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RIIO-ED2 Customer Service, Vulnerability and Connections Working Group:

Connections

4 February 2020

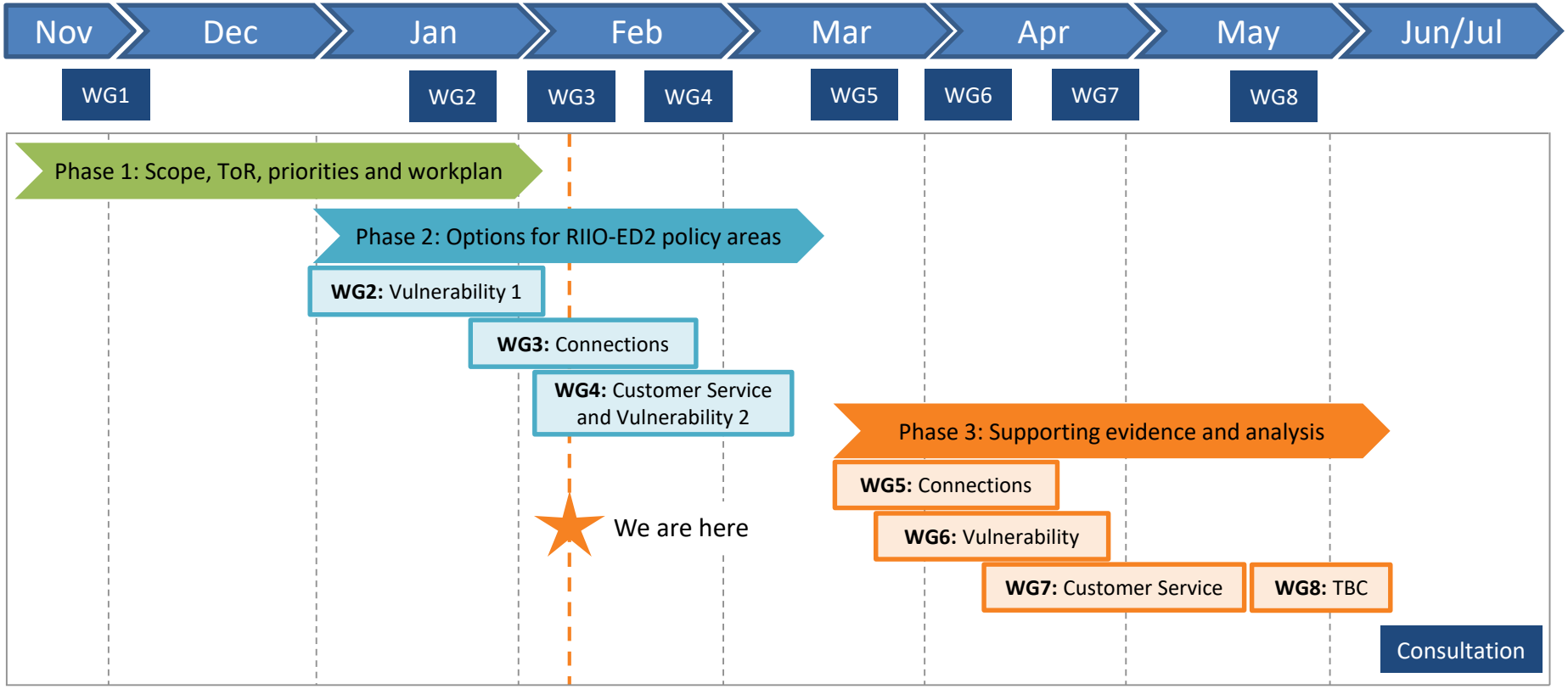
Today's session

Purpose of today's meeting is to gain a better understanding of:

- What behaviours have current arrangements (outputs and incentives) driven in RIIO-ED1?
- What behaviours might companies display in response to access and charging reform?
- What alternative arrangements might be required in RIIO-ED2?

Timings	Agenda item
10:00 – 10:45 (45mins)	1. Challenges for connections policy in ED2 **(Ofgem-led)**
10:45 – 11:30 (45mins)	2. Recap of current arrangements and performance drivers in ED1 **a) ENWL presentation** b) Roundtable discussion
11:30 – 12:30 (60mins)	3. Potential impact of access and charging reform on expected DNO behaviours **a) Ofgem presentation (Access and Charging)** **b) ENWL presentation** c) Roundtable discussion
12:30 – 13:00	Lunch
13:00 – 14:00 (60mins)	4. Output and incentive arrangements that could be appropriate to address these challenges a) Roundtable discussion

Proposed phased work plan and timeline for CSVCWG



Phase 1 Settle scope of Group, share and agree a ToR & carry out a prioritisation exercise to inform future work (WGs 1 and 2).

Phase 2 Explore options (for outputs and incentives) for the policy areas under consideration by the Group and the merits and drawbacks of these options. **Group members should put forward policy options for discussion and review ahead of these sessions** (WGs 2, 3 and 4).

Phase 3 Gather evidence and analysis to support and develop options (WGs 5, 6 and 7). As such, options should be brought to the Group by end of February, to ensure sufficient time for consideration. We may require an eighth WG session, but this will be decided close to the time.

In some sessions we may discuss more than one issue area but the aim is to focus on one issue area per session. The above plan **allows us to discuss an issue area more than once where policy options can be developed over time**.

