

Consumer priorities for electricity distribution network operators

Findings from the Ofgem Consumer First Panel Year 4:
Third workshops (held in June 2012)

21 September 2012

Legal notice

© Ipsos MORI UK Limited and Ofgem, all rights reserved. Unauthorised publication, copying or distribution prohibited.

If you would like to enquire about using any element of this report, or you would like further information about the research, then please contact Ofgem's Consumer First Team (consumer.first@ofgem.gov.uk).

Contents

Management summary	2
Section 1: Introduction	10
1.1 Background and context	10
1.2 Objectives	10
1.3 Methodology	11
1.4 Recruitment and re-contact.....	11
1.5 Interpretation of findings	12
1.6 Report outline.....	12
Section 2: Views on changes to electricity use	15
2.1 How use of electricity has changed.....	15
2.2 How use of electricity will change	16
2.3 Implications of changing use of electricity	17
Section 3: Spontaneous views of DNOs and regulation	19
3.1 Initial knowledge of distribution and DNOs	19
3.2 Spontaneous views of DNOs' priorities	19
3.3 Relationships with DNOs	21
3.4 Views on how DNOs should be regulated.....	22
Section 4: Flexibility and capacity	25
4.1 Spontaneous reaction to future capacity scenarios.....	26
4.2 Considered views of the scenarios	26
4.3 Views on the practicality of scenarios	28
4.4 Views on cost assumptions of scenarios	28
4.5 Views of the desirability of scenarios	29
4.6 Views of the fairness of scenarios.....	31
4.7 The ideal scenario.....	32
Section 5: Priorities for DNO across and within output areas..	34
5.1 Initial reactions to price control and outputs	34

5.2	Priorities for DNOs across ED1 output areas.....	34
5.3	Reliability and Availability.....	36
5.4	Customer Satisfaction.....	37
5.5	Social Obligations	39
5.6	Safety.....	40
5.7	Environmental Impact	41
5.8	Connections.....	42
Section 6: Conclusions.....		45
Appendices.....		48
	Appendix 1: Discussion Guide	48
	Appendix 2: Stimulus Materials	60
	Appendix 3: Panellist Demographics.....	64

Management summary

Management summary

This round of workshops with Ofgem Consumer First Panellists was intended to help Ofgem to understand consumer priorities for electricity distribution network operators (DNOs) over the next 10-15 years, including views of how future scenarios may impact on electricity networks. The overall aims of this research were:

- to work with consumers to help them understand how the use of electricity might change in the medium term and the effect this might have on how it is distributed;
- identify consumers' preferences around providing future capacity in the network in the context of potential changes to use of electricity; and
- understand consumer priorities for DNOs under the six key output areas identified in the RII0-ED1 model for the next price control period, i.e. reliability and capacity, environmental impact, social obligations, safety, customer satisfaction, and communications.

Workshops with 96 participants were conducted in six locations across Great Britain between the 18th and 28th of June 2012. This follows two previous rounds of workshops with the same Panel members in November 2011 and March 2012.

1. Views on changing electricity usage:

In order to understand the challenges facing DNOs, Panellists discussed how electricity use had changed in the past and was likely to change in the future. Their conclusion was that over time their households' usage has increased with numbers of electrical appliances in the home, but had probably levelled or decreased in recent years due to efforts to limit usage (usually for cost reasons, although some mentioned energy efficiency). Panellists did not think that society's use of electricity will change *fundamentally* in the next ten to fifteen years and struggled to think about the longer term.

As a result, Panellists found it difficult to articulate how the potential changes to electricity demand might affect how it is delivered to their homes in the future. Panellists assumed that even if demand did change, this would not happen quickly and therefore would not impact on the ability of the network to provide them with a constant, reliable electricity supply.

2. Spontaneous views of DNOs and their regulation

Very few Panellists were aware of the role of DNOs or how they work, and most felt they have no direct relationship with their DNO. They believed that there was no reason to have any contact, as they already have a relationship with their supplier.

Due to their lack of knowledge of what DNOs do, many Panellists initially felt they wouldn't know what a well performing DNO would look like. However, once the role was explained, it was generally agreed that continuity of supply (i.e. no interruptions) should be the main indicator of DNO performance. Most thought that the only way they would know if they had a good DNO was if they "*didn't have power cuts*" or at least only had them when there was an obvious reason such as a major storm.

Other spontaneously suggested indicators of a good DNO, most of which also related to reliability, were:

- **Provide quick reconnections:** If there are power cuts then a 'good' DNO would reconnect customers "*quickly*" or "*as quickly as possible*" and keep consumers informed about when the supply would be reconnected.
- **Ensure good maintenance of wires:** Panellists felt this was important to ensure reliability. This also included upgrading wires where necessary, while minimising the disruption caused.
- **Ensure sufficient investment in the network:** A few Panellists made the link between changing use of electricity and the need for providing sufficient capacity in the future.
- **Communicate well with consumers:** For example by warning consumers when they are about to cut off supply or dig up roads for maintenance purposes. If consumers do need to get in touch with DNOs, they should be easy to contact and communicate with.

Panellists were unsure about the best way for Ofgem to ensure that targets (either set by the DNO or Ofgem) are met. A punitive approach was initially favoured with many mentioning fines for not meeting performance targets, although there was concern that these costs would be "*passed on*" to consumers.

3. Flexibility and capacity

It was explained to Panellists that during the next price control period, DNOs will have to provide 'sufficient' flexibility in the network to adapt to changing consumer demand to ensure reliability. They were also informed that extra network capacity may also be needed to respond to higher electricity demand. In order to understand Panellists' views on what 'sufficient' might mean, they were asked to discuss the scenarios outlined below:

- A: No restriction on capacity in the future, no matter how much pressure is placed on the network (i.e. DNOs will spend as much money as necessary installing new wires). Bills are high as a consequence.
- B: There is less investment in new wires and as a result bills are lower but there are potential restrictions on the use of electricity at different times.
- B1: This is enforced through higher pricing at these times.
- B2: This is enforced through restrictions on usage at these times.
- C: Less investment in new wires, leading to lower bills but with increased chance of unplanned power cuts.

Initially, Panellists questioned why investment in future capacity is included as part of the price controls as many felt customers should not be providing the upfront investment that may be needed. Many questioned why bills should have to be higher to ensure a reliable supply in the future. They presumed that DNOs are already investing in added capacity on an ongoing basis, and that this is part of their current bill. It was difficult for Panellists to imagine the scale of investment that might be required and how much their bills might rise in order to provide this.

There were also some questions about the practicality of some of the scenarios, which shaped Panellists' reactions to them. Many Panellists thought that it would be much better to carry out any improvements to the network in a reactionary fashion. They thought it would be an impossible task to accurately predict how much capacity will be needed in the medium term. However they believed that electricity consumption would have to be monitored to avoid unplanned power cuts described in Option C. Option B2 was immediately dismissed by some Panellists as they thought restricting power to certain appliances was impossible, impractical or prohibitively costly to set-up.

When considering the scenarios, Panellists' discussions centred on the desirability and fairness of each, and they found each scenario lacking on at least one of these criteria.

3.1 Desirability of scenarios

Standards of living: Panellists reacted very negatively to any suggestion that supply might be physically restricted, either intentionally (scenario B2) or through unplanned power cuts (scenario C), as they are used to having their supply "on tap". While all Panellists thought planned restrictions were preferable to unplanned cuts they still saw this as an unnecessary imposition on their lifestyle and their freedom to use electricity how and when they want. When asked if they would accept scenario C if 'critical supply' could always be guaranteed, Panellists argued that there is no such thing as generic 'critical supply' and they would not be happy for a DNO to be allowed to decide what 'critical' means for their household. Panellists argued that different individual appliances were critical to their lives, and felt this would vary according to personal preference, household size and life stage.

Impacts on society: Scenarios B2 and C were described by many as "a return to the dark ages", unacceptable for a developed country and potentially damaging to the reputation of Great Britain. Overall many thought that, despite the personal cost, it might be better for the country as a whole to choose scenario A in order to future-proof the electricity network for subsequent generations, with some describing B and C scenarios as "ticking time-bombs" that would cost more in the long-term, through economic losses to UK PLC due to restricted access to electricity, or the need to make upgrades at short notice when capacity was urgently needed.

Ability to pay: Most thought that the current price of electricity (which was already perceived to be too high) should ensure that their electricity needs are always met. As such, Panellists did not want the amount that they pay to DNOs to increase (Scenario A), or to have to pay a higher price at times of peak demand (Scenario B1). They argued that consumers are already stretched to their limit as far as energy bills are concerned. However, while the lower price was seen as a desirable element of scenario C, this was thought to be offset by reductions in standards of living.

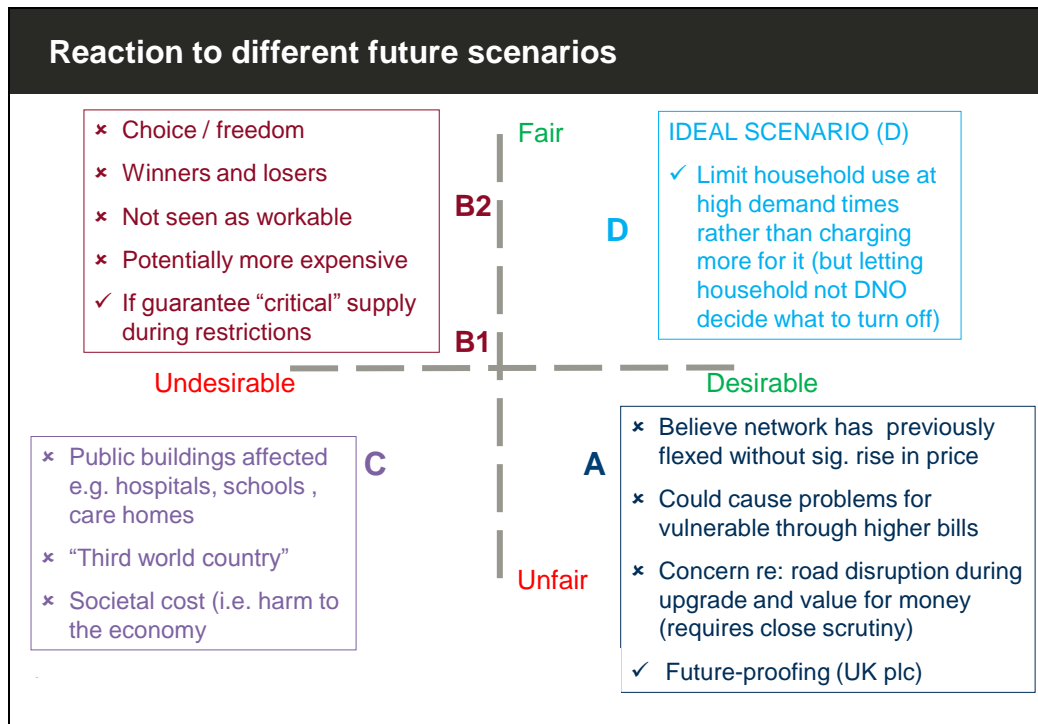
3.2 Fairness of scenarios

Panellists generally took a citizen perspective when thinking about the fairness of each of the scenarios. They thought that imposing the cost of extra capacity on everyone without differentiation was unfair. They were particularly concerned about poorer consumers, and worried that scenario A would lead to an increase in fuel poverty.

