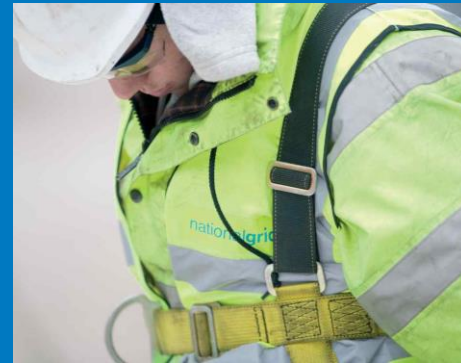


## Gas Charging Review



NTSCMF – 3 June 2016

*Update provided on 31 May 2016. All slides added or updated are marked with a blue star*



# Agenda

Area	Detail
Terms of Reference and work plan	<ul style="list-style-type: none"> <li>• Any proposed changes</li> </ul>
Alternative Reference Price Methodologies (RPMs)	<ul style="list-style-type: none"> <li>• Reminder of discussion at May NTSCMF</li> <li>• Overview of alternative methodologies proposed in previous EU TAR NC drafting</li> <li>• Discussion on developing RPMs</li> </ul>
Modelling CWD and LRMC with flow data	<ul style="list-style-type: none"> <li>• Additional analysis to build on CWD/LRMC analysis</li> <li>• Incorporating Commodity comparisons</li> <li>• Discussion on areas for development</li> </ul>
EU Tariffs Code – Current Outlook	<ul style="list-style-type: none"> <li>• Key updates relevant to Gas Charging Review</li> <li>• Areas under discussion</li> </ul>
Dual Regime discussion	<ul style="list-style-type: none"> <li>• Updates / discussion on areas where dual regime may be permitted</li> <li>• Detail on certain topics (e.g. interruptible)</li> </ul>
Relevant Objectives Discussions (GB and EU)	<ul style="list-style-type: none"> <li>• Reference Price Methodologies</li> <li>• Dual Regime scenarios/alternative products</li> </ul>
Next Steps	<ul style="list-style-type: none"> <li>• Future NTSCMF workshop planning</li> </ul>



## Terms of Reference / Objectives

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- As part of the Terms of Reference we discussed areas where there were issues raised and here we remind of the top five that were given
- It would be helpful to gather thoughts on what these mean to stakeholders
  - They may mean different things to different stakeholders
  - Reflections on Relevant Objectives will also be based on interpretations
    - There are close links between the issues identified and the Relevant Objectives



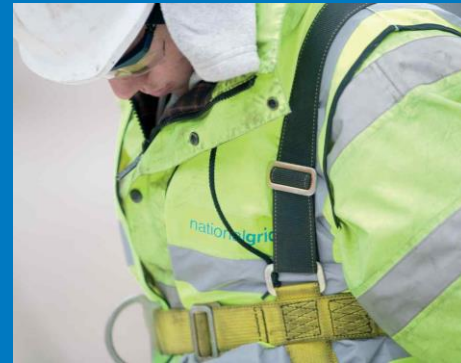
# Terms of Reference / Objectives

## Discussion on interpretation:

Issue	What does this mean to people? (examples to aid discussion)
Volatility	Changes year to year or within year, sensitivity of inputs in the overall reference price methodology and overall framework (inclusive of all adjustments, alternative products)
Predictability	Use of charges in their own charging frameworks, timing of changes
Stability of prices	Changes year to year or within year, sensitivity of inputs in the overall framework
Fairness	Same treatment for users, how the design and application of discounts, exemptions and alternative products is done
Relevant objectives	How the overall framework or constituent parts align with understanding of relevant objectives

- Stakeholder views are needed to help capture interpretations
- Understanding what these mean to stakeholders will help when considering how changes are measured beyond just Relevant Objectives to meet what the problems are that Gas Charging Review is aiming to address

## Gas Charging Review



Alternative Reference Price Methodologies (RPMs)

## Discussion:

# Alternative Reference Price Methodologies

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- At May NTSCMF we discussed some of the alternative Reference Price Methodologies (RPMs)
- We also discussed Ofgem's GTCR policy and the methodology that was used as the underlying RPM
  - Used Virtual Point Variant A
- Here we present a reminder of the May NTSCMF Material summarising those Reference Price Methodologies with a view to:
  - Continue the discussion for RPMs
  - Gather views on progression

# Discussion: Reminder of some alternative Reference Price Methodologies

Reference Price Methodology	Methodology and Application*	Comments
Postage Stamp	<ul style="list-style-type: none"> <li>The postage stamp methodology foresees the same reference price at all Entry and Exit Points.</li> <li>The reference price is given by the target revenue for entry (respectively exit) divided by the total booked capacity (or a relevant proxy)</li> </ul>	<ul style="list-style-type: none"> <li>Designed for a simple network</li> <li>May suit a relatively simple unmeshed network</li> <li>Does not provide investment signals</li> </ul>
Asset Allocation	<ul style="list-style-type: none"> <li>Considers users of the assets on the network and attributes proportion of costs accordingly (domestic, customers abroad – transitory, sub groups of transit)</li> <li>Where recovery of allowed revenue requires reconciliation to or from customers in other markets.</li> </ul>	<ul style="list-style-type: none"> <li>May be more suitable to more transitory networks</li> </ul>
Capacity Weighted Distance (CWD)	<ul style="list-style-type: none"> <li>This methodology assumes that the share of the allowed revenue to be collected from each point should be proportionate to its contribution to the cost of the capacity of the system.</li> <li>This share of the allowed revenue, corresponding to the tariff, is based on a (uniform) unit price per capacity per distance.</li> </ul>	<ul style="list-style-type: none"> <li>May suit a more usage based model rather than investment</li> <li>Does not use cost components in the calculation of prices, linked to revenue, capacity and distance.</li> </ul>
Virtual Point (VP) (includes variant A and B)	<ul style="list-style-type: none"> <li>The principle of the virtual point based approach is to determine entry and exit tariffs for each point to which the tariff applies by weighting capacity at these points according to their distance to a virtual point. The “virtual point” (theoretical location) can be either adjusted for mathematically (Variant A) or determined geographically (Variant B).</li> </ul>	<ul style="list-style-type: none"> <li>VP(A) relates to the LRMC model Works for a highly meshed, complex network</li> <li>May suit a more investment focused model due to marginal pricing</li> </ul>

\*Taken from EU Tariffs Code earlier drafting

## Discussion:

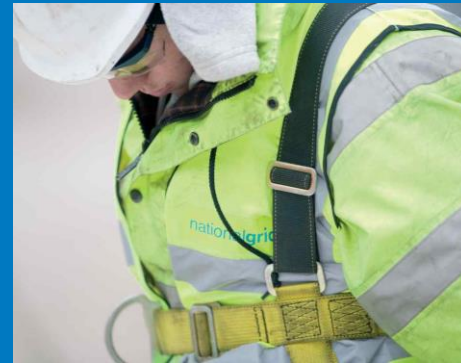
# Alternative Reference Price Methodologies

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- For information, Virtual Point Variant A is equivalent to the current Long Run Marginal Cost pricing model (LRMC)
- At May NTSCMF we discussed some of the alternative Reference Price methodologies and posed some questions regarding alternative RPMs:
  - Should focus be on LRMC and CWD to develop further?
  - Which is most suited to GB and links the commercial regime and physical most appropriately into the future?
- Discussion of views (related to NTSCMF Action 0502)



## Gas Charging Review



Continued development of Analysis building on CWD / LRMC seen so far

## Analysis – Overview (1/2)

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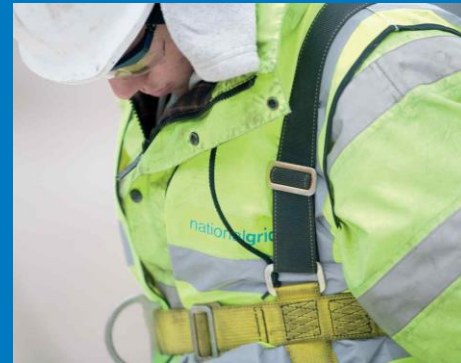
- Following on from May NTSCMF questions were raised about how the capacity rates shown compared to current Commodity rates
- Under EU Tariffs Code with more of a potential movement to Capacity over Commodity for aspects of GB regime, comparisons to current commodity may be helpful:
  - For those who participate more in the short term who may only currently have exposure to Commodity charges to assess potential impacts
  - To simply show how current Commodity rates compare to some of the initial calculations of Capacity prices under some alternative RPMs

## Analysis – Overview (2/2)

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- In order put this into context here we present:
  - A summary of the analysis presented in May
  - A history of Commodity charges and how they compare to those capacity rates seen so far under Capacity Weighted Distance (CWD) and LRMC analysis
  - A summary of the analysis and key points

## Gas Charging Review



Summary of May NTSCMF Analysis

# High level key assumptions for Modelling CWD compared to LRMC

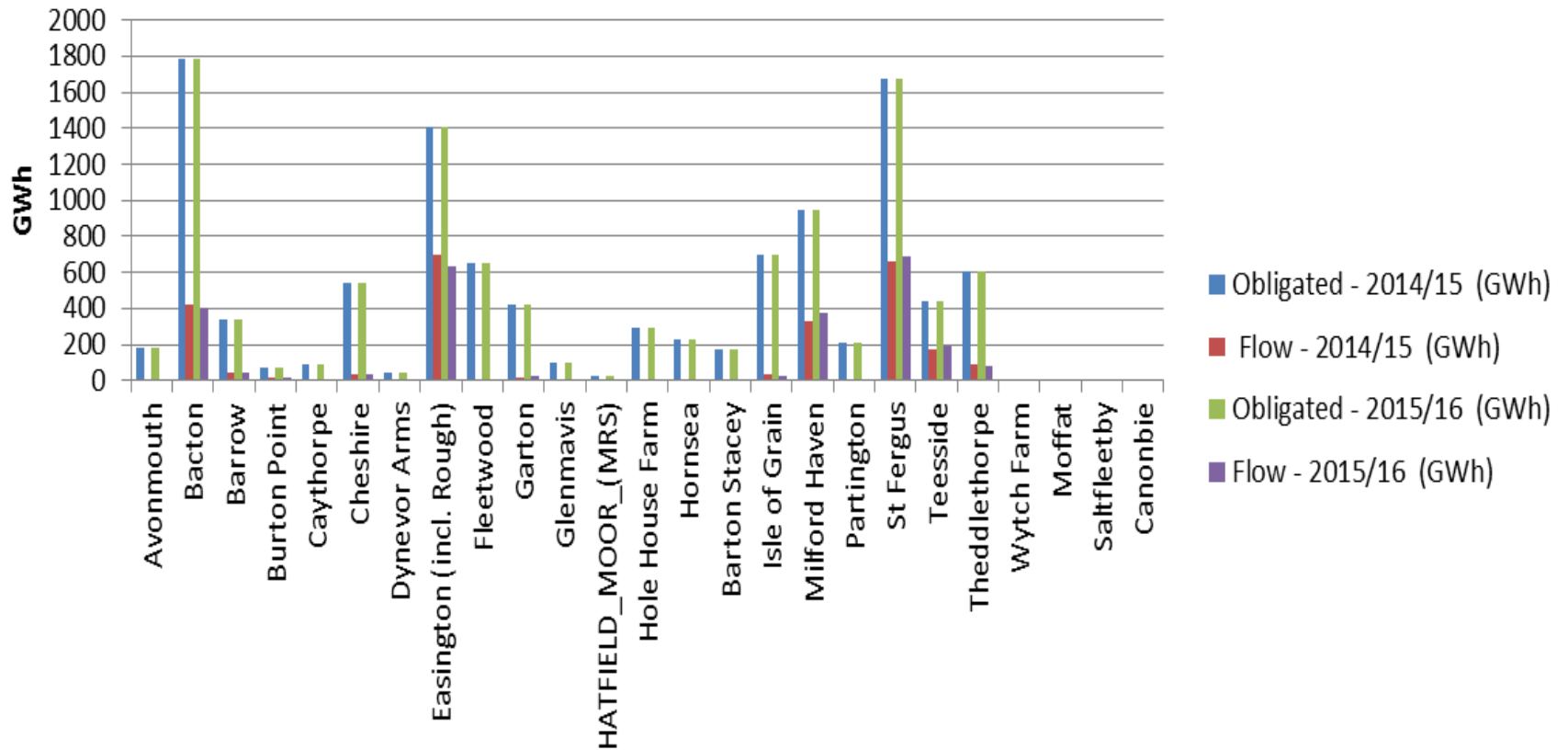
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- We have assumed that GB has a single methodology for all points (Interconnection Points (IPs) and Non Interconnection Points (Non-IPs)).
- We have assumed no change in behaviour relating to the purchase of capacity
- TO MAR used as revenue, what is assumed to be Transmission Service Revenue
- We have not included any discount structure, therefore all capacity at each point attracts the same price

