Charging Futures

Reforming electricity charging together

Forum

Charging Futures Forum

9 November 2017

Welcome

Richard Smith,

National Grid - Electricity System Operator

Lead Secretariat

Welcome

Frances Warburton, Ofgem

Objectives for the day

- **Learn** about Charging Futures, how it works and how you can best use it
- **Learn** about options for access and forward looking charges reform, and the Targeted Charging Review
- **Contribute** your thoughts on this work, next steps and how Charging Futures can work to achieve its aims
- **Ask** charging experts your questions

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Reasons and expectations for Charging Futures

- Ofgem has heard concerns about:
  - The scale of reform needed to charging and access arrangements
  - The challenges of engaging in industry processes
  - The need for a holistic process and vision
- The CFF can address these challenges, however:
  - It won't be perfect right away and we will need to learn and adapt as we go along – 'learning by doing'
  - Changes can result in 'winners and losers' and not everyone will be happy with every decision
  - There are resource constraints and not every problem can be addressed at the same speed; we will need to focus attention on areas with large potential benefits or harm to consumers

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Agenda

- 10:00 – 10:15 : **Welcome** - Frances Warbuton, Ofgem
- 10:15 – 10:50 : **Introduction to Charging Futures** - David Wildash, NG Lead Sec & Judith Ross, Ofgem
- **10:50 – 11:20: Coffee break**
- 11:20 – 11:55: **Ofgem's vision for the developing energy system** – Frances Warburton, Ofgem
- 11:55 – 12:45: **Group 1: Charging Futures process and coordination**

  Group 2: Access and forward looking charges

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Agenda

- **12:45 – 13:30: Lunch**
- 13:30 – 14:20: **Group 1: Access and forward looking charges**

  Group 2: Targeted Charging Review
- 14:20 – 15:10: **Group 1: Targeted Charging Review**

  Group 2: Charging Futures process and coordination
- **15:10 – 15:40: Coffee break**
- 15:40 – 16:15: **Panel Q&A**
- 16:15: **Closing remarks** - Frances Warburton, Ofgem & Richard Smith, NG Lead Sec

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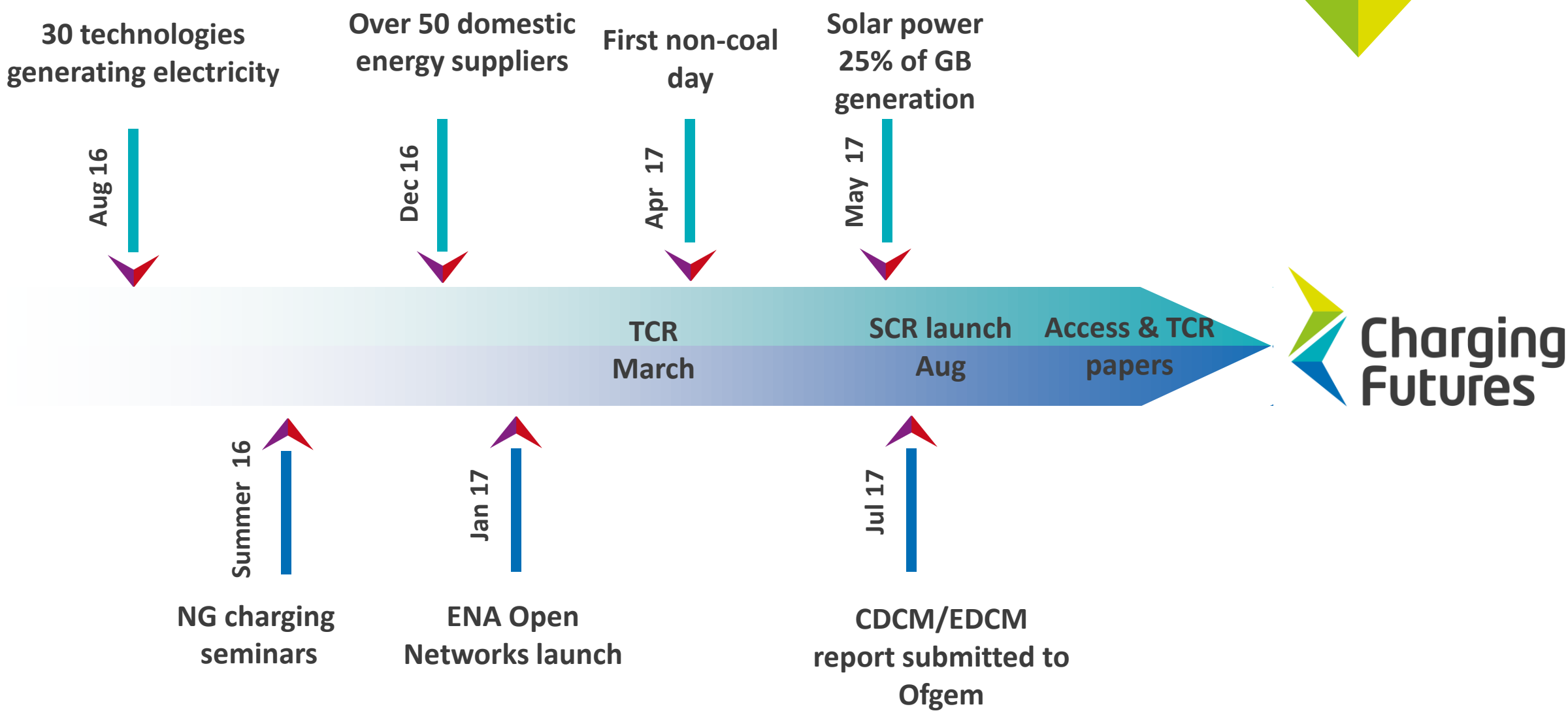
Introducing Charging Futures

David Wildash – NG ESO, Lead Secretariat

Judith Ross – Ofgem

The Journey to date



Aim of Charging Futures

Bringing together Ofgem-led and industry-led, ongoing and emerging electricity network charging review activities into a **joined-up work programme** which **delivers better outcomes** for current and future consumers and in which **stakeholders can engage with efficiently and effectively**.

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Aim of Charging Futures

Collaboration

Transformation

Accessibility

Innovation

Bringing together Ofgem-led and industry-led, ongoing and emerging electricity network charging review activities into a **joined-up work programme** which **delivers better outcomes** for current and future consumers and in which **stakeholders can engage with it effectively**.

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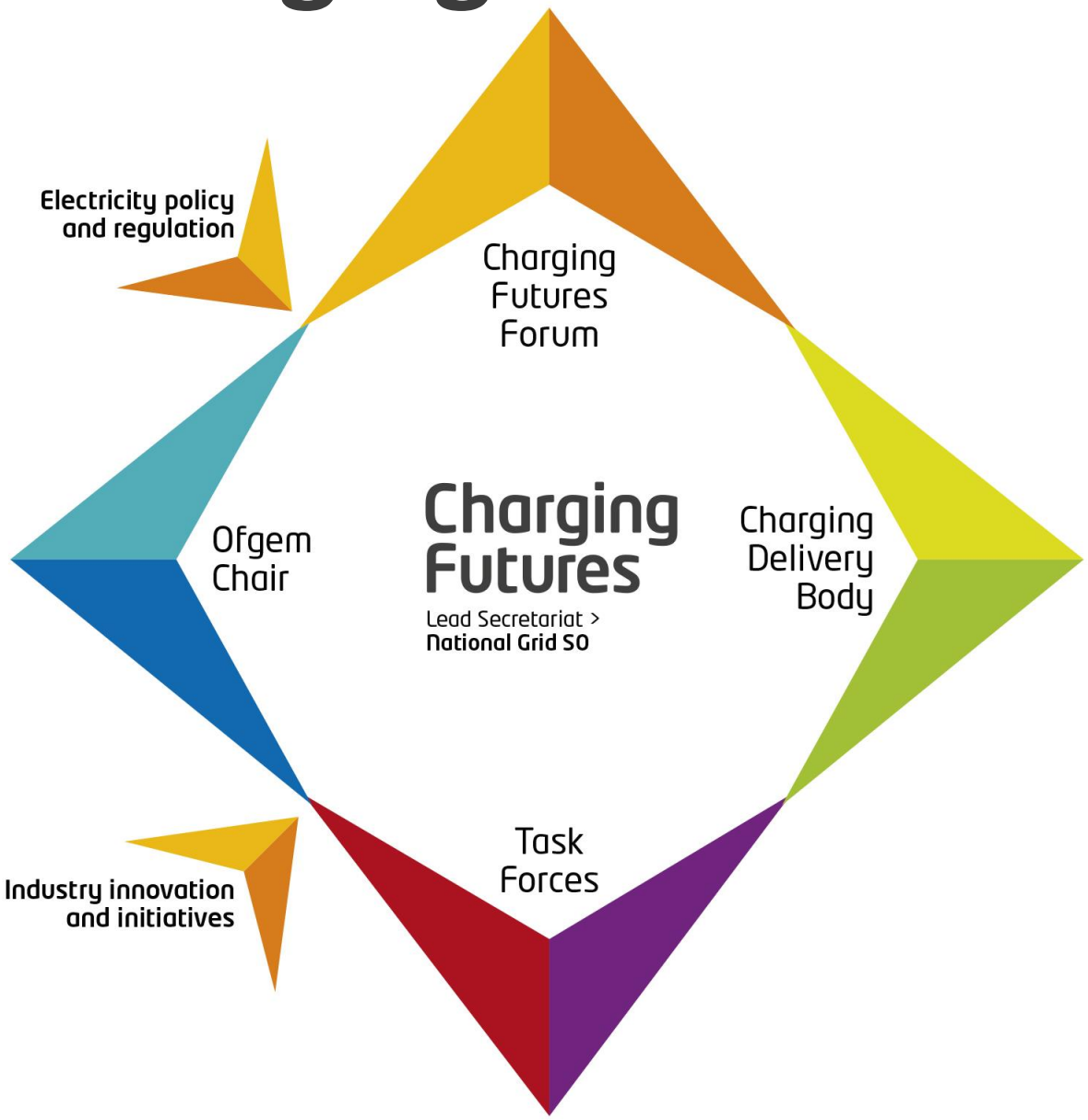
The Charging Futures ecosystem



INDUSTRY CODE GOVERNANCE

CUSC
Connection and Use of System Code (for transmission)

Code admin > **National Grid**

DCUSA
Distribution Connection and Use of System Agreement

Code admin > **Electralink**

BSC
Balancing and Settlement Code

Code admin > **Elexon**

How will Charging Futures help you?

