Charging Futures

Reforming electricity charging together

Forum

Charging Futures Forum

28 February 2018

Welcome

David Wildash, NG ESO - Lead Secretariat

Welcome

Andy Burgess, Ofgem - Forum Chair

Objectives for the day

- **Learn** about initial options on Access Rights and Forward Looking Charges from Task Forces
- **Learn** about how the wider landscape and developments in technology are relevant to charging and access reform.
- **Contribute** your thoughts on initial Access Rights and Forward Looking Charges options
- **Ask** your questions to Ofgem and Task Force members

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Agenda

- 10:00 – 10:05: **Welcome** – Andy Burgess, Ofgem
- 10:05 – 10:30: **Charging Futures: looking back and ahead**

  - Rob Marshall, NG Lead Sec & Judith Ross, Ofgem
- 10:30 – 10:50: **European policy and regulatory update and Q&A**

  - Andy Burgess, Ofgem
- **10:50 – 11:10: Coffee break**
- 11:10 – 11:30: **The consumer perspective in charging**

  - Stew Horne, Citizens Advice
- 11:30 – 12:10: **Industry panel and Q&A: Electric Vehicles and network charging**

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Agenda

- **12:10 – 13:00: Lunch**
- 13:00 – 13:20: **Introduction to Access and FL charges workshop**

  - Andy Burgess, Ofgem
- 13:20 – 14:50: **Break out session, large users**
- **14:50 – 15:10: Coffee break**
- 15:10 – 16:00 **Break out session, household & small users**
- 16:00 – 16:25: **Panel Q&A**
- 16:25: **Closing remarks** - Andy Burgess, Ofgem
- 16:30: **Forum ends**

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Ask your questions

Ask your questions

Submit questions for the Electric Vehicle panel

> Log in to www.sli.do

> Event code: **#EVPanel**

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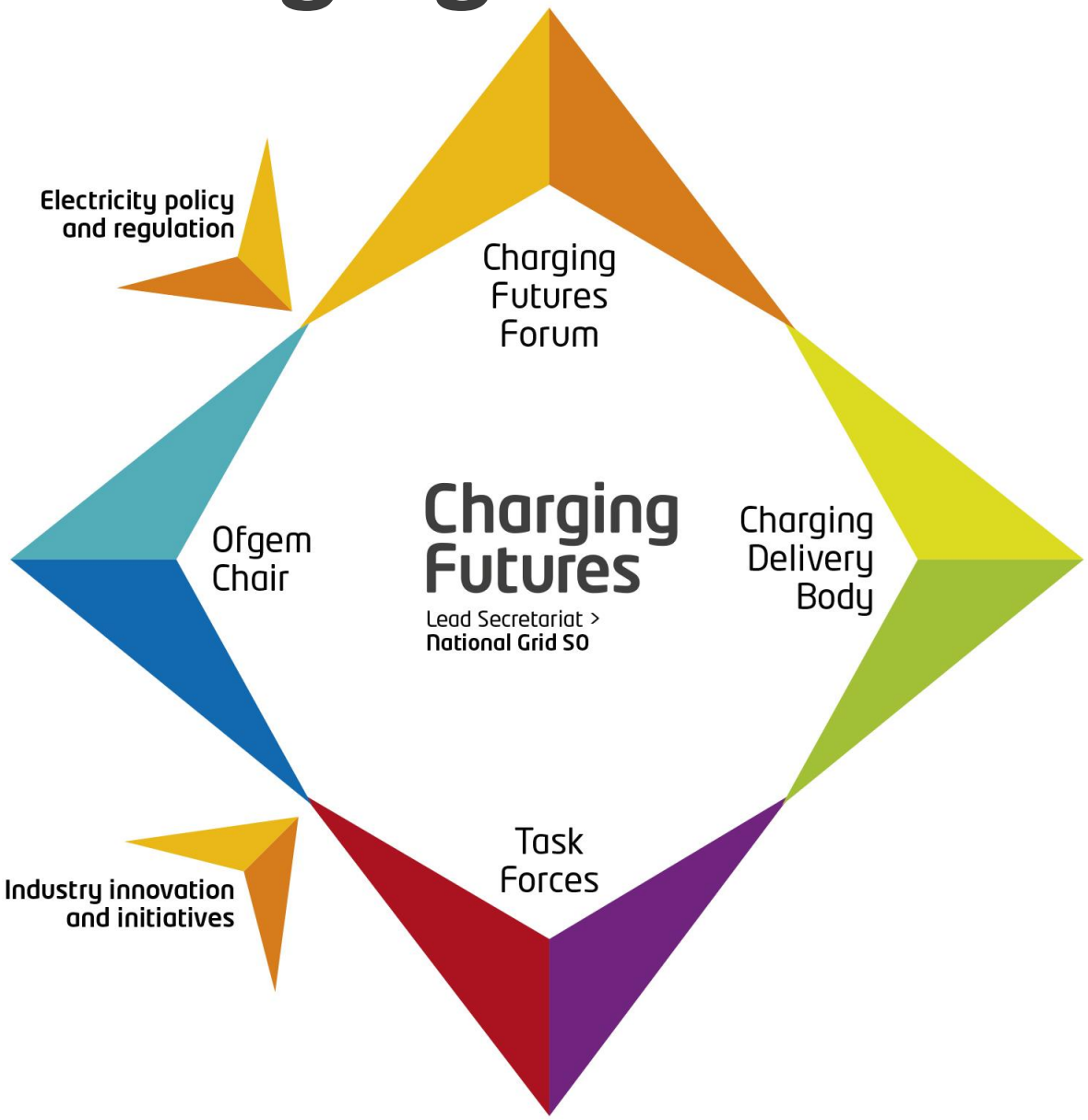
Charging Futures:
Looking back and looking ahead

Rob Marshall, NG ESO - Lead Secretariat

Judith Ross, Ofgem

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**

Your involvement

Learn

Ask

Contribute

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Areas you said we could improve

Briefing packs in advance of the forum

Papers published with enough time to digest

More domestic consumer presence

Make the process more accessible for those who are not charging experts

Clear updated timeline on the work which will be necessary

Keep stakeholders up to date

Needs smaller groups at forum for better debate

Time in forum for critical thinking

Less jargon

Ensure task forces have drive and are not a talking shop

Make the problems clearer

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Guidance Notes

Network charging arrangements can be a difficult topic to get your head around - especially with so much change in the industry.

So we have produced plain English guidance notes on **Access & Forward Looking Charges**, **BSUoS**, **Targeted Charging Review** and **Storage**.


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Access and Forward-looking charges

Summary note

January 2018

Purpose of this note

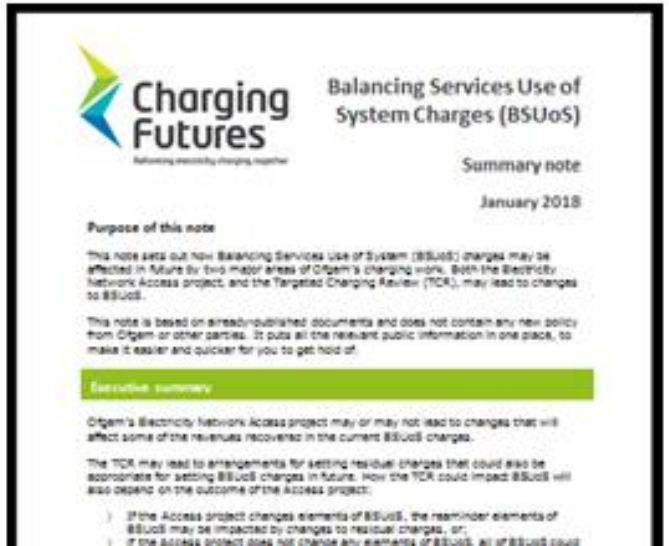
This is background information on Ofgem's Electricity Network Access project, summarising Ofgem's working paper on Access and Forward Looking Charges – which you can find here.

Two Charging Futures Task Forces have been set up to consider access arrangements, and forward-looking charges. You can find more information about those Task Forces here.

Executive summary

Ofgem are considering whether it would be in consumers' interests to change:

- the arrangements for how users gain the access they need to the network to either export or import power, including both the nature of their access rights and how they are obtained
- connection charges that are paid by new generation or demand connection to the transmission or distribution network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Balancing Services Use of System Charges (BSUoS)

Summary note

January 2018

Purpose of this note

This note sets out how Balancing Services Use of System (BSUoS) charges may be affected in future by two major areas of Ofgem's charging work. Both the Electricity Network Access project, and the Targeted Charging Review (TCR), may lead to changes to BSUoS.