# Entry – Obligated and Flow

- Flows represent approximately 23% of Obligated

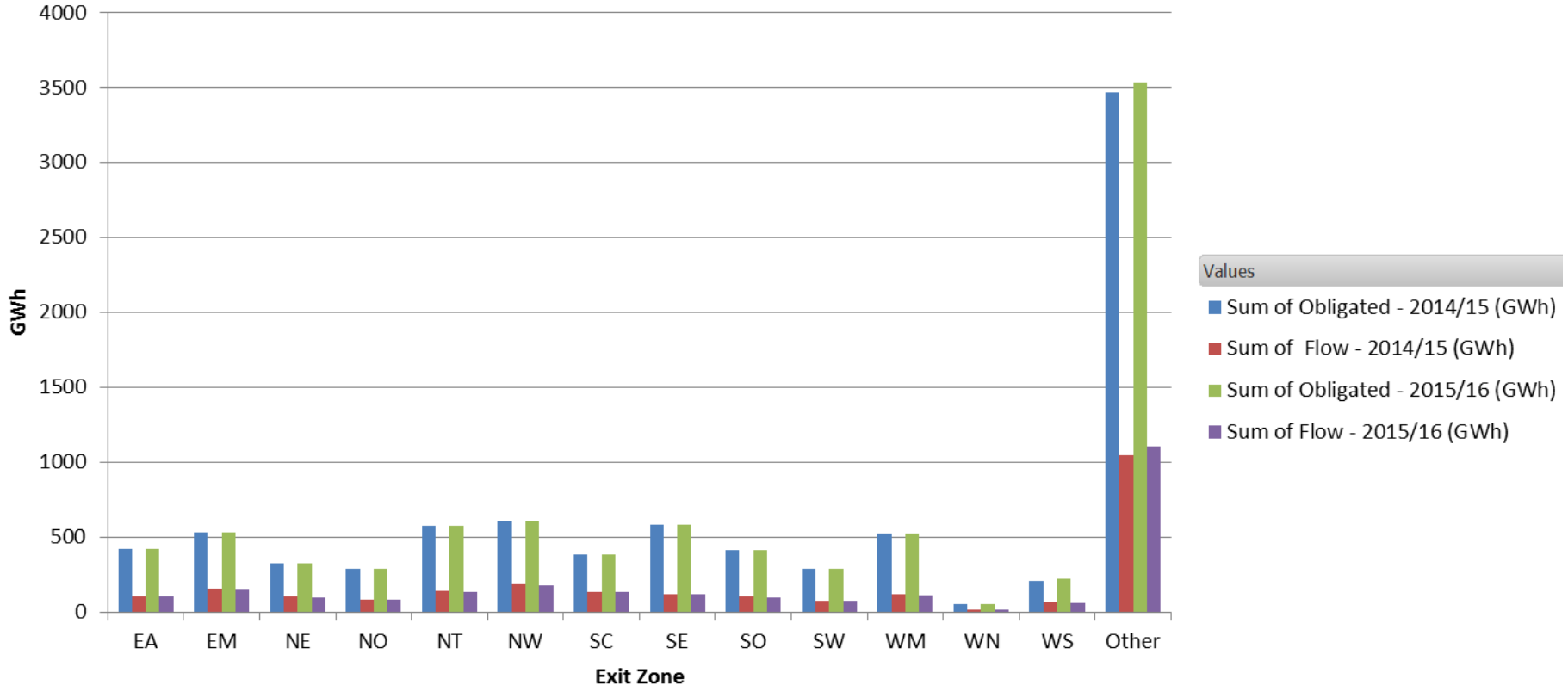
Entry - Obligated and Flow data



## Exit – Obligated and Flow

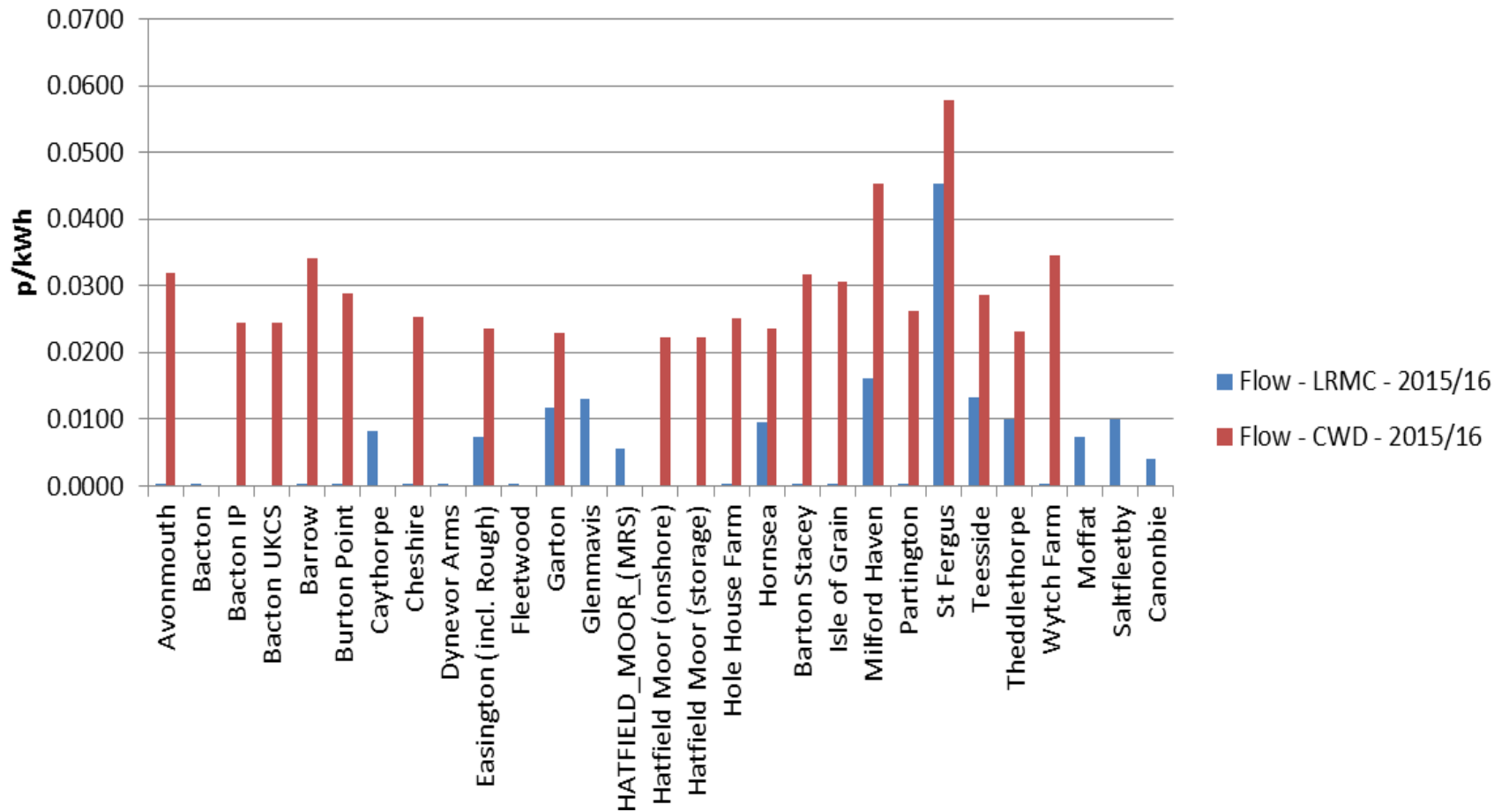
- Flows represent approximately 28% of Obligated

Exit Obligated and Flow data



# Entry Prices – LRMC compared to CWD model nationalgrid

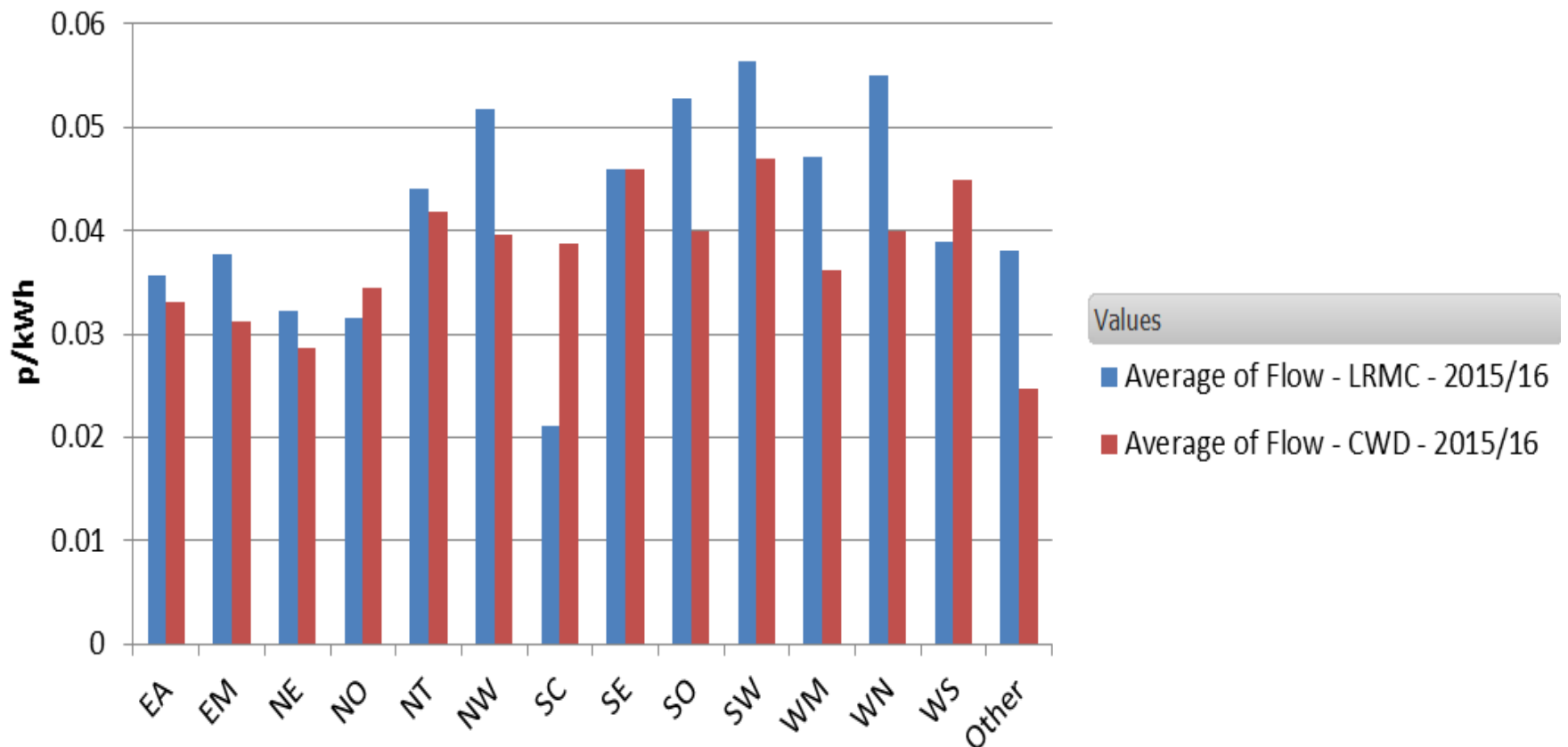
## Entry Prices - LRMC compared to CWD model