Resource

> Portal

> Training material

> Access to Charging experts

Navigate

> Single access point

> Sign posting

> Plain English

Influence

> Strategic change

> Whole system

> Implementation

Your involvement

Learn

Ask

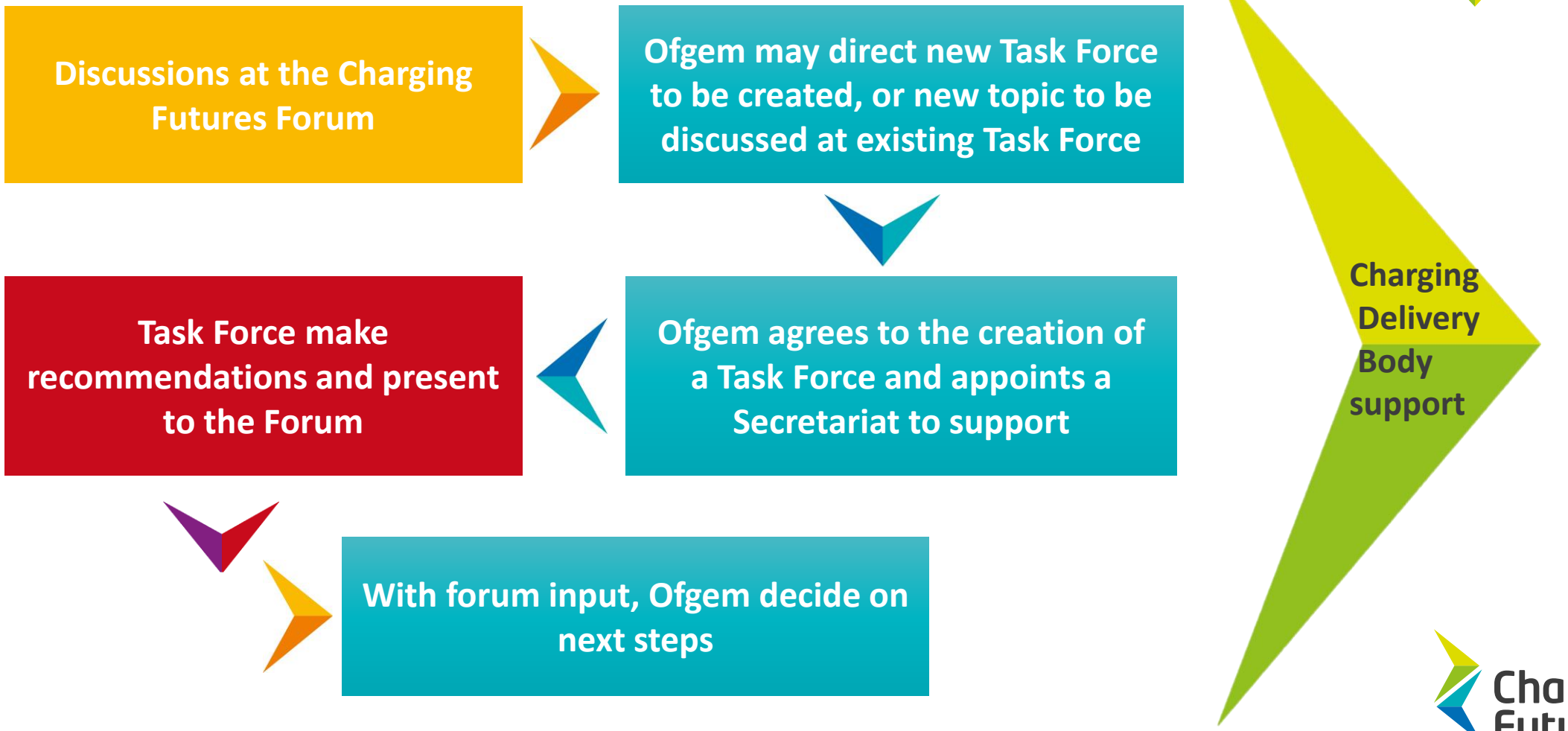
Contribute

Charging Futures

Introducing Charging Futures

Judith Ross – Ofgem

How Charging Futures will consider proposed new work areas



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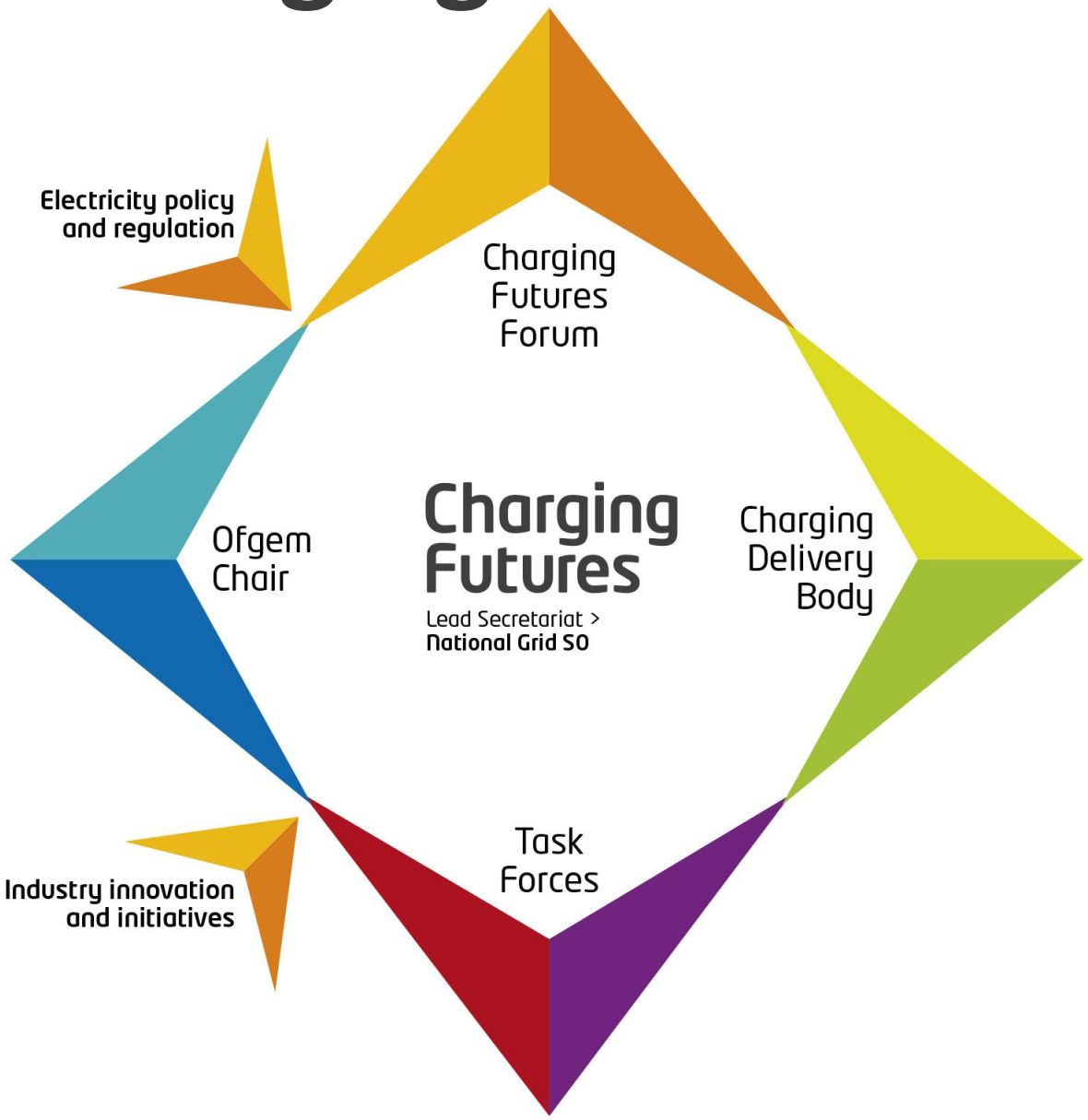
The Charging Futures ecosystem