This note is based on already-published documents and does not contain any new policy from Ofgem or other parties. It puts all the relevant public information in one place, to make it easier and quicker for you to get hold of.

Executive summary

Ofgem's Electricity Network Access project may or may not lead to changes that will affect some of the revenues recovered in the current BSUoS charges.

The TCR may lead to arrangements for setting residual charges that could also be appropriate for setting BSUoS charges in future. How the TCR could impact BSUoS will also depend on the outcome of the Access project:

- If the Access project changes elements of BSUoS, the remainder elements of BSUoS may be impacted by changes to residual charges, or;

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Webinars and Podcasts

You can also learn about today's charging and access arrangements and how they might change through our **new webinar series.** It currently covers:

Introduction to Electricity Distribution Charging
with SSE and WPD

Introduction to Transmission Charging
with National Grid's SO

Developments in electricity network charging
with Ofgem

We have also recorded a **podcast** to prepare you for the forum and will create one to summarise the day after the form for you to keep up to date.

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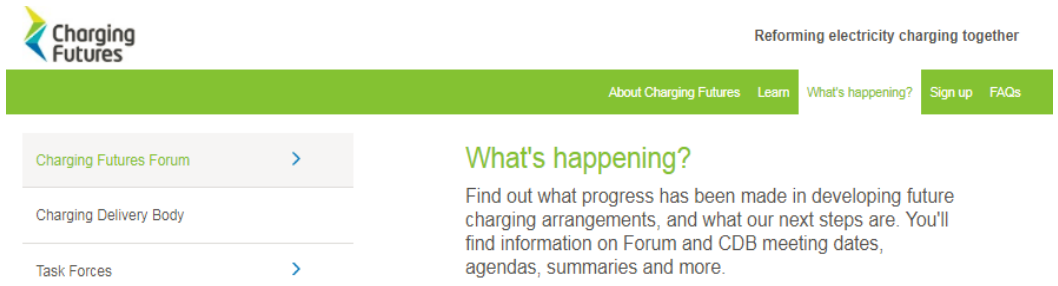
Website and communications

- All information is published, including minutes and materials for the Charging Delivery Body, Forum and Task Forces.
- Written in plain English

www.chargingfutures.com



- Keep you up to date through regular newsletters
- They signpost information that is useful and relevant to you

Jodie

Welcome and thank you for signing up to be part of Charging Futures.
Whether you are attending the Forum or just want to stay up to date, we

Plus many other areas of improvement…

TF Options Paper
Published documents further in advance of the forum

Domestic consumer representation
A focused session later this morning

Critical Debate
Workshops on the TCR and today on the Task Forces

Code mod tracker
All in flight **CUSC**, **BSC** and **DCUSA** mods relating to charging

Industry calendar
Charging Futures events and code panels

> Get in touch with any thoughts: chargingfutures@nationalgrid.com

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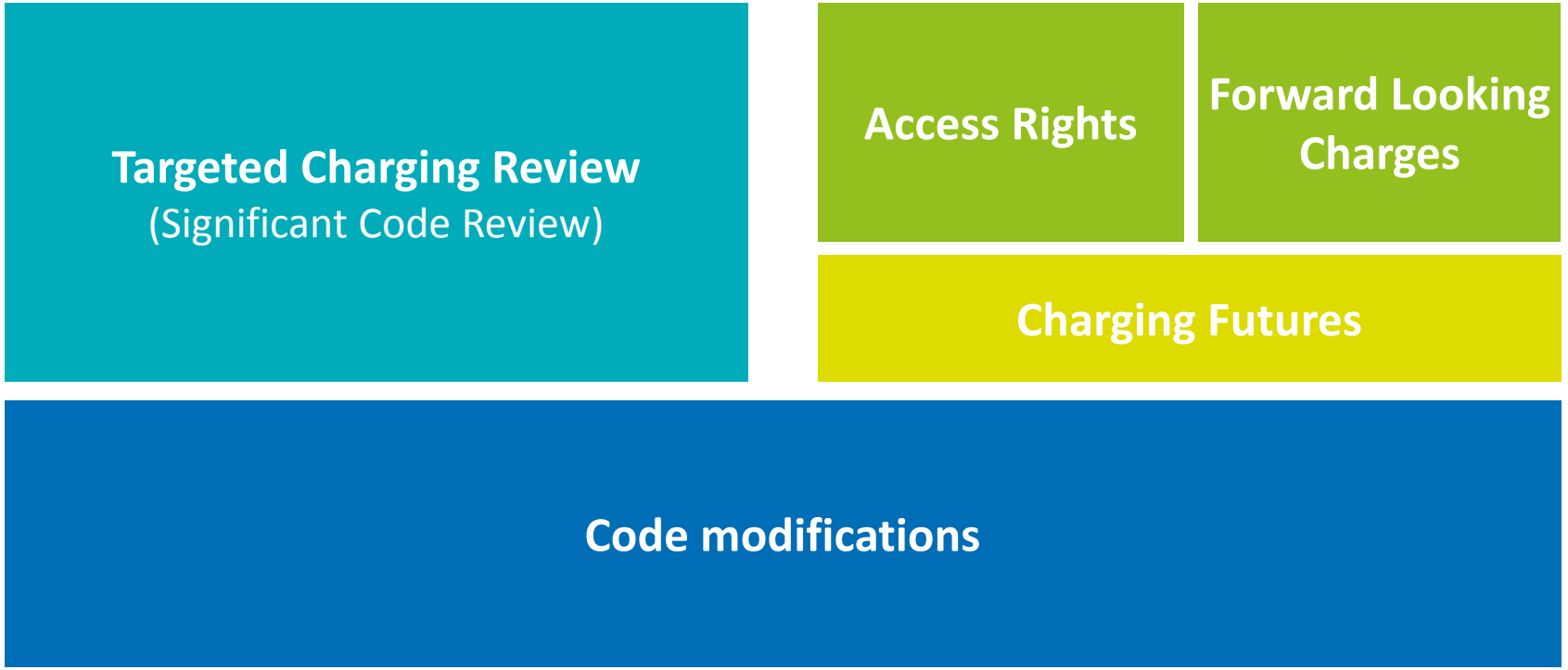
Overview of changes



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Targeted Charging Review update

- Stakeholder workshops held in London and Glasgow, November 2018
- Shortlist of options identified for further analysis

- Further workshops in spring to inform this analysis

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Next steps for the Significant Code Review

Now that we have developed a short-list of options, we are ready to move on to the next phase of the SCR which will mean further analytical work.

Three levels of analysis:

- What are the residual charges and associated incentives faced by different user types 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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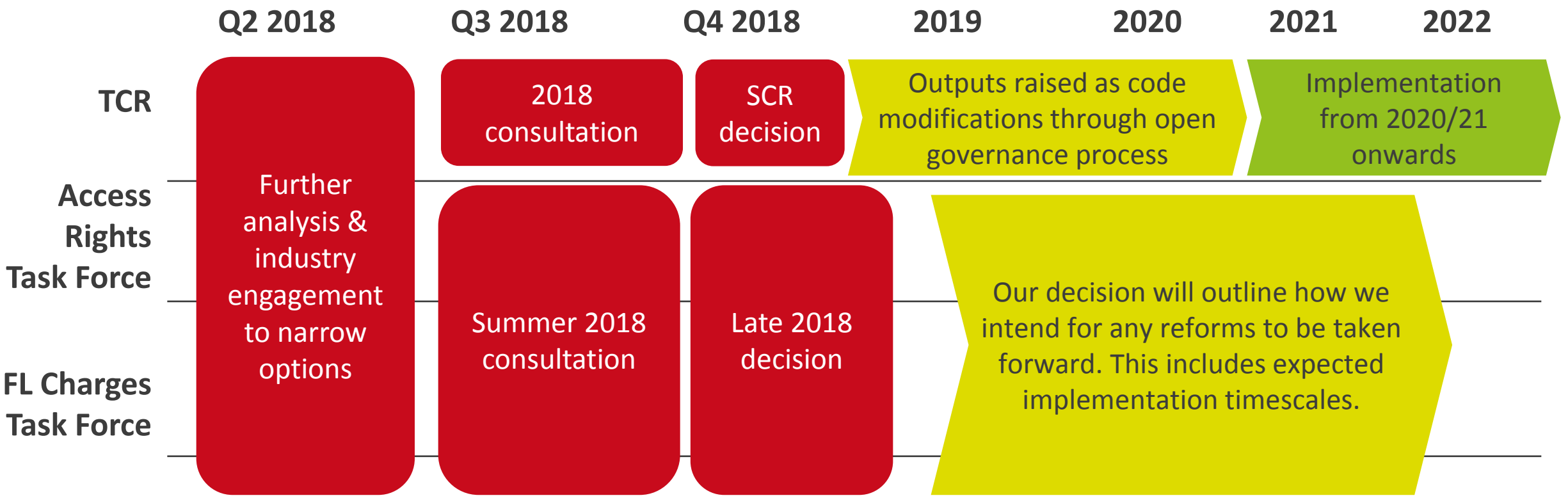
Timeline



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European policy and regulatory update

Andy Burgess, Ofgem

Does the European framework still matter?

