Charging Futures | Forum

Reforming electricity charging together

Targeted Charging Review Update

The webinar will begin shortly

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Targeted Charging Review Update

09 December 2020

nationalgridESO

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Agenda

Targeted Charging Review

- Latest Decisions - Eleanor Wood, Ofgem
- Modification Overview - Grahame Neale, ESO
- Final banding - Lee Wells, Northern Powergrid

Q&A Panel

- Grahame Neale, ESO
- Lee Wells, Northern Powergrid
- Kayt Button, Ofgem
- Eleanor Wood, Ofgem

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Menti Question

> Is “Die Hard” a Christmas Film?

> Yes

> No

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Latest Decisions

Eleanor Wood, Ofgem

Holistic Overview

Focus	Proposed modifications	Status	Outstanding issues
DUoS	DCPs 358, 359, 360 and 361 – DUoS residual charging	**All approved on 30 September. Implementation on 1 April 2022.**	**Existing mod DCP328 will resume and include consideration of residual charging for private wire and complex sites**
BSUoS	CMP333 – Charging of BSUoS on gross demand	**Approved on 3 December 2020 Implementation on** 1 April 2021	Ofgem response to BSUoS Task Force report due before end of year
TNUoS – TGR	CMPs 317, 327, 339 – setting the TGR to 0 and removing assets required for connection	With Ofgem for decision Due for implementation on 1 April 2021.	
TNUoS - TDR	CMP334 – liability for the TDR	**Approved on 30 Nov 2020 Implementation effective with CMP343**	**New mod required for assessment of residual charging for private wire and complex sites**
	CMP343 – calculating the TDR incl. approach to transmission banding	With Ofgem for decision Due for implementation on 1 April 2022.	Ofgem to consult on IA and minded-to decision in January 2020.
	CMPs 335, 336 and 340 – enabling mods for CMP343	With Ofgem for decision Due for implementation on 1 April 2022.	Decisions will be issued alongside final decision for CMP343.
BSC	P402 – BSC changes to support residual charging reform	Still in development – due to reach Ofgem for decision in January 2020	

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CMP343 Update

CMP343 Proposed Alternatives	Treatment of negative locational	Number of Transmission Bands - determined by
Original	Floor at zero	1 – consumption
WACM1	Floor at zero	2 - consumption
WACM2	Floor at zero	4 - consumption
WACM3	No Flooring	1 - consumption
WACM4	No Flooring	2 - consumption
WACM5	No Flooring	4 - consumption
WACM6	Introduce a £/site/day locational adjustment to negative locational charges	1 - consumption
WACM7	Introduce a £/site/day locational adjustment to negative locational charges	2 - consumption
WACM8	Introduce a £/site/day locational adjustment to negative locational charges	4 - consumption
WACM9	Floor at zero	1 – voltage

CUSC Panel Recommendation Vote

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CMP343 – Next Steps

1. Impact assessment:

- We are completing a limited impact assessment for this modification, examining:
  - Distributional impacts of flooring versus not-flooring
  - Distributional impacts of banding options
- Our plan is to publish a minded-to decision in January, for consultation
- We are hoping to make a final decision soon after this consultation

2. Complex sites:

- In our decision letter for CMP334 we indicated that a new mod is required to determine treatment of **private wire and complex sites** for residuals

3 Small sites:

- For **small transmission-connected final demand sites**, the CMP343 options do not include specific proposals for their treatment, which we highlighted as something for the workgroup to consider in our CUSC Direction
  - Our view is that **there are existing and likely-future sites that meet this description**.
  - Our current thinking is that there are **two potential ways to enable fair treatment of those smaller sites**, for Transmission Demand Residual charging:
    - Approving a WACM that splits transmission-connected final demand users into four bands
    - Approving a WACM with one charging band then having a separate modification for smaller sites

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Modification Overview

Grahame Neale, ESO

Ofgem's Targeted Charging Review decision – a reminder

- **Ofgem's TCR Decision was released on 21st November 2019 . The key points were:**

1. TNUoS Generation Residual (TGR) to be set at £0 (subject to compliance with EU Regulation No 838/2010 as being progressed via CMP317)
2. BSUoS to Suppliers to be based on gross demand as measured at the GSP
3. Second Balancing Services Charges Task Force to be set up to determine who should pay BSUoS and on what basis
4. Major reform of Network Residual charges to make them unavoidable and remove any behavioural signals by charging on a £/site/day basis

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1 – Transmission Generation Residual (TGR)