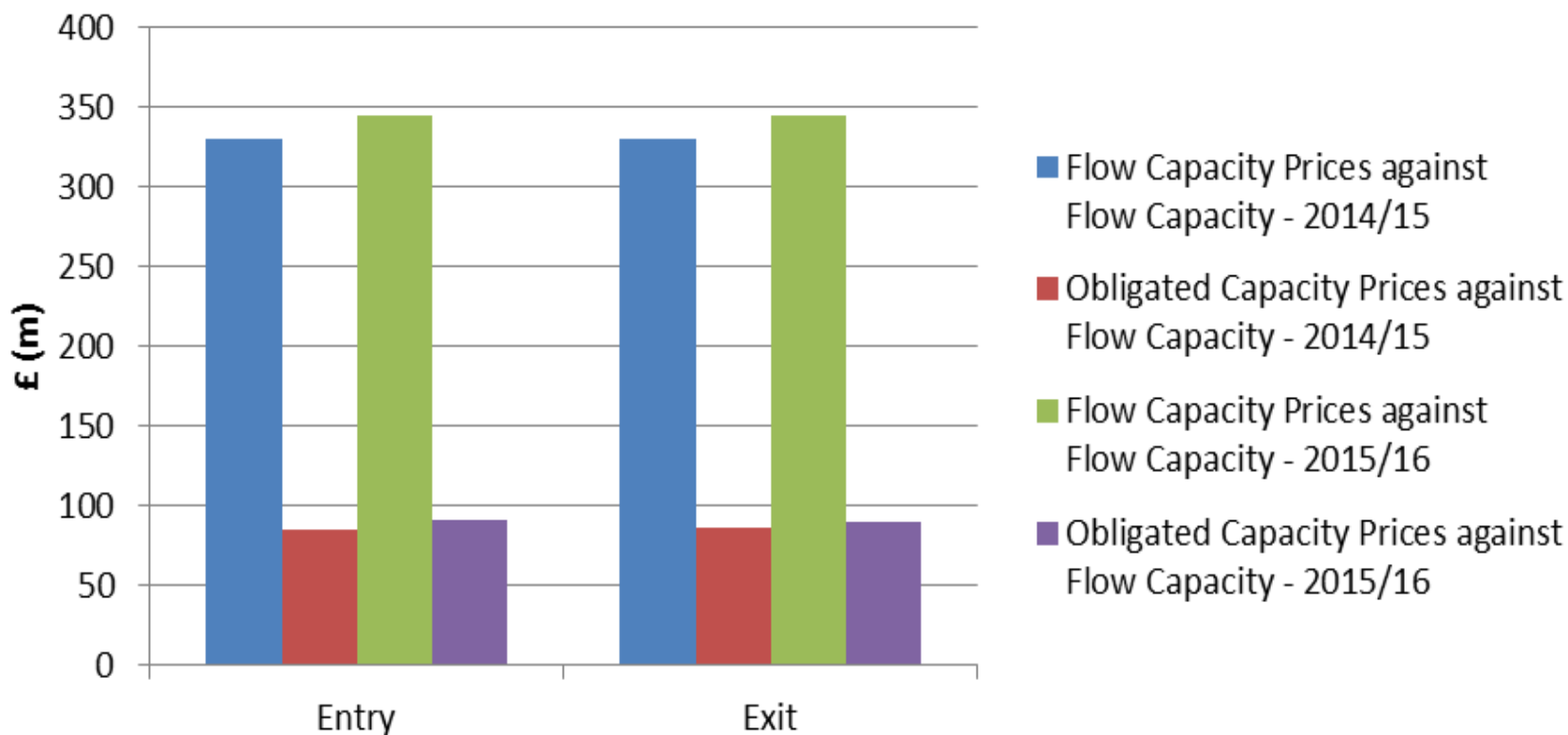
# Exit Prices – LRMC compared to CWD model

## Exit Prices - LRMC compared to CWD model



# Revenue collected under flow & obligated capacity prices against flow capacity

## Revenue collected under flow and obligated capacity prices against flow capacity



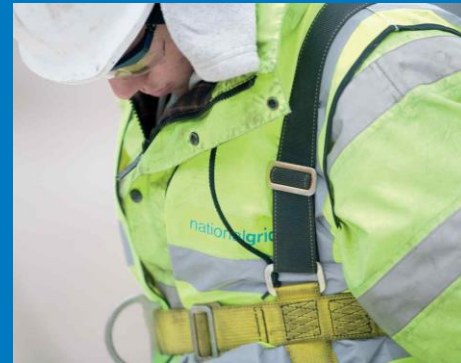
# Summary

## Modelling CWD and LRMC with flow data

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- Flow levels are currently less than 30% of the obligated levels for both Entry and Exit
- When recovery of revenue is linked to a low % against forecast charges could result in:
  - Significant under recovery that will need to be accommodated into potentially volatile charges
  - Undermining the methodology used for setting capacity
- Under any methodology the link between actual and forecast (when used in setting prices) is important
  - Forecasted contracted capacity needs to be as close to what is going to be flowed on system to ensure revenue is collected in applicable year

## Gas Charging Review



History of Commodity Rates / Modelling CWD and LRMC with flow data

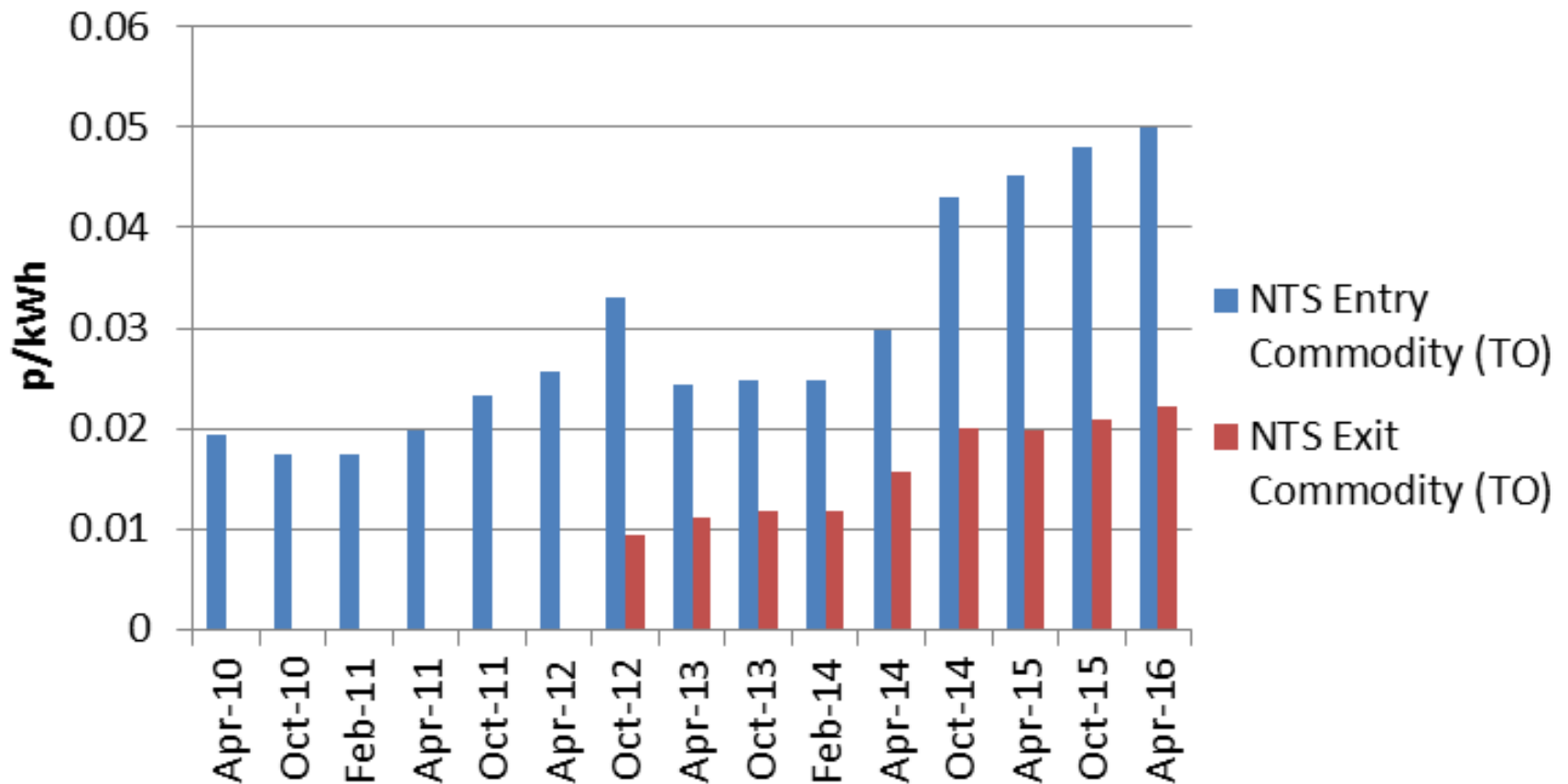
## Commodity Charges Overview

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- Charges calculated are based on TO Revenue for which our working assumption is that this equates to Transmission Services Revenue under EU Tariffs Code
- History of Commodity Charges as they are today
  - Therefore the chargeable demand base takes volumes on NTS Optional Commodity into account
  - No NTS Optional commodity rates are presented – these are customer specific
- Present the commodity charges calculated as they are today alongside the LRMC and CWD capacity charges (as seen in previous NTSCMF meetings)