- Still bound by existing legislation
- May need – and want – to implement new legislation
- Uncertainty about future, but still interconnected
- And UK businesses will trade in Europe and compare market and regulatory rules

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Clean Energy Package I

Major set of proposals for European energy markets:

> RES, CO2 & energy efficiency targets, Eco-design; Building efficiency; Bioenergy; Transport strategy; **Electricity market design changes**

> **11** pieces of legislation, **>70** documents, **>4,300** pages

> **Application to UK?**

> At least some elements of Package likely to have been agreed by March 2019

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Clean Energy Package II

Some Key Market Design Proposals:

- Detailed billing info & consumer right to smart meter & dynamic pricing contracts;
- 15 minute settlement for wholesale and smart metering
- Harmonising electricity transmission and distribution network tariffs
- New rules & Network Codes for flexibility market & distribution systems

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Clean Energy Package III

Some Key Market Design Proposals:

- Local energy
- ‘Regionalised’ Capacity Mechanisms
- Deeper regional TSO cooperation via ‘Regional Operational Centres’
- Changes to ACER governance & powers

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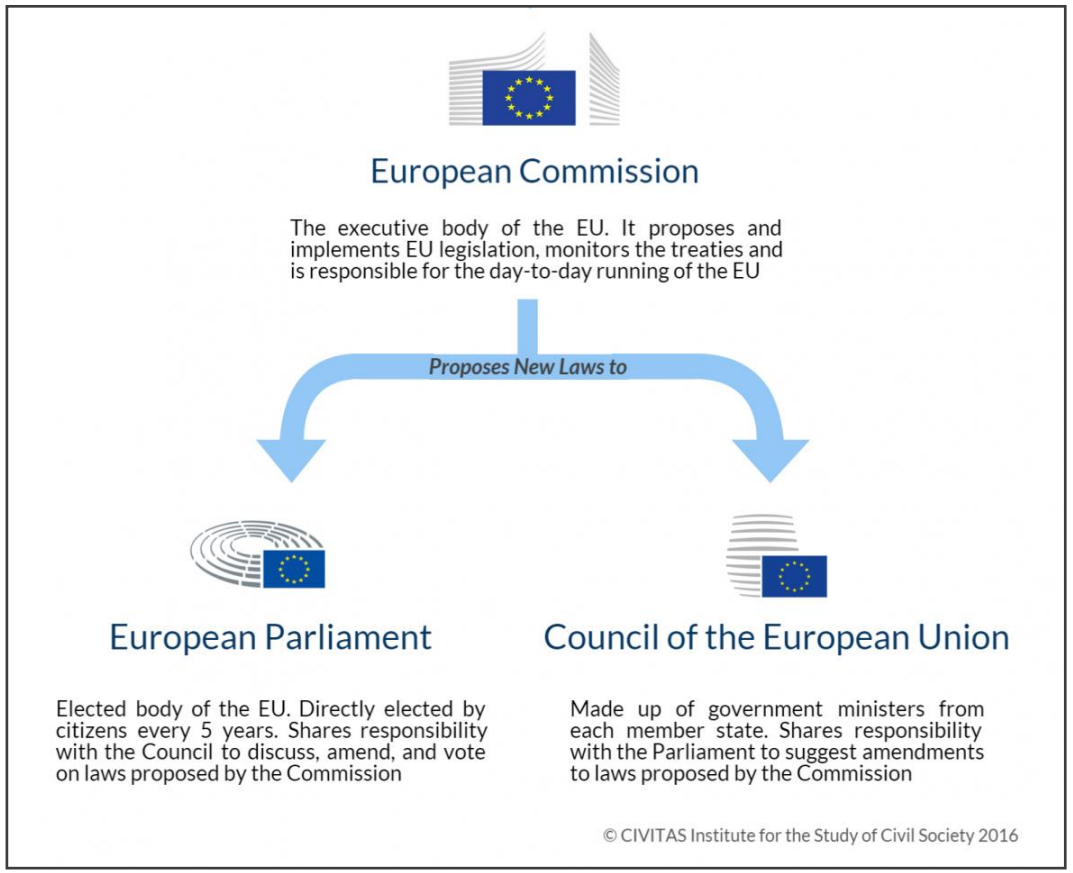
European Decision Making

3 European Institutions find agreement:

- External parties engage with process to effect change



CEER
Council of European Energy Regulators

ofgem
Making a positive difference for energy consumers

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Some of our priorities

- Ensure the continued ability to operate the ‘cap and floor’ interconnector regime
- Preserve 2/3 majority voting in ACER
- Push for national regulatory control of network tariffs
- Oppose new Network Codes on areas such as flexibility
- Ensure the continued use of 30-minute imbalance settlement periods
- Oppose the implementation of prescriptive retail market rules

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Relevant CEER work

- White papers on DSOs, Flexibility, local energy
- CEER Incentives paper, February 2018
- Consultation and workshop on Flexibility 2017-18
- Input to Commission's Smart Grid Task Force
- Workshops on distribution network tariffs (next in second half of 2018)

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Open Q&A

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Forum

Coffee break

10:50 – 11:10

Keeping the consumer at the heart of decision making

citizens advice

Stew Horne, Principal Policy Manager, Energy Regulation

About Citizens Advice

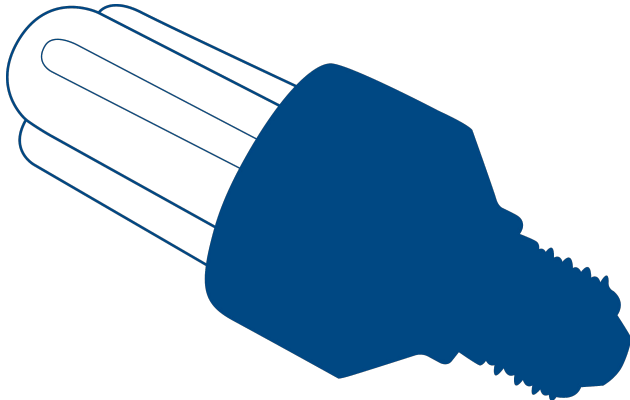
Citizens Advice and Citizens Advice Scotland represent consumers across essential regulated markets. We are the statutory consumer advocate for energy and postal services in Great Britain and for water in Scotland. We use compelling evidence and expert analysis to put consumer interests at the heart of policy-making and market behaviour. We have a number of responsibilities, including unique powers to require private and public bodies to disclose information.

We tackle issues that matter to consumers, working with people and a range of different organisations to champion creative solutions that make a difference to consumers' lives.

Our role

The Citizens Advice service:

- Provides energy consumers with accessible advice as well as help raising a complaint through our core channels of web, telephone and face to face
- Provides energy consumers with information enabling them make decisions about their supply and access specialist services
- Advocates on behalf of energy consumers to ensure regulation reflects how they actually think and behave



Who are consumers?

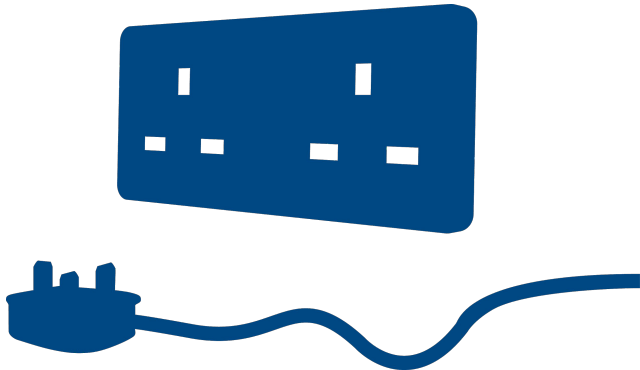
All of us.