Scenario B2 and C were seen as unfair as it was thought that the costs of unplanned cuts or restricted access to electricity would be disproportionately high for vulnerable consumers. In scenarios B1 and B2 it was thought that either a higher price or restrictions would disproportionately affect those who work 9-5 and those who have young families, whose demand for electricity is high at peak times, and they may find it difficult to change the ways in which they use electricity.

3.3 The ideal scenario

The chart below demonstrates where the scenarios fit in relation to desirability and fairness.



All of the scenarios were seen to have significant disadvantages and Panellists were reluctant to choose between them. Many thought that, if forced to choose, they would opt for option A on the condition that investment would be tightly monitored, in order to preserve their freedom of choice over when and how they use their electricity. Others thought that they would have to opt for scenario B, because they thought it was the most fair.

The ideal scenario (option D in the table above) was developed spontaneously in several workshops. This scenario would be a modified version of scenario B1 within which greater freedom of usage is maintained. In order for consumers to accept restrictions on usage at specific times, they felt they would have to retain the choice of what they would use at these times within certain limits. This scenario would combine Panellists' most desirable outcome (lower or static bills), without allowing DNOs to, as they saw it, dictate consumers' lifestyles. Within this scenario, it was also noted that consumption limits would need to take into account of those who need more electricity for medical reasons, so that they are not unduly restricted.

4. Priorities for DNOs across and within output areas

When presented with the RIIO-ED1 output areas (see slide below), most Panellists agreed that these were, generally, the right areas in which to set targets for DNOs.

Reliability (which most Panellists understood as a continuous supply of electricity) was the most important output area to nearly all Panellists. Panellist discussions *within* each of the other output areas confirmed the importance of reliability because many of the targets discussed focused on this, either directly or indirectly.

Proposal: Six key areas for DNOs

Environmental Impact: Help to reduce carbon emissions, decrease their overall impact on the environment

Customer Satisfaction: Maintain/increase customer satisfaction levels (e.g. are customers satisfied with how they are treated during a power cut?)

Connections: Connect new customers to the network in a timely and efficient way (e.g. making sure new houses can be connected to electricity network)

Safety: Provide a safe network to comply with Health and Safety standards

Reliability and availability: Promote reliability of supply e.g. fewer interruptions, make sure customers are reconnected quickly

Social obligations: Treatment of vulnerable customers and people in fuel poverty

DNOs will also have to ensure adequate **flexibility and capacity** in each of their networks as customers' use of electricity changes

4.1 Reliability and availability

The most important targets in this output area were:

- **Fewer or no interruptions:** Panellists thought that the most important thing that DNOs should do is “*keep the lights on*”. To ensure this, Panellists thought that there should be targets for investment in maintenance and upgrading of wires, where necessary.
- **Quick reconnection policy:** Where there are interruptions, targets should be set around maximum reconnection times. Panellists usually didn't have specific time frames in mind, partially due to lack of experience of interruptions.
- **Compensation:** If these ‘reasonable’ reconnection time targets are missed, Panellists thought that there should be compensation for the customers affected. There was no consensus on what reasonable meant; suggestions ranged from a few hours to a few days, with most noting that it would depend on the cause of the outage.
- **Back-up plans:** Panellists felt that DNOs should be expected to have good back-up plans in the case of prolonged interruptions, particularly for vulnerable customers. Again, there were no strong opinions on the shape of these back-up plans, but a more general concern that people should not be harmed by lack of access to electricity, where this is avoidable.
- **Warnings for planned interruptions:** If a DNO needs to interrupt power for maintenance/upgrading, then Panellists felt that it should provide warning to those who will be affected, either directly or through their suppliers. It was thought that several days warning would suffice for most customers, but vulnerable customers may need more notice, potentially several weeks.

4.2 Customer satisfaction

The most important target in this output area was:

- **Effective communications during a power cut.** For many Panellists, this was the only important target in this area. This included:
 - Providing advice on what to do during power cuts, and perhaps setting up a standard procedure for reporting to ensure all households are aware of this.
 - Providing information on how long the power cut will last. This information must be accurate and updated as often as necessary.
 - The DNO being easily accessible by phone during a power cut.
- Other targets mentioned included:
 - Complaints and satisfaction monitoring, in particular focussing on customers who have had direct contact with the DNO
 - Providing information about maintenance and interruptions but also a few mentioned the perceived need more information about the DNO itself.¹

4.3 Social Obligations

Many Panellists wondered how it would be possible for DNOs to fulfil social obligations when consumers are not direct customers of the DNO. Some thought suppliers already have special responsibilities for vulnerable groups of customers, and that this should include ensuring they have the energy supply they need, and ensuring that they are looked after when their energy supply fails.

The most important targets in this output area were:

- **Reconnections:** If there is a power cut for any reason, certain vulnerable customers who were more reliant on electricity should be prioritised for reconnection. This was seen by Panellists as the most important target in this output area.
- **Back-up systems:** Panellists felt these should be in place for those who are most vulnerable when there are long interruptions.
- **Informing vulnerable customers of the help that is already in place,** as there was an assumption that DNOs may already have means of assisting them.
- **Equality of reliability:** Some Panellists thought it would be important for customers in rural areas to get a similar level of reliability to those in urban areas.

4.4 Safety

Panellists found it difficult to think of targets in this area as they presumed it was “*the law*” to run a network in a safe manner. As such anything they felt that whatever they came up with would be covered by health and safety regulations which they believed DNOs would already comply with. While this output area was seen as very important some argued that carrying out their job safely should not be incentivised in any way (on their understanding of incentives). While they understood that it would be funded as part of the price control, they

¹ In research it is common to say that the public should be given more information in these kinds of workshops. Few felt they would read the information so the demand is likely to be limited.

did not feel that DNOs should be 'rewarded' in any way for carrying out such an important aspect of their job.

4.5 Environmental Impact

Most Panellists initially found it difficult to discuss targets for this area. A number of Panellists mentioned targets that could equally have been placed under the reliability output area, with other environmental considerations such as visual impact of the network taking a secondary role.

The most important targets in this output area were:

- **Undergrounding wires:** Panellists mentioned several reasons for wanting DNOs to do this including: decreasing visual impact, a belief that this would increase the efficiency of wires and improvements to reliability.
- **Improve efficiency of wires:** Panellists made comparisons to leaky water pipes and thought that companies should be trying to repair/upgrade wires where necessary to reduce loss during distribution.²

4.6 Connections

Panellists struggled to come up with targets for this area as few had experienced having a supply connected and thus had little understanding of the processes in place. They were prompted with a range of suggestions to consider (see appended discussion guide for details).

The most important targets in this output area were:

- **Time targets for connections:** Panellists thought that connections should be available almost immediately or at least within a few weeks, and always before new builds are complete.
- **Guaranteed timescales for connections work:** Panellists also said that they would want clear and agreed timescales for the provision of any new or reinforced connections on a case by case basis.

² There was low awareness of exactly how much electricity was lost during distribution or what makes a 'good wire', so these discussions were based mostly around Panellist assumptions.

Introduction

Section 1: Introduction

In June 2012, Ipsos MORI ran the third series of workshops of Ofgem's Consumer First Panel, now in its fourth year. The Consumer First Panel is a deliberative forum comprising around 100 consumers from around Great Britain who are chosen to be broadly representative of energy customers. The Panel meets regularly to discuss key issues affecting consumers in the energy market, and Panel membership is renewed once a year.

This report presents the findings of the third set of workshops for this Panel. The focus of these workshops was to understand consumer priorities for electricity distribution network operators (DNOs) over the next 10-15 years and to gather views on how future scenarios may impact on electricity networks. These priorities will feed into Ofgem's forthcoming ED1 price control.

1.1 Background and context

The Gas and Electricity Markets Authority (GEMA) is the regulator of Britain's gas and electricity markets, and Ofgem carries out the day to day functions of GEMA. The principal objective of GEMA and Ofgem is to protect the interests of current and future consumers.

Ofgem regulates the monopoly companies which run the gas and electricity networks which form the focus for this round of Panel discussions. There are 14 electricity distribution networks, each operated by one of 6 network companies. Each region is a natural monopoly, so to protect customers' interests Ofgem periodically sets and reviews price controls which include restrictions on behaviour, incentives and ultimately the amount the DNO can charge network users.

The forthcoming RIIO-ED1 price control period runs from 2015-2023. In order to inform these price controls, Ofgem was keen to seek the views of the public to ensure their interests are considered in the development of policy.

1.2 Objectives

The purpose of this round of workshops was to understand consumer priorities for electricity distribution network operators over the next 10-15 years, including views of how future scenarios may impact on the network. These priorities will feed in to Ofgem's forthcoming RIIO-ED1 price control.

The overall aims of this research were:

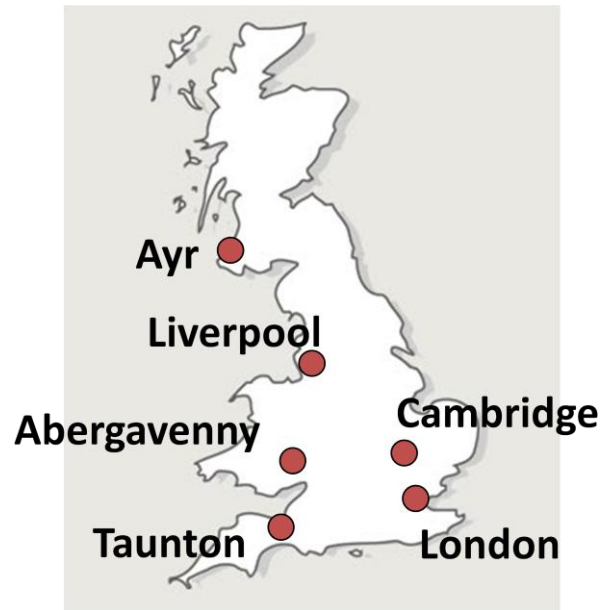
- to work with consumers to help them understand how the use of electricity might change in the medium term and the effect this might have on how it is distributed;
- to identify consumers' preferences around providing future capacity in the network in the context of potential changes to use of electricity; and
- to understand consumer priorities for DNOs under the six key output areas identified in the RIIO-ED1 model for the next price control period. There were:
 - Reliability and capacity;
 - Environmental impact;
 - Social obligations;

- Safety;
- Customer satisfaction; and
- Communications.