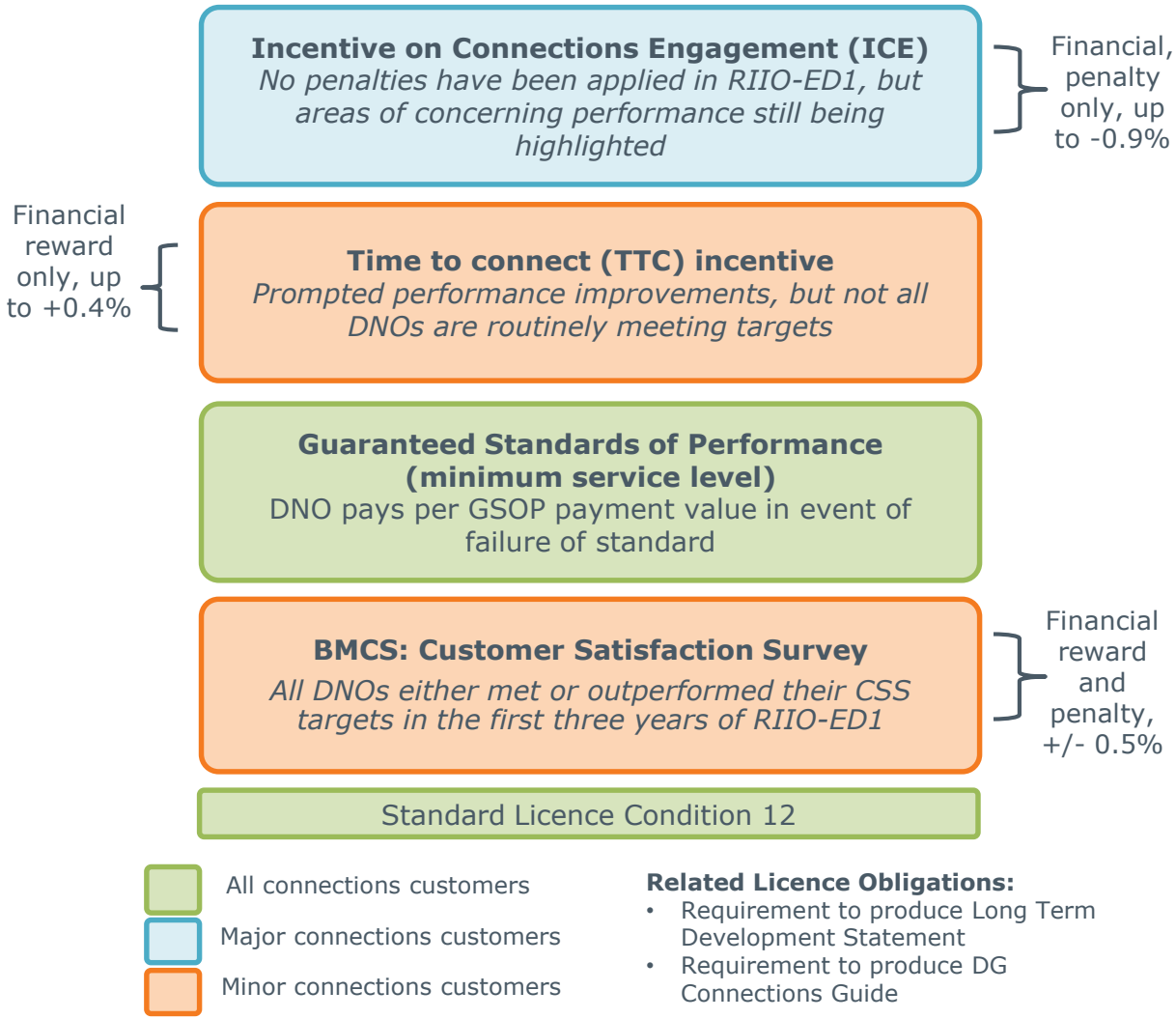
Proposed dates and locations for CSVC working group sessions

WG session	Date	Time	Location
1. Introductory session	28 November 2019	10am-4pm	Ofgem London offices (Room 1.17)
2. Policy options: Vulnerability	23 January 2020	10am-4pm	Ofgem London offices (Room 1.13)
3. Policy options: Connections	**04 February 2020**	**10am-2pm**	**Ofgem London offices (Room 1.09)**
4. Policy options: Customer Service and Vulnerability	27 February 2020	10am-4pm	Ofgem London offices (Room 1.17)
5. Evidence and analysis: Connections	**19 March 2020**	**10am-4pm**	**Ofgem Glasgow offices (Rooms 1 and 2)**
6. Evidence and analysis: Vulnerability	9 April 2020	10am-4pm	Ofgem London offices (Room 1.05)
7. Evidence and analysis: Customer Service	30 April 2020	10am-4pm	TBC
8. Evidence and analysis: TBC	28 May 2020	10am-4pm	TBC

Item 1: Overview of challenges to connections policy in ED2 – Ofgem

The ED1 arrangements have targeted performance improvements towards three key issues…

- **Quality of Connections Service**
  Connections customers not experiencing consistent levels of service and particular concern regarding insufficient focus on large, complex connections customers
- **Provision of Information**
  Stakeholders consider there is limited useful information available upfront and obtaining a quote can be the only way to secure the necessary information
- **Timeliness of Connections**
  Need to drive efficiencies in the connections process. Consider that minor connections customers in particular would benefit from shorter end-to-end timescales



Emerging challenges for connections policy in ED2

We have identified a number of challenges which we think may impact the appropriateness of existing arrangements in ED2:

- **Increasingly wide variance in customer needs**, which may change in response to LCT uptake and increased flexibility
- Mixed picture regarding the **quality of service major connections customers** are receiving
- Potential over-emphasis on small connections customers – could tightening TTQ and TTC targets **risk incentivising improvements beyond value they provide for customers** and encouraging DNOs to improve timeliness at cost of quality
- Risk that lack of anticipatory investment in ED2 could result in slower connection times for customers

These are made more complex when overlaid with challenges that may emerge as a result of wider policy changes…

Challenges that may emerge as a result of wider potential policy changes

- Impact of **access and charging reform** on expected DNO behaviours
- **Increasing prevalence of non-firm connections** not captured under the current arrangements
- Impact of **evolving DSO role** on connections services

What do we have in our toolkit to develop alternative arrangements?

- Refine or reform current incentives:
  - Broaden scope of BMCS survey to cover major connections customers
  - Broaden scope of BMCS survey to cover flexible connections
  - TTC target for large customers
  - Make ICE and/or TTC symmetrical incentives or penalty only
- Develop alternative output and incentives targeting ED2 issues
  - Monitor the amount of curtailments (kWh)
  - Bespoke connection targets in DNOs business plans alongside overall reinforcement costs
- Uncertainty Mechanisms
  - Volume driver to monitor utilisation of network assets

Any consideration of connections outputs and incentives needs to consider the other key drivers of performance in the RIIO ED framework

Additional considerations:

- What impact could potential outputs and incentives have on companies willingness to undertake strategic investment?
- Are the proposed outputs and incentives compatible with providing a level playing field for flexibility?
- How might potential new outputs and incentives on decarbonisation affect connection offers/interact with access reform?

RIIO Framework Performance Drivers

Interruptions Incentive Scheme (IIS)

- Financial incentive on the DNOs to reduce the number and duration of power cuts. It works by setting a target level of performance for the number of interrupted customers (CIs) and the number of minutes of supply lost (CMLs).
- Reward and penalty +/- 250 RoRE basis points (equivalent of 2.5% of Cost of Equity)
- DNOs earned £138.0m under the IIS in 2017-18. This compares with £165.6m in 2016-17. In both years, a number of DNOs reached the cap on rewards that can be earned under the IIS.

Totex incentive mechanism (TIM)

- The TIM incentivises DNOs to outperform their RIIO-ED1 allowances, as they retain a share of any underspend, with customers receiving the remainder.
- Network reinforcement is one of the most significant cost categories: the cost of managing the load on the network, for example the installation of new assets to accommodate changes in the level and/or pattern of electricity demand and generation.
- Performance varies across the DNOs, with the majority underspending to date; performance to date ranges from an 8% overspend to a 22% underspend.