- In 2016 the population of Great Britain was **63.7 million**, its largest ever.
- Great Britain's population is projected to continue growing, reaching over **70.5 million** by 2039.
- The population in the UK is getting older with 18% aged 65 and over and 2.4% aged 85 and over.
- In 2016, there were 285 people aged 65 and over for every 1,000 people aged 16 to 64 years ("traditional working age").
- Births are continuing to outnumber deaths and immigration continues to outnumber emigration, resulting in a growing population.

Source: Office for National Statistics

Consumers - Micro-business

- In 2017, there were 5.7 million businesses in the UK.
- Over 99% of businesses are Small or Medium Sized businesses – employing 0-249 people
- 5.5 million (96%) businesses were micro-businesses* – employing 0-9 people.
- Micro-businesses accounted for 33% of employment and 22% of turnover.



Source: Business Statistics - Commons Briefing papers SN06152

* This is not the definition normally used in the energy sector

UK population

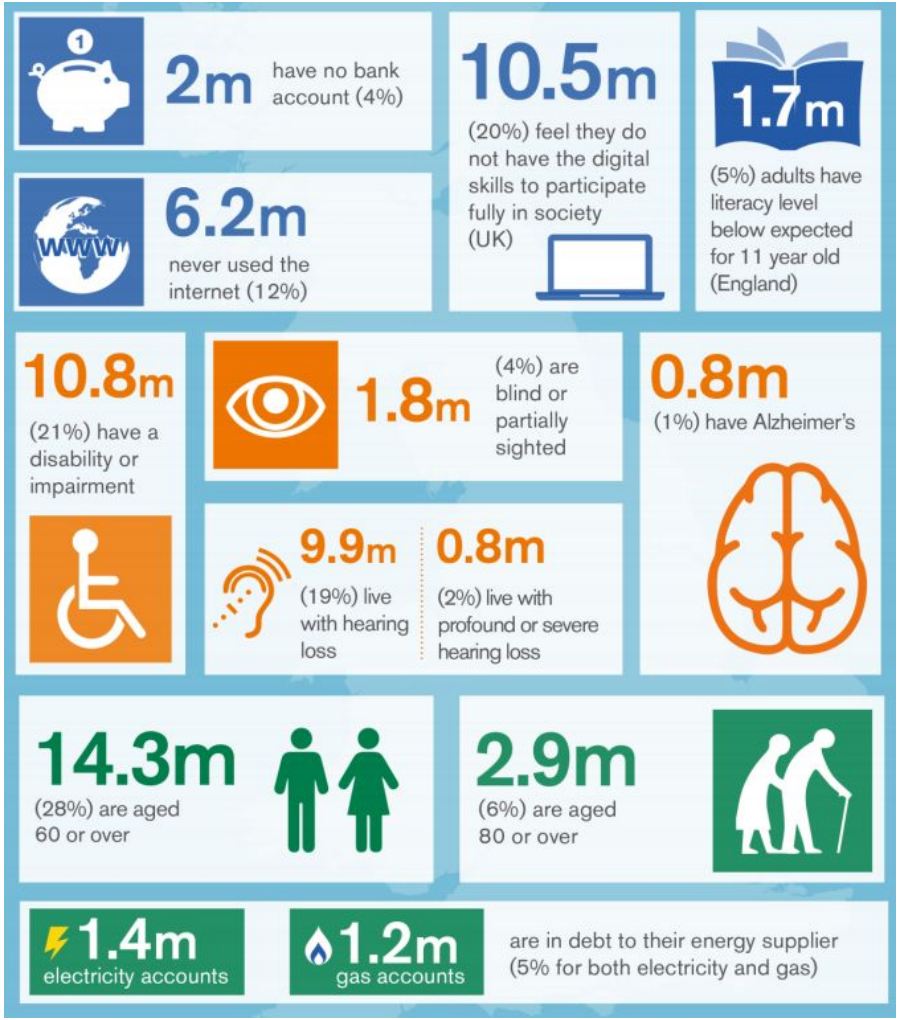
Age Distribution of the GB population, 1976 to 2046 (projected)				
Year	*0 to 15 years (%)*	*16 to 64 years (%)*	*Aged 65 and over (%)*	*UK Population*
1976	24.5	61.2	14.2	56,216,121
1986	20.5	64.1	15.4	56,683,835
1996	20.7	63.5	15.9	58,164,374
2006	19.2	64.9	15.9	60,827,067
2016	18.9	63.1	18.0	65,648,054
2026	18.8	60.7	20.5	69,843,515
2036	18.0	58.2	23.9	73,360,907
2046	17.7	57.7	24.7	76,342,235

Source: Office for National Statistics

Vulnerability in energy is complex

How will this change in a dynamic market?

- Don't have a smart meter/cant communicate?
- Don't have an electric vehicle/smart appliances?
- Can’t/won’t share data?



Source: [Consumer Vulnerability Strategy Progress Report 2015](), Ofgem

How do consumers behave?

Happy Shoppers enjoy shopping around in all markets, motivated by finding ways to save money. They are confident, trusting, engaged with the energy market and positive about switching.

Market Sceptics have very low levels of trust in energy companies and a lack of confidence engaging with the energy market. This contrasts with their relatively high levels of engagement in other markets, and average levels of general confidence and self-efficacy.

Anxious Avoiders have very low self-efficacy and lack confidence in shopping around generally and specifically in energy: reflected in low levels of engagement across all markets. They are far less likely to spend time researching purchases or finding ways to save money.

Savvy Searchers are highly confident and engaged across all markets, and broadly positive about energy switching. However, they are sceptical about the role of PCWs, often using more than one site to compare. Ultimately, they are confident they are on the right deal.

Hassle Haters are confident in their ability to engage in the market, and broadly trusting of suppliers. They are deterred, however, by the perceived time, hassle and risks involved. They feel they are on a good deal despite their lack of engagement but might be tempted by added-value services.

Contented Conformers are broadly happy with the status quo, trusting their supplier. They are nervous of change: worried by the risks of switching, unknown suppliers and overwhelmed with choice. They are the least confident engaging with the energy market and least motivated by saving money or value-added services.

Base: All respondents (4001)

Source: Consumer Engagement in the Energy Market 2017, Ofgem, GfK

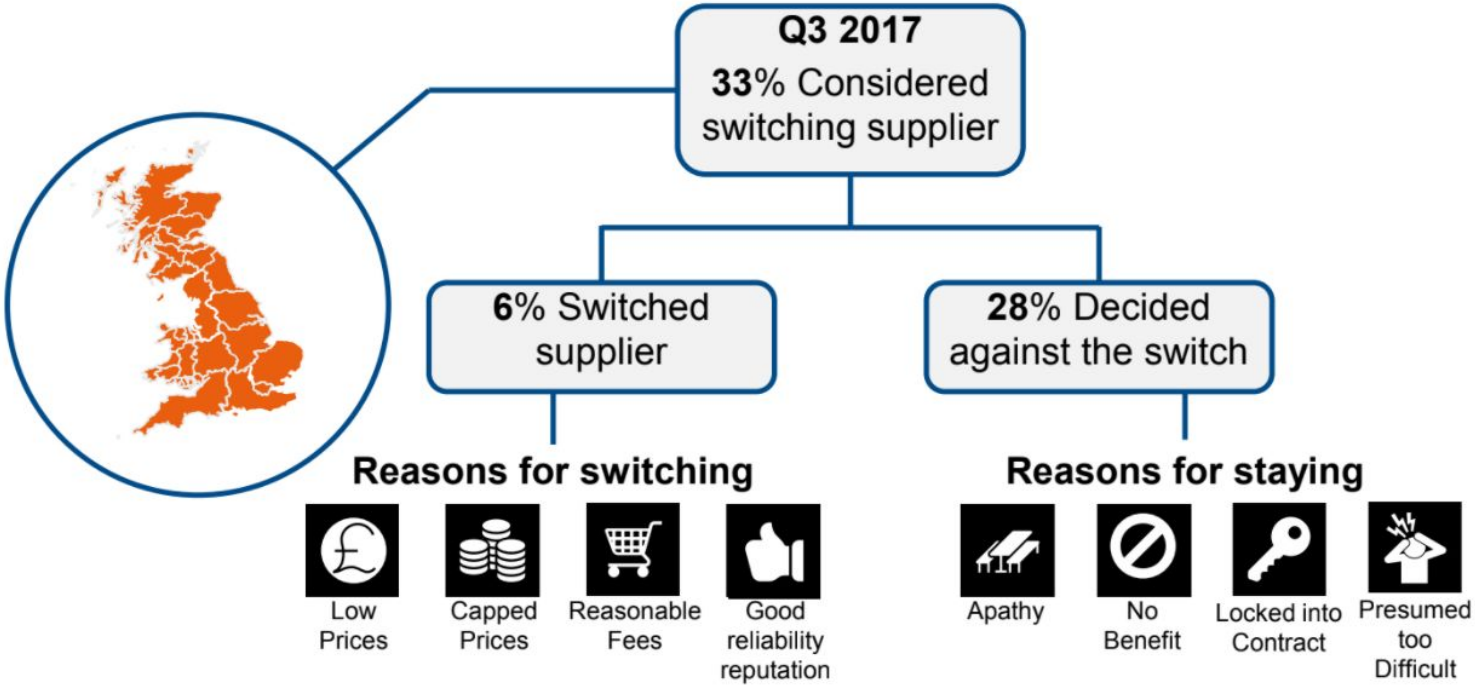
Consumer behaviour can have significant impacts