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Working through Charging Futures: Coordination guidance

- Strategic fit
- Consumer impact
- Feasibility and other practical considerations
- Coordination and sequencing with other changes
- Significance or urgency

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Get in touch

- www.chargingfutures.com
- National Grid SO, Lead Secretariat – Chargingfutures@nationalgrid.com
- Ofgem, Chair – CFF@Ofgem.gov.uk

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Coffee break

10:50 – 11:20

Ofgem's vision of the developing energy system

Frances Warburton

Partner, Energy Systems

Ofgem

Ofgem's principal objective

Our principal objective is to protect the interests of existing and future electricity and gas consumers

We have developed five regulatory stances, that explain what we are aiming for in taking regulatory decisions

We are applying these to our work on network access and charging reform

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Our regulatory stances

1. Promoting **effective competition** to deliver for consumers

2. Driving **value in monopoly activities** through competition and incentive regulation

3. Supporting **innovation** in technologies, systems and business models

4. **Managing risk** for efficient and sustainable energy

5. Protecting the interests of **consumers in vulnerable situations**

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Promoting effective competition

- We believe that:
  - in general, a well-functioning market which delivers competitive outcomes is the best way to protect and promote consumers' interests.
  - to ensure the benefits associated with effective competition, all market participants should compete on a level regulatory playing field, on cost and non-cost issues.
  - newcomers' ability to enter the market and grow their business can stimulate competition and make the energy system more diverse and innovative. Competition is also stimulated by the development of new markets, with new market participants.
  - intervention may be required to foster competitive markets in the energy sector and to provide for standards that reflect that energy is an essential service.

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Driving value in monopoly activities

- We believe that:
  - effective regulation should lead monopoly companies to develop and deliver strategies that maximise value for money for existing and future consumers.
  - monopoly companies respond to well-designed economic and reputational incentives that align their interests with those of consumers.
  - even with natural monopolies, we can harness the power of competition: we can limit the scope of monopoly activities; monopoly companies can engage with competitive markets to deliver many monopoly activities; we can hold competitions for the right to deliver monopoly services and we can use competitive processes (rivalry) to inform our decisions.
  - we should be objective and evidence-based when deciding which form of competitive pressure we use.

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Supporting innovation

- We believe that innovation:
  - can have multiple benefits for present and particularly future consumers.
  - spans technologies, systems and business models simultaneously.
  - may often face regulatory or other barriers, particularly in the case of new business models.
  - can involve both risk and reward for consumers.
  - can be deterred by overly burdensome regulation or if current regulation does not ensure a level playing field for all market participants.
  - can be hampered by lack of coordination, for example in developing supply chains and infrastructure for new technologies.

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Managing risk

- We believe that:
  - companies need to have confidence in the energy market to help ensure timely investment, productive risk-taking and efficient financing costs. This will promote best value for money for consumers.
  - market confidence is supported by a stable and predictable policy environment. This means we have to make good decisions based on principles that we then stick to, particularly when they influence longer term investment decisions.
  - the challenges involved in the energy transition may call for new business, financing and regulatory models which could have significant effects on the risk environment.
  - where competition works well and consumers can make choices, risk is efficiently assigned to consumers and companies through competitive pricing.

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Protecting vulnerable consumers

- We believe:
  - because of their individual or household circumstances, some consumers may be less able to engage with the energy market and / or be more at risk of poor outcomes.
  - consumers can move in and out of being in vulnerable situations depending on their ability to engage or their personal or household characteristics.
  - cost to serve is not the same for all groups of consumers, but the cost of energy should not be disproportionately more for consumers in vulnerable situations.
  - our regulation can have an impact on the distribution of system costs across different customer groups.
  - government has the primary role in addressing fuel poverty, particularly for policy aimed at redistributing substantial costs between energy consumers.

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How can access & charging rules help deliver for consumers?

Effective competition

Value in monopoly activities

Innovation

Managing risk

Protecting vulnerable consumers

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Applying these principles to charging reform

Our overall aim is to **ensure a regulatory framework that drives innovation, supports the transformation to a low carbon energy system and delivers the sustainable, resilient, and affordable services that all consumers need**.

We believe it will best do this by:

1. Aligning the SOs' and network companies' interests with those of consumers, through clear obligations and well-designed incentives.
2. Ensuring that charging for monopoly services reflects incremental costs and benefits and recovers other revenue requirements in ways that are fair and reduce distortions.
3. Ensuring that regulation is neutral between different technologies, systems and business models, while encouraging new entry and innovation by, for example, promoting a level playing field between entrants and existing companies, and between network reinforcement and alternative solutions.
4. Providing a predictable regulatory regime which supports efficient investment and allocates risks efficiently.
5. Promoting competition and harnessing market based mechanisms where it is in consumers' interests to do so.

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Recap on scale of charges

- The current levels of network and SO charges are c£10 B per year, of which about 50% is connection/forward-looking and 50% is residual/cost recovery charges

2016/17 charges		Transmission	Distribution	Balancing
Connection		£0.2 B	£0.2 B	
Use of system	Forward-looking	£0.5 B (both gen and demand)	£ 4.0 B (almost all on demand)	
	Residual/cost recovery	£2.1 B (all on demand now, since EU cap prevents residuals being charged on generation)	£1.4 B (more than 99% on demand)	£1.3 B (half on demand and half on gen)
Total charges		£2.8 B	£ 5.6 B	£1.3 B

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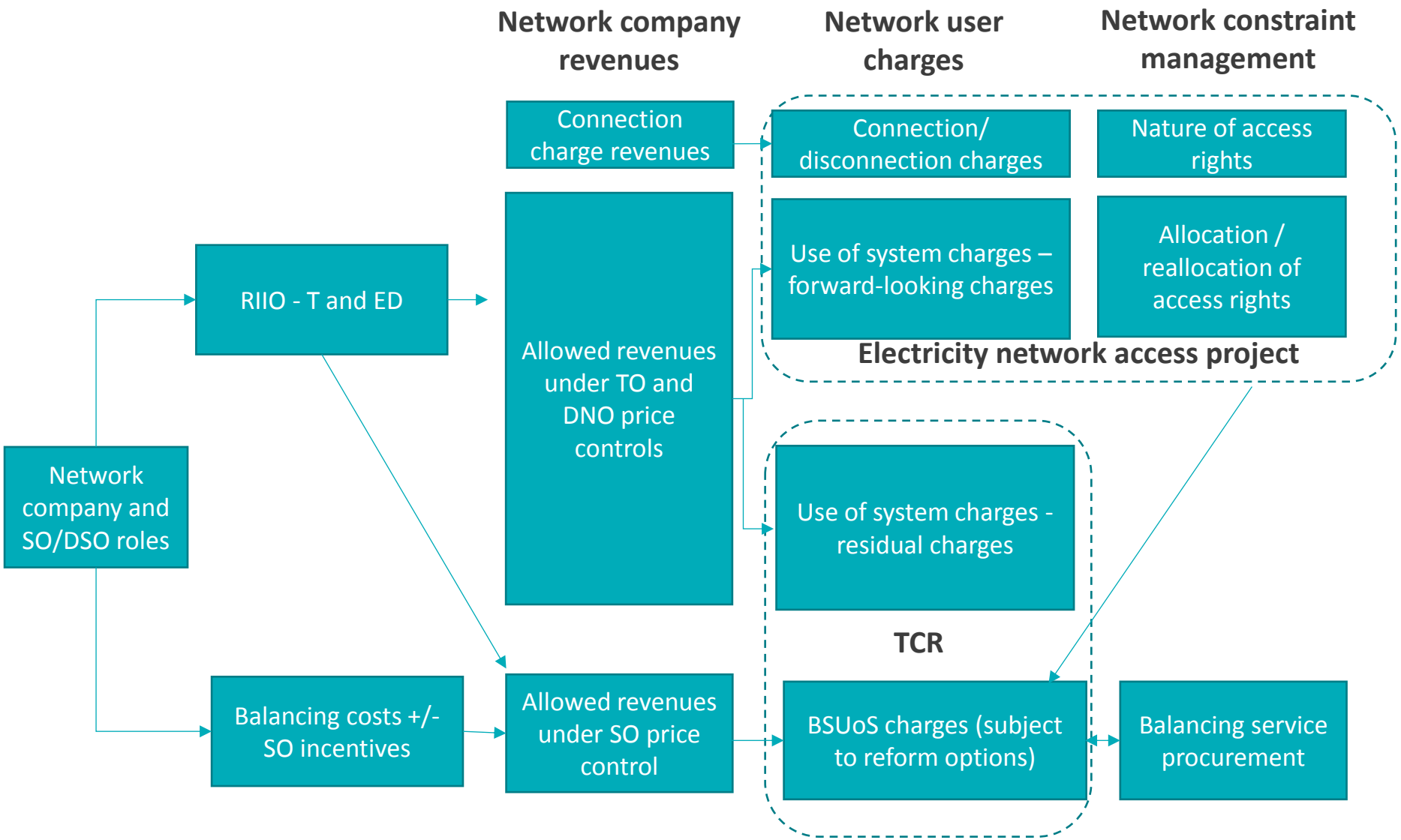
How these things fit together