- CMP317 was already in flight when Ofgem's decision was made – looking at ensuring compliance with EU Regulation No 838/2010

  i.e. the average annual transmission charge for all generators must be within a range of €0-2.50/MWh. TGR currently negative to ensure €2.50/MWh cap is not breached

- Ofgem's direction was to set TNUoS Generation Residual (TGR) at £0 (subject to compliance with EU Regulation No 838/2010)
- CMP327 was raised to implement Ofgem's direction and was amalgamated with CMP317 due to overlap
- 84 options developed by the workgroup for implementation in April 2021
- Final report sent to Ofgem in mid August and awaiting decision

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2 – BSUoS to suppliers on Gross Demand

- Ofgem have determined that BSUoS (Balancing Services Use of System Charge) to Suppliers is to be charged based on gross demand, rather than net of embedded generation
- CMP333 was raised to implement this change from April 2021
- Ofgem approved on 30 November 2020

3 – Second Balancing Services Task Force

- Ofgem directed that a Second Balancing Services Charges Task Force be formed to determine who should pay BSUoS, and how this charge should be recovered
- The final report was submitted to Ofgem by the taskforce on 30 September 2020
- More details to be shared at this afternoon's session – visit www.chargingfutures.com to sign up

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4 – Reform of Network Residual charges Overview

- Ofgem's direction is to make residual charges (both Transmission and Distribution) unavoidable and remove any behavioural signals
- This will be done by creating a banding methodology that will levy a '£/p per site per day charge' to all customers in the band
- Joint working between DNOs and ESO via the ENA to design and implement these changes collaboratively with industry
- Numerous code changes have been raised and progressed to implement these changes for April 2022 for both distribution and transmission

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4 – Reform of Network Residual charges Code Change Status

Approved by Ofgem

- DCP358 – Determination of Banding Boundaries
- DCP359 & CMP334 – Who should pay residual?
- DCP360 – Allocation to Bands and Interventions
- DCP361 – Calculation of Charges

Awaiting decision

- CMP335/6 - Interventions and Billing
- CMP340/3 – Banding and Allocation to Bands

Raised & in development with industry

Mod No.	Code	Description	Update
P402	BSC	Supporting Data requirements and processes.	2nd Consultation closes 15 December 2020
DCP376	DCUSA	Provision of Customer Charging Bands to Suppliers	Voting closes 11 December 2020
DCP-TBC	DCUSA	TCR housekeeping changes	To be raised shortly
CMP-TBC	CUSC	TCR housekeeping changes	Currently being scoped

TCR Demand Residual Bandings

	Voltage	Band	Percentile		Threshold (kWh or kVA)			
			Lower	Upper	Lower		Upper	
DUoS & TNUoS	Domestic *							
	Unmetered Supplies (UMS)*							
	LV no MIC (kWh)	Band 1	-	40		-	<=	3,571
		Band 2	40	70	>	3,571	<=	12,553
		Band 3	70	85	>	12,553	<=	25,279
		Band 4	85	100	>	25,279		∞
	LV MIC (kVA)	Band 1	-	40		-	<=	80
		Band 2	40	70	>	80	<=	150
		Band 3	70	85	>	150	<=	231
		Band 4	85	100	>	231		∞
	HV (kVA)	Band 1	-	40		-	<=	422
		Band 2	40	70	>	422	<=	1,000
		Band 3	70	85	>	1,000	<=	1,800
		Band 4	85	100	>	1,800		∞
	EHV (kVA)	Band 1	-	40		-	<=	5,000
		Band 2	40	70	>	5,000	<=	12,000
		Band 3	70	85	>	12,000	<=	21,500
		Band 4	85	100	>	21,500		∞
TNUoS	Transmission Connected Demand	TBC						

* For Domestic and UMS, there will be a charging band but it will not be split in to percentiles.

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Final banding

Lee Wells, Northern Powergrid

Final charging bands

- **The non-domestic charging bands will operate from 1 April 2022 to 31 March 2026 (i.e. to the end of RIIO-ET2)**
  - The bands are very similar to those presented at the July CFF
  - Most significant changes are in the LV no MIC 'group'
  - There will be a single band for domestic and UMS (UMS will receive a p/kWh residual charge)
  - Banding for transmission-connected sites to be determined via CMP343, which is with the Authority for decision
  - Distributors have used reasonable endeavours to exclude expected Non-Final Demand Sites
  - https://www.nationalgrideso.com/document/179706/download