Figure 1. Extra costs faced by GB energy consumers

	Average annual cost	No. households affected	Total annual cost	Vulnerable groups affected in particular
Standard tariff/not switching[1]	£140	18.5 million	£2bn	Low income, low qualifications, elderly
Energy inefficient home[2]	£600	5.9 million	£3.5bn	Private renters (young, low income)
Higher energy needs (at home during day)[3]	£230	11.9 million	£3.5bn	Elderly, young children, disabled, low income
Barriers to using smart data[4]	£30-40	4 million	£140m	Elderly, no qualifications, long term illness
Significant peak-time consumption[5]	£30-40	2 million	£70m	Low income, families, pensioners

Source: Frozen Out, Citizens Advice, March 2017

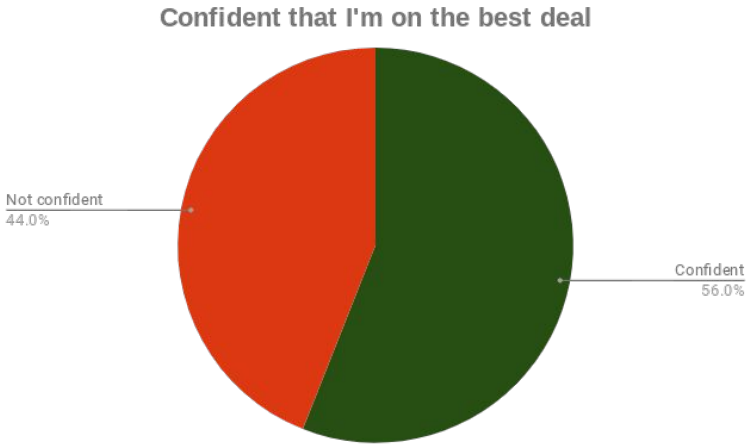
Switching and switch consideration

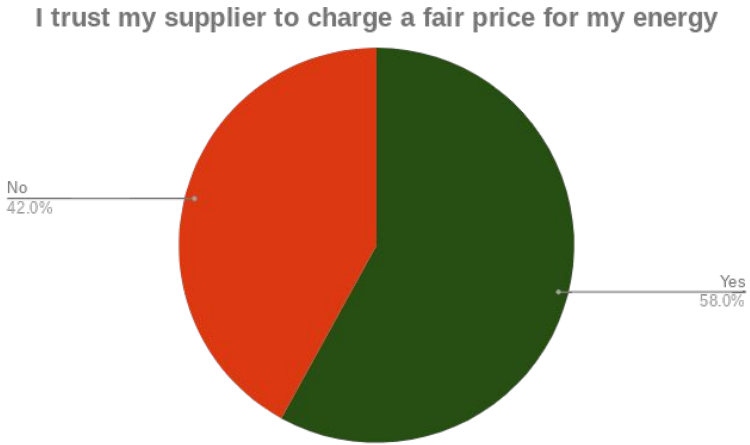


Bases: Total n=15227; Considered switching supplier n=2442 Note: Figures may not add up exactly, due to rounding

Source: GfK Energy360 report, Citizens Advice, 2017

Trust



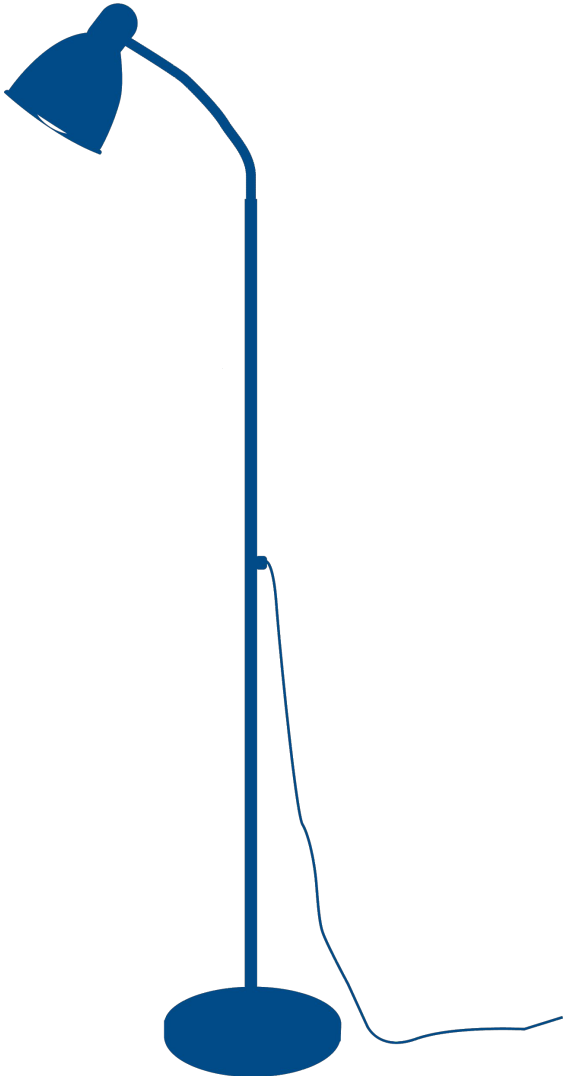


Source: Consumer Engagement in the Energy Market 2017, Ofgem, GfK

Top energy consumer issues

1. **Billing**
2. Debt/disconnections
3. Transfers
4. Pre-Payment Meters
5. Customer Service Failure
6. Smart meters
7. Marketing
8. Metering
9. Information
10. Distribution / Transportation

Source: Citizens Advice, February 2018



Case Study - debt and prepayment

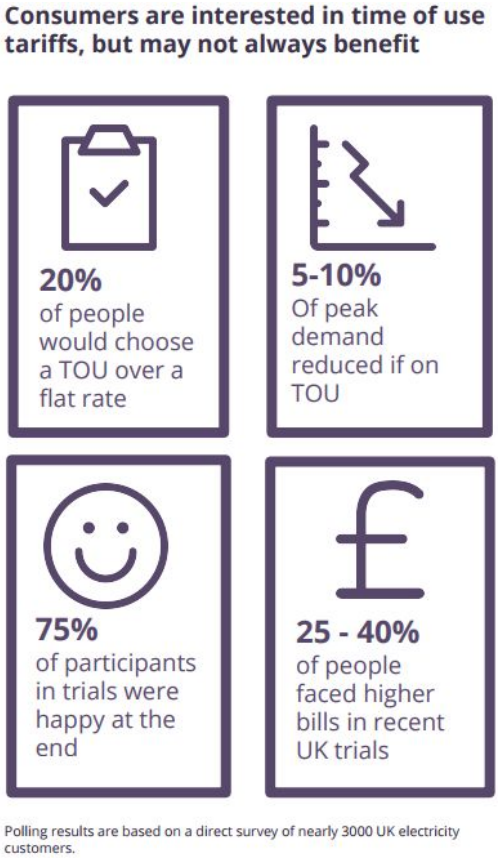
The consumer was struggling to pay for energy consumption at an all-electric property, and had accumulated a debt of £700. As a result she contacted her supplier and asked that a prepayment meter was fitted to help her budget as she was reliant only on her state pension. The consumer's daughter contacted the EHU after she had visited her mother unannounced and discovered that she was self-rationing her heating to stay warm. The consumer was adamant that she wanted the prepayment meter to remain as she didn't want her debt to increase again.

Source: Frozen Out, Citizens Advice, March 2017

Time of use tariffs

Consumers are interested in time of use tariffs

- But without electric heating and cars the value of time of use tariffs to the system is modest.
- Real time pricing could provide much more value when combined with automated controls
- Reductions in overall costs to the electricity system were similar for each of the tariff designs we tested under current generation and demand conditions
- Increases in renewable energy generation would not mean that the time of use tariffs in this study have significantly greater system value



Without electric heating and cars the value of time of use tariffs is modest

£19m a year

would be saved if static TOU tariffs were introduced under current trends.