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Review of ED1 arrangements

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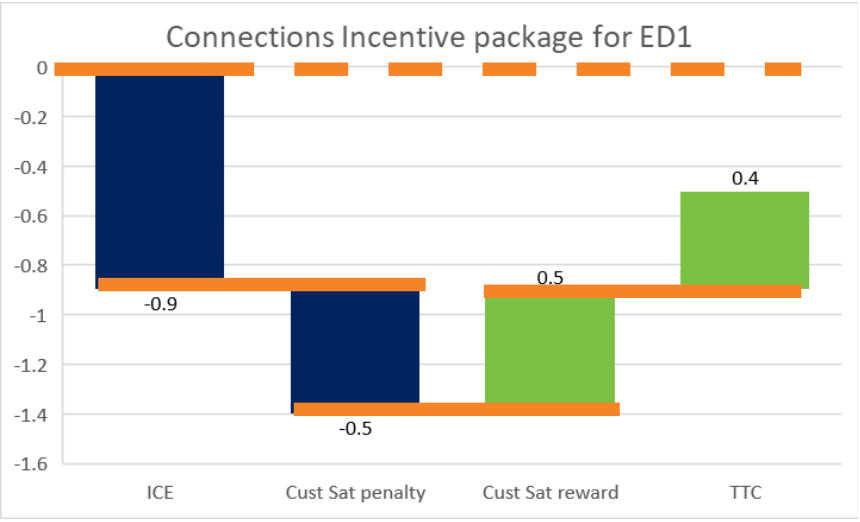
Design principles

"Competition should be introduced where appropriate where the net benefits of competition are likely to outweigh the costs to consumers (including wider non-financial costs to consumers)."

RIIO-2 design principles RIIO-ED2 Framework Decision

- Competition has been a longstanding feature of new connections
  - General principle has been that competition is good for customers as it brings cost and service benefits
  - Regulation only appropriate where competition hasn't been, or unlikely to be, established
  - Funding of incentive mechanisms need to be cognisant of potential impact on competitive markets

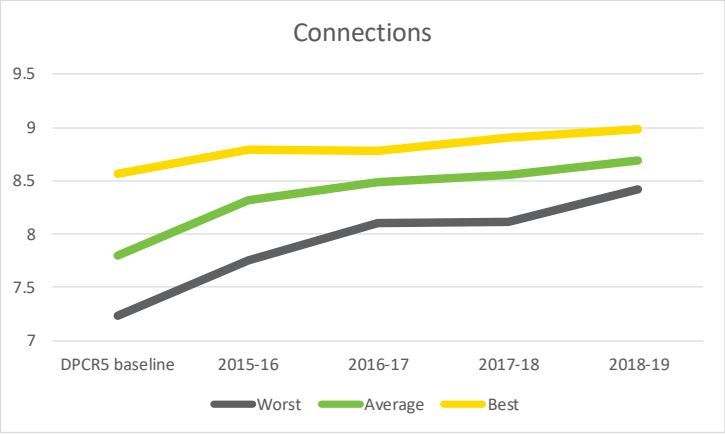
Connections regulatory framework

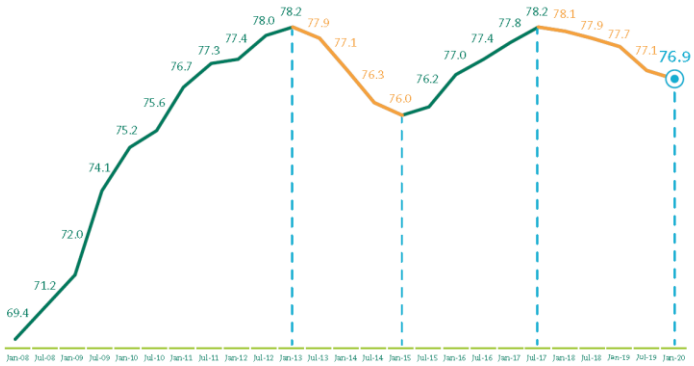


- Penalty & rewards based on percentage of base revenue
- Therefore scaled based on size of DNO

- Incentive on Connections Engagement (ICE)
  - Penalty only regime
  - Incentivises DNOs to engage with stakeholders, identify their needs, put plans in place to address needs and deliver them
  - Assessment by Ofgem panel based on stakeholder consultations and Ofgem assessment
- Broad measure of customer satisfaction
  - Symmetrical reward and penalty regime
  - Incentivises improving customer satisfaction across small scale connections
  - Measured by independent telephone survey of customers that have experienced the service
- Time To Connect
  - Reward only regime
  - Incentivises improvement on average time to issue quotations and connect small scale connections
  - Assessment by annual performance against pre defined targets
- Guaranteed standards of performance
  - Payments to affected customers if standards not met
  - Incentivises better than 'backstop' performance
- Standard Licence Condition 12
  - Backstop provision whereby all connection offers must be issued within 65 working days
  - Failure to meet is a licence breach

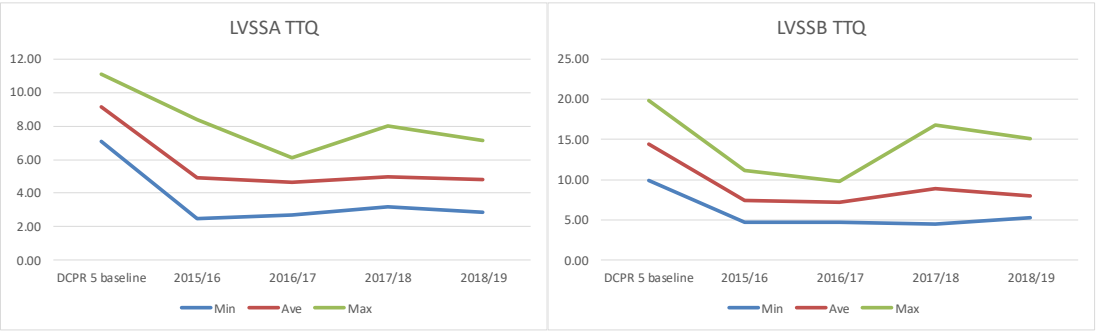
Connections Customer Satisfaction Survey