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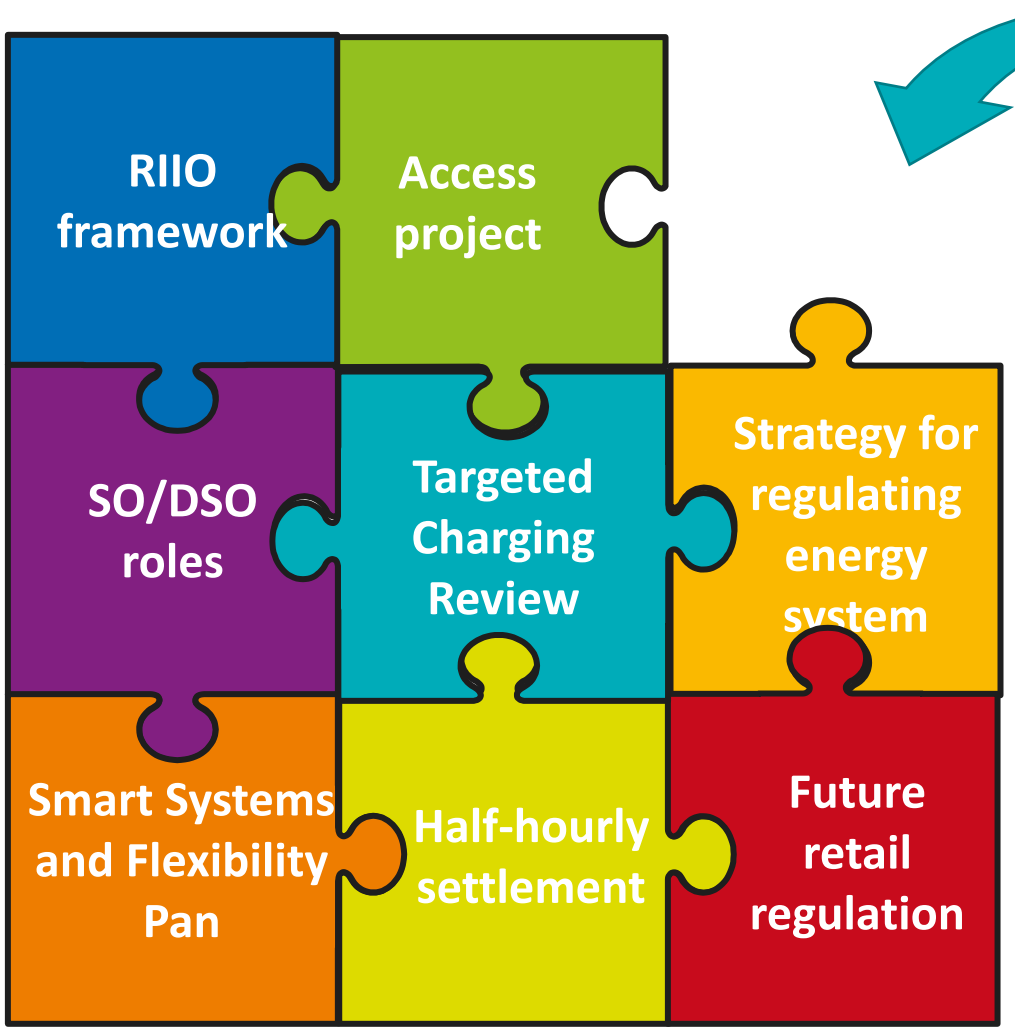
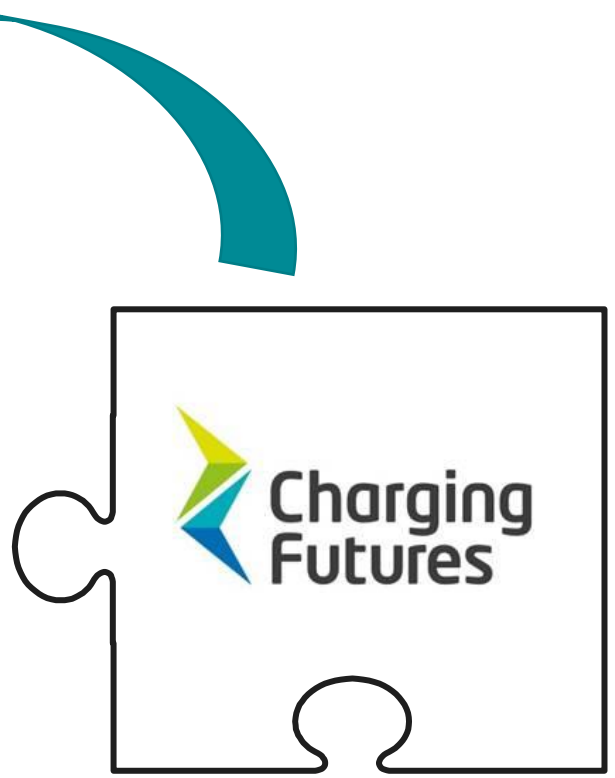
Our wider future facing work





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Ask your questions

Submit questions throughout the day via www.sli.do

> General questions for Panel Q&A: event code

#chargingfutures

> Access questions: event code **#access**

> Targeted Charging Review questions: event code **#TCR**

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Breakout Session 1: Access and Forward Looking charges

Jon Parker, Ofgem

Overview

Outline of the project

- Why action is needed
- Scope of the project
- Some introductory concepts
- Desirable features of network access and forward-looking charging arrangements
- Potential issues with the current arrangements
- Possible options for reform
  - Changes to access arrangements
  - Changes to forward-looking charges

Getting your input

- Next steps + how you can be involved
- Questions for you today

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Outline of the project

Why action is needed

Signals for efficient use of the network in a changing world

- Prospect of increased network constraints as use of the network changes
- This could hinder ability for system to accommodate new techs (eg EG, EVs, heat pumps) and require expensive new network capacity to address, with significant cost to consumers
- New smart and flexible technologies offer opportunity to accommodate new usages through making much better use of existing network capacity, alleviating the need for new capacity

Sending coherent signals across transmission and distribution

- Current access and charging arrangements designed when very limited EG and so little focus on ensuring consistent signals across T & D
- This no longer holds - EG capacity has doubled over the last 5 years
- Need to ensure that different approaches are not distorting decisions

To address these issues we are setting up a new Electricity Network Access project.

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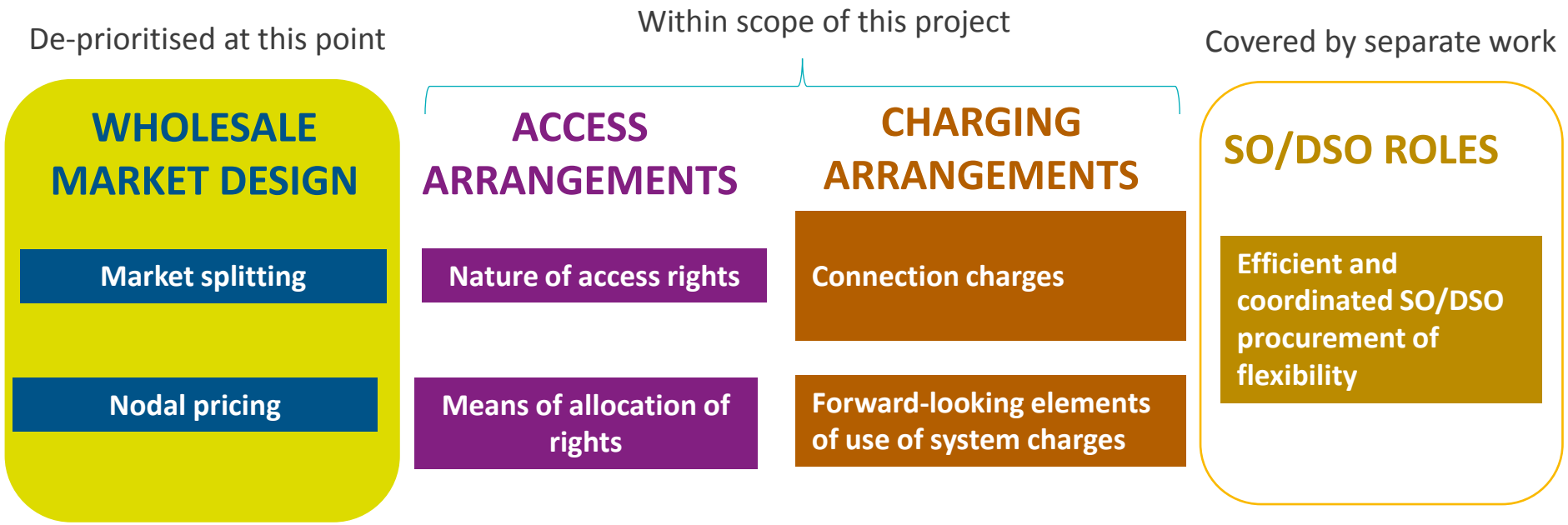
Scope of the project



The two main objectives of the project are to consider:

- The nature of network access rights and whether different ways of constructing and allocating them could have value
- The appropriate forward-looking charges for access and use of networks. This covers what changes might be merited both with and without changes to access arrangements

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Some introductory concepts

Network access rights

- The network capacity a user has allocated to them in order to import or export electricity from their target market
- Requires a connection from the user's equipment to the wider network, and then **allocated capacity on that wider network**

Forward-looking charges

- The elements of network charges that look to provide signals to users about how their behaviours can increase or reduce future (ie incremental) costs on the network
- Includes connection charges and elements of use of system charges

Access vs usage charges

- Access charges reflect the cost/value of providing a user with a certain amount of network access, regardless of whether the user actually ends up using it or not
- Usage charges aim to reflect the cost/value conferred on the network by the user's actual usage. May be used where less emphasis on access rights.

