



Electricity Network Access Project

24 July 2018



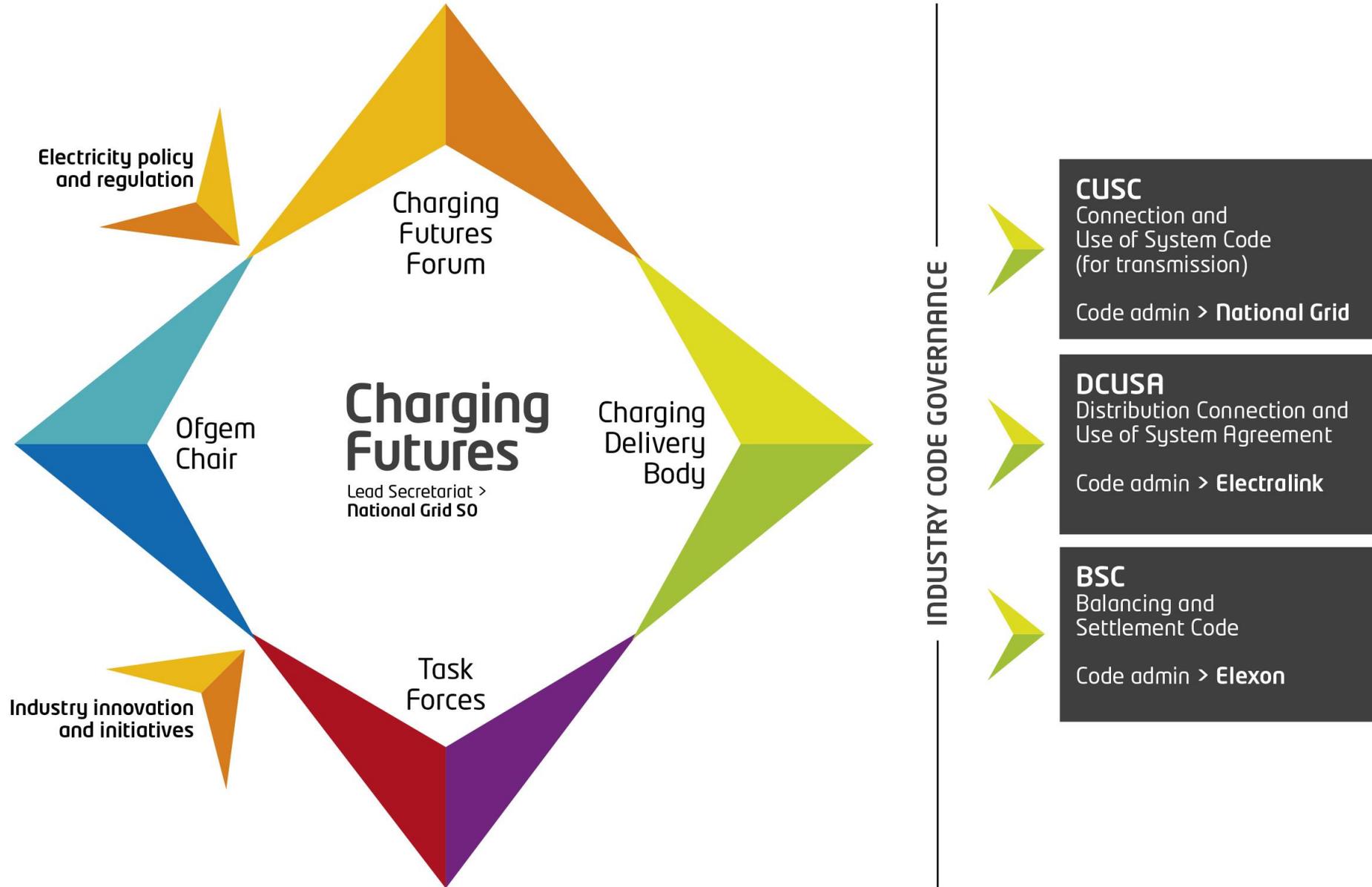


Today

- > The consultation: objectives, case for change and priorities for review
- > How the arrangements could affect:
 - > Electric Vehicle owners
 - > Generators
 - > Commercial customers
- > Key proposals under consultation
- > Q & A through webex chat



What is Charging Futures?



Quick poll

Today's webinar hosts:

Andy Burgess & Amy Freund
Ofgem

➤ What do we want to achieve

- > Energy system is going through a radical transformation.



- > These changes could create challenges and opportunities for our electricity networks.
- > We want to ensure that electricity networks can be used more efficiently and flexibly so that users can have the access needed, and benefit from new technologies and services, whilst avoiding unnecessary costs.