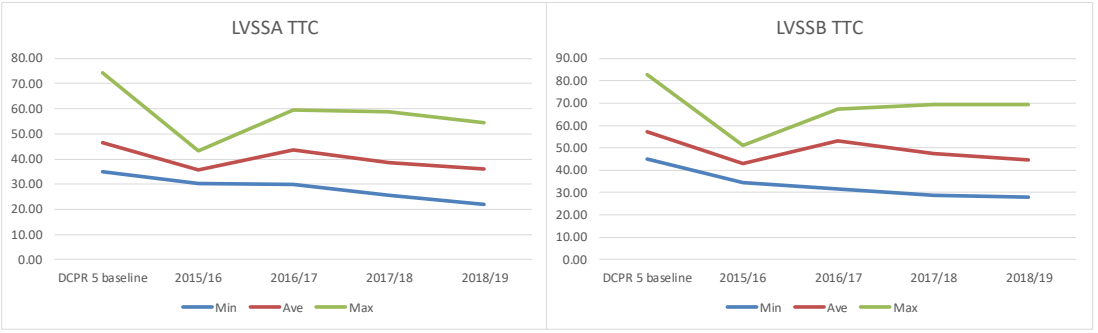




- Driven improvements in ED1
- Generally drives right behaviours
- Target needs to be realistic and achievable
  - General increase in customers expectations
  - Changing expectations of service
  - Can drive unrealistic costs to service with no WTP validation
- Could retain as symmetrical incentive
  - Or alter to penalty only
- Could remove restriction on resurveying within three months
  - Currently means if surveyed for quote unlikely to be surveyed for connection
  - Repeat customers only surveyed max four times a year

Time to Connect/Quote





- Driven improvements in both time to quote and connect
  - But not completely converged performance
- Targeting further improvements into ED2 risks compromising quality
  - Customer Satisfaction survey acts as overriding driver of behaviour
- Could
  - End at ED1
  - Could refine criteria for TTC
  - Could extend to other larger connections

Incentive on Connections Engagement

- Acts as a proxy to drive improvement in absence of competition
  - No contemporary published data on extent of competition
- May need to review which market segments covered by ICE
  - Competition Tests were onerous
  - Could analyse competition landscape based on quotes/acceptances
  - CiC Code of Practice now in place which has embedded best practice with annual compliance report
- Engagement now well embedded; workshops well attended, multiple channels open
- Engagement on developing ICE plans can be difficult
  - Some stakeholders think ICE dissuades DNOs from having ambitious targets
  - Some stakeholders see merit in an annual review
- Could retain but review where there is now competition and ease burden of assessment cycle
- Adds costs to connections customers so may need to re-evaluate the benefit to them

Item 3: Potential impact of access and charging reform on expected DNO behaviours

Potential impact of access and charging reform on expected DNO behaviours

Access SCR: We want to ensure electricity networks are used efficiently and flexibly, reflecting users' needs and allowing consumers to benefit from new technologies and services while avoiding unnecessary costs on energy bills in general.

- **Access arrangements** - the nature of users' access to the electricity networks (for example, when users can import/export electricity and how much) and how these rights are allocated.
- **Forward-looking charges** – the type of ongoing electricity network charges which signal to users how their actions can ether increase or decrease network costs in the future.

The scope is:

- Review of the definition and choice of transmission and distribution access rights
- Wide-ranging review of Distribution Use of System (DUoS) network charges
- Review of distribution connection charging boundary
- Focused review of Transmission Network Use of System (TNUoS) charges

The industry is also progressing work to improve the allocation of access (eg better enabling the exchange of access rights).

We launched our Access SCR in December 18. In 2019, we published two paper outlining initial thinking. We intend to publish 'minded to' consultation in late Summer 2020 and final decision in early 2021. Any changes will be implemented in April 2023.

Potential impact of access and charging reform on expected DNO behaviours (continued)

Access right reform	
Case for change	• Improved choice of access options could make better use of existing network capacity, connecting users quicker and cheaper. • Improved definition of access options should provide more certainty to users.
Options for change	• Levels of firmness • Time-profiled • Shared access • Small users • Transmission access
Impact on DNO behaviour	• Access arrangements support network capacity being allocated in accordance to users' needs and the value they ascribe to network usage • They provide effective signals for where new network capacity is justified • Help reduce barriers to entry and enable new business models where these can bring value for the system.

Potential impact of access and charging reform on expected DNO behaviours (continued)

DUoS reforms	
Case for change	Improved signals could better reflect the costs and benefits of using the network at different times and places, to support efficient use of capacity, and ensure no undue cross-subsidisation between users.
Options for change	<u>Charge design</u> • Volumetric ToU • Agreed capacity • Actual capacity • Dynamic charging/rebates <u>Cost models</u> • Locational granularity • Network cost model methodology used
Impact on DNO behaviour	• Could support more efficient use of network capacity, reducing need for network investment. • Could improve signals about where new network capacity is justified

Access SCR – connection charging boundary

Case for change
Stakeholders have told us the current arrangements could be creating undue barriers to entry and or distorting investment decisions. When we launched the SCR we said we would look for evidence of this and explore a range of options for the distribution connecting charging boundary.

Options for change
We have identified a number of options grouped under different depths. We do not think we can rule out any high level options at this stage.

There are also other changes we could make regardless of the connection boundary depth such as alternative payment terms and or introducing liabilities and securities.

Shallow-ish	•Status quo but could be modified to include, for example, alternative payment terms.
Shallower	•Connecting customers pay for their own assets and make some contribute to the cost of any network reinforcement, but less than they do today.
Shallow	•Connecting customers pay for their own assets only with all reinforcement costs funded through use of system charges.

Alternative payment terms

Liabilities and securities

Potential impact on DNO behaviour
A shallower or shallow boundary may better enable efficient DNO actions to support network development (strategic/anticipatory investment and flexible procurement).

For discussion:

What behaviours might companies display in response to a potential change to the connection boundary?

Challenges for connections policy in ED2

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Potential changes to Connections Boundary

