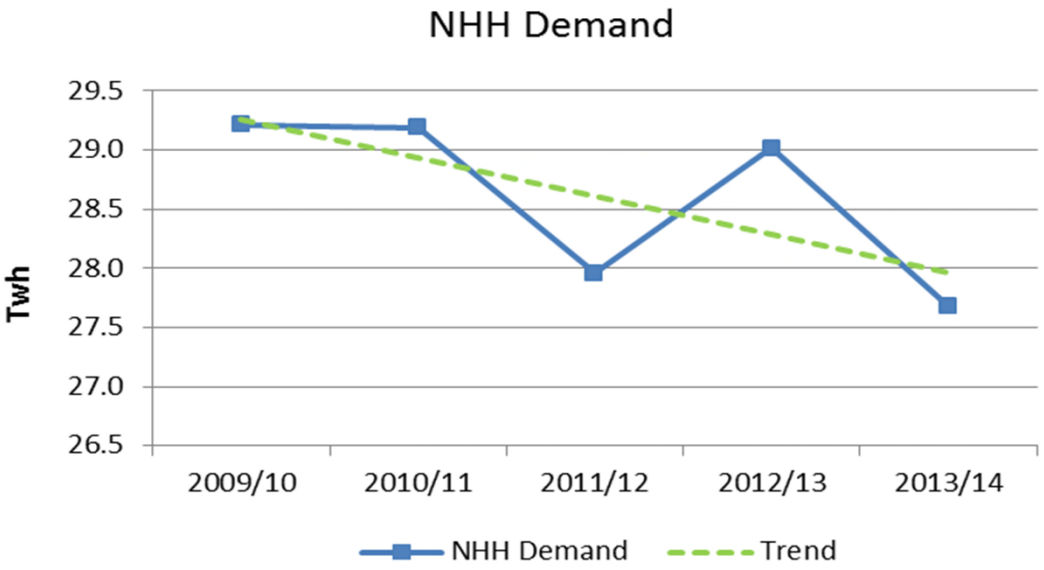
Peak Demand

- Forecast peak demand reduced from 55.3GW to 54.2GW
- Future Energy Scenarios taken into account
- Downward trend in historical outturns



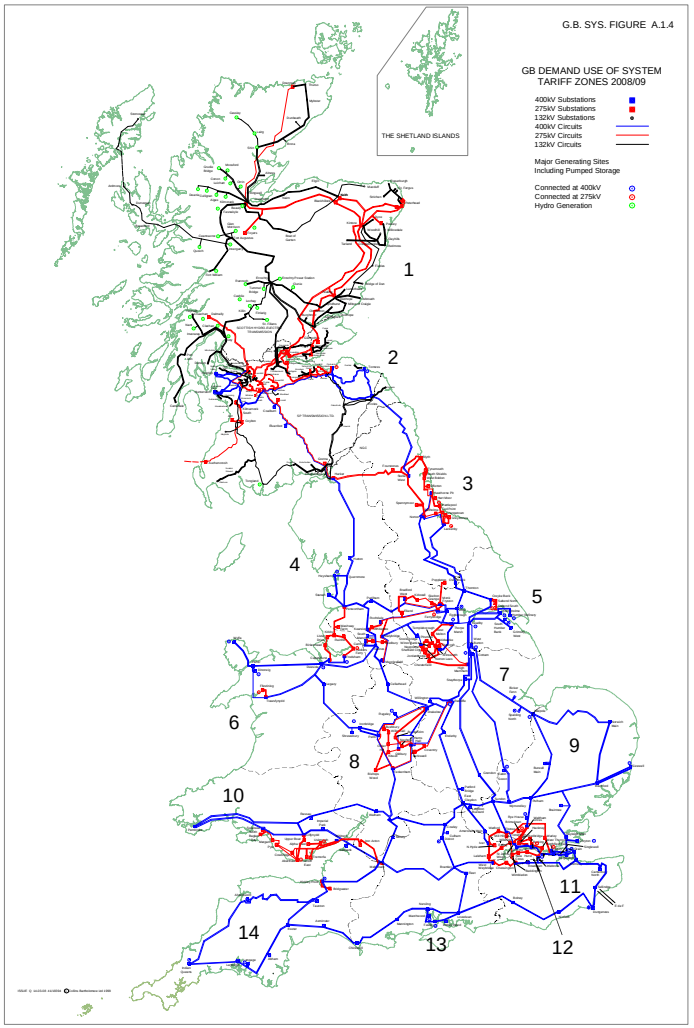
Non-Half Hourly Metered Demand

- Non-Half Hourly (NHH) Metered Demand reduced by 0.25TWh to 28.35TWh
- Downward trend over last 5 years despite mix of cold and warm winters
- Q1 2014 weather adjusted domestic energy consumption down 2.5% from 2013 (DECC)