1.3 Methodology

A deliberative method was considered the optimal approach to allow participants to explore these issues. This was particularly important as most Panellists were unfamiliar with electricity distribution networks and the companies that operate them. As a result, the first hour of the workshop was dedicated to discussing how electricity use might change in the future, who DNOs are and their responsibilities towards consumers. This discussion allowed Panellists to give their top of mind views, before having a more informed discussion about their priorities for DNOs later in the workshop.

Six three-hour long workshops were conducted to allow Panellists enough time to deliberate and express their views. Stimulus material was used to communicate changing electricity use and how this might impact on the relationship between DNOs and consumers. All other research materials (discussion guide and end of event questionnaire) are provided in the appendices.



1.4 Recruitment and re-contact

The third round of workshops involved 96 Panellists from different backgrounds across six locations in Great Britain: Abergavenny, Ayr, Cambridge, Liverpool, London and Taunton. Panellists were recruited to comprise a broad range of energy consumers, taking into account a number of key criteria that are likely to influence views of the most salient issues.

The criteria included the following recruitment variables:

- Gender
- Age
- Ethnicity
- Socio-Economic Group (SEG)
- Tenure
- Fuel poverty
- Long-term condition/disability
- Supplier
- Electricity only vs. gas and electricity
- Payment type
- Employment status
- Family status

In order to ensure Panellists reflected energy consumers in Great Britain, the sampling frame corresponded to national demographic figures derived from the Census. However in certain locations it was necessary to up-weight quotas to ensure the following groups were represented:

- **Ethnicity** – black and ethnic minorities (BME) were up-weighted to ensure that the Panel adequately represents these groups.
- **Rural/Urban** – we recruited those living in rural areas, including those living off the gas networks to ensure we could capture their views, as they can often have different experience to those living in urban environments.
- **Tenure** – we also over-represented those living in social and private rented accommodation.

For this Panel session, Panellists were re-contacted by Ipsos MORI. Re-contact happened by letter a few weeks prior to the event and a follow-up call by Ipsos MORI was made to confirm attendance. Participants received £60 as a thank-you for their participation in this workshop and in recognition of their commitment to the Panel over the course of the year. Fieldwork was conducted between 18th and 28th June 2012.

1.5 Interpretation of findings

It is important to note that qualitative research approaches (including deliberative methods) are used to shed light on *why* people hold particular views, rather than *how many* people hold those views. This research is intended to be illustrative rather than statistically reliable and, as such, does not permit conclusions to be drawn about the *extent* to which something is happening. In the case of this study, we intended to develop an in-depth understanding of consumer views of electricity distribution networks and their priorities for how those networks should be paid under the next price control period.

Where possible we have stated how common a particular view was amongst Panellists, but as this is qualitative research, these proportions should be considered indicative, rather than exact.

Finally, verbatim comments have been included to illustrate particular viewpoints. Where this is the case, it is important to remember that the views expressed do not always represent the views of all participants. In general, verbatim comments have been included to illustrate where there was a particular strength of feeling among participants.

1.6 Report outline

The rest of this report is structured as follows:

Section 2 looks at how Panellists understood their own electricity use, past and future changes to it, and how they thought use of electricity in society has changed and may continue to do so in the future. It was important for Panellists to consider this to provide the context for later discussions. The views expressed in this initial session help to explain assumptions they made in later discussions.

Section 3 examines Panellists' initial reaction to DNOs and what they think their priorities should be. It also presents how Panellists think DNOs should be regulated, and their reaction to the idea of price controls.

Section 4 discusses Panellist views on how DNOs should respond to changing demands on the network in the future.

Section 5 considers Panellists' priorities for DNOs across and within the six key output areas in the RIIO-ED1 model, namely 'Reliability and Availability', 'Customer Satisfaction', 'Social Obligations', 'Safety', 'Environmental Impact' and 'Connections'.

Section 6: Presents conclusions from this wave of Panel research.

Views on changes to electricity use

Section 2: Views on changes to electricity use

This section examines how Panellists understood their own electricity use and how they thought use of electricity in society has changed and may change in the future. It was important for Panellists to look at discuss this to provide the context for later discussions, and the views expressed in this initial session help to explain assumptions Panellists made later in their deliberations.

2.1 How use of electricity has changed

When asked to describe how they think that their use of electricity has changed in recent years, most Panellists spontaneously spoke of their own efforts to reduce the amount of electricity they use in their homes. This was typically a reaction to price increases rather than reducing usage for environmental reasons, and some Panellists described how receiving higher energy bills has made them more conscious about their energy use. Many stated that they are more conscious of turning off lights than they had been previously.

Some also felt that the increasing energy efficiency of new electrical appliances had also contributed to reduced usage (e.g. energy saving light bulbs, 'A-rated' fridges etc). In Cambridge, several Panellists noted that a move to gas (for example, central heating) had led to a reduction in the amount of electricity that they use.

Whilst recognising that the use of electricity in the household may have increased, many felt that this would be balanced out by the reductions described above. Many recognised that they probably use more electricity due to a greater number of appliances and gadgets in their home in comparison to ten years ago. Some new appliances were thought to use more electricity (e.g. larger televisions, power showers) and they were using these appliances more often. Some however, reported a general 'laziness' in either leaving appliances switched on while not in use, or on standby.

"Usage has really gone up for me...we have so many chargers for mobile phones, laptops things like that...you just need more plugs."

Overall, Panellists concluded that their households' usage has probably levelled or decreased in recent years because of these opposing factors. However, for many there was also a strong feeling that use of electricity is something over which they often have little control. While they consider that they are more conscious of their usage now than before, most energy consumption relates to tasks that they see as essential, such as washing clothes or lighting, or is influenced by other family members whose behaviour is difficult to change (e.g. teenagers). There appears to be significant generation gaps in attitudes to energy use. Older participants were typically more likely to be thinking about their energy use, whereas the younger participants and their children tended to take energy for granted unless they had financial constraints which meant they needed to focus more on their usage.

"We try and switch things off, but our children don't. They put their phones on to charge as soon as they come in, and leave them charging all night. The younger generation don't care about saving energy."

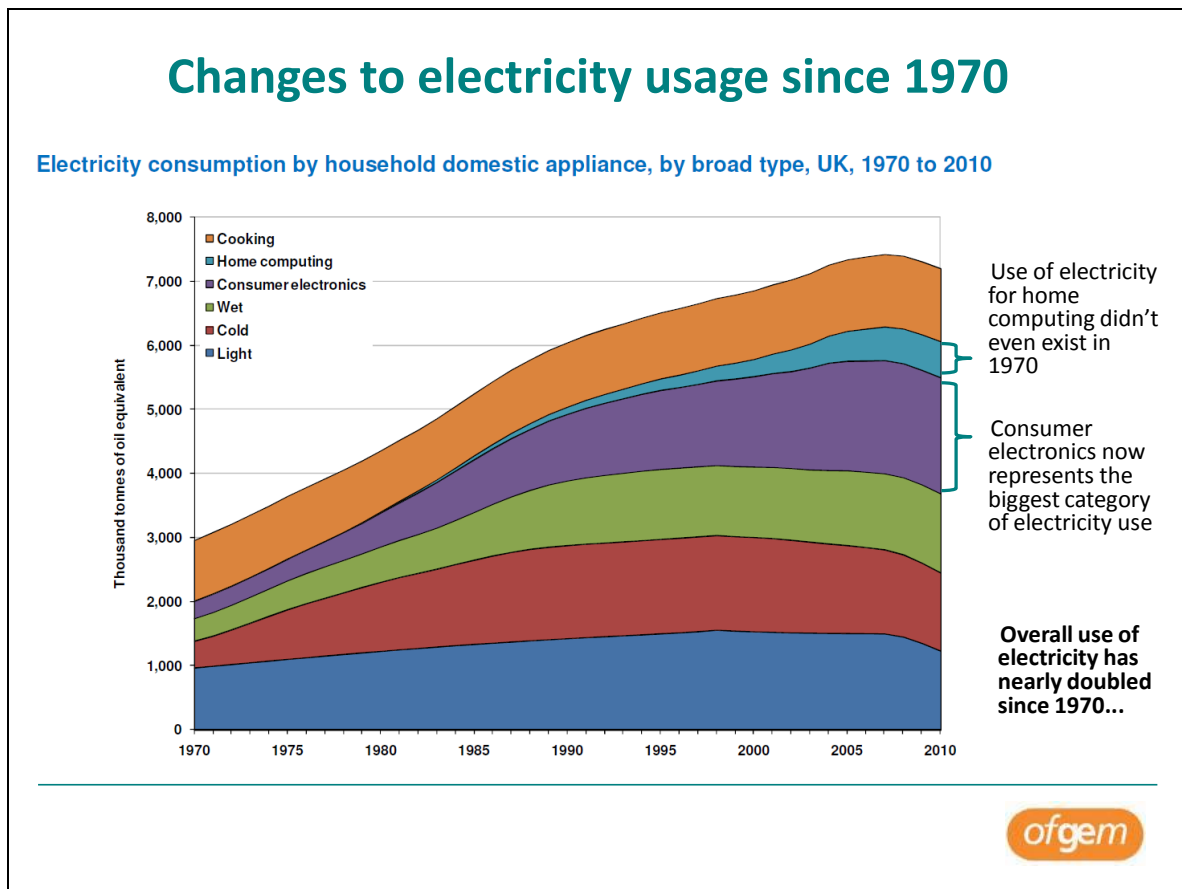
A small number of Panellists spontaneously mentioned that usage may have increased for society as a whole due to a growing population, and changes in how people live, in particular the increase in the number of individual households. They felt if per capita usage remained the same but the population grew this would naturally result in increased demand. Equally,

they felt that even if the population did not grow significantly, the increasing number of smaller households (more people choosing to live alone) could increase per capita usage.