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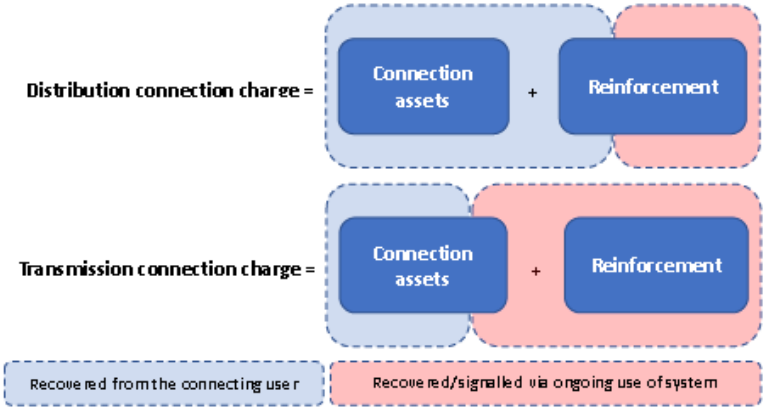
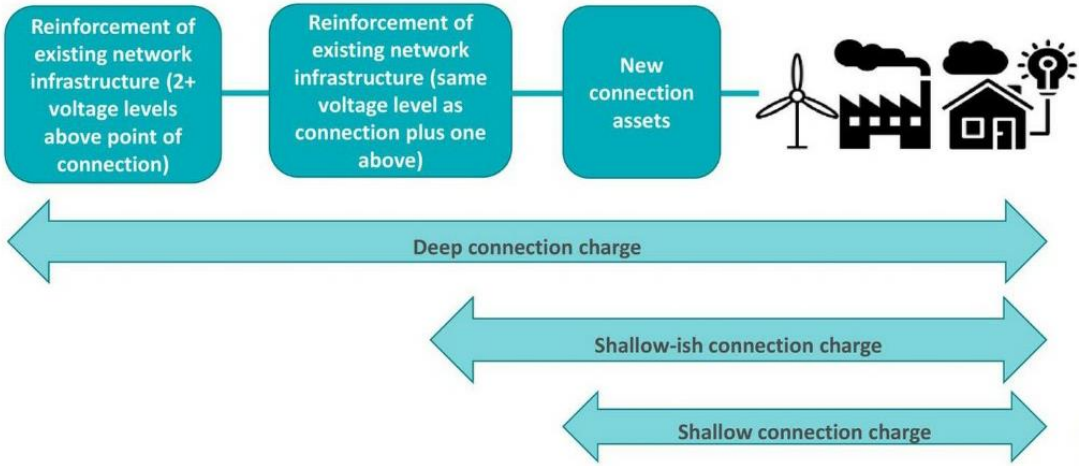
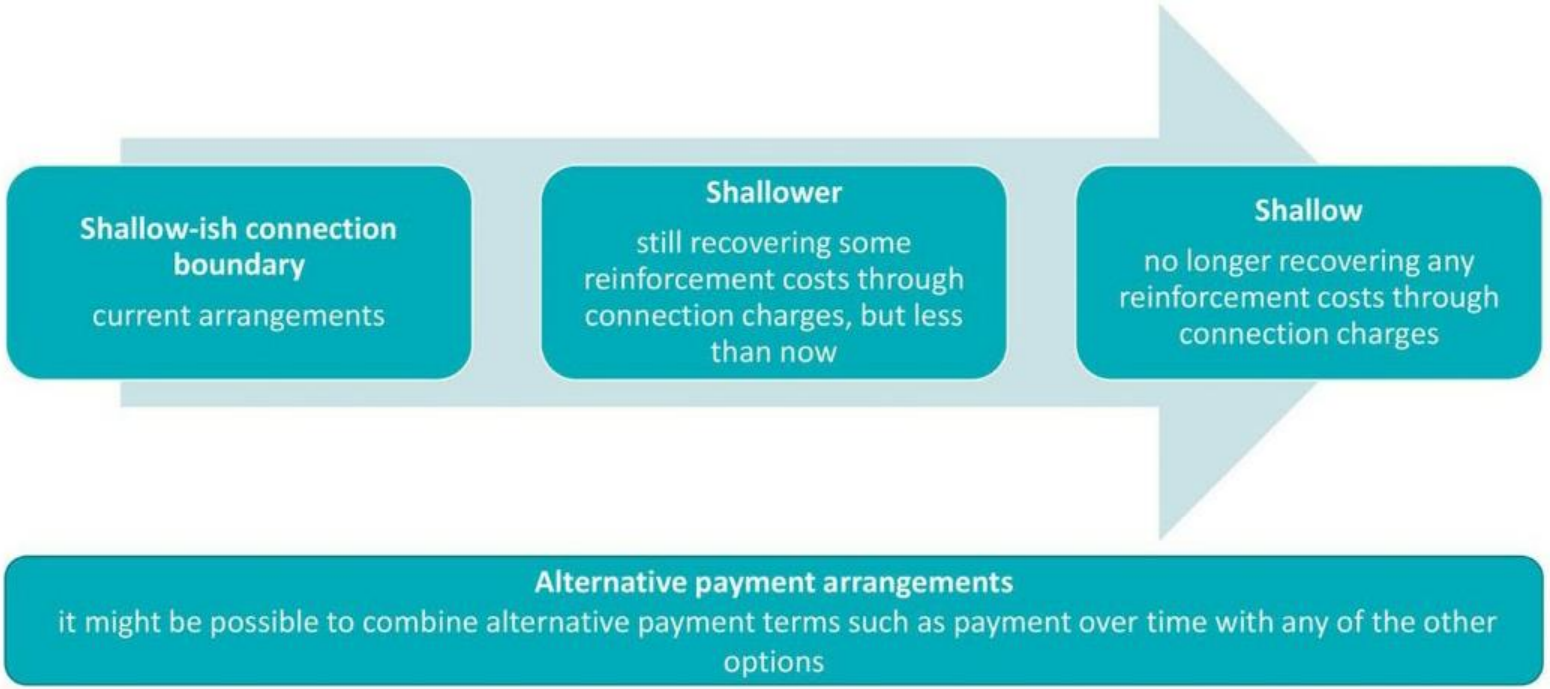
What is the ‘connections boundary’?

When connecting to the network there can be different kinds of assets required to make the connection. The ‘connections boundary’ describes the assets that the customer has to pay for and how the costs are recovered from different parties.





What options are Ofgem considering?



Possible ‘shallower’ options

- **Remove the High Cost Cap**: currently, for distributed generation connections only, and where the cost of reinforcement is more than £200/kW, the connecting user pays for all reinforcement above this threshold. This protects existing customers from extreme costs but could be creating a barrier for some connections. If the cap is removed, these costs would be recovered from all customers instead.
- **Amend the voltage rule**: connecting users currently contribute to reinforcement at the same voltage level as their point of connection, plus the one above. In this option, connecting users would only be charged for reinforcement at same voltage as the point of connection but anything above this would be recovered from existing customers.
- **Amend or replace the CAF**: the CAF currently apportions the cost of reinforcement between the connecting user and existing customers. This calculation could be amended or replaced, for example, with a scaling factor, to reduce the cost of reinforcement borne by new users.

Possible ‘ shallow’ options

- **Charge for all extension asset costs through connection charges:** this option would mean that the connecting customer pays for all extension costs involved in their connection. The “second comer” rule could continue to apply if another user subsequently connects and uses those assets, such that the first user would be refunded some of the costs.