Location of Demand

- Zonal demand proportions updated to reflect actual demand over the last three years (Trade-off between cost reflectivity and tariff volatility)
- Fundamental changes over time e.g. large plant closures, embedded generation and triad avoidance
- NHH zonal tariff changes vary between -0.22p/kWh and +0.67p/kWh
- HH tariffs increased by £0.11/kW for all zones (residual element only)
  - Demand is more concentrated in zones with lower locational tariffs
  - As less revenue is recovered from locational tariffs, the residual increases to make up the difference



Generation Changes

- We have reduced our best view by 1.5GW from May to July.
  - Generation that was contracted to connect in 2015/16 but has delayed to 2016/17.
  - Potential delays to power stations that have not yet commissioned.
  - Whether offered contracts will be signed by 31 October.
  - Does not reflect potential TEC reductions at existing power stations, i.e. closures.

nationalgrid

Revenue Changes

- More information provided to increase transparency.
- All three years are forecasts as the data was compiled before the 2013/14 regulatory reporting submission at the end of July.
- Uncertainties:
  - Price Control Financial Model Variables (MOD)
  - Environmental Discretionary Awards
  - Stakeholder Engagement Rewards
  - Network Innovation Competition Funding
  - Critical Investment Decisions (TIRG/TII/SWW)
  - Offshore Transmission Owner asset transfer dates and funding

Annual iteration of base allowances (MOD)

- MOD determinations this autumn will take account of :
  - Roll forward from November 2013 determination (Known)
  - Totex Incentive for 2013/14 (Not known)
  - Critical Investment decisions (Partially known)
- ChUG is seeking a common approach to forecasting MOD that will protect commercially sensitive information but still provide reasonable information for those that don't want to delve into the financial models.

Critical Investments

- The following were not included in the July forecast. These are allowances and not revenues, i.e. 10-15 % of the allowance is expensed in the year of expenditure with the reminder capitalised over 20-40 years.
- Strategic Wider Works
  - Beauly–Mossford multi-year allowance of £45.6m (2009/10 prices)
  - Kintyre–Hunterston multi-year allowance of £174.1m (2009/10 prices)
  - Caithness–Moray need case confirmed. Funding of the £1.2bn project to be consulted upon this autumn.
- Transmission Investment Incentives
  - Anglo-Scottish Project additional 2012/13 allowance of £8.4m (2009/10 prices).
- Transmission Investment for Renewable Generation
  - Decision awaited on additional £110.6m funding for Beauly –Denny.

Statement of Works Change Timescales

David Corby

Background

Ofgem led DG Forums

NETSO | TOs | DNOs

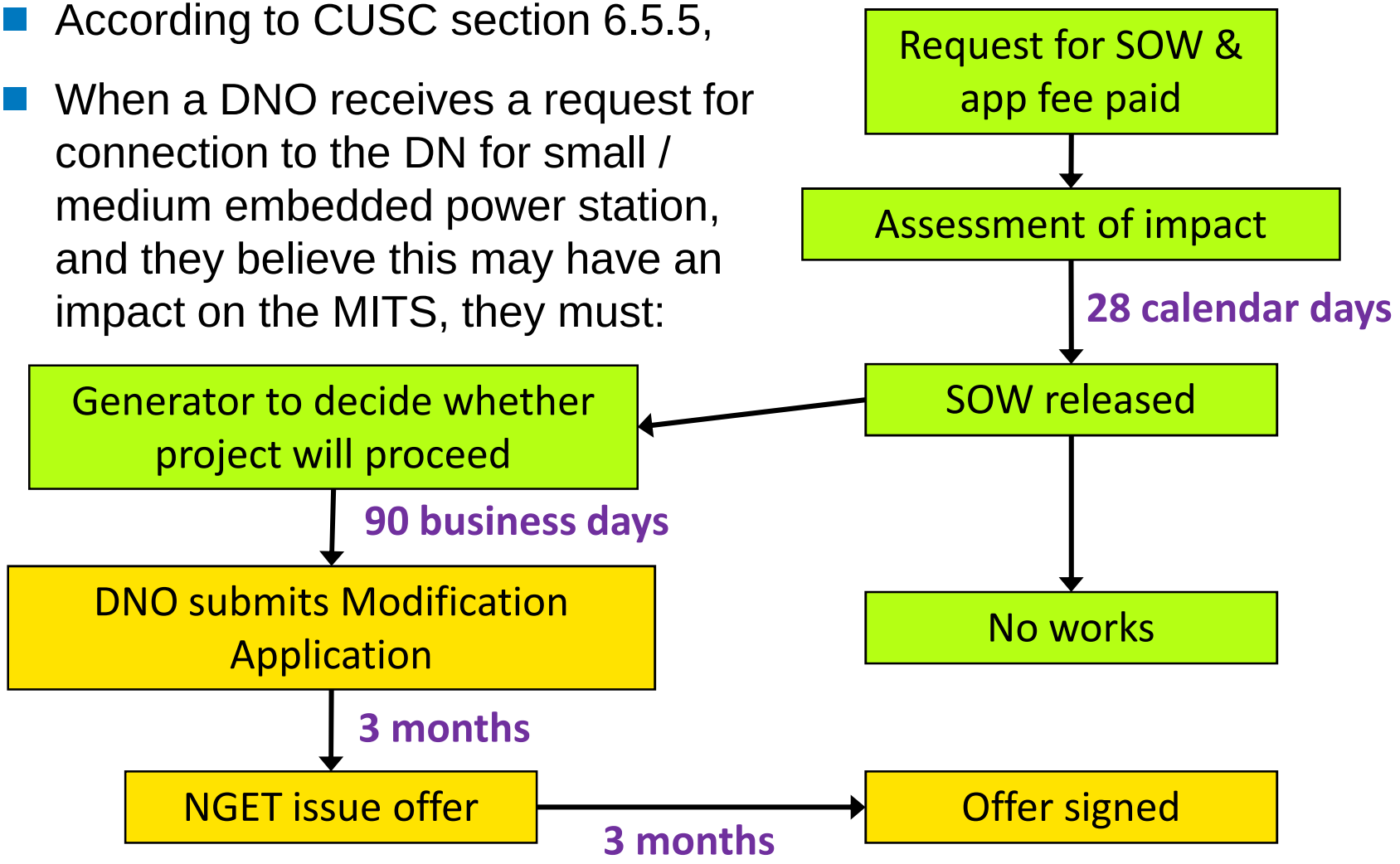
Embedded Developers have difficulty understanding how their development impacts on the Transmission network

