



Bringing Energy
Together

ADE Member briefing | Update on network charging reforms | February 2022

Context

Ofgem is currently reforming connections and network charges. This work is split into a number of programmes –

- **Targeted Charging Review (TCR):** Reform of residual TNUoS and DUoS charges, shift of the BSUoS charge to gross demand (removing the embedded benefit for distributed generation)
- **Access Significant Code Review:** Reform of connections and access charges at Distribution
- **Distribution Use of System Charges (DUoS) forward-looking charges Significant Code Review:** Reform of volumetric DUoS charges for demand and generation
- **Transmission Use of System Charges reform:** [To be decided] Will consider how small, distribution-connected generation pays/is paid transmission charges
- **BSUoS:** Reform of the structure of the BSUoS charge and who pays it

By residual charges, Ofgem is referring to approximately 80% of the TNUoS charge and 30-50% of the DUoS charge. At present, there is no line item on an electricity bill that refers to 'Residual charge' for either transmission or distribution charges. Instead, it is part of –

- For transmission charges, the TNUoS charge on import during TRIAD periods
- For distribution charges –
 - At HV, residual charges are added to the red, amber and green time of use (p/kWh) charges for import
 - At EHV, residual charges are recovered through the capacity charge for import (p/kVA/day)

This briefing covers the following.

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Overview of reforms

For these three programmes of work, the timelines for the current reforms are as follows –

2022	2023	2024 and onwards 
TCR - Introduction of DUoS residual tariffs (1st April 2022) [not impacted by the recent decision to delay TNUoS residual reforms to April 2023] Access - Finalising Ofgem's decisions on connection charges and access charges at Distribution DUoS - Refresh of this work and the objectives for it TNUoS - Decision as to whether Ofgem will launch a full SCR BSUoS - Ongoing mod working groups to finalise proposals	TCR - Ofgem's minded to decision proposes introduction of TNUoS residual tariffs (delayed from 1st April 2022 to 1st April 2023) Access reform - Introduction of reformed connections and capacity charges on 1st April 2023 (in line with the start of the RIIO-ED2 price control) DUoS - Ongoing policy development by Ofgem TNUoS - Ongoing policy development by Ofgem BSUoS - Introduction of BSUoS reforms from 1st April 2023	TCR Should be complete. Access reform Should be complete. DUoS - Any changes likely to be implemented April 2025, if not later. TNUoS - Ongoing policy development by Ofgem. Depending on the scale of changes, this reform could take several years. BSUoS Should be complete.

Green = Now completed/confirmed

Orange = Ongoing

Red = Timelines still uncertain

Black = Not yet started

Targeted Charging Review

What's the scope of this reform?

- TNUoS residual charges
- DUoS residual charges
- BSUoS

Where has this reform got to?

Ofgem have made their final decision and the modification groups are now complete.

Modification	About	Status
DCP358/ DCP360	How to determine charging bands for non-domestic Dx customers and then to allocate customers to those bands.	Accepted by Ofgem
DCP359/ CMP334	Identifying which consumers are eligible to pay residual charges. For example – • What should be the definition of 'site' and 'final demand', which will determine who is eligible to pay residual charges?	Accepted by Ofgem
DCP361	Changes needed to calculate the charges. For example – • Should the new charge be combined with other charges on consumers' bills? • How should bands with very few sites be managed? • How should negative residual areas (e.g. in London) be managed?	Accepted by Ofgem
CMP343 (previously CMP332)	Creating the methodology to determine how the total residual will be distributed to each band.	Awaiting decision by Ofgem
CMP335/ CMP336	Updating the post-tariff setting processes such as band allocation, securitisation.	Approved by the Panel. Likely to now be accepted by Ofgem.
P402	The processes and data flows to enable Elexon to collect aggregated data from DNOs and provide data to the ESO	Approved by the Panel. Likely to now be accepted by Ofgem.

How could my charges change?

Domestic consumers

Domestic demand users will now pay a fixed charge for the transmission residual and fixed charge for the distribution residual. All domestic consumers will be put in a single band.

The data used will be the average over 24 months if they are elective half-hourly or their most recent Estimated Annual Consumption if they are non-half-hourly settled.

Non-domestic consumers

What will the change look like on my bill?