The work to date

- > In November 2017, we **published a working paper** on “Reform of electricity network access and forward looking charges”.
- > We commissioned **Baringa to gather evidence** to assess the materiality of current inefficiencies.
- > We set up **two industry Task Forces under the Charging Futures** to help assess the options for the change. The Task Forces published three outputs. Their final report identified the initial options for further consideration.
- > We have presented at the last two Forums and held workshops on some potential options for change in Glasgow.

➤ What are access rights & forward-looking charges?

Network access rights

- **Users' network access rights and how these rights are allocated.**
- Network access rights define the nature of users' access to the networks e.g. how much they can import or export, when and for how long, where to/from, and how likely their access is to be interrupted and what happens if it is.

Forward-looking charges

- The elements of network charges that **signal to users how their actions can either increase or decrease future network costs in different locations.**
- Includes connection charges and elements of use of system charges

Residual charges ("scaling")

- Residual charges are 'top up' charges set to ensure that the network's efficient costs can be covered, after other charges have been levied.
- Residual charges are intended for revenue recovery, and are not meant to incentivise specific actions by network users.



The case for change

We commissioned Baringa to help assess the materiality of issues with the current arrangements. Their analysis identified three high priority areas:

A Managing constraints on the distribution network as a result of growth in demand (eg EVs and heat pumps)

B Managing constraints on the distribution network as a result of growth in distribution-connected generation

C An effective interface between transmission and distribution arrangements

➤ Our views on the priority areas to be reformed

Network access arrangements

Improving access choice and definition for larger users

Clarify access rights and choices for smaller users, including households

Improving the allocation of access rights, including enhancing the scope for markets

Forward-looking charging arrangements

Comprehensive review of distribution use of system charges (DUoS)

Review of distribution connection charging boundary

Focused improvements to the transmission use of system charges (TNUoS)

**How could the
arrangements affect
different network
users?**



How could the arrangements affect an EV owner?



Current Inefficiencies

Current Use of System Charge don't reflect **when** (peak vs off-peak), **where** (unconstrained vs constrained network) and **how** (eg fast vs trickle) charging an EV affects the need for network investment.

Options for reform

Better definition and choice of access rights: introduction of core access right would mean that this user would face minimal signals for this usage.
The user may need to buy additional access for usage above their "core".

Comprehensive review of DUoS: Reform of DUoS charging models and introduction of locational charges, for usage above a certain threshold, should encourage the user to amend usage above their core.

How could the arrangements affect a generator?



Current Inefficiencies

- Generally, users pay a proportion of any reinforcement costs as part of their connection charge.
- Under “flexible” connection offers, a user doesn’t pay reinforcement costs, but may be cut off at anytime without compensation.
- Once connected, the distributed generator (DG) receives DUoS “credits” and does not pay TNUoS charges, even in areas where the DG is contributing to constraints.

How could the arrangements affect a generator?



Options for reform

Better definition and choice of access rights : Improve the definition of non-firm and develop time-profiled access

Enable markets for access: Allow DG with flexible connections to bid to avoid being turned down by the DNO.

Comprehensive review of DUoS so that users' charges better reflect costs or benefits that they create in different locations.

Focused improvements to the transmission use of system charges so that small generators pay/receive credits under TNUoS on an equivalent basis to larger generators.

Review of distribution connection charging boundary to consider whether reinforcement costs should be signalled principally via DUoS rather than connection charges.

How could the arrangements affect a commercial customer?



Current Inefficiencies

- Generally, users pay a proportion of any reinforcement costs as part of their connection charge.
- The range of choice for type of connection/network access is limited and not well-defined.
- Transmission charges are based on usage during peak 'triad' periods. This creates uncertainty and means that any onsite generation receives different treatment to standalone generation.
- If connected at the Extra High Voltage (EHV) level, Distribution Use of System charges are bespoke for each substation and can be unpredictable.

How could the arrangements affect a commercial customer?



Options for reform

Better definition and choice of access rights : Providing additional/better define choice for non-firm and develop time-profiled access

Comprehensive review of DUoS to improve predictability of EHV charges while ensuring users' charges reflect costs or benefits that they create in different locations.

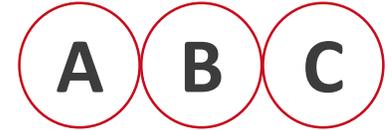
Focused improvements to the transmission use of system charges. We are inviting views on whether this should include reviewing whether charges should still be based on usage at 'triad' periods.

Review of distribution connection charging boundary to consider whether reinforcement costs should be signalled principally via DUoS rather than connection charges.

Overview of proposals in the consultation



Improving access choice and definition for larger users



- > We consider that there are benefits in improving the definition and choice of:
 - > Firmness of access rights
 - > Time-profile access rights
 - > Short-term access rights
- > We are also inviting views on the value and feasibility of developing options for:
 - > Long term access rights
 - > Local or shallow access rights

Where there are access choices, it is important that charges reflect the relative difference in costs and benefits of these different choices work.