Possible ‘ shallow’ options

Alternative payment arrangements
it might be possible to combine alternative payment terms such as payment over time with any of the other options

- **Alternative payment arrangements:** this option variant could therefore be to keep a shallow-ish connection boundary but require distributors to offer alternative payment terms such as an ability to pay over a number of years. This would keep a strong signal to users about where to locate on the network but potentially reduce issues associated with upfront costs.
- The potential benefit to users could depend on whether alternative payment terms are offered for the cost of extension assets, reinforcement or both. Any move away from upfront payment would place a risk of bad debt on distributors in the event of default.
- Mitigation could be from some form of securities mechanism, such that the connecting customers need to provide some financial commitments but this could undermine some of the benefits.

What are Ofgem's initial views?

Connection boundary depth	Pros	Cons
• **Shallow-ish** (keep the existing boundary but could still implement other approaches such as alternative payment terms)	+ Delayed payment may **reduce issues associated with high upfront cost**.	- Could expose DNOs to **bad debt risk**.
• **Shallower** (still recovering some reinforcement costs through connection charges, but less than now)	+ Would reduce cost but **keep some locational signal** depending on where new level is set. + Recovering more from network charges could mean **more opportunity for innovative/ more strategic solutions** to network development.	- **Weaker locational signal** but could be mitigated by more locational DUoS charging.
• **Shallow** (no longer recovering any reinforcement costs through connection charges)	+ Increased opportunity for DNOs to consider **alternative approaches to developing their network** + **Lowest level of upfront cost** to connecting users	- **Weakest locational signal** and could create an incentive to over–request capacity required. - May be **excessively complex** and/or risk introducing cross-subsidies between users

What challenges would a change in connections boundary bring?

Currently

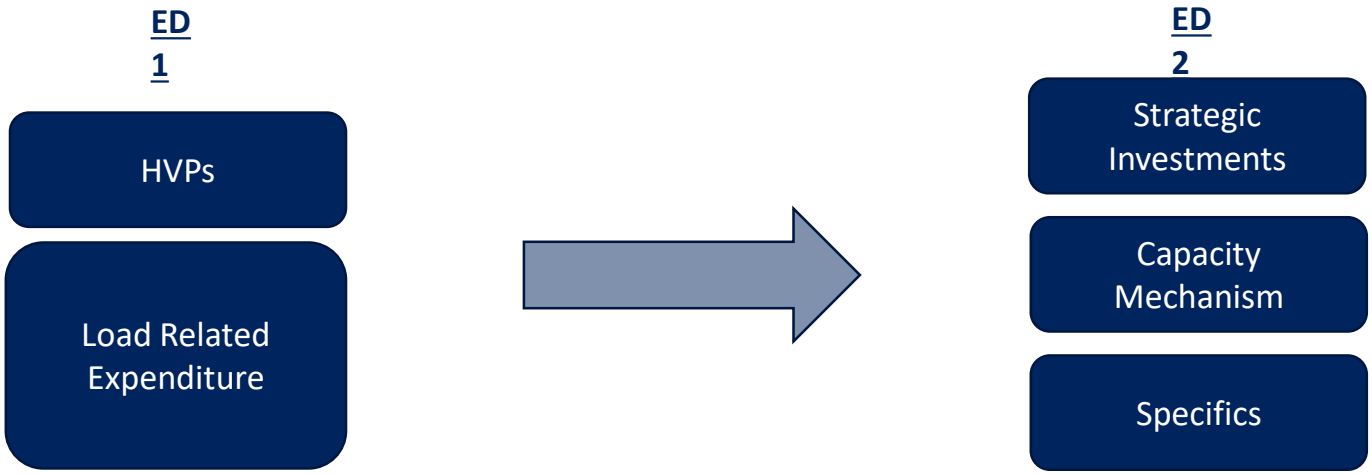
- DNOs have to respond to individual applications and provide connection offers to met those needs. This potentially leads to a fragmented and inefficient approach to developing the network as meeting DNOs' obligations is overriding concern.
- More strategic, forward looking investment poses a risk for DNOs with limited benefit.
- Occasionally connections are delayed until the works the customer has paid for (or contributed to) are completed. Work not initiated until customers have accepted and paid.
- Ex ante allowances given to DNOs for reinforcement and any outperformance is shared between DNO and customers.
- Flexible connections used to enable quicker and/or cheaper connection for customer

What challenges would a change in connections boundary bring?

<u>With a shallow connection boundary</u>

- There will be less visible linkage between the work needed to facilitate the connection
- Customer expectations therefore likely to be an expectation to have quicker connections
- Customers maybe less keen to accept a connection with curtailment risk (apart from a short term solution to allow an earlier connection)
- However natural tension for DNOs not to speculate with customers money and make inefficient investment in the network and being judged with the benefit of hindsight
- Some incentive to reward DNOs where efficient capacity has been created needed to avoid this situation
- Mechanism needs to
  - Encourage anticipatory investment so that connections are not delayed
  - Cater for investment that is justifiable, based on information at time not hindsight
  - Encourage efficiency and innovation including use of flexibility

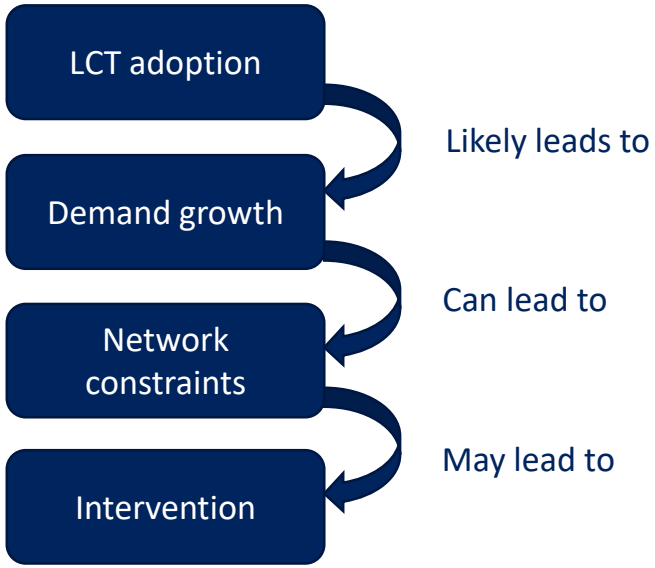
A Capacity Mechanism could be a solution



We propose breaking Load Related expenditure into clear categories that reflect the type of work involved and develop funding mechanisms to reflect the characteristics of this work