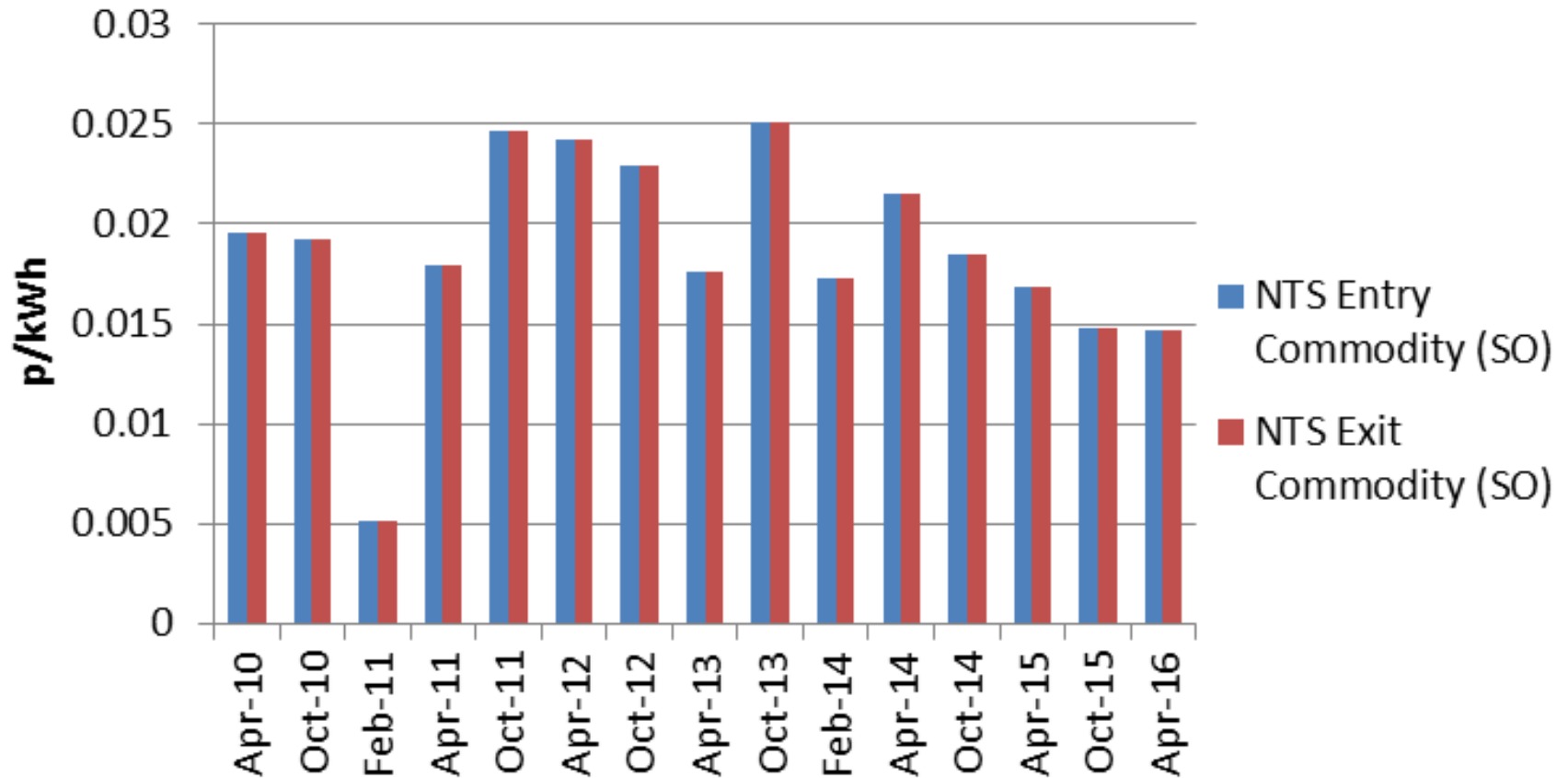
# TO Commodity Charges

## TO Commodity Charges



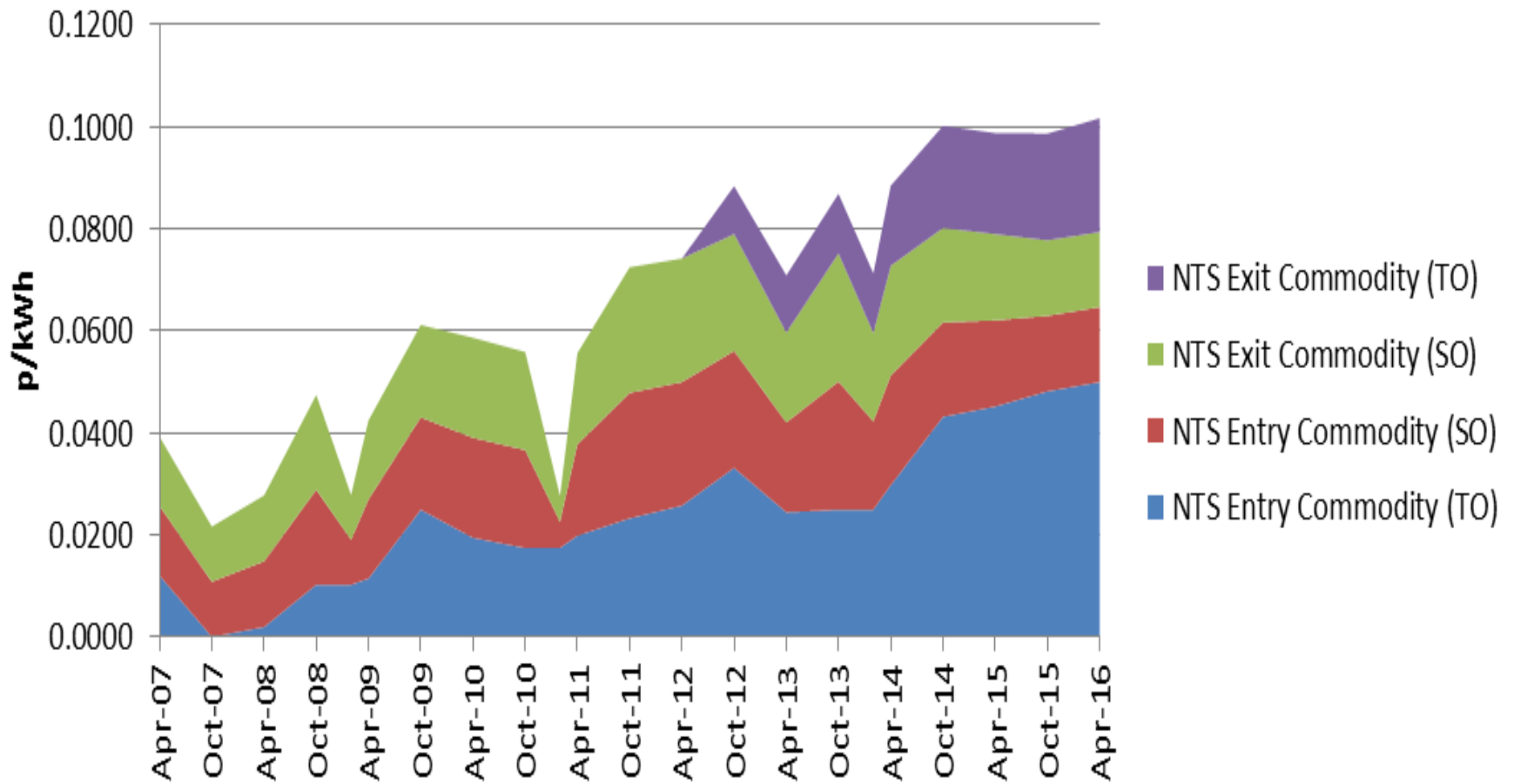
# SO Commodity Charges

## SO Commodity Charges



# Commodity Charges

## Commodity Rates





# High level key assumptions for Modelling CWD compared to LRMC

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- We have assumed that GB has a single methodology for all points (Interconnection Points (IPs) and Non Interconnection Points (Non-IPs)).
- We have assumed no change in behaviour relating to the purchase of capacity
- TO MAR used as revenue, what is assumed to be Transmission Service Revenue
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## Commodity vs Capacity Charges

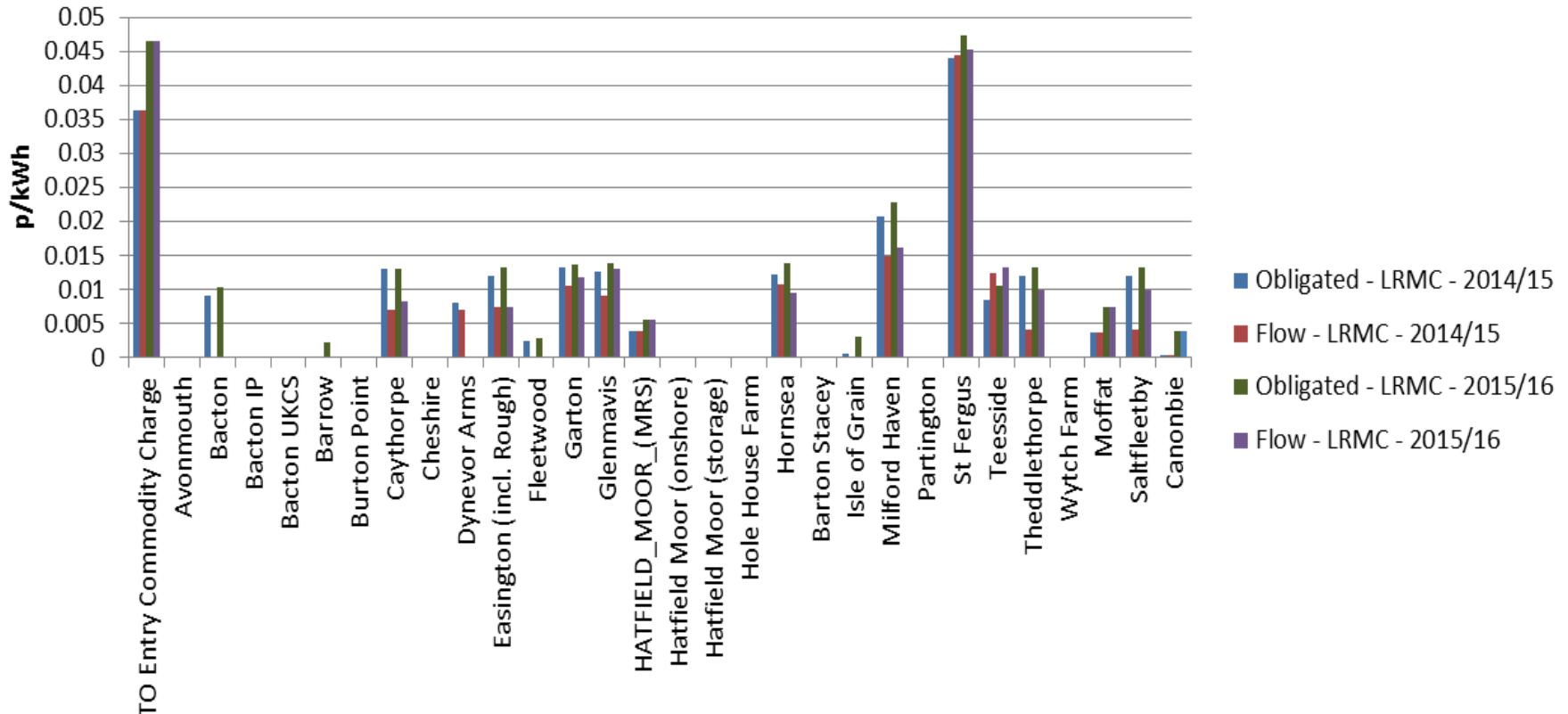
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- Capacity Charges produced in March and April NTSCMF and then average Commodity Rates in associated year
- Shows the differences between Capacity rates produced in the models under different scenarios and applicable average Commodity Rates in associated year