Non-domestic demand users will also now face a fixed charge for the transmission residual and for the distribution residual. This will be structured as a p/site/day charge and will be amalgamated into the existing fixed charge on customers' bills.

Which sites will have to pay residual charges?

Sites will have to pay residual charges if –

- 'Final demand site' = Premises associated with a Bespoke Connection Agreement or National Terms of Connection and with metered import consumption, except where non-final demand
- Where 'Non-final demand' = Gen or storage with valid certification (the definition of valid certification is not confirmed currently)

To note: Private wire and complex sites have now been de-scoped and are being picked up in another working group.

How much will sites pay?

Tariffs have now been published. Links can be found on the ADE's website.

How much each site will pay will be based on –

- **Which band they are allocated to** – These bands will be set nationally and on a kVA capacity basis. The kVA thresholds will be set against the 40th, 70th and 85th percentiles for each voltage level based on the number of final demand sites and their capacity. For sites with a Maximum Import Capacity (MIC), the data used to allocate sites to a band will be the most recent 24 months or, if this not available, then the average of what is available. The kVA boundary will be rounded up to the nearest 100 for the Low Voltage no-Minimum Export Capacity and the EHV bands and to the nearest 10 for HV and Low Voltage Minimum Export Capacity (as shown below and where the percentages and colours show the absolute variance to the boundary percentile). Ofgem's minded to decision on CMP343 has proposed 4 bands for transmission-connected demand customers.

In addition, how much each site will be also be based on –

- **How much needs to be recovered from the band, and between how many sites in that band** – The total residual to be recovered will be distributed to each voltage level and each percentile proportionally to their share of the total national net consumption. Given that these bands will be set

nationally, the number of sites and the net consumption will vary for a given band in one distribution network compared to another. Further, bands with a very small number of sites (less than 2) will be combined with another band.

- **Whether TNUoS locational demand tariffs are floored at £0** – In its minded to decision on CMP343, Ofgem is minded to floor TNUoS locational demand tariffs at £0. This creates a distributional impact of transferring benefit from demand in the North to the South but avoids distortions (including demand users being paid to consume during national peak periods).
- **How negative residuals are managed** - For sites in areas where the residual is actually negative (only London), this will be recycled back to users.

Changing bands and disputes

Bands will be reviewed periodically two years before the start of the RIIO price control for Electricity Transmission – i.e. the next review will be 2024 ready for April 2026. Otherwise, users will only be able to change bands if there is a 'significant change' which will be defined as a change in voltage level and/or 50% change in import consumption.

If a site successfully challenges their band allocation, they will be eligible for a refund of Use of System charges of up to 6 years in England and Wales, and 5 years in Scotland.

What does this mean for managing my network charges through flexibility?

Overall, this means that users will no longer be able to reduce this residual bill through the use of on-site generation, storage or through flexing demand during TRIAD periods.

A useful FAQ document can be found [here](#).

What still needs to be resolved?

Private wire sites

This was eventually descoped from the main TCR working groups and is not finalised. This will now be finalised through an existing modification, CMP328, that has been paused since the start of the TCR but is now meeting again.

CMP328 was originally proposed to agree a common methodology for DNOs to allocate all network charges (cost recovery and cost-reflective) where within a private wire site, a customer has exercised their right to switch supplier and is therefore, being supplied by a different supplier (Supplier B) to the main private wire supplier (Supplier A). Before this work was paused, the CMP343 working group had proposed a number of options –

- DNO charges the main private wire supplier only: This is easier for the DNO and leaves the private wire arrangement in place. However, it means effectively that the Supplier A could be overcharged (since they are also charged the network charges of Supplier B's customer)
- DNO charges Supplier A and B: The DNO would allocate charges to the different suppliers. This ensures Supplier A is not over-charged but dismantles the private wire arrangement.
- DNO charges Supplier and B but provides a rebate for Supplier A: This would be as per the second option but the DNOs would also allow Supplier A to effectively

refund part of their charges in order to recognise the network infrastructure they have built within the private wire network

- DNOs charge Supplier A and Supplier A apportions some cost to Supplier B: This would work similarly to the first option but Supplier A would be expected to transfer some costs to Supplier B to cover the charges due from their customer.