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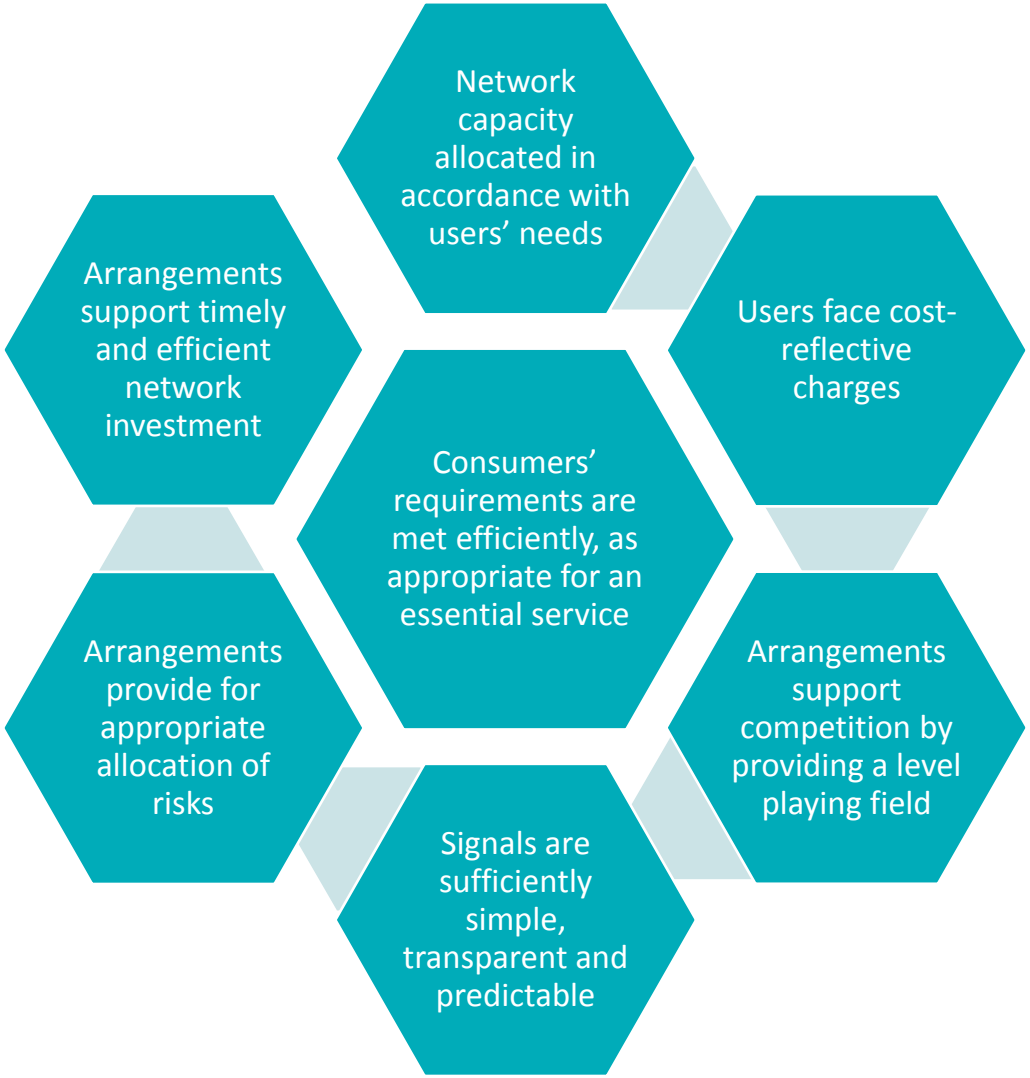
Desirable features of network access and forward-looking charging arrangements

We think that effective arrangements for consumers would have these features:



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Potential issues with the current arrangements

Desirable features of arrangements	Summary of potential concerns with current arrangements
Consumers' requirements are met efficiently, as appropriate for an essential service	Inadequacies in arrangements (discussed in other features) mean that requirements may not be met efficiently, with greater cost than necessary.
Optimising capacity allocation	Access is typically allocated first come first served, with users having limited choice in the types of access product to allow them to optimise how they secure access. Limited scope for users to trade capacity.
Signals reflect incremental costs and benefits	As cost drivers change, existing charging structures may not adequately reflect these, with different approaches to how costs are allocated across different charges.
Level playing field	Access arrangements and charges vary differ across the system – by voltage levels and, to some extent, for users of different types or sizes. Some of these differences may be causing material distortions.
Effective signals for network users	Variability and lack of predictability in charges can make it difficult for users to build them into their decision-making.
Appropriate allocation of risk	Limited ongoing security requirements (principally at transmission level) means network operators and consumers bear some of the risk of investment triggered by specific users. At distribution, network users can bear risks of curtailment.
Arrangements support efficient network development	Arrangements generally provide poor information to inform decisions on future network investment. Strong reliance on network monopoly processes to coordinate bringing forward new capacity.

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Potential options for reform

In the working paper we de-construct access and forward-looking charges into the following building blocks and consider how variants around these aspects could create value:

Network access arrangements		Forward looking network charges	
Nature of access rights	Time aspects	**Structure of the charge**	Types of costs
			Types of charge
	Firmness		Basis of charge
	Geographical nature		Timing of payment and degree of user commitment
	Associated conditions	**Level of granularity**	Locational granularity
Allocation and reallocation	Initial allocation		Types of locational signal
	Reallocation and trading		Temporal granularity

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Changes to access arrangements

Options to create greater choice and granularity of products

- Greater differentiation in type of access product available, with corresponding variation in cost (network charges)
- For example: long-term vs short-term rights; different time periods within a year (eg peak vs off-peak, seasonal); firm vs non-firm; national vs local
- Users better able to optimise what access they obtain
- Network companies have better information about the demand for network capacity to inform their investment plans

Options to improve allocation of access rights

- Could be move periodic allocation of access rights, or to allow improved reallocation (eg trading) of existing rights
- Support access rights being held by those that value most, provide improved information on the value of access

Important to take into account different user types needs, esp. households

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Changes to forward-looking charges

Changes to individual charges, for example:

- Considering whether charges sufficiently reflect investment drivers, eg move away from volumetric charges
- Increased locational granularity for lower voltage DUoS charges or for transmission constraint costs

Cross-system changes, for example:

- Options to harmonise approach across different methodologies – eg similar methodologies across TNUoS and DUoS; harmonising connection charging boundary
- Ensuring charges reflect whole system costs – eg ensuring that impact of EG costs on transmission network (where exporting GSPs) are taken into account
- New charge for DSO constraint costs, or recovering SO's transmission constraint costs under TNUoS

This is not a definitive list. Some represent significant change and so it would need to be clear there are material distortions arising from existing arrangements in order to justify it

If access right changes are taken forward then some of the changes may still apply, plus potentially a move towards more access-based rather than usage-based charging

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Getting your input

Next steps + how you can be involved

Our plans

- We will be developing these options and underlying evidence for reform (including prioritisation) over the coming months.
- Expect to consult on initial proposals for reform, if needed, next summer 2018.
- We recognise some of options considered may have implications for existing network users. We will consider this carefully and consider whether transitional arrangements would be appropriate as part of assessing the options for reform.

Getting your input

- We need your input to help inform our options development.
- We are setting up two taskforces under the CFF to help with this. If you want to be involved (or have colleagues that might) **please email us by 10 November.**
- Taskforce work will be made available, and there will be scope to feed in if not a member. This includes through open workshops that we plan to hold – further details will be sent round to the CFF mailing list.
- You can send any comments or questions to us at networkaccessreform@ofgem.gov.uk

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Questions for you today

Keen for initial feedback on these ideas outlined. Particular questions to prompt discussion are:

1. Do you think changes to access arrangements could bring benefits? What kind of access products would have most value?

2. What are the key areas of forward-looking charges where changes are needed (with or without changes to access arrangements)?

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Reforming electricity charging together

Forum

Lunch

Breakout Session 2: Targeted Charging Review

Andrew Self, Ofgem

Agenda

We have set out our initial thinking on the SCR

- Why
- Who should pay
- Options
- How we plan to undertake a detailed assessment
- Initial views

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Why an SCR?