These views on the necessity of most electricity usage influenced responses to the scenarios considered in the discussion of flexibility and capacity (section 4), as it meant that many Panellists were unwilling to even consider the possibility of an increase in interruptions (either planned or unplanned), no matter what the cost implications.

2.2 How use of electricity will change

In order to illustrate how much electricity usage could change in the medium term Panellists were shown the graph below, which illustrates how domestic use has changed between 1970 and 2010.



When Panellists discussed their personal usage of electricity in the medium term (i.e. the next 10-15 years) most did not see it changing significantly. Some thought that prices were likely to continue to increase as they have over the past few years, and become so high that they would be forced to cut down on their personal use. Panellists also noted that businesses may use electricity more efficiently in this time period, which would also reduce overall energy demand.

Some Panellists were convinced that the use of electricity may fall or remain at its current level during this time. Reasons given for this included increased energy efficiency of new buildings and appliances, better insulation of older buildings and increased use of technology

³ DECC energy consumption factsheet:

<http://www.decc.gov.uk/assets/decc/11/stats/publications/energy-consumption/2323-domestic-energy-consumption-factsheet.pdf>, accessed 11/06/2012.

(for example, sensors that will ensure that devices that turn themselves off when not in use). Several Panellists who took an interest in climate change also thought that efforts to meet emissions targets (e.g. increased use of renewable energy) would lead to higher electricity prices which in turn would make current energy consumption levels unaffordable and could therefore result in a reduction in usage for society overall.

Even when prompted with the significant increase in electricity use due to the introduction of home computing (as an example) since the mid eighties, and the potential for increased use of electric cars over the next decade, Panellists found it difficult to imagine the widespread use of new electrical appliances or products. This was despite the fact that earlier they had highlighted their own growing use of appliances as a factor in driving increased consumption. Most Panellists felt they were reaching a “*technological saturation point*”. In order to use new technology (e.g. a tablet) they would cut down on their use of existing technology (e.g. a computer). They also felt that the use of new technology such as electric cars in the medium term may be restricted to those they considered to be better off, rather than being widely available to everyone. While many noted that the use of gadgets and other electronic equipment is likely to continue to rise, they also thought that the additional electricity needed would be offset by overall improvements in energy efficiency. While moderators explained the possibility of more electrification in the future to reduce carbon emissions, most Panellists could not envisage their households not using gas in some way (when cooking for example).

Some thought that consumers have begun to take messages around decreasing consumption seriously, prompted by the slight downturn in demand shown in the slide. It was therefore difficult for them to imagine starting to use a lot more electricity, given this perceived prevailing societal trend. This was another reason why many Panellists struggled to see any reason to expect increased electricity demand in the short to medium term.

However, Panellists did think that some other changes in society may have an effect on electricity consumption. They spontaneously mentioned the number of people living longer and population increases as reasons why demand for electricity may increase in the future. Others spoke of how society is becoming more ‘24 hour’ – people are working different and longer hours, or from home, and so the idea of peak evening hours between 5 and 9 may no longer be as applicable as it once was. In more rural locations, some Panellists spoke about the increase in local generation of electricity, for example solar Panels, which they felt may decrease demand from the national grid as people start to generate more of their own electricity.

2.3 Implications of changing use of electricity

In general, Panellists did not think that how society uses electricity will change *fundamentally* in the medium term and struggled to think about the longer term. In any case, there was a broad agreement that a whole host of other factors besides their individual behaviour may affect usage, not least the performance of the economy, and actions to tackle climate change.

As a result Panellists found it difficult to articulate how the potential changes to electricity use they had spoken about might affect how electricity is delivered to their homes. As we discuss in detail later in this report, there was an underlying assumption that even if demand did change, this would not impact on the ability of the network to provide them with a constant, reliable electricity supply, as long as enough energy is being generated.

Spontaneous views of DNOs and regulation

Section 3: Spontaneous views of DNOs and regulation

This section explores Panellists' initial views regarding Distribution Network Operators (DNOs) and what they think their priorities should be. It also presents how Panellists think that DNOs should be regulated, and their reaction to the concept of price controls.

3.1 Initial knowledge of distribution and DNOs

Panellists were given a short presentation on the role of DNOs and introduced to some key facts about them via a quiz (see appendices).

Very few Panellists were aware of the role of DNOs, or how they work. While most were vaguely aware that electricity was delivered via “wires” or “cables”, most presumed that these were controlled by their suppliers.⁴ Some were aware that distribution was done by a different company, but usually thought that this was the National Grid. There were some exceptions in Taunton and Abergavenny, where a few Panellists were aware that Western Power Distribution was their distribution network, potentially as a result of advertising by the DNO, or by noticing branded vehicles. In Ayr, some were aware that Scottish Power Networks controlled supply, transmission and distribution, but were unclear as to the differences between the various roles.

A small number of Panellists made the link between potential future changes to electricity use and how that will affect the network, with reference to the potential need for new cables or how locally generated electricity might fit into the distribution network.

“I presume there’ll be a limit [to how much electricity can be carried in the wires] at some point.”

A few assumed that a high level of investment in the network could be needed to cope with this. In general however, most did not spontaneously link their discussions of electricity use with distribution networks. They thought that, no matter how much electricity was used, it would always be available without any interruptions.

A small number pointed out that they had little interest in DNOs, and did not think this was an important issue for consumers as they felt that the DNOs customers were the suppliers.

“Unless you’re a shareholder, it doesn’t matter does it...I think we’re more interested in our suppliers really.”

However, once the moderator explained how the DNOs are funded, these Panellists engaged with the discussions of DNO priorities.

3.2 Spontaneous views of DNOs’ priorities

After the initial presentation and quiz, Panellists were asked what would make a **good DNO**. Many noted that they simply wouldn’t know what a well performing DNO would look like. In many of the workshop locations, most Panellists could not recall an interruption to supply or

⁴ It should be noted that low prior awareness and the complexity of the system meant that, throughout the workshops, some Panellists blurred the remits of DNOs and suppliers. Where this occurred we have made it clear in the text.

interaction with a DNO. Before the workshop, they would have automatically ‘blamed’ any problems with, or interruptions to their supply on their supplier. In addition, some noted that, because there is only one DNO operating in their area, they would not be able to make comparisons that would help them to work out what a ‘good DNO’ would be (as some could with suppliers). As a result, some thought that a priority of DNOs could be to make consumers aware of who they are and what they do. However, it was generally agreed that the continuity of supply would be the main indicator of DNO performance. For this reason some thought that knowing who their DNO was not important.

Overall, the **indicators** of a good DNO were seen to be:

- **Provide a reliable supply of energy:** Most thought that the only way they would know if they had a good DNO was if they “*didn’t have power cuts*”. As long as they can switch the lights on in all weathers, they would be happy with the performance of their DNO, so this should be the DNOs’ main priority. Participants in Cambridge and Taunton also felt that a reliable supply would mean the elimination of, or reduction in what they called ‘power surges’ by which they meant fluctuations in the supply (in particular ‘spikes’ which could harm electrical devices, but also dips where lights might go dull for a short period).
- **Provide quick reconnections:** If there are power cuts (and many – especially those in rural areas – noted that this could occasionally happen through no fault of the DNO), then a ‘good’ DNO would reconnect customers in a “*timely manner*”:

“They can’t control all the elements of a power cut though, sometimes it’s natural... some things do go wrong and that’s just a part of life.”

There was little discussion of what a ‘timely manner’ might mean in relation to providing reconnections after a service interruption: those who mentioned this tended to simply say “*quickly*” or “*as quickly as possible*”. More important than target times was a commitment to keep consumers informed about when the repairs would be completed.

- **Ensure good maintenance of wires:** some Panellists thought that a good DNO would ensure reliability by focussing on network maintenance. This also meant upgrading wires as necessary and where possible, as there was an assumption that “*technology had moved on*” and newer wires were likely to be more ‘*efficient*’ than those that are currently in use. Panellists assumed that more efficient wires were those that lost or “*leaked*” less electricity while transporting it.
- **Ensure sufficient investment in the network:** A few Panellists made the link between changing use of electricity and potential capacity issues. They did not consider this in detail at this stage as they simply assumed that a good DNO would focus on the investment needed to ensure future demands on the network would be met. See Section 4 for a detailed discussion of these issues.
- **Communicate well with consumers:** Panellists, especially those in London and Cambridge, thought that it was important that DNOs let people know when they are about to dig up roads to avoid unnecessary disruption. Many also said that it is imperative to warn consumers when they are about to cut off supply for maintenance purposes. If consumers do need to contact DNOs, Panellists felt they should be easy to contact and communicate with (although many claimed that they did not think this was necessary as they would always contact their supplier first and would prefer this to be the only point of communication).

A few Panellists also suggested other elements that would denote a good DNO, such as employing / providing work experience for local people, increasing the efficiency of the network (i.e. reducing loss of electricity in distribution⁵), paying compensation for interruptions, and monitoring customer satisfaction in how DNOs deal with power cuts.

At this stage, very few Panellists explicitly mentioned price or cost as a key priority for DNOs. Despite being informed that a proportion of the bill goes towards distribution costs, and discussing their concern about rising energy bills at previous Panel workshops, only a few mentioned a decreasing amount of the bill being paid to the DNO would be an indicator that it was operating well. Most focussed on reliability of supply, despite the fact that in previous Panels, we have seen price mentioned as Panellists' biggest concern in relation to energy.

3.3 Relationships with DNOs

As previously noted, most Panellists felt that they have no direct relationship with their DNO, and that there was no reason to build one.

“Really what is taken out of our bill for maintaining the infrastructure is our only relationship with the DNO isn't it?”

Panellists were divided about what kind of a relationship they would like to have with their DNO. For some, the mark of a good DNO would be that its customers are better informed as to who it is, whereas others thought that the mark of the best DNO would be if they hadn't heard from them at all. This would mean that they are providing an uninterrupted, reliable supply. Several pointed out that the simplest way to inform consumers about who their DNO is and when and how to contact them is on their electricity bill, but few had noticed that they already receive this information on their bills.

Many noted that they already have a relationship with their supplier, and shouldn't need to have one with their DNO. These Panellists thought that the supplier (and not the end consumer) should be seen as the DNOs' primary customer, partly because of the greater influence suppliers can exert over DNOs.

“If you buy something faulty you take it back to the shop, not the factory. So why should we go to them [the DNO]? Our supplier should do their job... It's in their interest to stamp on them.”

Most Panellists would only like to have contact with their DNO when something goes wrong; for example an interruption or any other type of emergency.

“If your power box gives out for example... I contacted the supplier but they didn't have any information to give. So in that situation it'd be good to contact the distributor.”