This work is at an early stage currently. The working group published a first consultation in 2019 but the work has been paused since then. It has now re-started. To finalise their recommendations, the working group still needs to draft proposals that now include the residual charges, publish a second consultation and then submit the final proposals to Panel.

How will storage assets be charged?

Standalone storage assets

Modifications to date have taken different approaches to how they define 'standalone storage'. This is very important because the definition determines what changes different storage models can avail themselves of.

Modification	Df of storage
TCR	Gen or storage that is not a 'final demand site' and with valid certification (the definition of valid certification is not confirmed currently)
CMP280	CVA-registered and SVA-registered licensed storage
CMP281	Electricity storage facilities operating under a generation licence and where the only function of that facility is electricity storage
DCP341 and DCP342	The supplier will provide assurance to the Distributor that a site meets the requirements to be charged as a storage facility, namely that – 1. It has an import MPAN and export MPAN with associated metering equipment which both only measure activities necessary for performing Electricity Storage; 2. All metering equipment referred to in point (a) above is CT metering; and 3. It is subject to Supplier certification that the facility meets the above criteria and provides confirmation of this to the DNO/IDNO Party.

Ofgem's TCR decision means that standalone storage assets will not be charged TNUoS or DUoS residual charges on either import or export from 1st April 2022.

Regarding TNUoS charges, CMP280 had previously been raised to remove TNUoS residual charges from storage from 1st April 2021. This modification was then re-introduced and now has concluded. Ofgem's full decision can be found [here](#).

Regarding DUoS charges, Ofgem has approved the equivalent modification to CMP380 at Distribution level (both HV and EHV). Through DCP341 and DCP342,

standalone storage will not face DUoS residual charges on its imports or exports from 1st April 2021.

Although the process for a site to certify that it is a 'Non-Final Demand Site' was effectively copied from that which was put in place following DCP 341/342, it is not currently clear whether the DNOs will require a new certificate to be provided by July this year if a site has previously certified themselves as a 'Eligible Storage Facility'. Therefore, it is best currently if businesses submit a new certificate just in case. This process is again set out in the DNOs LC 14 Charging Statements.

Regarding BSUoS charges, Ofgem has approved CMP281 which removes the requirement for standalone storage to pay BSUoS on its imports from 1st April 2021. It will still be required to pay BSUoS on its exports (although note the BSUoS recommendations set out below).

Storage co-located with demand

If storage co-locates with "final demand", they will face residual charges on a site/p/day basis if the site has an import connection. The amount that storage will face will depend upon which band the site is placed in as above.

The storage site will not face any residual charges on export, even if it is co-located with demand because residual charges are not recovered from export.

Access Significant Code Reform

What's the scope of this reform?

- Distribution connections
- Access (capacity) charges for generation, storage and demand connected at distribution

Where has this reform got to?

Ofgem have published an **updated minded to (draft) decision** which mostly confirms their existing positions but does introduce some new proposals.

Largely unchanged from the original minded to

- Retain the High Cost Cap¹ for generation and calculated costs for it on the basis of the voltage level of the connection and one voltage up
- Move to a "shallower" connection boundary² for generation and move to a shallow connection boundary for demand
- Continue to introduce better-defined non-firm access options (incl. clear limits on how many hours per year DNOs can curtail a connectee) and time-profiled access rights (e.g., where connectees have a firm connection at certain times of the day but only non-firm, or curtailable, at other times of the day)

New or substantially amended proposals

- Introduce a High Cost Cap for demand connections – to be provisionally set at the 95% threshold for connections on a £/kVA basis, ~£1,400/kVA
- No longer treat import-driven and export-driven reinforcements for storage separately but treat storage as generation. This would mean that it would not face any reinforcement charges on the import-side but could still face some limited connection charges on the export-side.
- Ofgem will recommend to BEIS that they amend the Electricity (Connection Charges) Regulations 2017 (ECCR)³
- Explicit end dates to non-firm arrangements will be introduced
- Ofgem will not now implement changes to how smaller generation pays (or is paid) towards the transmission network in the Access SCR (meaning it will now likely be part of the upcoming TNUoS SCR)

¹ The High Cost Cap requires a generation connection to pay 100% of the costs of reinforcement over a certain threshold. Below this threshold, the costs are shared as per normal connections.