This is an average saving of around £5 a year for households on time of use tariffs, if consumers captured all the savings.

This is based on 20% of people adopting a static TOU tariff and reducing their peak demand by 5%.

In practice, these savings would have to shared between suppliers, energy networks and consumers.

Consumers may not be able to accurately compare time of use tariffs

Consumers may be attracted by a cheap electricity rate or a tariff which appears 'fair', or transparent.

However, those cheap rates may only be available a few days a year, or consumers may not be able to move their demand.

A tariff with a cheap rate may end up more expensive.

A clear and available way to compare tariffs needs to be developed before they become widespread.

Vulnerable consumers may struggle to receive benefits from time of use tariffs

Younger & better off people show more preference for time of use tariffs.

Vulnerable consumers may not choose time of use tariffs or be able to purchase automated electrical equipment to reduce their bills.

Different vulnerabilities may help or hinder the ability to benefit from time of use tariffs.

Development of the tariffs should include explicit protection for vulnerable consumers to ensure they are not worse off than they currently are under flat tariff structures.

Source: The Value of Time of Use Tariffs (Summary), Citizens Advice, 2017

Data - what consumers say

- Transparency - want to know who's accessing our data and why
- Control - want to be able to choose who accesses our data and how they use it
- Keep it simple and accessible "Help us get on with the rest of our lives" (OPS manifesto)
- Amendable - want to be able to correct or update information
- Using a service doesn't always imply comfort with it - significant sense of unease in many cases
- Increasingly aware that their data has a value, not convinced that they see much of it
- Don't trust Ts & Cs "They know I won't read it or understand it if I do" (Smart and Clear)

Data - what this means for energy

- Consumers care about their data and their privacy and need advocates to help ensure they have it
- Consumers want many (though not all) of the new services that their data enables or catalyses
- There exists an asymmetry of both understanding and power between providers and consumers of data-derived services
- Trust is key - current methods (e.g. notice and consent model) not fit for purpose

Stew Horne, Principal Policy Manager, Energy Regulation
Stew.Horne@citizensadvice.org.uk
28th February 2018

Industry Panel: Electric vehicles and network charging

Chaired by Chris Brown, Ofgem

Go to sli.do

#EVPanel

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Lunch

12:10 – 13:00

Intro to Access and Forward Looking Charges workshop

Andy Burgess - Ofgem

Agenda

Overview of the Electricity Network Access Project	13:00 - 13:20
Linking the options for change – large users	13:20 - 14:50
Breakout	14:50 - 15:10
Linking the options for change – domestic/small users	15:10 - 16:00
Panel and Q+A	16:00 - 16:30

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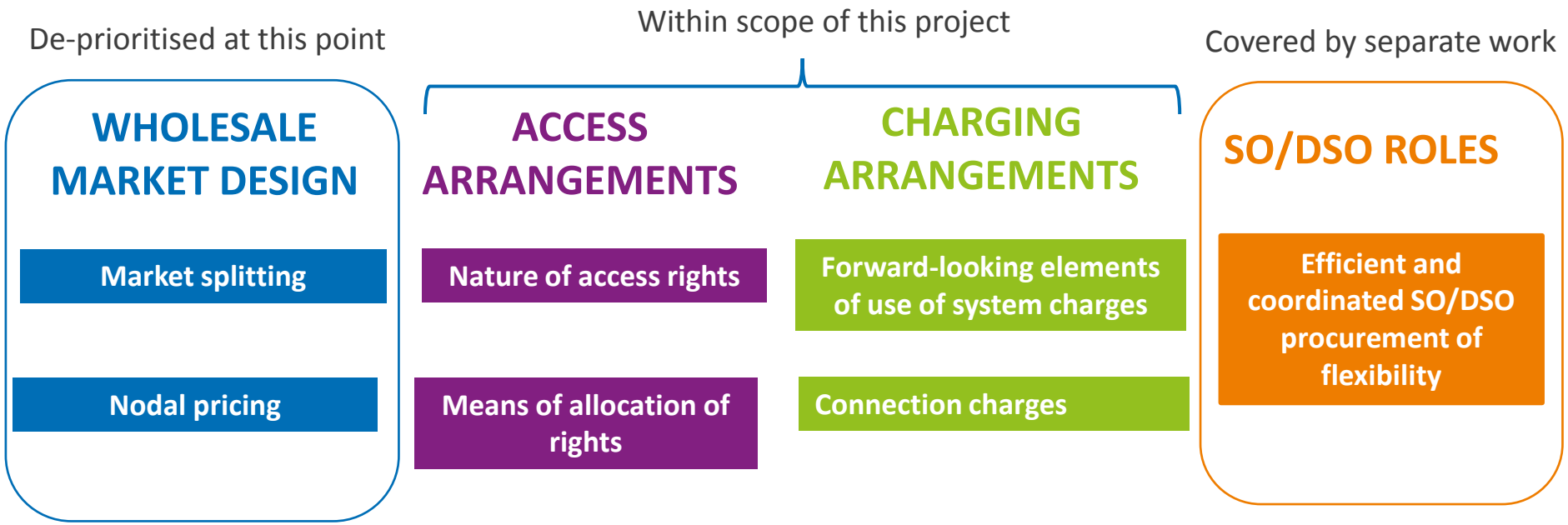
Overview

Electricity Network Access 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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What are Access Rights & Forward Looking Charges?

Network access rights

- The network capacity a user has allocated to them in order to import or export electricity.
- 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

Capacity vs usage charges

- Capacity 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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Why are we looking at this now?

Prospect of increased network constraints as use of the network changes

New opportunities from smart & flexible technology to better maximise network capacity

Growth of embedded generation – need for more consistency across Ttansmission & distribution

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Project timescales

- In **November 2017, we published a working paper** on ‘Reform of electricity network access and forward-looking charges
- We set up two industry **Task Forces** under the CFF to help assess the options for change.
- We anticipate **consulting on our initial proposal for reform, if needed, in summer 2018.** This consultation will consider the impact on network users and the potential implementation options.
- Following our summer 2018 consultation, we envisage setting out our proposed **next steps later in 2018**

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Desirable features and current issues

Desirable features	Current issues
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.
Network capacity **allocated in accordance with users' needs**	Access is typically allocated first come first served, rather than value placed on access. Users have limited choice in the types of access product.
Users face **cost-reflective charges**	Concerns that charging models may not reflect adequately reflect costs (eg no locational signals at CDCM or BSUoS).
Arrangements **support competition** by providing a **level playing field**	Arrangement vary across the system (eg voltage). Some of these differences may be causing distortions.
Signals are sufficiently **simple, transparent and predictable**	Concerns that some charges (eg EDCM and BSUoS) are variable and hard to predict.
Arrangements provide for **appropriate allocation of risks**	Concerns about apportionment of risk. At transmission, limited ongoing security requirements. At distribution, network users bear curtailment risk.
Arrangements support **timely and efficient network investment**	Arrangements provide generally provide poor signals for future network investment.

Materiality of issues

We have commissioned Baringa to develop and implement an analytical framework and gather evidence to assess the materiality of current inefficiencies and then assess options for reform.

This work will be split into two phases:

- **Phase 1 (January – March)**
  - Identify inefficiencies and assess which have the potential to have the largest impact on existing and future consumers
- **Potential phase 2 (April – June, tbd)**
  - Assess the costs and benefits of different policy options prioritised by Ofgem
- If you have any relevant evidence to support the materiality assessment – please send it to Baringa. Contact: Nick.Screen@baringa.com

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Role of the Task Forces

Purpose of the TFs

We want to gain industry expertise to develop options that support the efficient use of network capacity. The outputs of the TFs will help inform our thinking.

- **Access Task Force** – helping develop a clearer view of what changes to network access arrangements could drive benefits to consumers and key challenges to be worked through.
- **Forward-looking charges Task Force** – helping to clarify what changes to the forward-looking element of network charges could drive benefits to consumers, including considering what changes would need to be made in light of any changes to access arrangements.

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Task Force Outputs

The key outputs that we want the TF to develop are:

Date	Task
Dec 17/Jan 18	Produce a document identifying the initial options agreed for further assessment.
Feb/March 18	Produce a document assessing each of the detailed options, based on the agreed assessment criteria.
April/May 18	Produce a report outlining the TF's conclusions on what changes should be taken forward.