Where this type of contact is necessary, Panellists felt the DNOs should ensure that they have enough people to take calls from customers, and not 'just' provide an automated service. Even in these situations a few would prefer to only have to deal with their supplier.

The few Panellists that had some experience of arranging the instalment of new connections said that it would also be useful to deal directly with the DNO. Another area in which more contact would be appreciated is regarding planned repairs or upgrades. A simple leaflet informing those who may be affected would suffice in these situations.

⁵ Panellists were unsure whether there is energy loss through wires but drew comparisons with the water industry and felt that if 'leakage' was possible this would be an important area to set targets

A few Panellists said that they would like to hear a bit more from their DNO, perhaps through quarterly updates that informed them of the future plans⁶. However they did later point out that they would be unlikely to read such information. Others argued against this idea, suggesting that it would be unnecessary:

“I’d say “oh I’d love to know” but if you actually got letters through you’d start to moan about it. We’ve survived this long without the letters. I think people are busy enough with life as it is to not really want that much contact.”

It was also pointed out that a more involved relationship would come at a cost, and some Panellists argued that they would rather that DNOs did not spend money (in effect, their money) on this area. Some thought that publishing this information in annual reports and on DNO websites would suffice; those who were interested could seek this out. Panellists thought that knowing that they would have to publish this information would mean that DNOs could keep customer accountability in mind when making plans, even if very few customers would ultimately read the information.

3.4 Views on how DNOs should be regulated

After it had been explained why a DNO is a natural monopoly in each region, many Panellists noted that the task of regulating DNOs would be inherently difficult.

“They’ve got the power. We can’t choose so they can do what they want really.”

They generally thought that Ofgem should be “*keeping an eye*” on how well DNOs are:

- Providing a reliable supply;
- Carrying out maintenance;
- Ensuring none of their activities/wires posed any risk to people’s health; and
- Ensuring any disruption they cause through maintenance is justified.

Some thought it was important for Ofgem to ensure that each DNO has similar costs for maintaining and investing in their networks. This was seen to be important so that consumers in different regions are charged similar amounts for distribution.

It was presumed by most Panellists that setting and monitoring targets in these areas would be a key part of Ofgem’s role in to the way it regulates DNOs.

“Ofgem to monitor them...how many power cuts happened, what they did about them, how they’ll stop it happening again.”

Some thought that the publication of statistics on these targets might also be important in encouraging greater DNO transparency and accountability, although previous research by Ofgem has indicated that most consumers have little interest in DNO reporting.⁷

⁶ This may be a research effect. Consumers generally claim to want more information when confronted with an area about which they are currently ill-informed. In addition, the previous workshops have focussed heavily on providing consumers with information, so it may be that some Panellists are now primed to think that this is an important priority for all within the energy sector.

⁷ See link to Ofgem Consumer First Panel 2009/2010, findings from third workshops held in March 2010 <http://www.ofgem.gov.uk/Sustainability/Cp/CF/Documents1/Ofgem%20Panel%20workshop%20.3%20report.pdf>

Others suggested that the process of monitoring DNO's targets might be self-led by the DNO, i.e. that they would present their plans to Ofgem who would then monitor progress against these plans. This was thought to be especially important for targets on investment.

Panellists were unsure about the best way for Ofgem to ensure that targets (either set by the DNO or Ofgem) are met. Many assumed that DNO profits must be high and spontaneously mentioned fines for not meeting performance targets. A punitive approach was initially favoured. This echoes findings from the last Panel session, where Panellists argued that Ofgem should carry out more enforcement action on suppliers, and publicise this more widely. Where fines are handed out for bad performance, it was thought that they should be returned directly to consumers who have suffered.⁸ Conversely, some thought that fines were not the best solution; as it was presumed the cost was always passed through to the consumer in the end:

“Who pays fines? If we’re paying them – it’s us. It’s like cutting your nose off to spite your face if you get a worse service.”

This highlights the importance of explaining how price control and the penalties contained therein are explained to consumers; as they are more likely to be receptive to fines if it is understood that they would come out of a DNO's profit, and that the DNO would not be able to pass this cost on to consumers.

Similarly, the moderator prompted Panellists to think about the possibility of using incentives to manage DNO performance (see appended discussion guide for details). This suggestion (by which Panellists understood that DNOs would receive extra money for meeting targets) was generally met with negativity. Although a few thought that incentives in conjunction with strict targets could lead to better service, most didn't understand why companies should be incentivised for “*doing their job*”.⁹

In several workshops Panellists talked about revoking DNO licences if they were underperforming, and thought that their “*contracts*” should be competed for periodically, along the lines of the train franchise model.

Finally, a handful spontaneously mentioned limits on expenditure as the best way of ensuring that DNOs work in the public interest.

“There should be yearly caps on pricing and assess at the end of the year whether it should go up or down.”

⁸ Responses around fines may be coloured by discussions of fining suppliers in the previous round of workshops.

⁹ This was Panellist reaction to incentives as they commonly understand them, and before price controls had been presented to them.

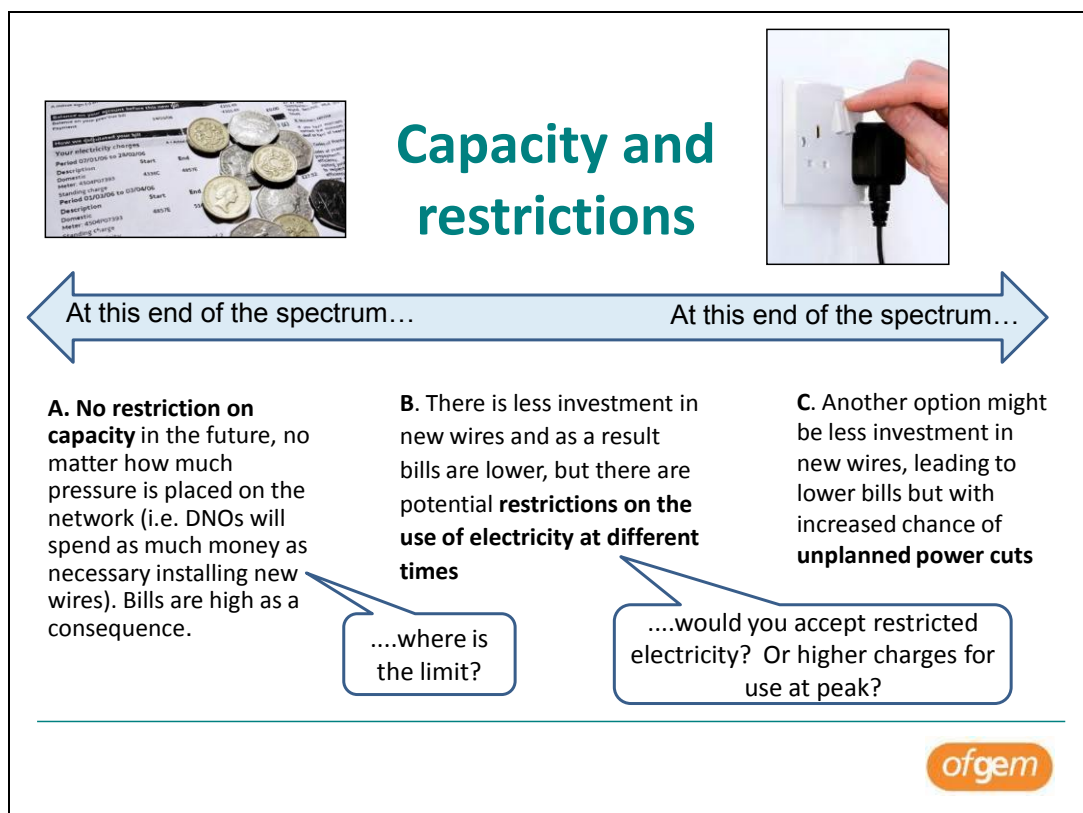
Flexibility and capacity

Section 4: Flexibility and capacity

This section looks at Panellists' views on how DNOs should respond to changing demands on the network in the future. The moderators explained to Panellists that during the next price control period, to ensure reliability, DNOs will need to provide sufficient flexibility in the network to adapt to changing consumer needs. Networks may also need extra capacity to respond to potential higher demand overall. It was explained that if there is not enough capacity then there could be unplanned interruptions.

In order to understand Panellists' views on what 'sufficient' might mean, they were asked to discuss the three scenarios outlined in the slide below. The scenarios will be referred to as A, B1, B2 and C. A short outline of each is included below:

- A: **No restriction on capacity in the future, no matter how much pressure is placed on the network (i.e. DNOs will spend as much money as necessary installing new wires). Bills are high as a consequence.**
- B: **There is less investment in new wires and as a result bills are lower but there are potential restrictions on the use of electricity at different times.**
 - B1: This is enforced through higher pricing at these times.
 - B2: This is enforced through restrictions on usage at these times.
- C: **Less investment in new wires, leading to lower bills but with increased chance of unplanned power cuts**



The moderator introduced B1 and B2 as different possible alternatives for how electricity could be restricted, in order to explore views on fairness and desirability of different alternatives.

4.1 Spontaneous reaction to future capacity scenarios

Initially, there were questions from Panellists around why investment in future capacity is included as part of price controls. They assumed the DNO would ultimately benefit from increased capacity because it would enable higher usage, and therefore higher bills which would result in more money going back to the DNO¹⁰. Therefore Panellists felt that customers should not be providing the upfront investment that is needed to upgrade a network.

“I fail to see why we should provide investment, there’s no additional bonus for us.”

If the DNO was not responsible for providing this funding, then a few Panellists thought that it should be the government taking the decisions around the nation’s electricity needs (rather than in each of the individual DNO regions). The government would allocate funding as necessary to ensure power is always available. While they recognised that consumers would still pay in the end through taxation, they felt on principle that these were national decisions that needed to be taken by the government, and therefore funded by it.

“There are so many variables...a decision has got to be made at a government level and not a regional one”

In addition, Panellists found it difficult to engage with the scenarios due to their views on how electricity usage might change. Those who thought that demand is likely to stabilise or decrease, thought that there would be no need to think about the different trade-offs involved in the scenarios. Their belief was that none of the scenarios were likely to become a reality. Some questioned whether the types of changes discussed earlier in the workshop could really add so much pressure to a network that significant investment would be needed. They felt that small changes would be sufficient to mitigate changes in local demand, and thought that these should not be particularly expensive and could be provided for from existing budgets¹¹.

“If 50 people plugged in an electric car it wouldn’t make a difference. Just put in a new transformer.”