² The "shallowness" of the connection refers to how much is paid for by the individual connectee (if all is paid, that would be a deep connection) and how much is socialised through wider distribution charges to the whole DNO's customer base (if all is socialised apart from sole use assets, that would be a shallow connection)

³ The ECCR effectively requires second-comers to pay a contribution towards a first-comer who has paid substantially towards a reinforcement which, going forward, both parties will benefit from

Ofgem's final decision is expected sometime this year and Ofgem is looking to implement the changes from 1st April 2023.

How could my charges change?

Ofgem has now published detailed proposals for changes to connections and capacity charging.

However, precise changes in charges are not yet available.

How could connections change?

For new demand connections, connectees would pay nothing towards their connection upfront (apart from any sole use assets) but everyone would pay marginally more in their ongoing charges (as that former reinforcement cost would be socialised). Where reinforcement is very expensive, connectees would need to pay 100% of the costs towards it above a certain threshold.

For new generation connections, connectees would pay less towards their connection upfront and would pay for any sole use assets. For generation on non-firm connections, DNOs would need agree a set limit of curtailable hours. If the DNOs want to exceed the level agreed in future, they would need to use flexibility tenders to procure it. There would also be end-dates on all non-firm connections. Whilst this doesn't fully address the market-splitting between ANM schemes and flexibility tenders, this is a positive step forward.

Secondly, connections will also now be able to agree with the DNOs time-profiled access to the distribution system. In practice, this means that connectees could agree with the DNOs either to have no ability to import or export during peak times or they could agree non-firm access at peak times. This would mean they could import or export, but the DNO would be able to curtail them during these hours. This could be for all their import and/or export or it could be for only part of it. This option will not be available to small users.

For both options, there may be changes to the DNOs' arrangements to penalise users for exceeding their Maximum Import and Export limits. This could include greater use of physical control equipment. How this would be done is still to be confirmed.

For storage connections, connectees would only pay towards reinforcements needed for export and any sole use assets.

Shared access

Ofgem will not now take this forward. Instead, they will rely on the work being down by the ENA and industry.

Forward-looking charges reform

What's the scope of this reform?

- DUoS cost-reflective charges

Where has this reform got to?

Ofgem paused this work to review its alignment with their broader strategy on flexibility. They have now formally separated out this reform from the Access work.

They are re-starting this work but will review the case for it and what they are trying to achieve through it.

This means this work will not be implemented by April 2023. The timescales for this work remain unclear but are not expected before 2025.

How could my charges change?

Given the decision to review the case for this change, it is very unclear currently.

How could my charges change?

In previous iterations of this work, Ofgem's work suggested that –

- For sites at EHV, it is likely that charges will vary less by location within a given DNO area.
- For sites at HV and LV, they are likely to vary more.

Ofgem were also considering how DUoS charges should show the Time of Use value of import and export to the system – moving for example to seasonal Time of Use bands, different daily Time of Use bands within a given DNO area rather than just one.

Could demand begin to see credits for DUoS?

Ofgem were exploring whether DNO regions should be defined as either 'generation-dominated' or demand-dominated'. How precisely this would be defined is still being developed. In practice, this would mean that generation does not receive credits or even pays charges and demand does not pay charges or even receives credits in a generation-dominated area. The opposite would be true in a demand-dominated area.

As with the other proposals under the Forward-looking charges SCR, it is currently unclear how far Ofgem will proceed on this basis.

Transmission Use of System charges reform

What's the scope of this reform?

- Demand TNUoS cost-reflective charges (TRIAD)
- How distributed generation is exposed to TNUoS cost-reflective charges (both demand TNUoS and generation TNUoS)
- Broader changes to the TNUoS methodology and Generation TNUoS

Where has this reform got to?

Ofgem have published **a call for evidence** on what they should consider through any reform of TNUoS.

They have not yet made a decision whether they should launch reform to TNUoS.

How could my charges change?

At this very early stage, it is mostly very unclear what the reforms could entail.

Changes to how distributed generation pays or is paid for the transmission network were developed originally within the Access and Forward-looking charges work are therefore possibly clearer.