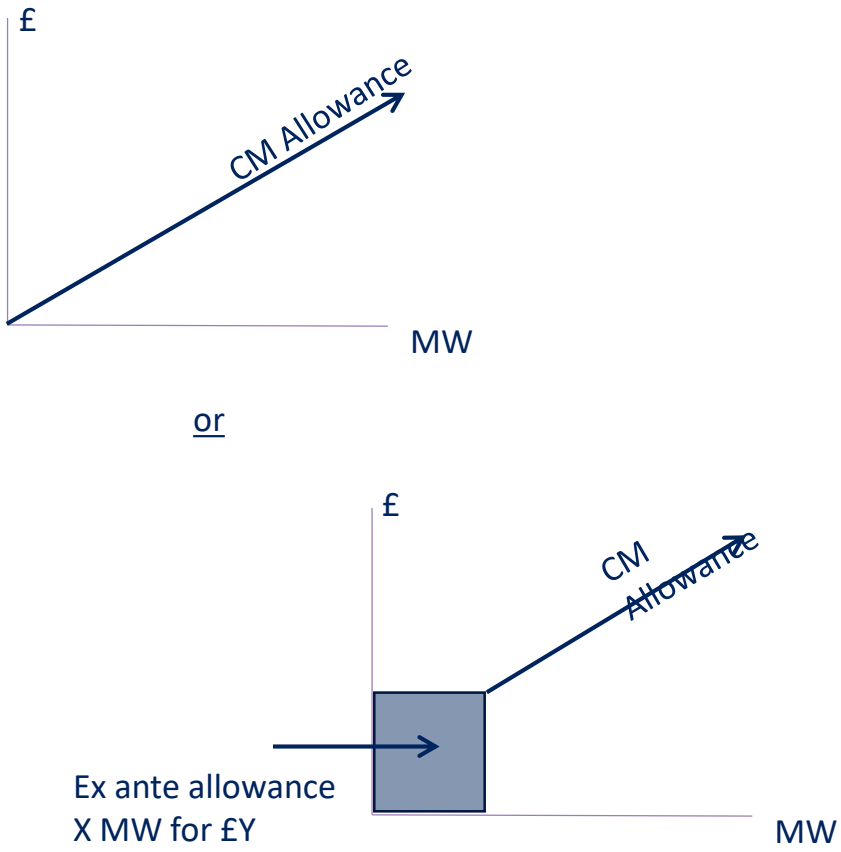
- Ofgem scrutiny to be focussed on larger, more strategic schemes, where need cannot be determined mechanistically
- 'Specifics' that don't deliver network capacity (eg fault level intervention, service unlooping, reactive power and harmonics management) be treated separately
- "Capacity Mechanism" utilising a Unit Cost Allowance (UCA) used to calculate and adjust allowance depending on volume (MW) of capacity delivered

Different network impacts will be seen



- What is right level to look at?
- Difficult to assess the correlation at this stage between LCT adoption and ultimate need to intervene to relieve a constraint
- Capacity created seems appropriate output

Capacity Mechanism (CM) – Volume Driver



- We think capacity is suitable for the use of a volume driver
  - Defined in RIIO Handbook as "*a Provision allowing revenue to vary as a function of a volume*"
- Allowance for all investment under the CM driven by UCA or fixed ex ante allowance for X MW and then UCA based CM allowance once threshold is reached
- Encourages efficient investment and utilisation of flexibility
- Adjustments to be made automatically via PCFM
  - Need to consider impact of 2yr lag & whether RRP is used to release allowance on the basis of forecast with true-up at end of period based on actual capacity realised

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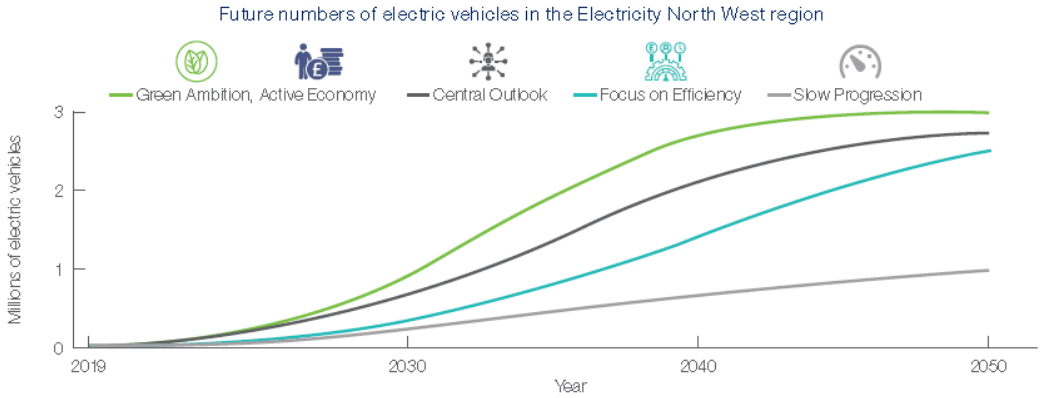
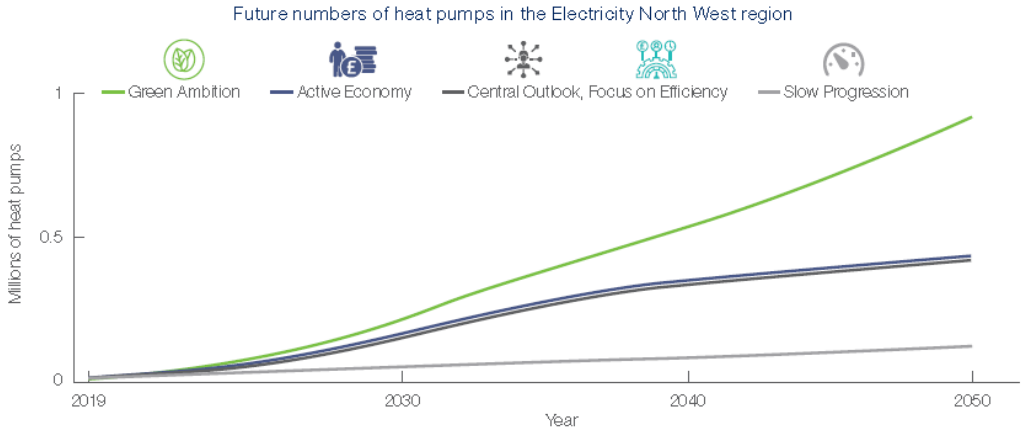
Low carbon technologies

- Broad topic
- Being covered in multiple working groups
- Significant uncertainty in terms of uptake
- Range of stakeholders
  - Behind meter EV charging, slow or rapid charging
  - Large fast EV charging in motorway services
  - Heat pumps in new properties
  - Retro fit heat pumps
  - etc





Issues for new connections

- Should LCTs be treated any differently to other demand?
- When should DNOs intervene?
  - Marginal proactive costs applied universally vs. more expensive targeted reactive costs?
- What size of service cable is installed in new properties and who pays?
  - Could respond to applicant's requirements and the applicant pays for size needed
  - Could install three phase as company or industry standard and customer pays
  - Could install three phase but incremental costs socialised
- Who pays for reinforcement costs?
  - ED1 policy covers ***existing*** customers where no change to connection (exception for unlooping)
  - Linked to connections boundary?
  - Or could there be separate decision for LCTs?
  - Currently socialisation of reinforcement costs where LCT installed in existing premises and no change to service required (apart from unlooping)
- Should there be any different treatment for customers that are vulnerable or in fuel poverty?