Others thought that, given that changes in demand would not happen “overnight”, these issues can be decided as and when necessary, and are not a consideration for now.

4.2 Considered views of the scenarios

When considering the three scenarios, Panellists’ discussions centred on four different aspects:

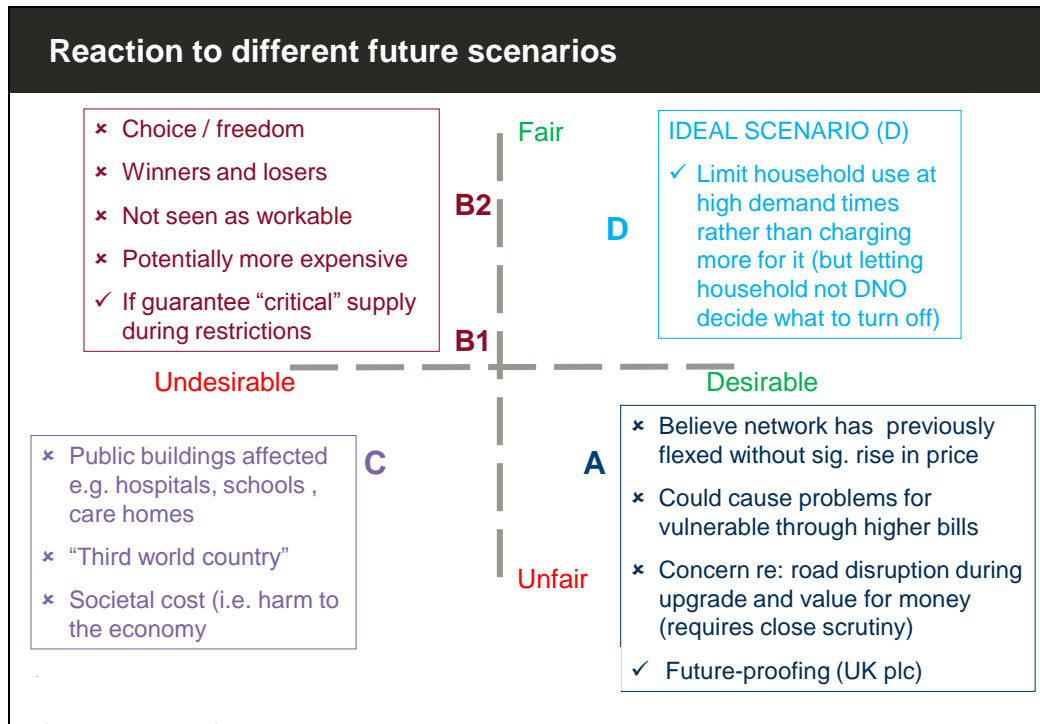
- The desirability of the scenarios;
- The fairness of the scenarios;

¹⁰ In the quiz, Panellists were told that 19% of their electricity bill was paid to DNOs, and consequently some assumed that as bills/usage increased, the amount of money paid to DNOs would also increase.

¹¹ Despite the stimulus materials explaining that expanding capacity is expensive, many felt that adding a new transformer here and there where needed should not be a significant cost in comparison to the overall costs of keeping the system in good repair

- The practicality of the scenarios; and
- The cost assumptions of the scenarios.

These are discussed separately below. When choosing between the scenarios or outlining alternatives, all of these aspects were taken into account. The slide below demonstrates where the scenarios fit in relation to desirability and fairness, which were the two most important considerations for Panellists.



All of the scenarios were seen to have significant disadvantages, and additionally some Panellists questioned the practicalities of each. They were reluctant to choose between them, but many thought that, if forced, they would opt for option A, provided investment was tightly monitored.

“I think you want to be between A & B. You want them to improve on equipment and wires etc, but you still don’t want them to charging astronomical prices. You don’t want to be in B as there are potential power cuts.”

A few noted that if they chose option A, they would preserve their freedom of choice over how and when they use their electricity. They could then manage their bills by making their own decisions about how they were using their electricity. Some thought they would have to cut their usage as a response to higher bills, but would choose this over the other options as the cuts to usage would be entirely on their own terms.

Others thought that they would have to opt for scenario B, because they thought it was the most fair.

“My head says A but heart says B. Because I can afford it, but my conscience says B so it doesn’t hurt everyone’s bills.”

4.3 Views on the practicality of scenarios

Many concerns about the practicality of each of the scenarios arose throughout discussions, which shaped Panellists' reactions to them. Many Panellists questioned how changes to capacity would be planned for and carried out. They thought that it would be much better to carry out improvements in a reactionary fashion, as they thought it would be an impossible task to accurately predict how much capacity will be needed in the medium term, whereas a 'just-in-time' approach where demand was carefully monitored could be more cost effective. Some realised this would probably mean that scenario C would happen in the short term, but as they were convinced changes in demand would not happen quickly and be minimal, if network capacity was exceeded for a short time, the problem could be solved quickly. A few Panellists noted that they might see scenario C as acceptable if it was feasible to guarantee critical supply to vulnerable customers and community buildings (schools, care homes and hospitals) during an unplanned power cut.

There was scepticism around the feasibility of option B2. Most Panellists immediately dismissed the idea of restricting power to certain appliances as impossible.

"It's unworkable; you're just never going to be able to do that."

Examples were provided where this approach is workable, such as in Australia where air conditioning and swimming pools are on different circuits, or in some parts of Scotland where energy is supplied to a separate circuit to power a storage heater. Yet many were still unconvinced as to how well this would work in practice. They thought it might need constant monitoring and would be open to tampering at an individual household/building level if the non-critical electricity cap was adopted, and as such would be very dependent on the cooperation of individuals. For example, they felt that people might use the 'critical' supply electricity sockets for all of their household needs so that the impact on their household was reduced, because the DNO would not be able to check what they were doing.

"I find it hard to see how they'd achieve it without coming into everyone's house to check."

Many Panellists did not trust others to 'play fair' within such a system. A few also raised the concern that it would cost a large amount to install the kind of monitoring systems or separate circuits (i.e. one for critical supply and one for non-critical) that might be needed to allow scenario B2 to work, and as such it would probably be preferable to invest this money in extra capacity instead.

4.4 Views on cost assumptions of scenarios

There were many concerns about how investment would be managed in scenario A. Panellists disliked the idea of delivering a 'blank cheque' to the DNOs without some guarantees that the work would be done to a very high standard, and provide future-proofing i.e. be carried out in such a way that further investment would not be needed for another ten years.

"We cannot allow an open cart approach for this, and say 'Take my credit card and spend what you like'."

If Panellists were to accept higher bills, they felt that they would have to be persuaded that it was worth it in the long-term. They would need to be assured that the DNOs had adequate plans in place to ensure that the work was 'future-proofed' or that Ofgem was closely monitoring it.

In addition, it was difficult for Panellists to imagine the scale of investment that might be required to allow for as much capacity as might be necessary, and by how much their bills would have to rise in order to provide this. Many questioned why bills should have to be higher to ensure a reliable supply in the future. They presumed that DNOs are already investing in added capacity on an ongoing basis, and that this is part of their current bill. A small number presumed that, no matter what consumers think, bills will always rise. There was little point in considering capacity issues because no matter what the customers think, the DNOs will invest as much as they like and consumers will pay. Although most felt demand was not going to increase, a few thought that overinvestment was impossible, as any extra capacity would “eventually” be used due to future growth.

4.5 Views of the desirability of scenarios

None of the scenarios were considered to be either optimal or desirable, either due to cost, effects on society, or potential impacts on vulnerable energy users. Panellists were particularly concerned with potential effects on their personal standard of living.

Ability to pay

Panellists did not want to have to have a worse service than they currently do, primarily because they feel that they already pay high bills for their electricity. This was a key objection to both scenario A and scenario B1. Most thought that the current price should ensure that their electricity needs are always met and as such did not want the proportion that covers DNO costs to increase, or to have to pay a higher price at times of peak demand.

Several pointed out that there are limits to people’s ability to pay much more than they currently do. They thought that consumers are stretched to their limit as far as energy bills are concerned.

“I do think we’re paying enough for what we’re using at the moment, something’s got to give. The wages aren’t going up, are they?”

Some rejected scenario A because of the perceived lack of a limit on investment, as they thought that this would mean that they would not know how much their bills were going to rise (see section 2.4 above), and that this would make budgeting very difficult.

“The uncertainty would be unbearable.”

While the lower price was seen as a desirable element of scenario C, this was thought to be offset by other potential personal costs of unplanned power cuts, which Panellists thought would significantly decrease their standard of living.

Standards of living

Panellists reacted very negatively to any suggestion that supply might be physically restricted, either intentionally (scenario B2) or through unplanned power cuts (scenario C). This was primarily because they are used to having their supply “on tap”.

“We take it for granted that electricity always works for us. If you compare it to where we are with the internet where it often doesn’t work and sometimes runs faster, there is a difference.”

While all Panellists thought planned restrictions (B2) were preferable to unplanned cuts (C), they still saw this as an unnecessary nuisance. They argued that they would resent DNOs

taking away their freedom to choose when and how they used their electricity. When discussing what 'critical supply' might mean in this context, it became clear that this has different meanings for different types of households. While most agreed that refrigeration, cooking, heating and lighting would count as critical, other Panellists argued that different individual appliances were critical to their lives, and felt this would vary both by personal preference but also life-stage (in particular, whether or not there were children in the household). The consensus was that they would not be happy for a DNO to be allowed to decide what 'critical' means for their household.

"Her critical supply would be different to my critical supply. If mine goes down, my critical supply is going to be my hair straighteners."

However, a small number of Panellists argued that the restrictions in option B2 would not affect them too much, and they would quickly "get used to it". Some believed that such restrictions would lead to positive environmental outcomes (i.e. lower emissions) and that these restrictions on lifestyle freedoms would therefore be justified.

Impacts on society

For others, the wider impact on society was precisely the reason they objected to options B2 and C. Many described both of these options, (in particular option C) in negative terms, such as "it's a return to the dark ages". They thought these scenarios were not acceptable for a 'developed country', and felt that not having a reliable supply would be potentially damaging to the reputation of Great Britain as a whole. Scenario A was seen as the most desirable scenario for the country as a whole, as it would allow the economy to develop without being restricted by lack of access to energy.

"If it's for the long run, then it's better to invest. At least future generations would benefit."

Overall, many thought that, despite the personal cost, it might be better to choose scenario A in order to future-proof the electricity network for subsequent generations. In addition, some were of the opinion that the B and C scenarios were a "ticking time-bomb" that would cost more in the long-term and potentially lead to significant future disruption or cost to businesses and community buildings. For example, if interruptions led to the need to invest significant amounts in back-up generation.