Voltage	%ile	Threshold		
		#	Lower	Upper
LV no MIC (kWh)	40	1	-	3,571
	70	2	3,571	12,553
	85	3	12,553	25,279
	100	4	25,279	∞
LV MIC (kVA)	40	1	-	80
	70	2	80	150
	85	3	150	231
	100	4	231	∞
HV (kVA)	40	1	-	422
	70	2	422	1,000
	85	3	1,000	1,800
	100	4	1,800	∞
EHV (kVA)	40	1	-	5,000
	70	2	5,000	12,000
	85	3	12,000	21,500
	100	4	21,500	∞

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Comparison to July illustrative bands

Voltage	%ile	#	Final		July		Variance			
							Absolute		%	
			Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
LV no MIC (kWh)	-	1	-	3,571	-	4,248		(677)		(19%)
	40	2	3,571	12,553	4,248	14,178	(677)	(1,625)	(19%)	(13%)
	70	3	12,553	25,279	14,178	28,836	(1,625)	(3,557)	(13%)	(14%)
	85	4	25,279	∞	28,836	∞	(3,557)		(14%)	

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	85	4	25,279	∞	28,836	∞	(3,557)		(14%)	
LV MIC (kVA)	-	1	-	80	-	82		(2)		(3%)
	40	2	80	150	82	150	(2)	-	(3%)	-
	70	3	150	231	150	230	-	1	-	0%
	85	4	231	∞	230	∞	1		0%	

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LV MIC (kVA)	-	1	-	80	-	82		(2)		(3%)
	40	2	80	150	82	150	(2)	-	(3%)	-
	70	3	150	231	150	230	-	1	-	0%
	85	4	231	∞	230	∞	1		0%	
HV (kVA)	-	1	-	422	-	425		(3)		(1%)
	40	2	422	1,000	425	1,000	(3)	-	(1%)	-
	70	3	1,000	1,800	1,000	1,800	-	-	-	-
	85	4	1,800	∞	1,800	∞	-		-	

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	40	2	422	1,000	425	1,000	(3)	-	(1%)	-
	70	3	1,000	1,800	1,000	1,800	-	-	-	-
	85	4	1,800	∞	1,800	∞	-		-	
EHV (kVA)	-	1	-	5,000	-	4,000		1,000		20%
	40	2	5,000	12,000	4,000	12,000	1,000	-	20%	-
	70	3	12,000	21,500	12,000	20,000	-	1,500	-	7%
	85	4	21,500	∞	20,000	∞	1,500		7%	

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What could it mean for charges?

- The following are **illustrative** 2022/23 DUoS charges for Northern Powergrid licensees only
- DNOs will publish actual charges for this period before 1 January 2021
- The charges are based on Northern Powergrid's November 2020 DCUSA Schedule 15 ('Cost Information Table') submission, as presented to stakeholders on 26 November 2020

- A comparison to the July illustrative charges would be misleading, primarily because:
  - the banding boundaries have changed; and
  - the July figures were based on the 2021/22 residual

Instead, a comparison of the relative percentage of the residual to be recovered from each charging band is shown

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What could it mean for charges?

Voltage and band				Nov-20 (2022/23)	
				NPgN	NPgY
LV	Domestic			£41	£37
	LV no MIC (kWh)	-	3,571	£20	£17
		3,571	12,553	£112	£92
		12,553	25,279	£274	£226
		25,279	∞	£822	£713
	LV MIC (kVA)	-	80	£1,180	£1,056
		80	150	£2,613	£2,142
		150	231	£3,979	£3,395
		231	∞	£10,664	£6,727
HV	HV (kVA)	-	422	£6,527	£5,672
		422	1,000	£20,950	£18,794
		1,000	1,800	£36,376	£39,542
		1,800	∞	£103,987	£96,628
EHV	EHV (kVA)	-	5,000	£12,638	£12,842
		5,000	12,000	£34,701	£60,870
		12,000	21,500	£88,564	£131,065
		21,500	∞	£308,975	£328,027
Unmetered					

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What could it mean for charges?