Current approach to residuals

Inefficient investment and operational decisions

- Residuals may drive unintended and inefficient user actions by dampening or amplifying signals
- ‘Active’ network users are increasingly able to vary their interaction with the networks, reducing residual exposure
- Overall system costs may be increased by these actions to avoid residual charges

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Current approach to residuals

Adverse impacts on consumers

- Current framework means residuals increasingly fall on users who aren't active or don't have onsite generation
- Residential and small business consumers more likely to be affected, particularly more vulnerable consumers
  - Level of distortion will depend on incentives and scale and speed of technology adoption (such as EVs)
- Costs likely be passed through to PPM customers - current price cap provides allowance for the network companies' published charges

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Current situation

Residual exposure varies widely

		T Generation	T Demand	T Storage†	D Smaller EG*	D Larger EG**	D Smaller Storage*†	D Larger Storage**†	D Demand
Transmission residual	Generation (TGR)	✔		✔		✔		✔	
	Demand (TDR)		✔	✔	Paid††		Paid††	✔	✔
Distribution residual	Generation				Only EHV pay#	Only EHV pay#	Only EHV pay#	Only EHV pay#	
	Demand					✔	✔	✔	✔
Balancing	Generation	✔		✔		✔		✔	
	Demand		✔	✔	Paid		Paid	✔	✔

✔ - Pay the charge Paid - can get paid the inverse of the charge

* <100MW **>100MW

† - may be affected by ongoing storage modifications CMP280 & CMP281

†† - will be replaced by dedicated embedded export tariff following CMP264/5 WACM4 implementation

- Only those connected at EHV level pay distribution demand residuals. All others are exempt

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Our principles

Reducing harmful distortions	• Network costs should be recovered in ways that reduce distortions to decisions around efficient access and use of the network • Reducing harmful distortions helps promote effective competition for consumers by facilitating a level playing field
Fairness	• Avoid undue discrimination among network users due to the recovery of residual charges • We will give careful consideration to the impacts on vulnerable consumers • Fairness to investors or industry participants covered by our aim to be non-discriminatory
Proportionality and practical considerations	• Practical issues are key to assessment of new charging framework, including the availability of the required metering information, implementation cost and simplicity • We will consider whether transitional arrangements are justified

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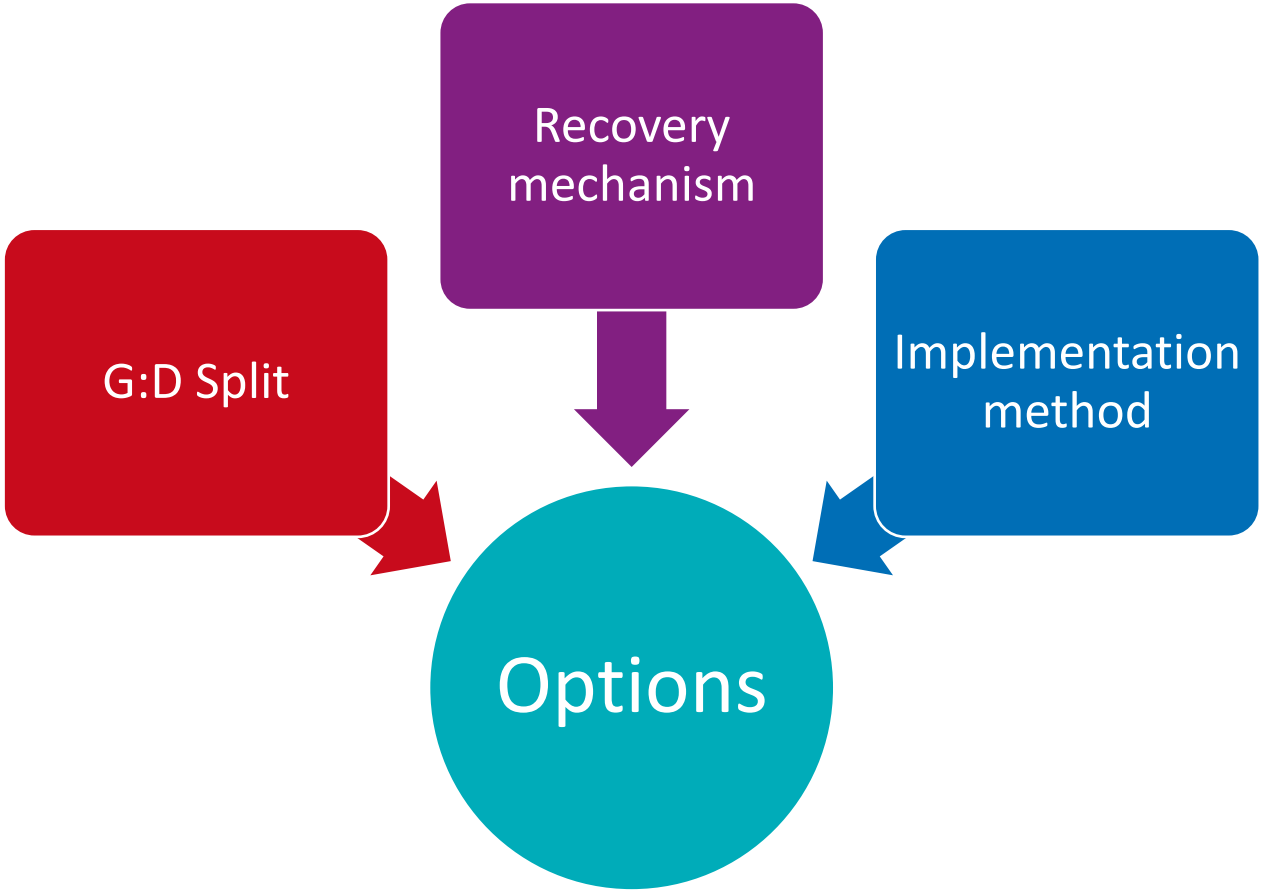
Our approach

There are 3 degrees of freedom when designing a residual charge



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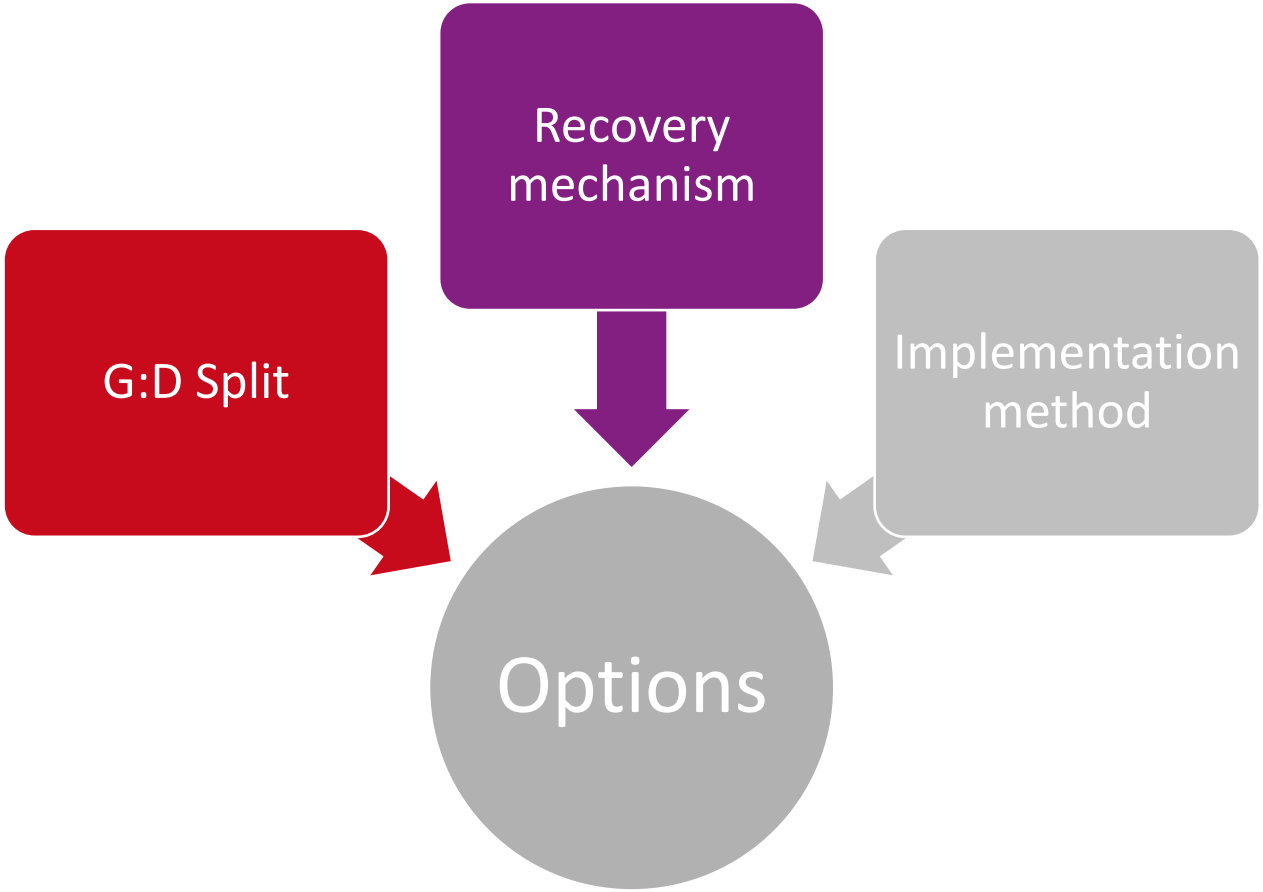

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Options for recovery

Who should pay?