That the Statement of Works process:

- Took too long & was expensive
- There was a lack of transparency in the process
- Stage 1 caused a delay in most cases

What is the Defect?

- According to CUSC section 6.5.5,
- When a DNO receives a request for connection to the DN for small / medium embedded power station, and they believe this may have an impact on the MITS, they must:



nationalgrid

Next Steps

- Intention to raise a CUSC modification to the October panel meeting
  - Not intending to raise as Self Governance as the intention is to save material costs
    - Any views?
  - Aspiration that the proposal will need only minimal workgroup involvement
  - Potentially return to CUSC panel in Jan 2015
  - Potentially passed to Ofgem in Mar 2015

Flexible Access Review - Conclusion

Nick Pittarello

Original Aims of Flexible Access Review

- Explore options to access transmission capacity within year

- Why?
  - More efficient use of capacity
  - Lower fixed costs for marginal thermal plant with low load factors

Process undertaken

- TCMF discussion of success criteria and some options
- Developed spectrum of options
- Bilateral discussions with industry participants
- Internal assessment of those options

During this process, Transmit was approved for implementation and EMR rules were published

What you told us

- No consensus, each party has a preferred way forward

Some interest

Overrun

- **NG LC26**
- **Unable to develop cost reflective charge**

Trading

- **Overrun need?**
- **LCN complex**
- **Concern from non-portfolio participants**
- **Does it help marginal plant in EMR world?**

STTEC

- **Could speed process w/o mod**
- **Does it help marginal plant in EMR world?**

- Is it a priority?
  - Some think there's rather a lot going on already
  - Limited appetite from July TCMF

Conclusion

- Transmit helps plant with low load factors
- EMR requires TEC to bid
- Any change would take a WG and 18m process (where broad consensus exists)
- We are not getting a message that there is an overwhelming appetite for change in this area at this time

Propose to take no further action at this time

nationalgrid

Potential Future Topics

David Corby

nationalgrid

Revised Priority Potential Topic list

Topic	Ranking
BSUoS stability	1
Flexible TNUoS products	2
8 year Price control	3
TNUoS fixed tariffs	4
G/D split	5
Triad	6
Integrated offshore	7
User Commitment (Section 15) Flexibility Developments	8
Exporting GSPs / Gross charging	9
BSUoS Forecasting transparency	10
Methodology Housekeeping	11

nationalgrid

Any Other Business

Next TCMF

November

12

Wednesday

Venue: National Grid House, Warwick

Future TCMF Dates

- Proposed future meetings on 3rd Wednesday of each month
- This could clash with the Grid Code Review Panel
- Is this an issue?

January	March	May
21	18	20
Wednesday	Wednesday	Wednesday

Venue: National Grid House, Warwick

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*

nationalgrid

Close