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		12,000	21,500	£88,564	£131,065
		21,500	∞	£308,975	£328,027
Unmetered					

Residual % allocation					
Nov-20		Jul-20		Var'n	
NPgN	NPgY	NPgN	NPgY	NPgN	NPgY
40%	38%	40%	38%	(0.2%)	0.3%
1%	0%	1%	1%	(0.1%)	(0.1%)
2%	2%	2%	2%	-	(0.2%)
3%	2%	3%	3%	-	(0.1%)
8%	8%	8%	8%	0.5%	0.5%
4%	4%	5%	4%	(0.2%)	(0.1%)
5%	5%	5%	5%	(0.4%)	-
4%	3%	3%	3%	0.5%	-
11%	7%	11%	7%	(0.2%)	(0.3%)
1%	2%	1%	2%	-	(0.1%)
3%	6%	4%	6%	(0.7%)	(0.1%)
4%	6%	4%	6%	0.5%	0.2%
14%	15%	14%	15%	0.1%	-
3%	6%	3%	7%	(0.2%)	(0.6%)
10%	22%	14%	30%	(4.3%)	(7.5%)
23%	18%	24%	20%	(1.2%)	(1.5%)
65%	53%	59%	44%	5.6%	9.6%
1%	1%	1%	1%	-	(0.1%)

> Variances are rounded to nearest 0.1 percentage point

> EHV impacted by revised view of Non-Final Demand Sites

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Allocation to bands

Lee Wells, Northern Powergrid

Allocation to bands

- **Distribution-connected sites are allocated in accordance with DCUSA Schedule 32 (paragraph 4)**
  - NHH annual consumption equivalent to the most recent Estimated Annual Consumption (EAC) provided by NHH Data Aggregators (NHHDAs)
  - HH annual consumption calculated based on annual metered data provided by ElectraLink – a BSC change will be raised in due course to remedy the 'gap'
  - Final Demand Sites will be allocated where their Maximum Import Capacity (MIC)/annual consumption (as appropriate) is > min and ≤ max boundary
  - Allocation generally based on average data over 24 months where available
  - Where there is <24 months, the average (annual for consumption) of that data will be used before an estimate is derived (e.g. default EACs, extrapolation etc)
  - A Final Demand Site will generally be in that band for the duration of the price control period, subject to:
    (i) a transitional period;
    (ii) exceptional circumstances (e.g. 'significant' change in usage);
    (iii) or a successful dispute

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Allocation to bands

- **Distributors will communicate the allocation of all non-domestic sites by the end of December to all suppliers, subject to the implementation of DCP376**
  - Some distributors have or will, voluntarily provide this information to suppliers regardless
  - DCP376 'Provision of Customer Residual Charging Bands to Suppliers' was raised to obligate distributors to provide this information to all suppliers, and not just the incumbent supplier
  - The information will include as a minimum: (i) the current Line Loss Factor Class (LLFC); (ii) the proposed LLFC (as not all Market Domain Data (MDD) submissions have been made/approved); and (iii) the charging band
- **Valid certification is needed for a Single Site to be a Non-Final Demand Site**
  - This process will be set out in charging statements, and will follow a very similar process to the requirement to certify (e.g.) an Eligible Electricity Storage Facility (this term, and EHV equivalent, will be superseded by Non-Final Demand Site)
  - The transitional period will operate to 31 October 2021, where a Single Site may switch between a Final Demand Site and a non-Final Demand Site, and vice versa
  - Certification needed by 31 July 2021

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Line Loss Factor Class (LLFC): Migration Plan

Lee Wells, Northern Powergrid

LLFC migration plans

- **Customers will continue to be allocated to the appropriate tariff using LLFCs**
  - Distributors are creating new LLFCs, and will or have, submitted to Elexon in the upcoming Market Domain Data iterations
  - Once the new LLFCs have been created, customers will be migrated to the new LLFCs at different times depending on the distributor, and LLFCs will continue to be different between distributors
  - Some distributors will use alphanumeric LLFCs and not all will be three characters
  - The ENA is coordinating a plan, in liaison with Elexon, on behalf of distributors, and has published expected timings and rates of transfers per day per distributor on the Charging Futures website

LLFC migration plans

- **All DNO Market Domain Data changes have now been approved, and where not already implemented, will be in January 2021 (version 306)**
  - Most IDNOs yet to be approved, but this will be sought in 2021, subject to Central System testing providing the necessary assurances
  - Testing is expected to be completed by Q2 2021
  - IDNOs account for the vast majority of Market Domain Data changes (around 90%), but only around 2% of the customers to be migrated
  - DNO-connected customer migrations, plus one IDNO, are scheduled to be completed by the end of August 2021 – with each distributor having a 'migration window'
  - Assuming testing is successful, and IDNO Market Domain Data changes are approved in Q2 2021, the remaining IDNO-connected customer migrations are scheduled to be completed in Q3 2021
  - Feedback on the migration plan is sought from suppliers, who should contact: tcr@energynetworks.org

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Q&A

Lee Wells, Northern Powergrid
Grahame Neale, ESO
Eleanor Wood, Ofgem
Kayt Button, Ofgem

Feedback

> How did we do?

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Thanks