However, it is important to note that if Ofgem were to launch a full Significant Code Review into TNUoS, it is very hard to say where the reforms will go and what the consequent impacts on generation, storage and demand could be.

Distributed assets and TNUoS

Ofgem are still minded to require all generation exporting to the distribution system above 1MW to be exposed to Generation TNUoS costs. This would be paid (or credited) on the basis of capacity rather than export volumes. This is very different from the current arrangements where generation smaller than 100MW are paid the same value as demand is charged for export at Triad. This is capped which means that it cannot become a charge. In practice, what this is likely to mean is that <100MW generation in Scotland and perhaps the North of England and Wales may start to pay charges towards the Transmission system. However, against this, it is likely to mean that <100MW generators in the South still receive credits for their export but those credits will be based on Generation TNUoS, not demand charges.

Administratively, Ofgem's preferred approach currently is that small generation now facing Generation TNUoS would be required to sign an agreement directly with the ESO (similar to the BEGA and BELLA models currently used). However, they recognise that there are other options; for example, working through the supplier or the DNO. They have not made a final decision on this.

Generation under 1MW would be paid the same value that demand in that area is charged; adjusted for its additional value in reducing reinforcement at the GSP (called the EET). This is the current status quo. However, Ofgem is also planning to remove the cap that currently prevents this becoming a charge to generation where it is far from demand. Removing the cap would therefore mean very small generation could face charges to export in some regions if demand were ever credited with consuming through TNUoS charges.

Given this is a considerable change, Ofgem are considering transitional arrangements; including delayed implementation. However, they have not made a decision on this.

The impact assessment of this change indicates a net benefit of £544m savings to the system. However, this masks the significant distributional impact across generation in different areas and between renewable and dispatchable generation. In particular, <100MW renewable generation in Scotland will see a significant reduction in revenue. There is also likely to be a small, overall reduction in revenue across generation located in the South. Conversely, transmission-connected generation, including those in Scotland, will see an increase in net revenue. Ofgem note that if Government changes are not forthcoming (for example, relaxing planning requirements that currently effectively exclude new onshore wind in England), this could harm the UK's progress in decarbonising the power sector.

On the demand side, Ofgem are likely to make changes to Demand TNUoS which is charged through TRIADs for half-hourly sites. It is likely that they will move away from TRIADs towards a less peak pricing form of charge.

BSUoS reform

What's the scope of this reform?

- The BSUoS embedded benefit
- Who should pay BSUoS
- The structure of the charge

Where has this reform got to?

BSUoS embedded benefit

The first reform has already been decided through Ofgem's final decision. BSUoS has moved to being charged on gross demand, removing the embedded benefit for distributed generation.

Broader reform to BSUoS

The second, more substantive reform regarding who should pay BSUoS and the structure of the charge has been decided at a high-level but is still being developed in detail through working groups.

The first BSUoS taskforce last year found that it was not possible to create a BSUoS charge that is cost-reflective and forward-looking. Following that conclusion, Ofgem launched the second taskforce to consider how BSUoS should be reformed. The second BSUoS taskforce then submitted its recommendations to Ofgem. This recommended that BSUoS should remain a p/kWh charge but it should be set in advance and should be paid only by demand. Ofgem then responded to the taskforce's recommendations (mostly in agreement).

This work is now being developed through CUSC modifications **CMP361 and CMP362** and through **CMP308**. The working groups are now at relatively late stages and are planning for implementation from 1st April 2023.

How could my charges change?

BSUoS will now move to being charged on gross demand, having removed the embedded benefit for distributed generation from 1st April 2021.

The code modification proposals are that -

- **Who pays:** BSUoS will be paid by final demand only.
- **Structure of the BSUoS charge:** BSUoS will remain a p/kWh charge.
- **Fixing the charge:** BSUoS tariffs will be fixed over a 15-month period. There will be a 3-month notice period followed by a 12-month period where the tariff is fixed. The tariff will be set at a 1-in-100 year probability of the tariff needing to be revised.
- **ESO risks:** There will be a cap on the ESO's total over/under recovery based on the ESO's working capital facility and any additional working capital available. There will also be further measures put in place to manage very exceptional periods where that working capital is close to being exhausted (which may include re-stating the tariffs to market participants).

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