Why charge generators

Advantages

> Generators **may not be able to pass through all network charges** in the short term if levied on a fixed/capacity basis, so consumers could realise some short term savings

Disadvantages

> Could **distort investment** decisions

> Could **distort dispatch** decisions

> Currently only TG, larger EG and extra high voltage connected generation are exposed to residual charges, **levying it on other EG would likely be difficult to implement**

> Potential to **disadvantage grid-connected generation vs on-site generation**

> Creates **disadvantage for GB generators** compared with interconnected generators who don't pay GB network charges

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Why charge final demand

Advantages

- Removes potential for distortions of generation investment and dispatch decisions
- Addresses the distortions that only some generation currently faces generation residual charges
- Consistent with removing intermediate demand charges from storage
- Similar to current arrangements, so **minimises disruption**
- **Tax efficiency theory**

Disadvantages

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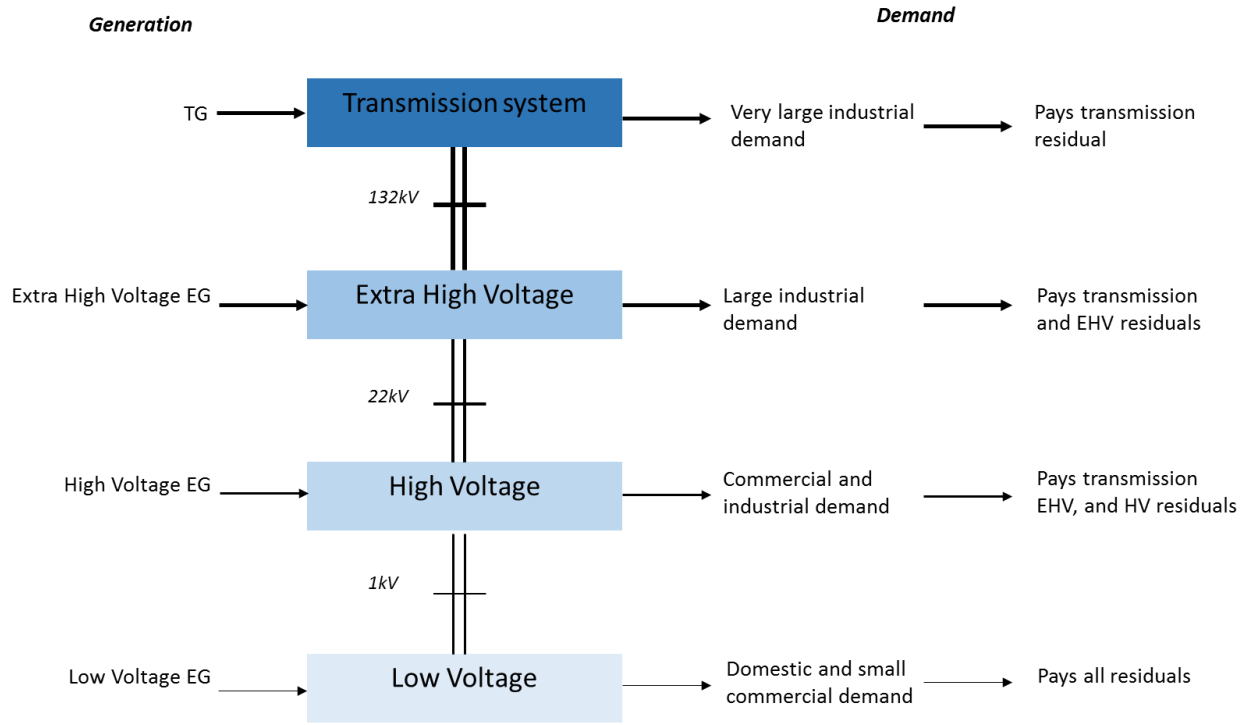
Voltage levels

Two key questions:

- whether the residual charges that a user faces should be linked to the voltage level to which that user is connected
- Are users more likely to be able to respond to residual charges, or if it would significantly increase incentives to reduce usage of the network, potentially increasing the burden of costs on other consumers



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Options for recovery

How should residuals be recovered?

Options considered

- Net volumetric demand charges
- Fixed charges (per user)
- Ex ante capacity demand charges
- Ex post capacity demand charges
- Gross consumption charges
- Net volumetric import and export charges
- Max import or export capacity charges

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Net (at meter) volumetric demand charges

- Could overly **incentivise load reduction** and mean that consumers ration their use of electricity networks beyond the extent to which it is efficient to do so.
  - This could be achieved through reduced end-consumption or use of on-site generation.
  - Technological developments are making it easier for some groups of users to reduce their loads. This goes against our objective of reducing distortions to efficient network use.
- Give **little incentive for users to disconnect entirely from the network**, because network users with on-site generation or storage can pay very little toward network costs, but still maintain a connection for backup, achieving a high level of reliability.
- **Straightforward to implement** and may work well in a hybrid form with fixed or capacity charges.

Our initial view is that net volumetric demand charges would not be appropriate as the sole approach to recovery of residual charges, as they send signals to network users that are likely to result in inefficient network use

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Fixed demand charges (per user)

- A simple fixed charge, per network user **should not distort user decisions**
- Could give an **increased incentive for inefficient grid** disconnection
- Key fairness consideration:
  - **Regressive effects** in design of the charging framework
  - **Perceptions**: Doesn't relate to ability to access or use then network, so may be considered unfair
- **Easy to implement,** hybrids and implementation could limit regressive effects

In summary: shortlist

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Ex ante capacity demand charges

- **Less distorting to operational decisions** around network use
- **Increase incentives** for inefficient grid disconnection
- Key fairness consideration:
  - Household consumers may see some **regressive distributional** effects
- Agreed capacity charges may **support efficient planning** of the network
- hybrids and implementation could limit regressive effects
- **In summary: shortlist**

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Ex post capacity demand charges

- **Less distorting to operational decisions** around network use, but potentially incentivises less than optimal capacity use
  - Residual charges do not relate to peak system use, but individual user peaks could be an option for recovering them. Our Electricity network access project will consider how to send cost reflective signals at peak
- Incentive for **inefficient disconnection low**
- There are implementation challenges
  - To achieve an ex-post capacity charge, a measure of peak use is required. As the residual component of the charges is not intended to reflect the costs imposed by individual network users, coincidence with system peak has limited benefits.
  - What if someone moves?
- Lower residual contributions for an initial block of capacity might be appropriate
- **In summary: shortlist**

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Gross volumetric consumption charges

- The term ‘gross charging’ is used to refer to different types of charging arrangements. We are defining this as true gross charging, where all of a user’s consumption is measured
- **Might not drive large responses to reduce charges**, as gross consumption is relatively price insensitive for most users
- Key fairness consideration:
  - Responses could be positive (energy efficiency) or negative for some users (not heating homes properly)
  - Many people may not find this option acceptable on principle
- **The practical challenge of this option is considerable**.
  - Would require a new metering approach, and changes to the parties that can access information from the meters
  - It would require considerable change in our approach to what happens on-site and be extremely challenging to monitor and ensure compliance
- **In summary: for business users – shortlist, for all others – take no further**

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Net volumetric import and export charges

- Net volumetric import and export charges are effectively set on the sum of net import and net export
- Has been proposed for the setting of overall network charges (cost reflective and cost recovery elements), rather than for residual/cost recovery charges alone
- Applied to residual charges it would incentivise some users to take action to adjust their network usage that would not be efficient in terms of overall system costs
- **In summary: take no further**

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Max peak import or export capacity charges

- Would **incentivise demand matching for onsite generation**
  - This could run counter to system needs, and could impact market flexibility
  - May lead prosumers to size any behind the meter assets simply to reduce their capacity requirements, leading to inefficient investment decisions
- **Challenging to implement** and would require a method of metering both maximum import and export us
- In principle, this would charge users a residual which was linked to their system requirements
- **In summary: take no further**

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Our shortlist

Fixed charges

- Based on a range of implementation options

Capacity demand charges

- Ex post
- Ex ante

Gross consumption charges

- For business consumers

Baseline arrangements

- For T and D charging

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Question time

- Of the shortlisted options, what is your initial lead?
  - Fixed charges
  - Ex ante capacity charges
  - Ex post capacity charges
  - Gross consumption
  - Baseline

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Assessment criteria

Approach to a principle driven assessment

Reducing harmful distortions

Applying the principle

- **distortions to the signals** created by the forward-looking charges (this may affect location of connection, and investment in, and use of, generation, storage or both)
- **distortions to competition** between network users

We will consider

- the degree to which a charge might vary depending on actions taken by users, including the likely cost of taking such an action and whether this would be outweighed by the reduction in charges
- whether the residual charge would affect incentives or prices for dispatch of generation (including storage) or DSR
- whether the residual charge would drive changes in investment, including investment to enable disconnection from the grid

Fairness

Our focus

- Focus on consumers, in particular financial vulnerability
- Distributional impacts
- Other network users coved by reducing harmful distortions principle
- Seek to avoid undue discrimination among network users and investors due to the recovery of residual charges

Our initial views

- Residual charges which do not provide undue advantages to any particular set of network users will best facilitate efficient use of the network
- To be accepted as fair, any differences in residual charges between users should have a clear reason
- An understandable link from those variances to the benefits the user receives from being connected to the network

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Practical considerations

Proportionality

- implementing changes in itself causes costs, and takes Ofgem and stakeholder resource away from other priorities. We will consider:
  - whether the impacts on some users, and the scale of work required to make changes, are justified by the likely reduction in distortions and the benefits of charges being set more fairly.