# Commodity vs Capacity Charges – nationalgrid

## Entry - LRMC

### Entry Prices - LRMC model - Obligated and Flow against Commodity Charge Rate

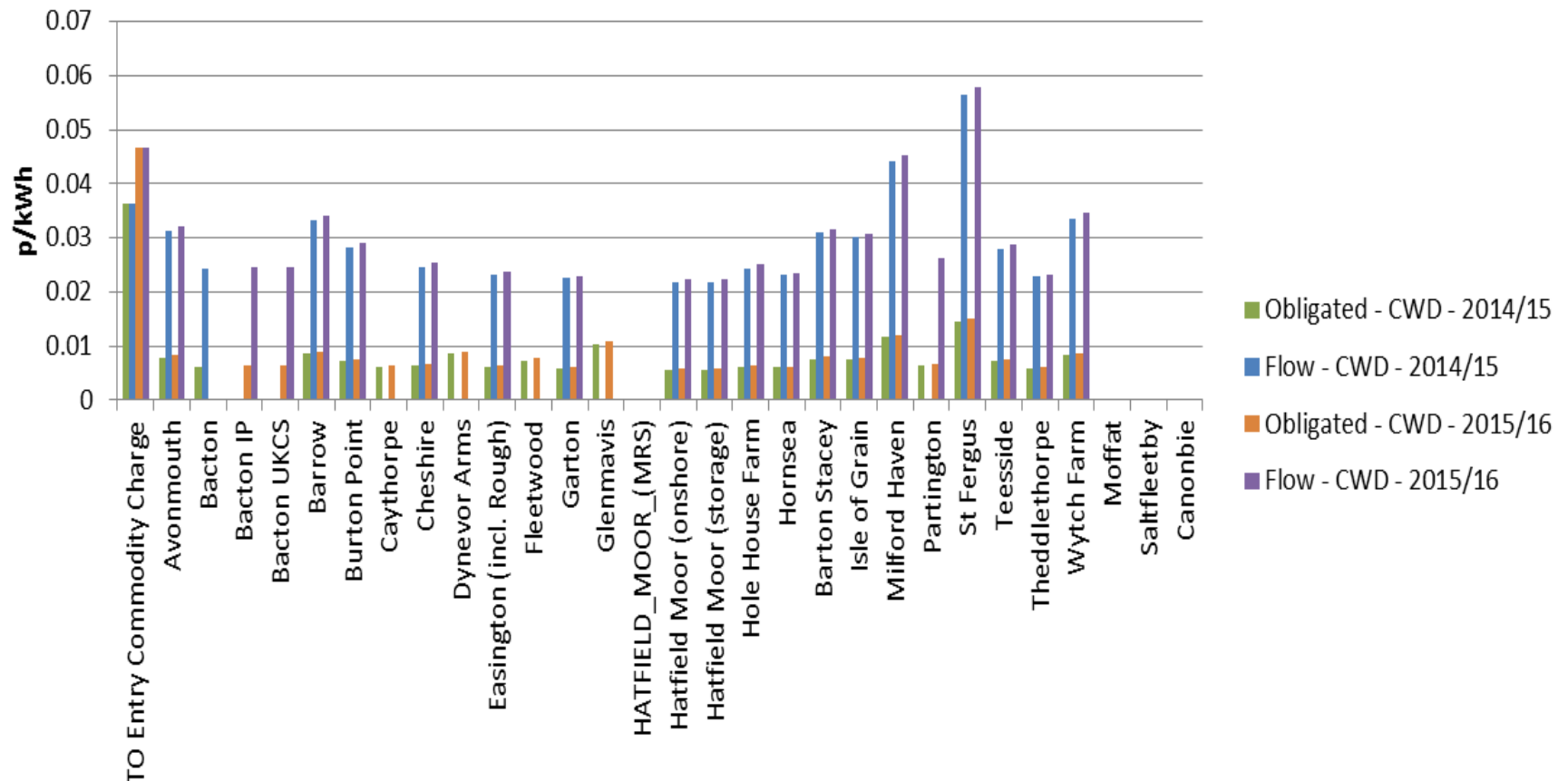


TO Exit Commodity Charge is the average over the year

# Commodity vs Capacity Charges

## – Entry – CWD

### Entry Prices - CWD model - Obligated and Flow against Commodity Charge Rate

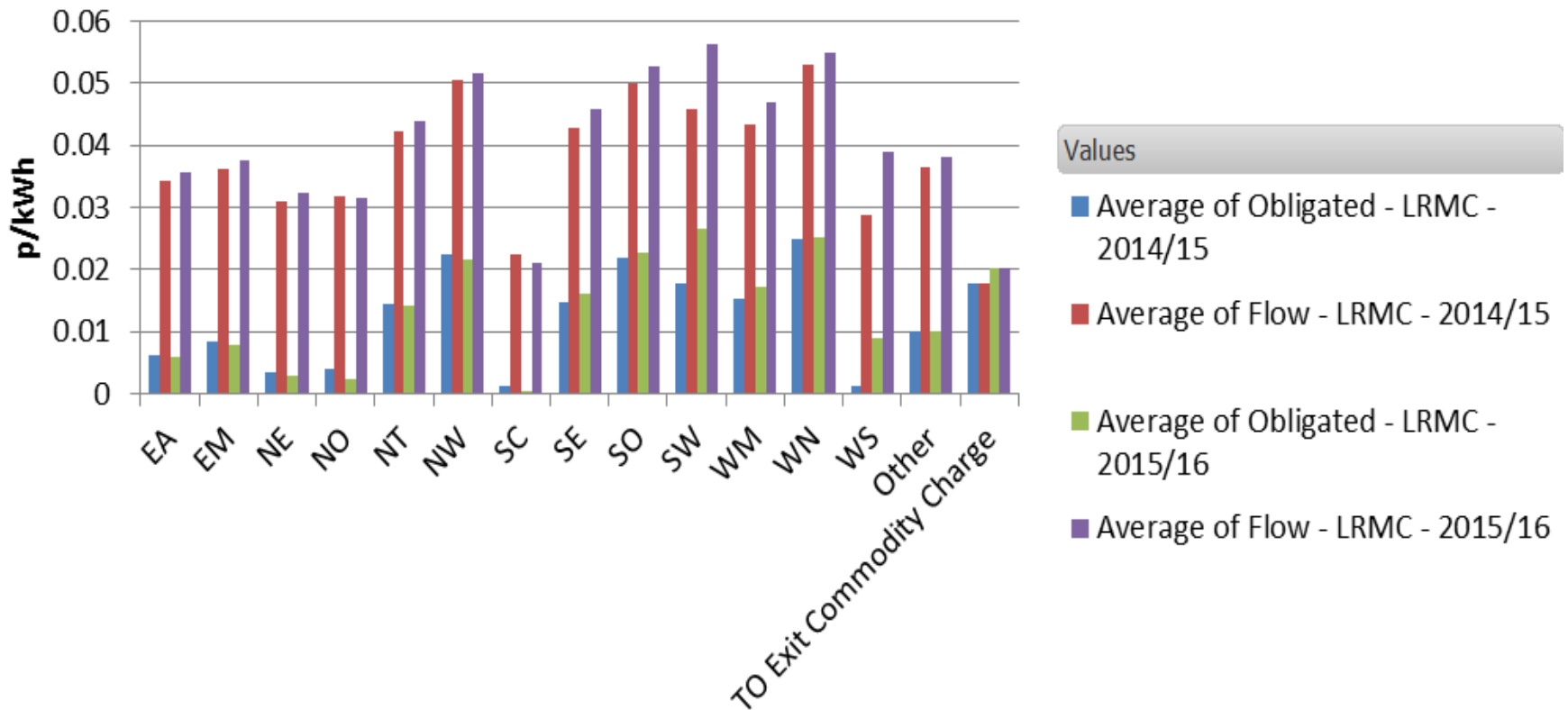


TO Entry Commodity Charge is the average over the year

# Commodity vs Capacity Charges

## – Exit – LRMC

### Exit Prices - LRMC model - Obligated and flow against Commodity Rate

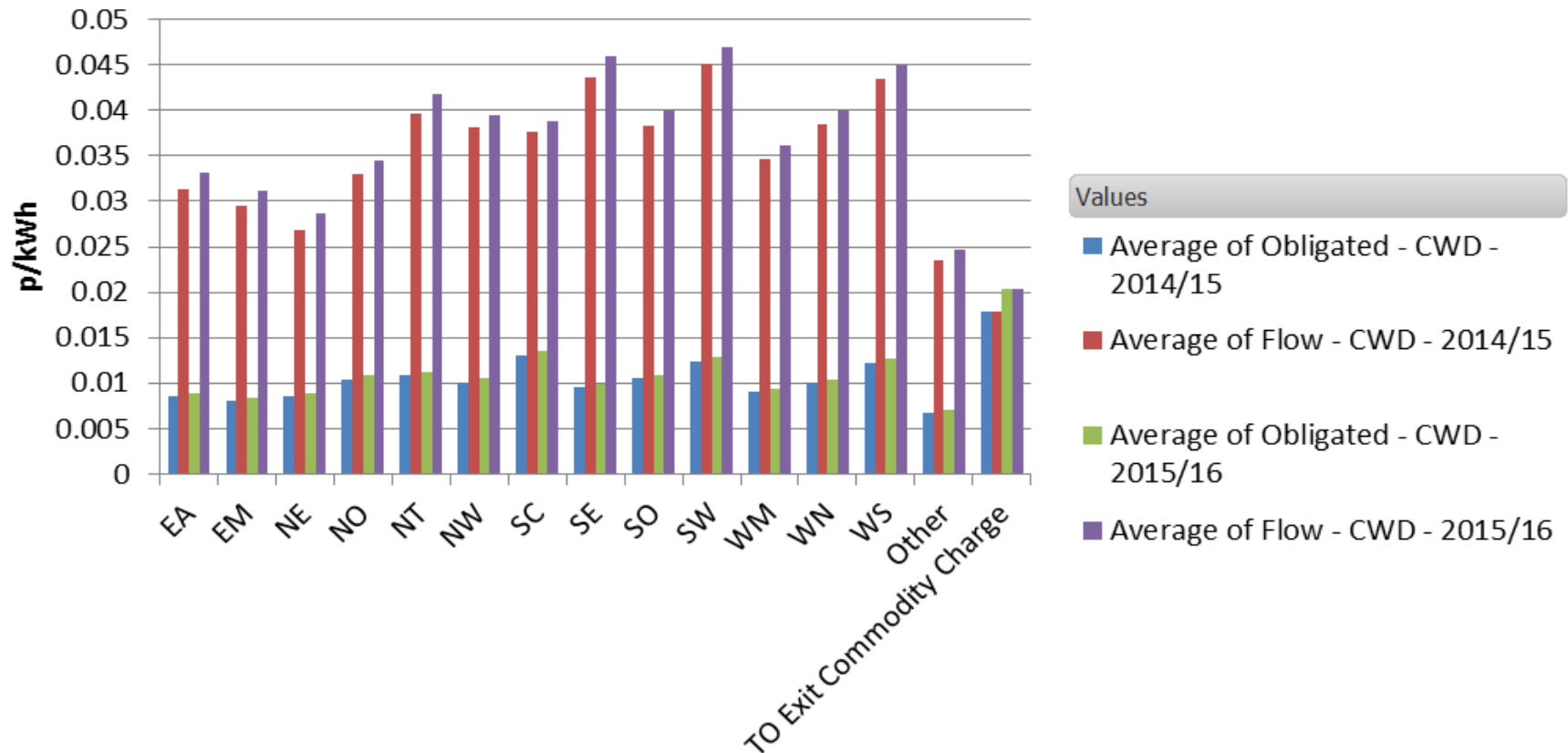


TO Exit Commodity Charge is the average over the year

# Commodity vs Capacity Charges

## - Exit - CWD

### Exit Prices - CWD model - Obligated and flow against Commodity Rate



TO Exit Commodity Charge is the average over the year

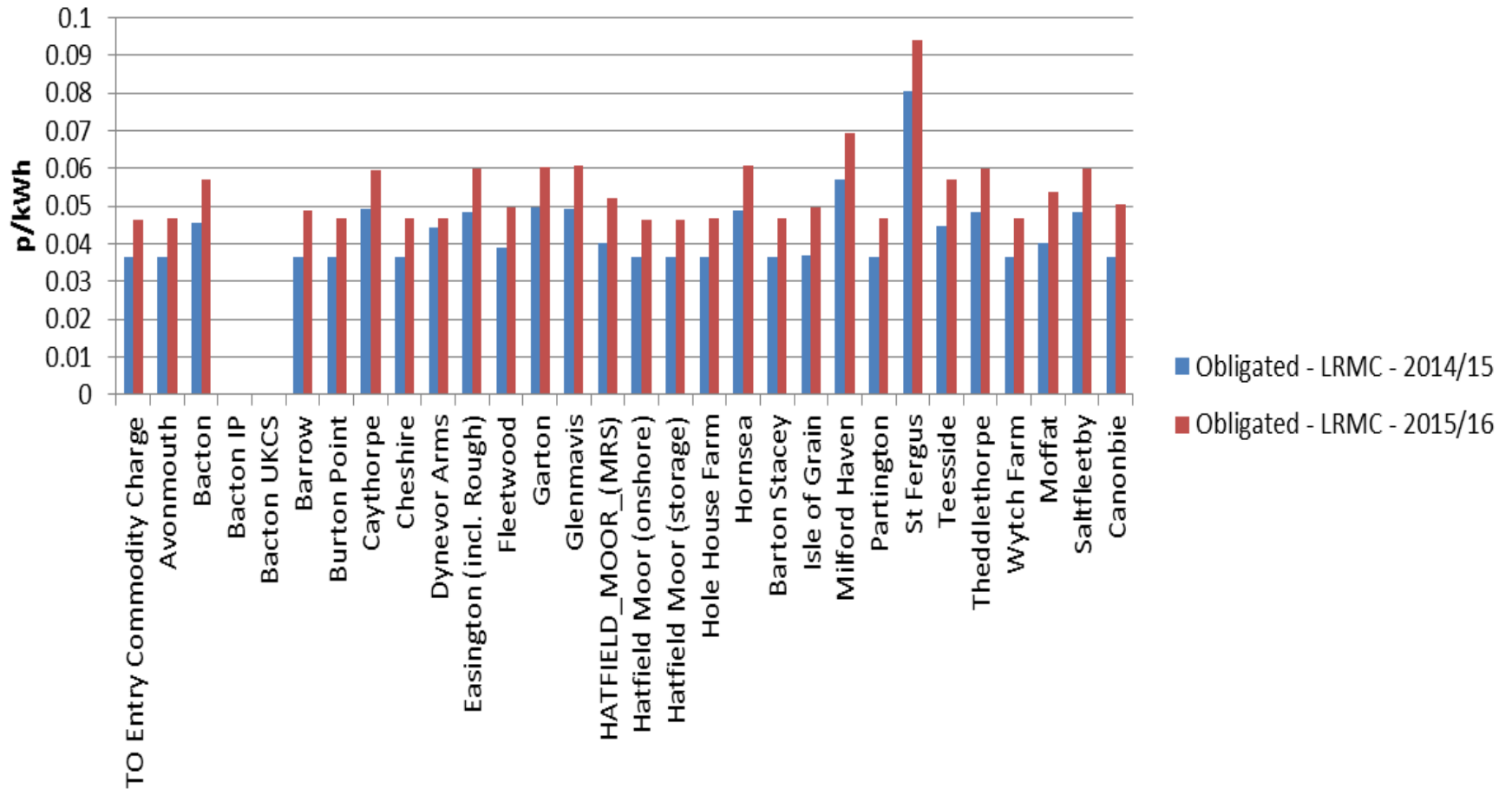
# Capacity Charge and Commodity Charge Total – Obligated Values

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- For LRMC model - when using obligated levels the revenue recovered will not be the MAR so need to have a Commodity charge (as we currently have today)
- Graphs show the TO Capacity charges and TO commodity charges combined to make a total charge
- Also show what the TO Commodity Charge would be if buying capacity at zero price

# LRMC – Entry Capacity Charge and nationalgrid Commodity Charge Total

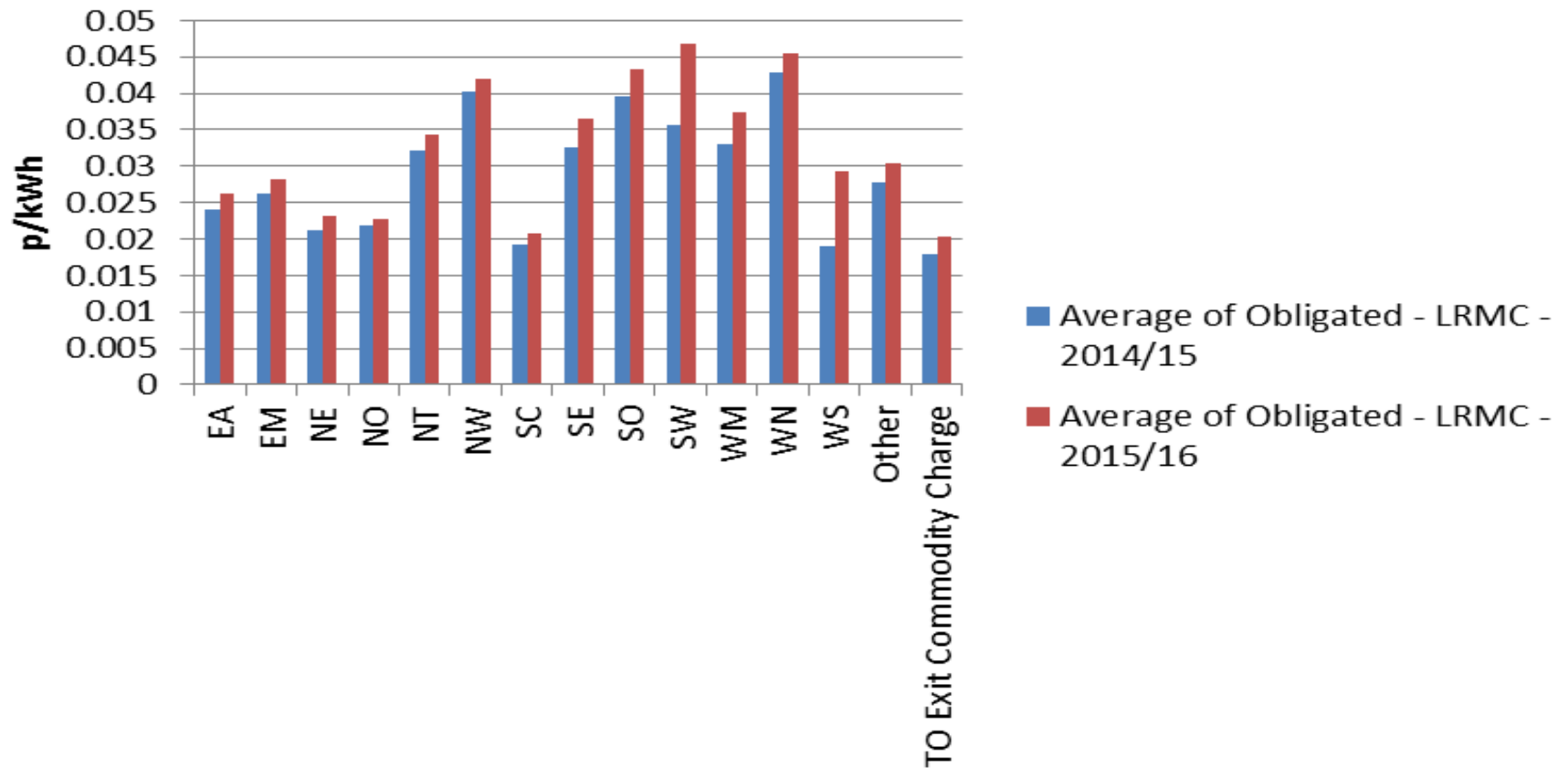
## LRMC - Entry Capacity Charge and Commodity Charge





# LRMC – Exit Capacity Charge and Commodity Charge Total nationalgrid

## LRMC - Exit Capacity Charge and Commodity Charge



## Revenue – Under/over recovery

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- If do not collect revenue in applicable year from capacity charges at the moment have a commodity charge
- Currently pay capacity charge for everything that is booked and commodity charge for everything that flow
- Any under/over recovery of revenue collected in applicable will feed through into the revenue to collect in  $y+2$

## Tariff Code Under/over Recovery

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- Under Tariff Code we will need to collect most (if not all) revenue by capacity charges
  - If we have a top up charge this can be done in a number of ways, some examples are:
    - Know we are going to under recover due to contracted forecast been incorrect so add top up element to capacity charge
    - Unknown when under recover is so feeds into revenue in 2 years time – which will effect prices in 2 years time.

# High level key assumptions for Modelling CWD compared to LRMC

---

- We have assumed that GB has a single methodology for all points (Interconnection Points (IPs) and Non Interconnection Points (Non-IPs)).
- We have assumed no change in behaviour relating to the purchase of capacity
- TO MAR used as revenue, what is assumed to be Transmission Service Revenue
- We have not included any discount structure, therefore all capacity at each point attracts the same price

## Under/over Recovery Analysis

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- Using obligated charges (produced in previous NTSCMF analysis) but assumed that capacity equals average flow capacity value over year
  - Times the obligated charges by the average flow capacity, which will give the revenue which will be collected assuming that everyone is paying the same price for capacity
    - There will be a revenue left over which will need to be collected via a top up charge