There were also principle-based objections to scenario B2 which centred on data protection concerns and their implications for the society we live in. Many Panellists instinctively disliked the idea of DNOs having detailed information about their usage within their home, which they assumed would be needed in order to operate this scenario. While some agreed that this would be acceptable if it allowed for more efficient investment in the network, this would only be acceptable for some if they were asked for their consent.

Desirability versus fairness

Scenario A therefore emerged as the most *desirable* scenarios of those presented, both personally and for Great Britain as a whole. As noted above, most were not convinced that they should ever have to pay more for this (i.e. they questioned the cost assumptions of this approach). Several Panellists noted that higher bills would not pose a particular financial problem for them, but nevertheless, did not think it was sufficient to simply say "I'm rich, I can afford it". Scenario A was largely rejected as an **acceptable** scenario based on its perceived unfairness, discussed below.

4.6 Views of the fairness of scenarios

When discussing the desirability of the different scenarios, Panellists discussed potential impacts on their own households or on society as a *whole*. However, many also took a 'citizen' view when discussing future capacity, considering the potential *distribution* of impacts, and as a result raised some concerns around the fairness of the various scenarios.

Panellists thought that passing the cost of extra capacity through to everyone without differentiation between customers was unfair. However, they did recognise that this would be the most likely approach if significantly more capacity is needed in the future. They were particularly concerned about consumers who were already struggling to pay their bills, and worried that scenario A would lead to an increase of those considered to be in fuel poverty. Scenario B2 and C were seen as unfair as it was thought that the costs of unplanned cuts or restricted access to electricity would be disproportionately high for certain types of vulnerable consumers, such as the elderly and those who need constant electricity for medical equipment.

Scenarios B1 and B2 were also seen as unfair because their impact would not be distributed evenly. They thought that either a higher price or restrictions of use (as envisaged in the B scenarios) would disproportionately affect those who work nine to five and those who have young families, both being types of households where demand for electricity is high at peak times, and difficult to change.

"Then people who work all day are penalised. They come home and have a nice shower, a cuppa, and they're penalised."

The general consensus was that use of electricity is something which consumers often have little control over, as most usage comes from "*essential tasks*" as outlined in Section 2.

It was also thought that it would be unfair for public sector organisations (schools, hospitals etc.) whose budgets are already tight, to have to pay for the cost of increasing capacity in the network, or for more expensive electricity at certain times. Panellists thought that it would be inherently difficult to manage or reduce electricity usage in such buildings. The effect on these types of customers was also an important factor in arguments against scenarios B2 and C. Panellists thought that the costs of unplanned cuts or restricted access to electricity would be particularly high in these types of buildings, as the risks of disrupting teaching classes or healthcare provision could be substantial. Therefore all scenarios were seen as unfair when provision of supply to these types of public buildings was considered.

It was generally agreed that the underlying reasons for extra pressure on the network would make little difference to the fairness of any of the scenarios. As Panellists were used to costs for distribution being built into bills and not charged at an individual level, they found it difficult to discuss (and to envisage) paying for the extra demand on the network by individual building or consumer. In addition, some felt that those that already use a lot of electricity would already be paying more to their DNO as a result of the higher cost of their energy bills.

"If the guy with all the plasmas has all the money to buy all of the gadgets and pay for the electricity, what does it matter [where the pressure on the network comes from]? His electricity bill is going to be higher than mine."

Many Panellists thought that it would either be technically impossible, prohibitively expensive or too intrusive on consumers to work out where exactly the extra pressure on the network was coming from.

4.7 The ideal scenario

There were several suggestions for modifications to the scenarios to help mitigate perceived problems of fairness, while stopping bills from rising too much. The ideal scenario developed spontaneously in several workshops would be a modified version of scenario B1 under which greater freedom of usage was maintained. A few Panellists used the analogy of broadband access with a 'download limit'.

If Panellists were to accept restrictions on usage at specific times, then they would expect to retain control over what they would use at these times within certain limits. This would combine their most desired outcome (lower or non-rising bills), but not allow DNOs to, as they saw it, dictate their lifestyles. Within this scenario, it was also noted that these 'download limits' would need to take into account the needs of those who need more electricity for medical reasons, so that they are not unduly restricted.¹²

¹² The emphasis in the research was to get feedback on scenarios A-C and consequently we had limited time to probe around scenarios proposed by participants. This scenario could be argued against on the grounds outlined in section 4.3 (i.e. that it would be unfair to families who may need more electricity than single households) so would need further development if adopted.

**Priorities for DNOs
across and within
output areas**

Section 5: Priorities for DNOs across and within output areas

This section looks at Panellists priorities for DNOs across and within the six key output areas in the RII0-ED1 model: Reliability and Availability, Customer Satisfaction, Social Obligations, Safety, Environmental Impact and Connections.

5.1 Initial reactions to price control and outputs

Due to time constraints, price control was described simply, as a ‘contract’ between DNOs and Ofgem. As part of this contract, DNOs have to achieve certain targets across six specific output areas. This approach allowed Panellists to deliberate on what DNOs should focus on and what their priorities should be.

Panellists generally understood the fundamental principal of DNO price controls. However, they were less confident in how the price control would work in reality, in particular the use of incentives and penalties. Some felt that it was difficult to discuss the pricing of electricity distribution because they think in terms of their overall energy bills, not the proportion of their bill paid to the DNO. Although Panellists struggled with the specific details of price controls, almost all were able to comment on what they thought DNOs should deliver for customers through the price control outputs.


5.2 Priorities for DNOs across ED1 output areas

The graphic below outlines the six ED1 output areas, as presented to Panellists.

Proposal: Six key areas for DNOs

Environmental Impact: Help to reduce carbon emissions, decrease their overall impact on the environment
Customer Satisfaction: Maintain/increase customer satisfaction levels (e.g. are customers satisfied with how they are treated during a power cut?)
Connections: Connect new customers to the network in a timely and efficient way (e.g. making sure new houses can be connected to electricity network)
Safety: Provide a safe network to comply with Health and Safety standards
Reliability and availability: Promote reliability of supply e.g. fewer interruptions, make sure customers are reconnected quickly
Social obligations: Treatment of vulnerable customers and people in fuel poverty

DNOs will also have to ensure adequate **flexibility and capacity** in each of their networks as customers’ use of electricity changes



When presented with the RIIO-ED1 output areas, most Panellists agreed that these were, generally, the right areas in which to set 'targets' for DNOs. However, a few Panellists thought that it was very difficult for the general public to engage with the concept. It was also noted that these issues do not seem particularly relevant to them as customers:

"It all seems a bit removed from where I am. It all sounds very nice if they reduce their environmental impact, but what's it got to do with me?"

However, many mentioned that these output areas broadly corresponded with what they had spontaneously spoken about as DNO priorities (specifically 'reliability and availability', 'customer satisfaction' and in a limited number of cases 'connections'). Other areas sounded reasonable even though they had not been raised spontaneously ('safety', 'environmental impact'). Some Panellists were surprised to see 'social obligations' as an output area as they assumed this would be a supplier obligation. Others simply did not understand what was meant by 'social obligations'. After other Panellists suggested it could include activities such as providing support for vulnerable customers, a number initially questioned how this would work in practice, as they found it difficult to imagine what targets could be set in this area.

Reliability was the most important output area to nearly all consumers when considering all of the output areas. Panellists 'voted' it the most important in all but one location (Liverpool), where Panellists said they were most concerned with social obligations. Meanwhile, Panellist discussions *within* each of the output areas confirmed the importance of reliability because many of the measures discussed related either directly or indirectly to reliability. For example, targets for output areas such as 'Customer satisfaction', and 'Connections' areas related to being reconnected quickly and checking satisfaction after a power cut. Some thought that these targets were only important insofar as they would help ensure that DNOs are prioritising the provision of a reliable supply. Indeed many of the targets discussed within the output areas were thought to be irrelevant if there was a 100% reliable supply.

Across all the other five output areas, Panellists developed and discussed targets which were either related to improving reliability or dealing with the consequences when there are interruptions to supply, thus underscoring the importance of this output area. Examples of this type of targets included:

Social obligations:	Prioritise vulnerable customers during an interruption
Customer Satisfaction:	Deal with reconnection issues quickly
Safety:	Ensure on-going maintenance, in part to reduce interruptions
Connections:	Ensure reinforced connections for reliability of supply (especially for vulnerable consumers and community buildings)
Environmental Impact:	Run wires underground wherever possible (partly due to perception that this would reduce the number of interruptions)

In the following sections we discuss each of the output areas in more detail. As discussed above, there was some overlap in the way the different output areas were interpreted (such as reliability being mentioned across a number of areas). To avoid repetition we have reported the findings by output area as understood in the proposed ED1 price control and have also identified where overlap in Panellists' views exist.

5.3 Reliability and Availability

Panellists tended to focus on the current reliability of the network, with few linking this to capacity issues discussed earlier in the workshops.

Views on DNO targets in this area differed across locations, with those in urban areas who had experienced few/no interruptions often taking a stringent approach to targets for the number of interruptions and speed of reconnection. Those in rural areas who had experienced power cuts were more likely to advocate a more pragmatic approach, perhaps as they understand the difficulties in ensuring a totally reliable supply in all areas of the country at all times.

The most important targets in this output area were:

Fewer or no interruptions: Panellists thought that the most important thing that DNOs should do is “*keep the lights on*”. They did not expect 100% reliability in all areas, as there was an understanding that extreme weather conditions cannot always be protected against. In Ayr, Taunton and Cambridge some Panellists spontaneously mentioned electricity outages, but were not probed on frequency. Whether they had experienced outages or not, most Panellists maintained that it should be the main priority of all DNOs to keep disruption to a minimum. To ensure this, Panellists thought that there should be targets for investment in maintenance and upgrading of wires, where necessary. Panellists suggested that DNOs should be obliged to do regular checks of their networks. An example of a target suggested by Panellists was that DNOs should be able to show they are working with the latest and most reliable technology.

Another recommended indicator was a year-on-year reduction in the number of interruptions across a network. Some Panellists in rural locations argued strongly that targets of this nature should focus on improving reliability for those who are currently subject to frequent interruptions. One suggested way to enforce this would be by monitoring how constant electricity supply is and publishing statistics for each local geographical area, so that it would be possible for customers to see who has the best and worst service if they were interested.

Panellists noted that if ‘fewer or no interruptions’ was seen as the main priority; there would be little need for the other targets listed below.