For discussion:

What alternative arrangements might be required in RIIO-ED2?

Annex

Competition in Connections

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Developments

- In 2014, Ofgem conducted a review into the electricity distribution connections market to understand why effective competition had only developed in some sections of the market.
- The review found several issues in the market that could limit competition. A number of these issues related to the DNOs' role in the connection process (as the sole provider, for both its own connections business and its competitors, of a several key inputs needed to make connection).
- To address this, Ofgem introduced in October 2015:
  - A new licence condition - which requires DNOs to facilitate competition in the electricity distribution connections market and maintain a Code of Practice.
  - A Competition in Connections Code of Practice – which specifies how DNOs must provide key services to its competitors in the connections market.
- Ofgem planned another review 18 months later but in November 2017 decided:
  - *"Due to the relatively short period of time since we introduced these arrangements and the positive feedback that we have received since then, we will not be undertaking a further review of the market right now."*

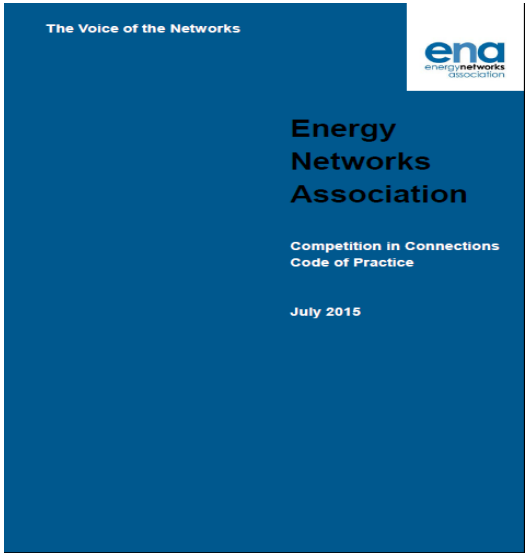
52.2 The licensee must:

a) have, maintain and comply with a Competition in Connections Code of Practice which is designed to facilitate the achievement of the Relevant Objectives:

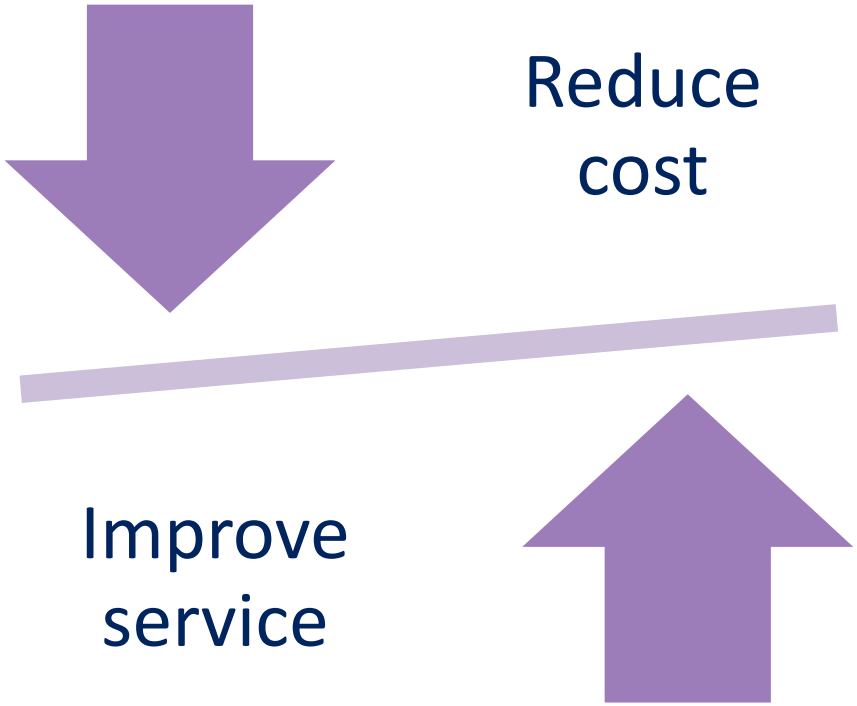
(i) **minimising**, to the fullest extent reasonably practicable, the number and scope of Input Services which are only available from the licensee;

(ii) providing Input Services on an **equivalent** basis to all Connection Parties that operate in the Local Connections Markets;

(iii) **harmonising**, to the fullest extent reasonably practicable, the Input Services provided by Distribution Services Providers.



Competition in Connections

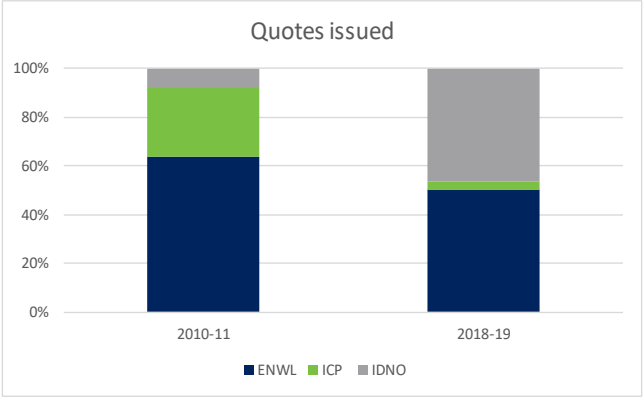


- For DNOs to compete in competitive markets they need to focus on improving service and reducing costs
- There is a risk that extra regulatory burden adds costs to DNO and makes them less competitive
- *Do the net benefits outweigh the cost?*
  - Are GSoP still needed where there is competition?
  - Extensive reporting to Ofgem with Data Assurance obligations adds costs to connections customers
    - Eg annual validation of evidence used in Competition Test submission in 2011

IDNO development

IDNOs now significant presence in connections markets

- Now 13 IDNOs
  - with a 14th being consulted on
- Most new housing carried out by ICPs for IDNOs
- Market share of IDNOs has increased significantly



- A key differentiator for IDNOs is ability to offer asset values
- DNOs explicitly prevented from doing via Common Connections Charging Methodology:
  - *"5.59 Where we adopt assets installed by an ICP we will not make any adoption payment in respect of those assets."*
- This was last considered in detail by Ofgem in October 2007
- May be appropriate to remove restriction for ED2
  - Particularly if there is a change to the connections boundary
- This may remove a potential distortion to competitive markets that unduly favour IDNOs