## Revenue under recovery - Entry

	Obligated charges against flowed capacity 2014/15 - LRMC	Obligated charges against flowed capacity 2015/16 - LRMC	Obligated charges against flowed capacity 2014/15 - CWD	Obligated charges against flowed capacity 2015/16 - CWD
Total Revenue (£m)	329.6	344.7	329.6	344.7
Revenue Collected (£m)	186.4	210.6	85.0	90.9
Revenue Difference (£m)	143.3	134.1	244.6	253.7

NB: Due to rounding the figures may not match exactly

## Revenue under recovery - Exit

	Obligated charges against flowed capacity 2014/15 - LRMC	Obligated charges against flowed capacity 2015/16 - LRMC	Obligated charges against flowed capacity 2014/15 - CWD	Obligated charges against flowed capacity 2015/16 - CWD
Total Revenue (£m)	329.6	344.7	329.6	344.7
Revenue Collected (£m)	82.6	82.5	86.7	90.5
Revenue Difference (£m)	247.1	262.2	242.9	254.1

NB: Due to rounding the figures may not match exactly

## p/kWh flat top up

- Pay flat top up on flow capacity (used as forecasted contracted capacity)

	Top up charge for flow capacity - 2014/15 - LRMC	Top up charge for flow capacity - 2015/16 - LRMC	Top up charge for flow capacity - 2014/15 - CWD	Top up charge for flow capacity - 2015/16 - CWD
Entry - Top up (flat rate) (p/kWh)	0.0153	0.0143	0.0262	0.0272
Exit - Top up (flat rate) (p/kWh)	0.0271	0.0288	0.0267	0.0279

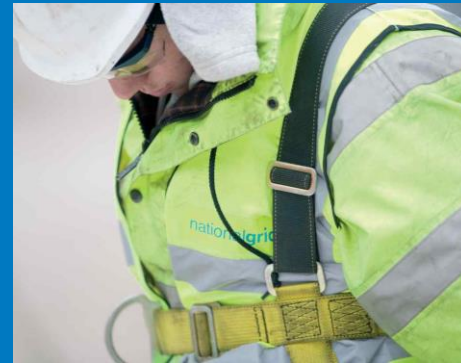


## Analysis – Summary

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- If using Obligated level prices but only flow current capacity then would under recover revenue for applicable year
- For capacity charges to recover close to the required allowed revenue the amount booked must therefore be as close to requirements for use as possible
- With any move to capacity over commodity for TO (Transmission Services) this would likely result in behavioural changes for shippers
- Behavioural changes will vary across shippers based on price responsiveness

## Gas Charging Review



EU Tariff Code – Current Outlook

## EU Tariff Code Update

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- **28-29 April:** Informal Member State meeting
- Topics of interest to Member States
  - ACER review of charging methodology (most discussed topic); ACER guidance on regulatory accounting principles; Asset cost split; Storage discounts; pricing of backhaul; secondary adjustments, language of periodic consultation, existing contracts, implementation, article for interconnectors, and entry into force
- Text currently under review
- Updated text to be issued by EC mid-June

# EU Tariffs Code: current proposals

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## ■ Definitions:

- “alternative transmission tariffs”: currently only about “path-based” firm capacity but push to also include concept of avoidance of inefficient bypass of transmission system
  - This addition would allow possibility of a having discount to firm capacity for “short-haul”
- Term “path-based” may revert back to “conditional”

## EU Tariffs Code: current proposals

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- **Storage (*Art 10*):**
- Latest text requires that storage discount is at least 50%. (Option 1)
- All criteria for determining discount removed from article
- Level of discount simply subject to consultation
- ENTSOG pushing for discounts less than 50% under certain criteria
- Option 2 proposal: of default of 100% discount, adjusted to reflect any costs associated with storage unlikely to be accepted.