Predictability

- consider the case for transitional arrangements where changes for individual network users would be significant.
- We will only consider implementing transitional arrangements if clearly justified.

Practical considerations

- consider practicalities in designing a charging methodology, including the availability of the required metering information and simplicity.

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Practical considerations

Type of charge	Fixed	Gross consumption	Ex-post capacity	Ex-ante capacity
Metering	Can utilise current metering arrangements May require additional MPAN data access for National Grid	Requires additional metering (HH) to be installed for most users and for HH metering for all users	Can utilise the current HH metering for larger HH users but likely additional and HH metering required for household users	Can utilise the current HH metering for larger HH users but likely additional and HH metering required for household users
Data flows	HH data not necessarily required	Additional HH data collection and pass through required HH data accessibility a possible issue	Historical data available for some users. HH data required for smaller users unless profile used	Historical data and agreed capacity available for some larger users HH data required for smaller users, unless profile used. Accessibility to the HH data a possible issue
Cost	Likely lowest cost Can utilise current data, metering and systems	Likely highest cost due to additional metering and data collection required System and consumer cost	Dependent on smart meter roll out for household users Likely lower cost than gross metering Aggregating the data may have lower cost Historical data required for some users	Dependent on smart meter roll out for household users Likely lower cost than gross metering Aggregating the data may have lower cost Likely administration costs in agreement of capacity

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Question time

- Of the shortlisted options, which has the greatest implementation challenges?
  - Fixed charges
  - Ex ante capacity charges
  - Ex post capacity charges
  - Gross consumption
  - Baseline

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Quantitative assessment

Levels of analysis

Three levels of analysis

- What are the residual charges and associated incentives faced by individual users due to the existing arrangements, and how are they affected by a change in the method by which residual charges are collected?
- What aggregate (whole system) changes might be expected from a change to residual charges.
- Costs of change

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Whole system assessment

- the characteristics of the user group segments and their associated behavioural responses;
- the costs of technologies or behaviours that might be adopted to reduce exposure to residual charges, …
- … the increased or decreased costs of networks, generation or balancing that may arise from particular changes in user behaviour; and
- the approach by which we take account of other policy developments that may overlap, such as Ofgem's Electricity network access project or changes to the size or charging mechanisms of other costs recovered from energy users.

- … sensitivities

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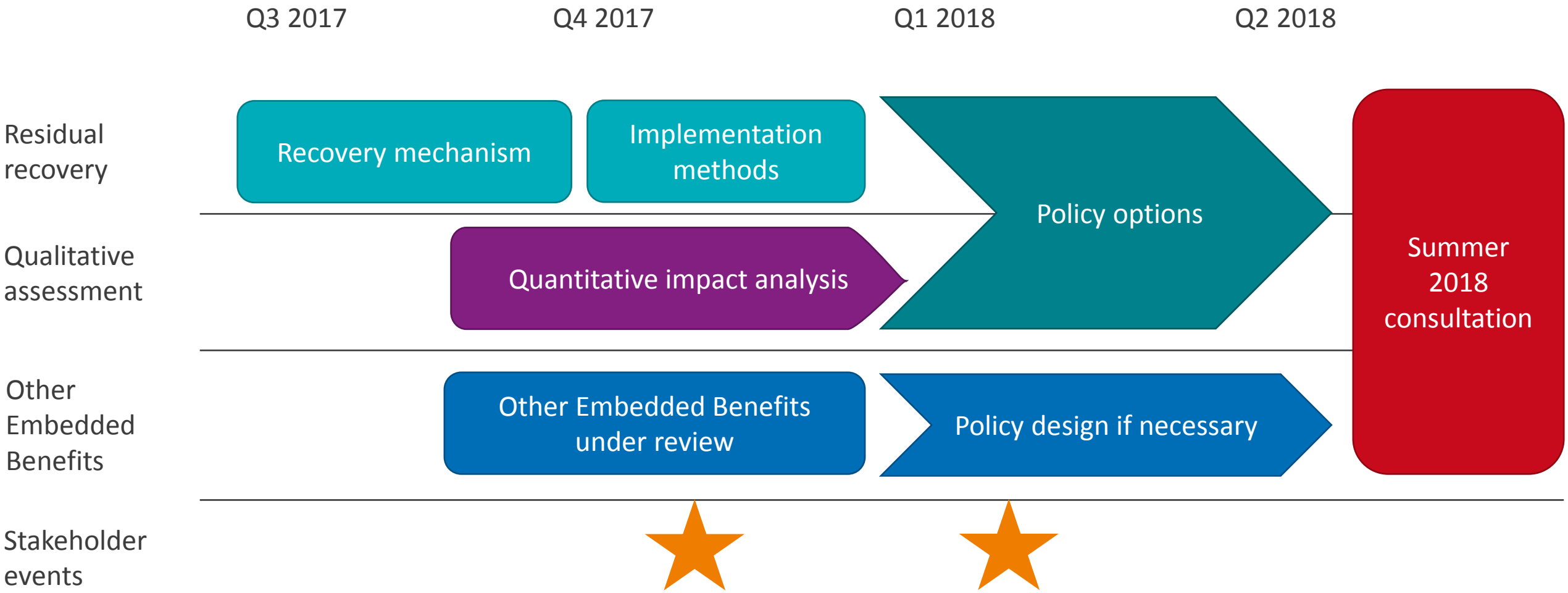
Next steps

Timeline



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Breakout sessions

- Initial views on the options
- Initial views on the practical considerations

- 10 mins on each and report back.

- Your initial views will help shape our sessions on the 15th and 30th

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Breakout Session 3:
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Coordination and process

How Charging Futures will consider proposed new work areas

Discussions at the Charging Futures Forum

- Presentations on existing work areas, and workshop/breakout sessions on specific topics
- The proposer of a new work areas (or new Task Force) to consider Coordination Guidance and can offer to present topic at CFF
- The proposer can be invited to present topic(s)
- CFF attendees will be able to discuss proposed new work areas or new Task Forces at the meeting (or afterwards)
- Lead Secretariat consolidates the views from the CFF into a summary document for Ofgem

For the first CFF, Ofgem will present proposed Task Forces to consider:

- Network access arrangements
- Arrangements for Forward-Looking charges

Ofgem will also seek views at the first CFF on recent industry reviews, and other emerging issues

Ofgem may direct new Task Force to be created, or new topic to be discussed at existing Task Force

With input from CFF, Ofgem will consider how the topic may fit with existing or new work:

- New TF created (for example to address a defect for T and D consistently)
- Combined with existing TF or other work (eg TCR SCR)
- Continue in open governance process, as a standalone change proposal

- Lead Secretariat to draft proposed ToR for Ofgem approval. May seek input from the CDB and/or others
- Lead Secretariat to invite nominations for Task Force Secretariat
- Lead Secretariat to ask for nominations for Task Force Members (and Task Force Chair if Ofgem will not chair Task Force)
- Ofgem to appoint Task Force Secretariat, Chair and members

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Task Forces

Ofgem agrees to the creation of a Task Force and appoints a Secretariat to support

- Task Force Secretariat to coordinate and support the work of the TF, and report progress and actions to the CFF and CDB
- Wider engagement of TF with CFF also supported by Lead Secretariat

Task Force make recommendations and present to the Forum

- The Task Force Chair will provide updates and recommendations to Ofgem and Charging Futures Forum, on behalf of the Task Force

Ofgem to decide on progression of Task Force

Ofgem will consider options including:

- Updates and/or open letters to industry and other stakeholders
- Ofgem consultation on launching an SCR
- Task force makes recommendations, completes work and is closed

The CDB will support Task Forces by coordinating and communicating each TF's work:

- provide advice and support to existing and new task forces on the coordination and implementation of changes
- consider delivery opportunities and challenges for options the TF is considering
- coordinate the work of Task Forces alongside other ongoing work on access and charging reform

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Reforming electricity charging together

Forum

Coffee break

15:10 – 15:40

Panel Q&A

Compered by Stefan Leedham – ElectraLink

Panel members

- **Compere - Stefan Leedham**: ElectraLink
- **Andy Burgess**: Ofgem
- **David Wildash**: National Grid, Electricity System Operator
- **Caroline Bragg**: Association for Decentralised Energy (ADE)
- **Stew Horne**: Citizens Advice

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Closing remarks

Frances Warburton - Ofgem

Objectives for the day

- **Learn** about Charging Futures, how it works and how you can best use it
- **Learn** about options for access and forward looking charges reform, and the Targeted Charging Review
- **Contribute** your thoughts on this work, next steps and how Charging Futures can work to achieve its aims
- **Ask** charging experts your questions

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Reforming electricity charging together

Forum

Thank you, and have a safe journey home