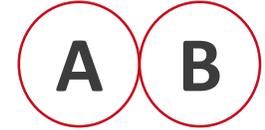
Clarify access rights and choices for smaller users, including households



- > Most small users currently have poorly defined access level to the wider system (eg no clear rights to a specified level of capacity).
- > We are proposing to clarify access rights and choices for small users. This could involve small users specifying the level of capacity they require and enabling them to choose from wider options above a standard core level.
- > We consider that there is a need to ensure access arrangements support efficient network development, to ensure mitigate the impact of EVs/heat pumps driven reinforcements are provided at efficient cost.



Improving the allocation of access rights, including enhancing the scope for markets



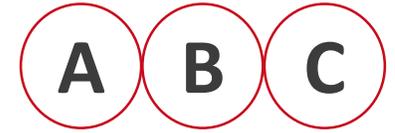
Initial allocation

- > We consider that incremental improvements to queue management activities should be explored as part of a review of access arrangements.
- > We are not considering for immediate review:
 - > A potential role for targeted auctions of the initial allocation of access rights;
 - > Extending the 'Connect and Manage' policy to allow for connection of DG ahead of wider reinforcement of the distribution network;
 - > Universal auctions for the initial allocation of access rights.

Reallocation

- > We think a review of access arrangements should include developing and assessing options to:
 - > Establish new access conditions (eg 'use it or lose it' or 'use it or sell it');
 - > Develop mechanisms to enable distribution-connected users with non-firm access can trade their exposure to curtailment;
- 20 > Better enable the exchange of access rights between users.

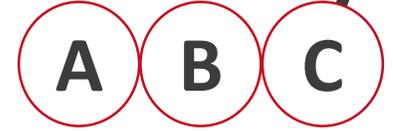
Comprehensive review of distribution use of system charges (DUoS)



- > We are proposing a comprehensive review of both DUoS forward looking charging methodologies (CDCM and EDCM). Areas of focus will include:
 - > Introducing greater locational granularity at lower voltages, so that changes are more reflective of actual network conditions;
 - > Improving the predictability of locational signals at Extra High Voltage;
 - > Considering the balance between time-of-use based usage charges and capacity based charges.



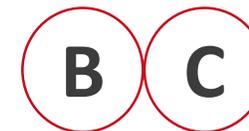
Review of distribution connection charging boundary



- > We are proposing to review whether it would be in consumers' interests to move to a **shallow connection charge at distribution level**.
- > This would mean that **new connectees would only pay for their sole-use assets** through the connection charge, but not any wider reinforcement costs that are triggered.
- > This option is likely to be contingent on sending **better locational signals** through ongoing DUoS charges, rather than upfront as part of the connection charge. Alongside this, we would consider introducing new arrangements at distribution level to ensure appropriate allocation risk for network investment (eg user commitment).



Focused improvements to the transmission use of system charges (TNUoS)



- > We are proposing that the basis of TNUoS charging for smaller DG should be reviewed.
- > We are seeking views about whether the review should also include the basis of TNUoS charging of demand.

We not proposing to review:

- the Transport Model methodology for setting locational tariffs;
- the current socialisation of Connect and Manage costs through BSUoS. However, we do consider there would be value in further work on BSUoS more generally to help establish its long-term direction.



Taking forward this review

- > The proposed review could be **Ofgem-led or system/network operator-led**. We have the power to **launch a Significant Code Review** where we consider that Ofgem leadership is needed to drive forward reform of industry codes.

We consider that a Significant Code Review should cover the following areas

- > Clarifying rights and choices for smaller users;
- > Improving forward-looking charging arrangements.

We are seeking views on who should lead

- > Improving the definition and choice of access for larger users.

We consider that the SO and DNOs should lead

- > Improving allocation of access, including enhancing scope for markets.

- > We are considering **introducing a licence condition on the SO and DNOs** to provide assurance that they will lead their areas of the review in a timely way. We have published a draft licence condition alongside the consultation.

Timeline for change

INDUSTRY-LED CHANGES OUTSIDE SCR

Some potential reforms could be progressed earlier.

INDICATIVE SCR TIMELINE





Next steps

- > We are seeking views on our proposed scope of review and proposed way forward – **consultation closes 18 September.**
- > The consultation will be discussed at the next Charging Futures Forum on 5 Sept 2018.
- > More information can be found at www.chargingfutures.com for:
 - > Summary notes
 - > Podcasts
 - > Recorded webinars
 - > Consultation document

➤ Your involvement in this consultation



Learn



Ask



Contribute

Quick poll

Q & A

Please use the chat box to ask your questions

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