## EU Tariffs Code: current proposals

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### **Possible drafting for *Art. 10 Discounts applied at entry points from and exit points to storage facilities***

*“As part of the decision referred to in Article 27(4), when the national regulatory authority sets or approves the capacity-based transmission tariffs at entry points from and exit points to storage facilities, a discount of at least 50% shall be applied to the respective capacity-based transmission tariffs. Due to exceptional circumstances such as where a storage facility is connected to more than one entry-exit system and may be used as an interconnection point or where such storage facility is used for short-term gas trade, such discount may be less than 50%.”*

n.b. Possible additional text in **red**

## EU Tariffs Code: current proposals

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- **Article 13: Level of multipliers and seasonal factors**
- ENTSOG proposing
  - no automatic drop in multiplier ceiling of 3 for daily products
  - Formal link of multiplier review to ACER implementation monitoring requirement under Art 9(1) of EC 715/2009
- GB might be lone voice in pushing for multipliers <1

## EU Tariffs Code: current proposals

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- **Calculation of interruptible price (*Art 16*):**
- Backhaul priced at administrative/marginal cost of product reintroduced
  - “A” factor may be introduced in backhaul pricing (i.e. multiplier applicable to discount)
  - ENTSOG has proposed new drafting that reintroduces concept that backhaul should be priced as for interruptible



## EU Tariffs Code: current proposals

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- **ACER review (*Art 27*):**
- Review cycle was every 5 years – now **“at least” every 5 years**
- ENTSOG to propose ACER review to occur during main industry consultation to streamline process

## EU Tariffs Code: current proposals

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- **Article 30: Information to be published before the tariff period**
- 30(2)(b): Publication of tariff model
  - ENTSOG proposes publication of “simplified tariff model” or “*sensitivity analyses enabling network users to estimate the possible evolution of transmission tariffs beyond such tariff period*”.
  - Current text only mentions “*at least a simplified tariff model*”

## EU Tariffs Code: current proposals

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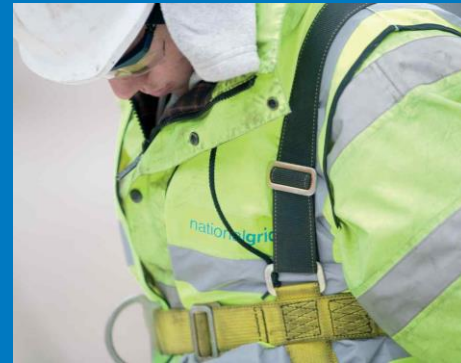
- **Regulatory accounting Principles (*Art 38*):**
- Requirement for ACER Guidance document expected to be deleted but report on different regimes to remain
- ENTSOG still pushing for deletion of Art 38, but sees deletion of only paragraph 3 (guidance document) as a compromise

## EU Tariffs Code: current proposals

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- **Existing contracts (*Art 39*):**
- Protection for fixed price element for contracts concluded before 29 November 2013 still included
- Uncertainty as to whether the article gives any protection to GB shippers
- Clarity being sought with Commission re applicability to GB
- Text under review by commission
- Current outlook is that Art 39 will be clarified and will apply to GB (but not certain yet)

## Gas Charging Review



Dual Regime discussion



## Discussion: Updates on Dual Regime Scenarios

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- The following discussion slides on specific charging areas provide commentary on whether a “dual regime” may be possible
  - These have been updated from those seen in May’s NTSCMF for relevant updates to the codes and to facilitate discussion on key areas



# Discussion: (refresher from May)

## Potential Dual Regime Scenarios (1/2)

Item	Description	IP	Non IP	Comments
Reference Price Methodology (RPM)	The Main methodology to recover Transmission Services Revenue	One methodology at all points		Requirement that IP must float each year, with new payable price
Complimentary Revenue Recovery Charge (CRRC)	Permitted commodity “top up” to reach allowed revenue	Not allowed at IPs	Can be applied at Non IPs	If used can only be for Non-IPs. Any use of CRRC becomes a GB Discussion.
Storage pricing	Treatment for Capacity pricing for storage	One methodology at all points. Minimum discount of 50% from the Capacity based transmission tariffs.		Beyond min. criteria is a GB discussion.
Short Term Pricing	Options for short term pricing linked to reserve prices	No discounts permitted. Only multipliers or seasonal adjustments (must be $\geq 1$ )	Discounts could be applied at Non IPs	Could align non-IPs with IPs, but if discounts adopted at non-IPs, can’t apply same at IPs. Beyond min. EU criteria is a GB discussion.



# Discussion: (refresher from May)

## Potential Dual Regime Scenarios (2/2)

Item	Description	IP	Non IP	Comments
Alternative Transmission Tariffs	Charges that contribute to the Transmission Services Revenue that must be linked to a discount from reserve prices	If applied, they apply at all points as they are part of the RPM. Linked to 7a(2) of CAM.		If what we call “shorthaul” is considered a Transmission Service or covered under CAM definition this could be where it sits. Other options may be permitted and would be a GB discussion.
Fixed prices (excluding any “existing contracts” covered in A39)	Providing a fixed price for Capacity ahead of the date of use, for capacity offered as part of incremental auction	A choice as to whether these are offered. Method fixed under the Tariffs Code	Could offer Fixed Prices as today or as per IP or something different	Any different approach IP vs Non-IP would be a GB discussion.
Interruptible	Methodology for pricing interruptible capacity	Ex ante discount reflecting the probability of interruption	Can be as today or as per IP	Any different approach IP vs Non-IP would be a GB discussion.
<b>Existing Contracts* (Article 39 of EU Tariffs Code)</b>	Price can’t be adjusted for contracts concluded before 29 November 2013 . May apply to GB.	Applies to all points, Entry only, subject to clarification.		If applied, assume this would not apply to Exit as Exit already has administered prices

*\*Linked to NTSCMF Action 0504 relating to clarifying if this is the case*





# Discussion: NTS Optional Commodity (“Shorthaul”)

## NTS Optional Commodity Charge (“Shorthaul”) arrangements and how they may need to change

### Key Points on current arrangements:

- NTS Optional Commodity charge (“Shorthaul”) as we have it in GB is a product designed to encourage use of the NTS rather than bypass the NTS with potentially inefficient market investment
- Current GB method provides an Optional Commodity rate intending to link to estimated investment costs
- Provides exemption from all other commodity rates (except St Fergus compression)

### Key Points on developing change linking EU Tariffs Code and CAM

- Under Article 4(2) of the EU Tariffs Code, Alternative Transmission Tariffs allow a discount to reserve prices for standard capacity products for firm capacity
- Alternative Transmission Tariffs link to CAM Article 7a(2) which may be amended to specify it covers avoiding inefficient bypass of the network.
- Links with EU Tariffs Code article 10 (storage discounts) and article 27 (4) – NRA decision on RPM

Potential changes	Interconnection Point application	Non Interconnection Point application	Comments
If moving to Capacity and considered a Transmission Service	<ul style="list-style-type: none"> <li>• Considered an Alternative Transmission Tariff – provides discount from Capacity Reserve prices</li> <li>• May interact with how discounts / multipliers are applied</li> <li>• Any arrangements other than capacity might be possible however subject to GB discussion and Ofgem approval.</li> </ul>		Link to capacity definitions under CAM Article 7a(2) that may restrict the capacity and mechanisms it could be applied to.

### Summary of potential change:

- Relevant objectives would need to be an input as would potential options for design of a product to discourage inefficient bypass of the NTS, dual regime (separate IP/Non-IP approach) would be a GB debate
- A change to the methodology of calculating / application would need to take into account the whole charging methodology including interactions, any alternative product cannot be designed in isolation



# Discussion: Pricing for interruptible Capacity

## Interruptible charging arrangements and how they may need to change

**Key Points on current arrangements:**

- Reserve prices for Daily Interruptible System Entry Capacity (DISEC) are discounted by 100% from the MSEC obligated capacity prices
- Interruptible on Entry and Exit (off peak for Exit)
- Backhaul in an interruptible product

Potential changes	Interconnection Point application	Non Interconnection Point application	Comments
No default, pricing based on product of calculation	Ex ante discount reflecting the probability of interruption. Formula given in Article 16 of the EU Tariffs Code.	No requirement to apply at Non IPs. Becomes a GB conversation as to how to review or apply change to Non IPs	<ul style="list-style-type: none"> <li>• For Entry and Exit.</li> <li>• Backhaul expected to be priced the same as other interruptible</li> </ul>

**Summary of potential change:**

- EU Tariffs Code Article 16 is an article that is IP Specific, no obligation to roll out to Non IP.
- Relevant objectives would need to be an input
- Any Dual regime (separate IP/Non-IP approach) treatment would be a GB conversation
- A change to the methodology of calculating / application would need to take into account the whole charging methodology including interactions, any alternative product cannot be designed in isolation



# Discussion: Provisions / changes for Storage

## Storage charges and the methodology for applying any relevant discounts / alternative approaches

### Key Points on current arrangements:

- On the NTS, eligible flows for commodity charges relate only to “new gas” on the NTS. Any flows in and out of storage once entered onto the NTS exempt to avoid double counting of gas.
- Storage have same arrangements for capacity as for all Entry and Exit points
- Provides exemption from all commodity rates (except St Fergus compression)

Potential changes	Interconnection Point application	Non Interconnection Point application	Comments
Capacity	<ul style="list-style-type: none"> <li>• EU Tariffs Code mandates a minimum discount of 50% from Capacity reserve price. Applies to all points. Reserve prices can float, recalculated each year. Scope for discount to be reviewed and updated within permitted timescales.</li> <li>• Article 10 only covers capacity treatment</li> </ul>		Becomes a GB discussion how to structure beyond the minimum requirement of EU Tariffs Code.
Commodity	<ul style="list-style-type: none"> <li>• If the “cost to flow gas” commodity charge is applied as a Transmission Service this applies to all points including storage. (article 4)</li> <li>• Any application of other commodity charges would be a GB discussion.</li> </ul>		Application of any Commodity charges becomes a GB discussion.

### Summary of potential change:

- Relevant objectives would need to be an input
- A change to the methodology of calculating / application would need to take into account EU Tariff’s Code requirements for Storage, overall charging methodology including interactions. Cannot be designed in isolation.
- Any combined ASEPs (with Storage) may need to be split.