- **The TFs have produced their first report** – it is available on the charging future website. The options build upon the building blocks identified in our Nov paper.
- The TFs are currently **working to identify how the options fit together**. The presentation this afternoon will outline initial views on this.
- Over the next few months the TFs will be **focused on delivering the next two outputs**.
- **To keep up-to-date** go on the charging future website or engage with TF Members or the TF Secretariat.

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TF Initial options for reform

Here is a summary of the initial options for reform that were identified:

Network access arrangements		Forward looking network charges	
Nature of access rights	Lifespan of access	**Structure of the charge**	Basis of the charge (fixed vs capacity vs volumetric)
	Time of Use Access		User segmentation
	Firmness		Connection depth
	Depth of Access		Ex ante or ex post
	Volumetric Access		Timing of payment and degree of user commitment
	Associated conditions of access (eg unused capacity)	**Location and temporal signals**	Locational signals
Allocation and reallocation	Initial allocation		Temporal signals
	Reallocation and trading (both medium/long term and near real-time)		Calculation of signals (ie cost models)

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Ask your questions

Submit questions for afternoon Q&A

on Access and Forward Looking Charges:

> Log on to www.sli.do

> Event code: **#chargingfutures**

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Access and Forward Looking Charges Breakout

Group 1: Smile 1&2
Group 2: Smile 3&4

Linking the options together - large users

Potential scenarios for larger users

High emphasis on auctions/trading

Access choices are well-defined (including being financially firm)

They are purchased via auctions, with scope for re-sale.

Charging models still used to set robust reserve prices, with potential changes to **ensure they reflect differential value of access adequately.**

High emphasis on access right choices

Access rights are granted broadly on a **first come first served basis.**

There is a **range of choice** around type of access to maximise use of capacity.

Capacity charges reflect impact of different choices on network costs.

Non-firm holders can trade curtailment obligations through a market-based mechanism.

High emphasis on better usage charges

Limited changes to access, with **reliance on usage charges.**

Most charges focused on **usage at system peaks.** Could include more **locational charging** (eg for constraint costs.)

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Cross cutting building blocks

High emphasis on auctions/trading	High emphasis on access right choices	High emphasis on better usage charges
User segmentation		
Connection boundary		
Conditions of access (eg unused capacity)		
Range of access products		
	Method of initial allocation	
Re-allocation of access rights		
Operational costs		
Timing of payment and degree of user commitment		
These issues could also cut across auctions, depending on the need for charging models (e.g. reserve price)	**Tariff design (ex ante vs ex post, capacity vs volumetric)**	
	Temporal signals	
	Locational signals	
	Charging model design and assumptions	

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Assessment criteria

Desirable
Consumers' **requirements are met efficiently**, as appropriate for an **essential service**
Network capacity **allocated in accordance with users' needs**
Users face **cost-reflective charges**
Arrangements **support competition** by providing a **level playing field**
Signals are sufficiently **simple, transparent and predictable**
Arrangements provide for **appropriate allocation of risks**
Arrangements support **timely and efficient network investment**
Be practical
Be proportionate

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Scenario 1 – key features

Access	Key features	Key sub-choices
Access choices	• **Clearly defined choices**. • **More standardised options, less choice** than scenario 2.	• Option about type of access choices available.
Allocation and re-allocation	• **Auctions and high levels of trading.**	• Form of auctions • Scope of auctions • Condition of access

Forward looking charges	Key features	Key sub-choices
Structure of charges	• **Value driven by auctions**. • Reinforcement costs recovered via auction.	• Potential **reserve prices driven by charging model**. This includes many sub-options.
Locational and temporal signals.		

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Scenario 1 – key considerations

- Is this the most economically efficient way of allocating capacity?
- Does the “value” that a party places on access always reflect their “need” for access?
- What “product” is being auctioned?
- How easy would it be to design and implement an auction?
- Are all parties able to compete in an auction on a level playing field?
- Could auctions provide signals and revenue for network operators to invest in the network?
- How predictable are charges from auctions?
- Would auctions work in unconstrained parts of the network?
- How would any reserve price be calculated?

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Potential scenarios for larger users

High emphasis on auctions/trading	High emphasis on access right choices	High emphasis on better usage charges
Access products are well-defined (including being financially firm) **They are purchased via auctions**, with scope for re-sale. **Charging models still used to set robust reserve prices,** with potential changes to **ensure they reflect differential value of access adequately.**	Access rights are granted broadly on a **first come first served basis.** There is a **range of choice** around type of access to maximise use of capacity. **Capacity charges** reflect impact of different choices on network costs. **Non-firm holders can trade curtailment obligations** through a market-based mechanism.	**Limited changes to access,** with **reliance on usage charges.** Most charges focused on **usage at system peaks.** Could include more **locational charging** (eg for constraint costs.)

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Scenario 2 – key features

Access	Key features	Key sub-choices
Access choices	• **Users have a range of access choices** (eg depth, lifespan, firmness, time of use).	• Option about type of access choices available.
Allocation and re-allocation	• **First come, first served retained** (with improvements). • Focus on **reallocation mechanisms** (eg trade access or constraint obligations, extend BM)	• Options for different types of reallocation mechanisms.

Forward looking choices	Key features	Key sub-choices
Structure of Charge	• Stronger focus on **capacity based charges.** • Charges need to **reflect different access choices.**	
Location and temporal signals	• Charge need to **reflect different access choices.**	

Key considerations

- Would a greater range of access choices be beneficial for network users?
- How would choices on the “depth” of access work?
- Could auctions have a role in the reallocation of access in operational timeframes?
- Does this approach lead to more consistent access choices across distribution and transmission?
- Does this approach provide a clear signal for network operators to invest?
- How easy would this approach be to implement?
- What impact would this approach have on charges (eg connection depth)?
- Would this approach provide more predictable charges?

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Potential scenarios for larger users

High emphasis on auctions/trading	High emphasis on access right choices	High emphasis on better usage charges
Access products are well-defined (including being financially firm) **They are purchased via auctions**, with scope for re-sale. **Charging models still used to set robust reserve prices,** with potential changes to **ensure they reflect differential value of access adequately.**	Access rights are granted broadly on a **first come first served basis.** There is a **range of choice** around type of access to maximise use of capacity. **Capacity charges** reflect impact of different choices on network costs. **Non-firm holders can trade curtailment obligations** through a market-based mechanism.	**Limited changes to access,** with **reliance on usage charges.** Most charges focused on **usage at system peaks.** Could include more **locational charging** (eg for constraint costs.)

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Scenario 3 – key features

Access	Key features	Key sub-choices
Access choices	• **No change to existing access choices.** • Differences in access choices remain at tx and dx**.**	
Allocation and re-allocation	• **First come, first served retained** (and improved) • No change to existing approaches to reallocation. • Focus on **conditions of access**.	• Options to improve conditions of access.

Forward looking choices	Key features	Key sub-choices
Structure of charges	• Stronger focus on **usage charges**	• Options charges are sent ex post or ex ante.
Locational and temporal signals.	• **Stronger focus on locational and temporal signals.** • Locational charging of constraint costs.	• How to implement stronger locational and temporal signals. • Options whether signals are dynamic.

Scenario 3 – key considerations

> What changes would be required to the charging methodologies to send more cost reflective signals?

> How volatile or predictable would these charges be?

> Do usage charges provide a clear signal for network operators to invest?

> How easy would this approach be to implement?

> Can a network operator send locational UoS signals at LV?

> Would charges be set ex post or ex ante? Would they be static or dynamic?

> Would usage charges provide network users with more flexibility (less focus on identifying requirements upfront)?

> What impact would this scenario have on user commitment arrangements?

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Menti questions

Questions –

- Are there any additional key features or sub-choices of scenario 1? (8 mins)
- What are the advantages/disadvantages of scenario 1? (12 mins)

- Are there any additional key features of sub-choices of scenario 2? (8 mins)
- What are the advantages/disadvantages of scenario 2? (12 mins)

- Are there any additional key features of sub-choices of scenario 3? (8 mins)
- What are the advantages/disadvantages of scenario 3? (12 mins)

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Coffee break

Linking the options together - Domestic households/small users

Diversity of domestic users

I am struggling to pay my electricity bills. I don't understand how to manage my usage.

I want to be able to use electricity whenever I want. I don't care about the cost.

I am dependent on electricity for my dialysis machine.

I am willing to be flexible about my usage to reduce my electricity bills.

