

Network charging workshop

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The Association for
Decentralised Energy

Combined Heat & Power
Demand Side Services
Energy Efficiency
Heat Networks



Competition Rules

It is critical that all ADE members comply with competition law at all times. In particular, please do not:

- ⦿ Discuss prices
- ⦿ Reach any agreement whatsoever relating to price-fixing
- ⦿ Seek information from members of the ADE on any assumptions or findings relating to market conduct
- ⦿ Adopt any rules or recommendations which could prevent or distort competition or could be perceived to do so
- ⦿ Adopt industry standards which create a barrier to entering the market unless such standards can be objectively justified and legal advice has been sought
- ⦿ Fetter your own commercial freedom of action through discussions with your competitors
- ⦿ Use ambiguous or unhelpful language which might be misinterpreted if read by the competition authorities
- ⦿ Encourage, permit, hold or attend any ad hoc, unofficial or 'shadow' meeting before or after any ADE meetings or any other time



RECORDING: For minuting only



Agenda

- ⦿ The current set of reforms and what they mean
- ⦿ The possible scope of short-term reforms to TNUoS and any likely direction in the longer term
- ⦿ How we should respond as an industry - incl. ensuring that TNUoS reforms are supportive of decentralised energy

For a full overview, see [ADE's network charging overview update from Feb 2022](#)

Slides will be circulated with a write-up of the discussion afterwards.

Overview



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Overview

Network charging – The basics

- ⊙ So what?
 - ⊙ Changes to network charging create significant financial impacts for existing and new energy participants – Some win, some lose
- ⊙ What the costs relate to –
 - ⊙ Transmission network – Transmission Network Use of Service (TNUoS)
 - ⊙ Distribution networks – Distribution Use of Service (DUoS)
 - ⊙ The ESO's costs of system balancing – Balancing Services Use of Service (BSUoS)
- ⊙ Who pays/gets paid -
 - ⊙ Generation
 - ⊙ Demand
 - ⊙ Storage
- ⊙ What the charge/payment is intended to do –
 - ⊙ To send a signal for investment
 - ⊙ To send a signal for operations
 - ⊙ To recover costs already spent

Overview

Key

Charged

Paid

Not charged/paid

Charge type	Aim of the charge	Whom?	Policy question/principle	Impact on decentralised energy
Transmission	Recovering costs	Gen	Assumed to pass straight on to demand.	N/A
		Demand	A tax – aim to broaden base to as much of demand as poss.	(TCR) Higher charges for non-dom. Cannot no longer use flex to reduce/avoid charges.
	Investment or operational signals	Gen	Investment - Signals long-term additional burden on Tx network – usually increasing burden. [No ToU]	N/A
		Demand	Investment/locational and ToU – Charge depends on where demand is. Focused on worst times of the year for total demand (TRIADs)	Location matters for demand charges – existing and new. Import during TRIADs matters for non-dom (not domestic)
Distribution	Recovering costs	Gen	Assumed to pass straight on to demand.	N/A
		Storage	Assumed to pass straight on to demand.	N/A
		Demand	A tax – aim to broaden base to as much of demand as poss.	(TCR) Higher charges for non-dom. Cannot no longer use flex to reduce/avoid charges.
	Investment or operational signals	Gen	Investment - Connection charges Signals long-term impact on Dx network – considered always to reduce power flows [No locational part within DNO region]	Now moving to a “shallower” connection (reduced costs towards reinforcement). Paid DUoS for export - RAG rates
		Storage	Export = Gen. Import = Demand.	Export = Gen. Import = Demand.
		Demand	Investment – Connection charges Operational – Charge depends on which DNO. Focused on worst times of the day (evening peak). [No differentiation within DNO region]	Now moving to a “shallow” connection (reduced costs towards reinforcement). Charged DUoS. RAG rates for non-dom, flat for domestic.
Balancing	Recovering costs	Gen	Assumed to pass straight on to demand.	N/A
		Storage	Assumed to pass straight on to demand.	N/A
		Demand	A tax – aim to broaden base to as much of demand as poss.	(BSUoS reform) Higher charges
	Operational signal		[Following reforms – now no investment/operational signal]	(BSUoS reform)