# Discussion:

## Non Transmission Services and Dual Regime

Charge	Detail	Comments
Flow Based charge covering costs mainly driven by quantity of gas flow (if used)	Potentially could be equivalent to Shrinkage values	Can be applied to all points. Not a requirement to levy this separately if done as a Non Transmission Service. Could be part of an overall Non Transmission Services Charge.
Residual Charge. Anything not collected from other charges listed.	Remainder of revenue from target SO can be subject to separate method, could be via a Commodity Charge	Can be applied to all points. Could be broadly similar to SO Commodity. Calculation and application would be a GB discussion.
Special / alternative arrangements	Becomes a GB discussion about whether or not to have any alternative charging arrangements for Non Transmission Services	Can be applied to all points therefore it would be a GB discussion on design and implementation.

### Summary for Non Transmission Services under Dual Regime scenarios

- Under the EU Tariffs Code there are more prescribed elements for Transmission Services, leaving potentially more flexibility for Non Transmission Services
- Becomes a GB Discussion as to what the optimal approach is, subject to NRA approval, however tariffs should be cost-reflective, non-discriminatory, objective and transparent and also charged to the beneficiaries of a non-transmission service with the aim of minimising cross-subsidisation between network users within and or/outside a Member State.
- Subject to GB discussion and Ofgem approval



# Revenue Recovery – Cost to flow

## Gas Commodity charge

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- As part of May NTSCMF we showed an illustrative view of how the revenue recovery may be permitted under the EU Tariffs Code
- One element that is mentioned under Transmission Services and part of the Reference Price Methodology (article 4) is a flow based charge which may be levied for the purposes of covering the costs mainly driven by the quantity of the gas flow
  - Treatment could be different depending on whether it is levied and if a Transmission Service or not
  - Here we show a few options of how it may be treated if Transmission or Non-Transmission



# Current GB Framework for Revenues and recovery (reminder)

## Transmission Owner (TO)

TO Entry

TO Exit

Other charges

TO Entry Capacity

TO Entry Commodity

TO Exit Capacity

TO Exit Commodity

DN Pensions / Metering

## System Operator (SO)

SO Commodity

Other charges

SO Entry Commodity

SO Exit Commodity

St Fergus / Shorthaul / Legacy Capacity



# Revenues and recovery – What may national grid be permitted based on our EU understanding#

## Total TO and SO Allowed Revenue

### Transmission Services

### Non Transmission Services

Other Charges

Entry

Exit

Alternative Transmission on Tariffs

Commodity for cost to flow Gas (if used)

Remaining Non Transmission Services Revenue

Alternative / Other Charges

DN Pensions

Entry Capacity\*

CRRC (if used)

Exit Capacity

CRRC (if used)

Alternative Transmission on Tariffs

Entry

Exit

Entry Proportion

Exit Proportion

St. Fergus Compression

Charged directly to specific Users

Multipliers / Seasonal Factors

Multipliers / Seasonal Factors / Discounts

Multipliers / Seasonal Factors

Multipliers / Seasonal Factors / Discounts

### Key

All these are where the arrangements are for IP and Non IP are the same

All these are where the arrangements are for IP and Non IP can be the same. For Non Transmission Services, could treat IP and Non IP differently however relevant objectives must be followed.

All these are where separate treatment for NON-IPs is possible

IP Specific requirements

#### Items to note:

- Consideration for how Legacy Capacity is treated will be part of the GB discussion (Transmission or Non Transmission Services) – likely to be determined through Licence
- \*Will need to consider how “existing contracts” are treated
- Where IP could be different to IP it would not preclude applying the IP method to all points.
- #Based on an understanding of EU Tariffs Code as of 14 April 2016 – subject to change



# Revenues and recovery – What may nationalgrid be permitted based on our EU understanding#

## Total TO and SO Allowed Revenue

### Transmission Services

### Non Transmission Services

Other Charges

Entry

Exit

Alternative Transmission Tariffs

Commodity reflecting costs related to quantity of gas flow (if used)

Remaining Non Transmission Services Revenue

Alternative / Other Charges

DN Pensions

Entry Capacity\*

CRRC (if used)

Exit Capacity

CRRC (if used)

Alternative Transmission Tariffs

Entry Proportion

Exit Proportion

Entry Proportion

Exit Proportion

St. Fergus Compression

Charged directly to specific Users

Multipliers / Seasonal Factors

Multipliers / Seasonal Factors / Discounts

Multipliers / Seasonal Factors

Multipliers / Seasonal Factors / Discounts

Could potentially be levied as one or two charges and how to apply would be a GB conversation

#### Key

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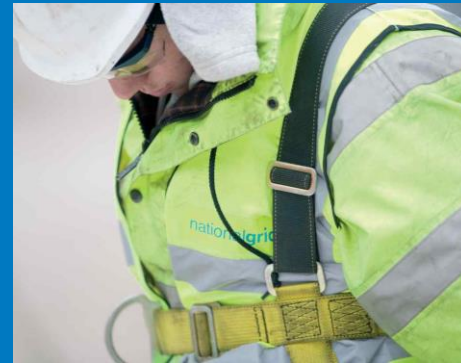


# Gas Charging Review: Dual Regime summary

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- As we develop the GB charging review there are a number of options whereby in GB there could be a dual regime where:
  - Treatment of certain users or points (e.g. IP and Non IP, Storage and Non Storage) could be different;
  - Options will be based on a GB discussion, subject to Ofgem approval;
  - Development of options, in combination with the overall GB framework, would look to address issues / opportunities identified to improve the GB regime and make the most fit for purpose for GB

## Gas Charging Review



Relevant Objectives Discussions

# Relevant Objectives Discussion Overview

Item	Detail
Reminder of Relevant Objectives currently applicable for charging arrangements	<ul style="list-style-type: none"><li>• GB Relevant Objectives</li><li>• Summary of EU Relevant Objectives</li><li>• Summary of Relevant Objectives</li></ul>
Relevant Objectives	<ul style="list-style-type: none"><li>• Discussion on how to consider measurement against relevant objectives</li><li>• How this could be applied to Charging Review / EU Tariffs Code discussions</li></ul>
Relevant Objectives alignment	<ul style="list-style-type: none"><li>• Discussion on how alternative Reference Price Methodologies align to Relevant Objectives</li><li>• Discussion on how potential dual regime scenarios align to Relevant Objectives</li></ul>

# Reminder of Charging Obligations / Relevant Objectives – GB Current

Licence Obligations	Detail
<p>Licence Standard Special Conditions</p> <ul style="list-style-type: none"> <li>• A4 - Charging General</li> <li>• A5 - Charging Methodology</li> </ul>	<ul style="list-style-type: none"> <li>• Keep charging methodology under review</li> <li>• Use reasonable endeavours regarding methodology and charge changes:               <ul style="list-style-type: none"> <li>• Not to make changes more frequently than twice a year (on 1 April and 1 October)</li> <li>• In relation to exit capacity once a year on 1 October</li> </ul> </li> </ul>

GB Relevant Objectives	
<ul style="list-style-type: none"> <li>• Cost reflectivity</li> <li>• Promote efficiency</li> <li>• Avoid undue preference in the supply of transportation services</li> <li>• Best promotes competition between gas suppliers and gas shippers</li> </ul>	<ul style="list-style-type: none"> <li>• Take account of developments in the transportation business</li> <li>• Compliance with Regulation and decisions from the EC and ACER</li> <li>• Follow any alternative arrangement determined by the Secretary of State</li> </ul>

# Reminder of Charging Obligations / Relevant Objectives – EU Tariffs Code

nationalgrid

## EU Tariffs Code Relevant Objectives

- Charges must be levied for access for existing and incremental infrastructure
- Access based on published tariffs available to all eligible customers
- Applied objectively without discrimination and approved by NRA
- Accounts for need of system integrity and improvement
- Reflect efficient costs incurred with appropriate return on investment
- Can take account of benchmarking by NRA
- Facilitate efficient gas trade and competition
- Avoid cross-subsidies between users
- Provides incentives for investment and interoperability
- Set separately for every entry and exit point
- Cannot restrict market liquidity nor distort cross-border trade



## Summarising Relevant Objectives

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- Themes are:
  - Cost reflectivity
  - Avoid undue preference / cross-subsidies between users in provision of supply of Transportation Services
  - Takes account of Developments in the Market / Promotes efficiency
  - Cannot restrict market liquidity nor distort cross-border trade (EU Tariffs Code specific objective)
- Can we take two taken as given?
  - EU Compliance / Measures from Secretary of State



# How to consider measurement against Relevant Objectives




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- One area mentioned previously was whether it would be possible to numerically measure and compare different RPMs when considering relevant objectives
- This would be difficult to produce a meaningful metric for comparison as reference price methodologies run on different core principles (e.g. LRMC vs CWD vs Postage)
- E.g. to measure cost reflectivity:
  - High level term may mean different things to different people
  - Any methodology will incorporate costs in different ways
    - Investment, marginal pricing models will use costs differently to usage based models
    - “Cost reflectivity” therefore differs across RPMs



# How to consider measurement against Relevant Objectives

- Would an alternative work whereby we reviewed aspects or an overall RPM using a traffic light style rating?
- Could we apply this to our discussions as we develop options? Example (with reasons or suggestions as to why this status)

Status	Description	Reasons
	<b>Green</b> <ul style="list-style-type: none"><li>• Strong alignment</li><li>• Most aspects meet the objective or the ambition</li></ul>	<ul style="list-style-type: none"><li>• <i>Explanation for rating</i></li></ul>
	<b>Amber</b> <ul style="list-style-type: none"><li>• Some alignment</li><li>• May have aspects that are not meeting the objective or the ambition</li></ul>	<ul style="list-style-type: none"><li>• <i>Explanation for rating</i></li></ul>
	<b>Red</b> <ul style="list-style-type: none"><li>• Poor alignment to this area</li><li>• Little or no likelihood of meeting the objective or the ambition</li></ul>	<ul style="list-style-type: none"><li>• <i>Explanation for rating</i></li></ul>



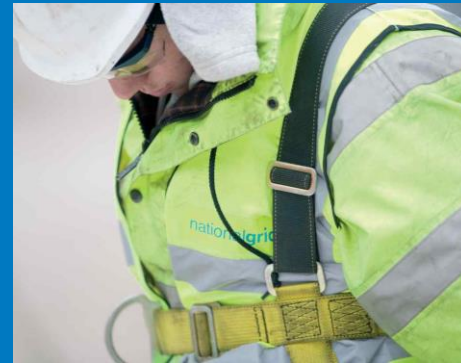


## Relevant Objectives Alignment

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- Discussion on how alternative Reference Price Methodologies align to Relevant Objectives
- Discussion on how potential dual regime scenarios align to Relevant Objectives
- Your input is needed for this
  - Thoughts for Discussion and building into July NTSCMF

## Next Steps



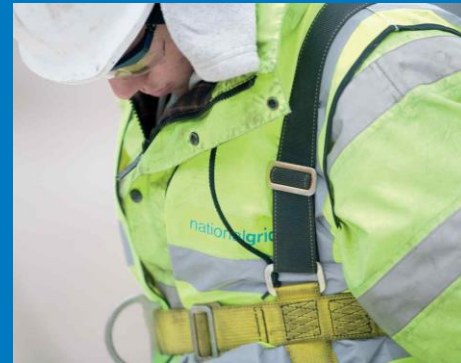


## Next Steps

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- Build on how to rate development of options and measurement against Relevant Objectives
- Building on analysis to start discussion on price responsiveness
- Long term / Short Term pricing development
- Feedback and input is important to develop the charging review. Please contact us:
  - If there are any areas we should be considering or to share thoughts;
  - To provide input outside of NTSCMF so we can build it in

## Contact us



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