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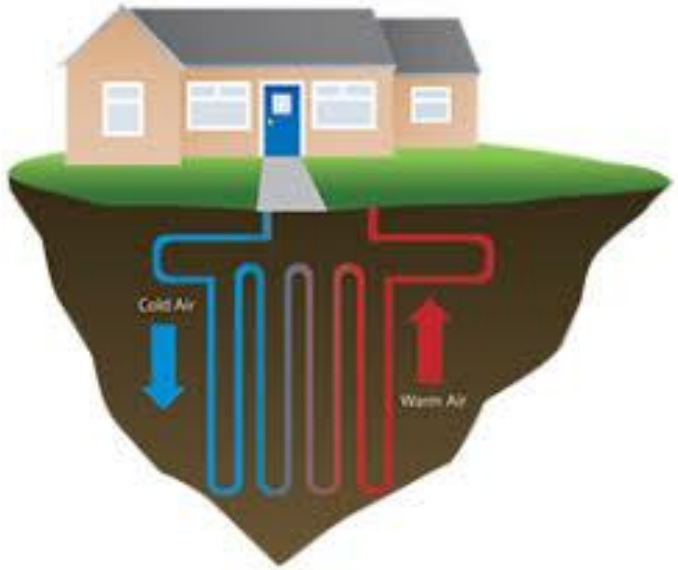
Domestic usage



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Current arrangements

How do we currently treat domestic users?

- **Access arrangements**
  - No clearly defined level of capacity.
- **Charging arrangements**
  - No locational signals in use of system charges for any customers connected at low-voltage.
  - Socialisation of reinforcement costs triggered by low-carbon technologies.

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As domestic energy usage changes, how do we encourage optimal use?

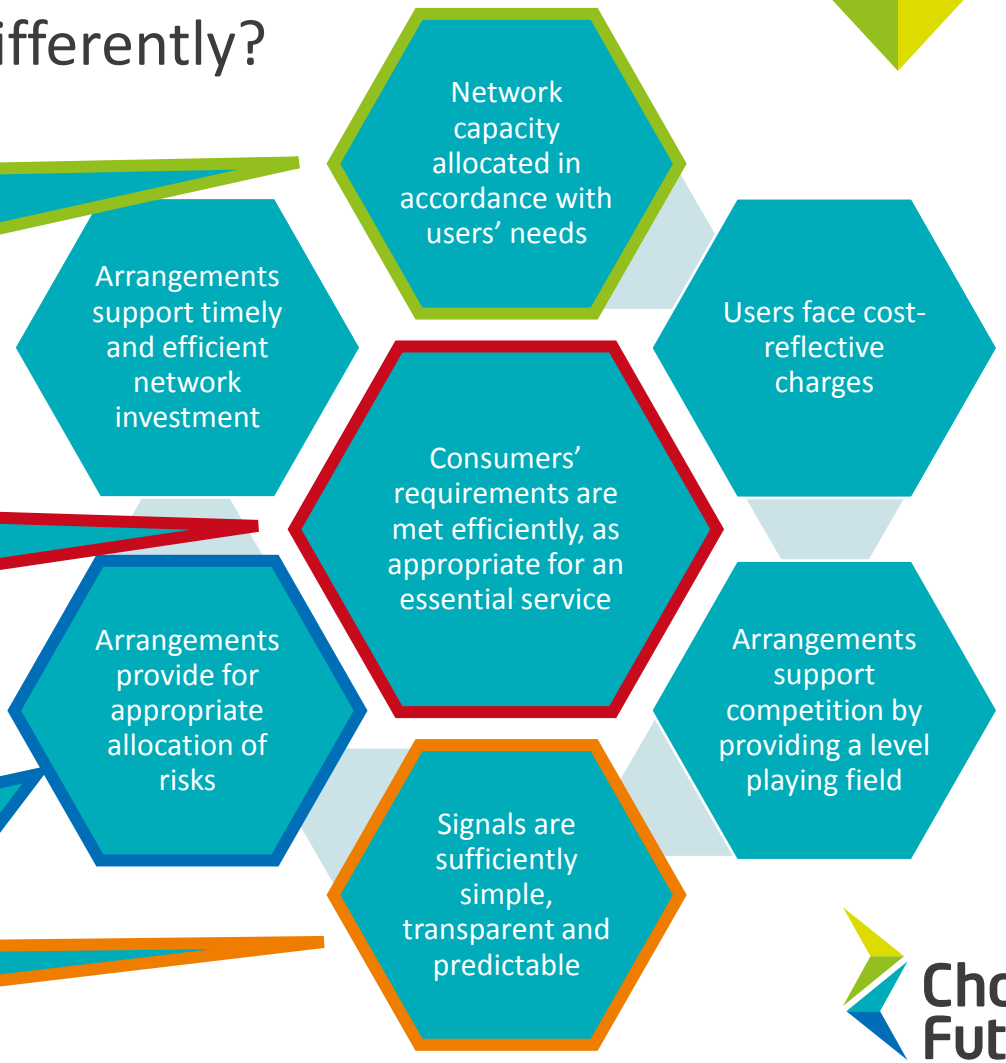
> Should we treat this customer group differently?

There are potential differences between a domestic user's needs, the cost of meeting these needs and the relative value that users are able to place on the available capacity.

Domestic User requirements consist of things which are absolutely necessary: lighting, cooking and (possibly) heating

Particularly at a domestic level, network reinforcements consider the cumulative effect of many users. An individual user will have limited ability to manage this risk

Domestic Users may be less able to predict complex charging models than other users.



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Should we treat domestic and small non-domestic user differently?

Is it appropriate to treat domestic and small non-domestic differently?

If so, how would define the threshold?

- Usage
- Size of non-domestic?
- Are there existing definitions, that we could use? (eg “micro-business”)

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Options for change

High emphasis on auctions/trading

High emphasis on access right choices

High emphasis on better usage charges

Can we define a core level of capacity?

No → Rely on charges

Yes

Yes

Supplier auctions and trades access on behalf of customer.

Supplier provides alternative access (eg batteries) or compensation if it fails to win access.

Define a core level of capacity for each domestic user.

Above the core level of capacity:

i) **charges provide locational and time-of-use signals,** or

ii) **additional access choices available.**

i) **Rely on usage charges** to signal efficient network usage - introduce locational UoS signals to low voltage networks users

Or

i) Remove socialisation of reinforcement costs for low-carbon technologies (ie SLC 13), so they **trigger a new connection charge**

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Assessment criteria

Desirable
Consumers' requirements are met efficiently, as appropriate for an essential service
Network capacity allocated in accordance with users' needs
Users face cost-reflective charges
Arrangements support competition by providing a level playing field
Signals are sufficiently simple, transparent and predictable
Arrangements provide for appropriate allocation of risks
Arrangements support timely and efficient network investment
Be practical
Be proportionate

Key considerations?

- Should we treat domestic and small non-domestic users differently? If so, what should the threshold be?
- Is there any scope for auctions to work for users with essential service requirements?
- Can we define a core level of capacity? If so, how?
- Can we introduce sufficient locational signals at LV via UoS?
- Are access rights issued to an individual or a premises? What happens when a premises is sold?

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Menti Questions

> **Questions –**

- Is it appropriate to treat domestic customer/non-domestic customers differently? Why? (10 mins)
- Have we got the right range of options? (5 mins)
- What the advantage/disadvantages of defining a core level of capacity for domestic/small non-domestics? (7 mins)
- What the advantages/disadvantages of relying upon charges? (7 mins)

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How to engage with this work going forward

- Keep up-to-date with TF work via the website.
- You can send any comments or questions on the TF to the secretariat at chargingtaskforces@energynetworks.org or to us at networkaccessreform@ofgem.gov.uk
- We will provide an update on Access work at the next CFF.
- We will be consulting on Initial Proposals for Reform in the summer.

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Panel Q&A

Chaired by Andy Burgess, Ofgem

Panel members

- **Chair – Andy Burgess,** Ofgem
- **Stew Horne,** Citizen's Advice
- **Jeremy Nicholson,** Energy Intensive Users Group
- **Nicola Percival,** Innogy
- **Jon Parker,** Ofgem

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Closing remarks

Andy Burgess, Ofgem - Forum Chair

Objectives for the day

- **Learn** about initial options on Access Rights and Forward Looking Charges from Task Forces
- **Learn** about how the wider landscape and developments in technology are relevant to charging and access reform.
- **Contribute** your thoughts on initial Access Rights and Forward Looking Charges options
- **Ask** your questions to Ofgem and Task Force members

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Quick poll

Go to sli.do

#chargingfutures

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Reforming electricity charging together

Forum

Thank you, and have a safe journey home