Overview

Key	Charged	Paid	Not charged/paid
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Charge type	Aim of the charge	Whom?	Under reform?	Why?
Transmission	Recovering costs	Gen	No	TCR now complete
		Demand	No	TCR now complete
	Investment or operational signals	Gen	Yes – New TNUoS reform	Large generation – What’s right for a net zero system? Small generation – Should it pay Gen TNUoS as per larger Gen?
		Demand	Yes – New TNUoS reform	What’s right for a net zero system? Can TRIADs be improved given peaks are less extreme than previously?
Distribution	Recovering costs	Gen	No	TCR now complete
		Storage	No	TCR now complete
		Demand	No	TCR now complete
	Investment or operational signals	Gen	Yes – Access reforms and DUoS SCR	What is the impact of Dx Gen and Demand for different Dx networks and different parts therein? What locational and ToU signals are useful for system efficiency? Export = Gen. Import = Demand.
		Demand		
Balancing	Recovering costs	Gen	Yes – BSUoS reform	BSUoS is cost recovery, not a useful signal – now effectively considered a tax
		Storage		
		Demand		
	Operational signal		[Following reforms – now no investment/operational signal]	(BSUoS reform)

Overview

Reforms – What’s changing and when?

2022	2023	2024	2025 and onwards
TCR - Finalised - Introduction of DUoS residual tariffs (1st April 2022) Access - Ongoing - Finalising Ofgem’s decisions on connection charges and access charges at Distribution DUoS - Ongoing - Total refresh of this work and the objectives for it TNUoS - Ongoing - Decision as to how to approach reforms – Likely taskforce and then deeper reform BSUoS - Near finalised – 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 - Intention - Introduction of reformed connections and capacity charges on 1st April 2023 (in line with the start of the RII0-ED2 price control) DUoS - Ongoing - Policy development by Ofgem TNUoS - Ongoing - Policy development by Ofgem - To note: Changes for Dx Gen charges or the Embedded Export Tariff will no longer be implemented for April 2023. Will be reviewed as part of broader TNUoS BSUoS - Intention - Introduction of new BSUoS charges from 1st April 2023	TCR Should be complete. Access reform Should be complete. DUoS - Ongoing - Policy development by Ofgem TNUoS - Ongoing - Policy development by Ofgem BSUoS Should be complete.	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 BSUoS Should be complete.

TNUoS reform

Possible approach?

- ⊙ Taskforce this year - Smaller changes in the short-term to medium-term
- ⊙ Longer-term changes to be developed in the next few years

What could this mean for decentralised energy?

- ⊙ Worst case scenario –
 - ⊙ Generation pays far less in transmission network charges – e.g., through reducing the Generation Cap and/or reducing what is considered to be “sole use assets” offshore
 - ⊙ Through offshore wind growth targets etc., massive increase in transmission network (esp. offshore) in the next few decades
 - ⊙ Demand pays very high network charges for transmission and without any benefit from flexing
- ⊙ Best case scenario -
 - ⊙ Generation pays the same or more towards transmission reinforcement (esp. re offshore networks)
 - ⊙ Methodology and approach to charges credits demand more strongly where it flexes to meet generation (esp. in Tx network areas that are Gen-dominated)

Reforms overall

Questions for discussion

- ⊙ DUoS and TNUoS reform pose significant risks, but also significant opportunities, for decentralised energy
 - ⊙ Both are under fundamental reform and will be for at least several years
 - ⊙ Both have significant interactions with broader reforms – incl. electricity market reforms and the role of flexibility and on-site generation
 - ⊙ Network charging is highly technical – with few people having the required depth of understanding to translate high-level outcomes (e.g., network charging reflects the system benefit of flexible demand) into reforms to the underlying model and charges, or to comprehensively identify risks posed by reform proposals
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- ⊙ What are the high-level outcomes we want from these reforms?
 - ⊙ What is the best approach to getting them?
 - ⊙ Should we be bringing in specialist support?

Reforms overall

Outcomes of the discussion

Access SCR

- ⦿ The timescales are very short for the modification groups between Ofgem publishing its final decision on Access and implementation by April 2023 – ADE to raise this as a concern to Ofgem
- ⦿ In previous reforms, it has been very difficult to understand the impact during the process of reform because Ofgem has limited its quantitative assessments to UK-wide costs and benefits – ADE to push for Ofgem to publish more granular assessments of the costs and benefits (esp. for proposals around making DUoS more locational) earlier
- ⦿ The Avoided GSP Infrastructure Credit is valuable to small distributed generation (SDG) and represents an important contribution to system efficiency – ADE to push for this to be maintained (or an equivalent found) if SDG moves to being paid/paying Generation TNUoS on its capacity (as per current proposals)
- ⦿ The ADE will not explore finding specialist support until the scope of the TNUoS and DUoS reforms are clearer