Quick reconnection policy¹³: Panellists felt that where there are interruptions, targets should be set around maximum reconnection times.

“We know things go wrong, but it’s how they get fixed afterwards”

Panellists usually didn’t have specific timeframes in mind, partially due to lack of experience of interruptions. For example, two hours was suggested in Cambridge, and 48 hours in Taunton, although the emphasis was on reconnecting as soon as possible depending on the cause of the interruption (e.g. some recognised reconnection would take longer if storms had taken out large parts of the network). Some pointed out that it is important to maintain an adequate, well-trained and experienced workforce in order to do this, and thought that this is something that should be monitored. One example of a specific target was that the DNO should be able to show they have a dedicated workforce to repair transformers that was on standby throughout the year.

Some Panellists added that targets should be “*sensible*”. By this they meant that the targets set should take into account the reason for the interruption. If the interruption was caused by

¹³ Panellists tended to use the word ‘reconnection’ when discussing restoration of supply. As a result, we have used this language throughout the report.

a lack of maintenance or contingency planning (i.e. the fault of the DNO), then participants felt that the reconnection targets should be more stringent than if it was caused by something that was outside of the DNO's control.

Compensation: If these reasonable reconnection times are missed, Panellists thought that there should be compensation for the customers affected, though they did not talk in detail about expected levels of compensation or the circumstances in which they would expect it. A few Panellists in one location suggested £50 for every day without electricity as a reasonable level of compensation.

Back-up plans: DNOs should be expected to have good back-up plans in the case of prolonged interruptions, particularly for vulnerable customers. Most did not have strong opinions as to what might be involved in these back-up plans (they thought the DNOs might be best placed to decide that), but thought that it was important that DNOs ensure that vulnerable people were not harmed by lack of access to electricity, where this is avoidable. Suggestions included ensuring that the elderly or sick had access to emergency supply during prolonged interruptions or the DNO paying to put such customers up in hotels in these situations. Similar targets were suggested when discussing 'Social Obligations' and 'Customer Satisfaction' and are outlined in more detail in the relevant sections.

Warnings for planned interruptions: If the DNO needs to interrupt power for maintenance/upgrading, then they should provide adequate warning to those who will be affected, either directly or through their suppliers. Panellists discussed this in more detail when considering the 'Customer Satisfaction' output area (Section 5.4). It was suggested in London that there should be national targets for the amount of disruption that is allowed for planned repairs and maintenance and that DNOs should have to fit their work around this.

5.4 Customer Satisfaction

Panellists came up with a wide range of targets in this area, many of which were related to reliability, e.g. "constant supply", "fix outages in a set time", "compensation for power cuts". This was important for some: the only way to ensure customer satisfaction is to provide a reliable supply. The other targets were seen as 'nice to have'.

Views on how to measure this output area varied depending on the type of relationship Panellists would like to have with their DNO. For those who did not see themselves as direct customers of the DNO, the only important customer satisfaction target was centred around what happens should something go wrong.

Others thought that the most pressing target for DNOs in this output area would have to be informing their customers as to who they are and what their responsibilities are. These Panellists wanted the DNO to begin treating them *as customers*.

The most important targets in this output area were:

Effective communications during a power cut: For many, this was the only target in this area, although it is important to note that some felt they would prefer all information about power cuts to come through their supplier. Several indicators for DNOs were mentioned here including:

- **Providing advice on what to do during power cuts**, and perhaps setting up a standard procedure for reporting to ensure all households are aware of this. Many Panellists noted that, before the workshop, they would have gone to their supplier during a power outage. Some felt they would rather know how to contact the DNO, given that they are ultimately responsible for restoring supply.

- **Providing information on how long the power cut will last.** This information must be accurate and updated as often as necessary. Some suggested that this would be best provided by text message once they reflected that internet and radio would be unavailable with no power. One Panellist had experienced a power cut, which was fixed in a matter of hours, but was frustrated that the DNO hadn't contacted him, and that the engineers who were working on the repairs could not offer him any information about how long it would take. Generally, Panellists thought that it wouldn't cost much to do this, especially as in their experience, power cuts are rare occurrences.
- **Being easily accessible during a power cut.** By accessible, Panellists meant that it should be easy to contact a person on the phone (ideally a free phone number), and that person should communicate with customers in easily understandable, simple English.

Complaints and satisfaction monitoring: In most workshops, Panellists suggested indicators that related to collecting data or monitoring customer perceptions of service through customer surveys and keeping track of complaints¹⁴ (i.e. whether the number of complaints is increasing or decreasing).

“To be in touch with the customer – do a survey to see if you are happy or not”

This was one of the few areas that some Panellists specifically felt could be tied to penalties or incentives, possibly because it is seen as quite a clear measure that Ofgem can easily set key performance indicators for. But as it was thought that satisfaction with DNOs is driven primarily by reliability, and because reliability could be affected by several factors outside of the control of the DNO (historic levels of investment, the rurality of the area the network covers and weather conditions), it would be difficult to fairly measure satisfaction with DNOs and to set targets in this area.

In addition, some noted that if someone called them and asked them to rate their satisfaction with their DNO they would not be able to answer, so felt that any surveys should only include those likely to be able to comment (e.g. if they had recently been in touch with the DNO or had experienced an interruption).

Providing information: Panellists were divided about targets around information. Most agreed that if the DNO needs to interrupt power for maintenance/upgrading, then they should provide information about this to those who will be affected, at least four weeks in advance.

Others thought that DNOs should be obliged to go further and keep customers informed about their business activities which may impact on the service consumers receive. For example, they suggested consumers should receive more information on the types of investment DNOs are making, and *“how the DNO is working for the customer”*.

Panellists felt this information could be provided in a simple format such as a leaflet. Some suggested email as it would be more cost-effective, but others felt they would probably ignore messages in this format. They felt it could get lost among large volumes of junk mail entering their inbox. A few Panellists were against DNOs providing information, arguing that this level of contact would not be worth the cost which they thought would be passed back to the consumer.

¹⁴ This may in part be research effect, as customer satisfaction monitoring was discussed as a way of regulating suppliers in the previous Panel workshop.

Other targets mentioned in this area included:

- Ensuring there is a local customer on the board of each DNO to feed back on behalf of local residents on any customer service issues;
- Flagging up reliability problems on the DNO's website to inform consumers that these problems are being dealt with, and to give them an indication of how long it will take.

Several of the targets outlined above would be dependent on DNOs having access to usage information and contact details for all of their customers. Panellists were not in agreement as to how they felt about suppliers sharing their information with DNOs. Some felt that sharing anonymised data would be acceptable while others were concerned about data privacy.

5.5 Social Obligations

Many Panellists wondered how it would be possible for DNOs to fulfil social obligations to vulnerable groups when they are not 'direct customers' of the DNO. Some pointed out that suppliers already have special responsibilities towards these groups of customers, and this should include ensuring they have the energy supply they need. But as the discussion progressed, most Panellists came to the conclusion that it was important that the DNO know who their vulnerable customers are, to ensure that they are supported, especially during a power cut.

Some of the targets that were discussed might be more properly seen as the remit of suppliers or the state, such as "*waiving large bills*", "*not cutting off elderly customers*" or "*ensuring that no one goes without basic supply*". A few Panellists argued that DNOs could potentially work with suppliers in trying to help customers in fuel poverty, though they were unsure of what this might entail.

Panellists were much more open to data sharing between suppliers and DNOs in these cases, if it would help DNOs to identify who is most in need in emergencies. However, some still argued that vulnerable customers should be able to opt-out of this information sharing. It is worth noting that most Panellists are not 'vulnerable', and even those who are (based on Ofgem's definition) don't always class themselves this way, and as such would not see this in terms of *their own* information being passed on.

The most important targets in this output area were:

Reconnections: If there is a power cut for any reason, certain customers should be prioritised for reconnection. The types of customers mentioned included the elderly, those who are reliant on medical equipment and community customers such as hospitals and care homes. This was seen as the most important target in this output area.

Back-up systems: These should be back-up systems in place for those who are most vulnerable (frail or dependent on medical equipment) when there are long interruptions. Suggestions for doing this included supplying heaters to those most in need, providing hospitals, care homes and schools with generators (or paying compensation if they had to provide their own generation during an outage) and moving the elderly and frail to a warm building during an interruption.

Informing vulnerable customers of the help available: Panellists thought that any efforts in this area would need to be communicated to those who they are intended to benefit in order to be as effective as possible. Some noted that there are probably current DNO schemes for vulnerable customers in place that need to be sufficiently publicised.

Equality of reliability: In rural areas, some thought an important part of the DNOs' social obligation is ensuring that these customers should get a similar standard of service to those in urban areas. A few rural Panellists felt that they were perhaps lower priorities for DNOs as they experience regular power cuts.

"You're punished for living in an area that is perhaps not so accessible."

Other targets mentioned in this area included:

- Recruiting employees from the local area
- Offering work experience to people in the local area
- Paying employees well, and offering them job security which was seen to be part of good corporate social responsibility, and
- Giving vulnerable customers information on how to use their electricity as efficiently as possible.

5.6 Safety

Panellists found it difficult to think of targets in this area as they presumed it was *"the law"* and as such anything they came up with would already be covered by health and safety regulations which they understood DNOs are already legally obliged to comply with.

"We totally take this for granted; you assume and expect things to be safe."

While this output area was seen as very important, some questioned whether it really belonged in the price control model. Carrying out their job safely should happen irrespective of how the DNOs are incentivised. As a result, Panellists did not think that they needed to know about targets in these areas, as they do not affect them as customers. They did however think that any DNOs who do not abide by health and safety laws should be held to account.

Many linked maintenance issues to reliability, which was seen as an important secondary objective of keeping the wires safe. A few also linked maintenance back to environmental impact, which meant that they thought it was doubly important. They argued that well-maintained wires are more likely to be efficient, thus not wasting energy, and also unlikely to *"leak"* which they thought would be harmful for the environment.

The most important targets in this output area were:

Network maintained so wires and substations are kept safe: There should be checks on this at regular intervals. A few thought that the findings should be reported to customers so that they can be satisfied that the network is safe. For some it was important that these checks are carried out by whoever was responsible for monitoring safety (Panellists presumed the Health and Safety Executive (HSE) as this was mentioned in the stimulus material). Panellists also noted that any repairs/upgrades should be carried out safely.

Staff training: Staff should be sufficiently trained both when they are first employed and at regular intervals to ensure that their safety is never in danger.

Avoid power surges: Surges were mentioned in several areas, and were assumed by Panellists to be one of the key risks that safety standards are in place to mitigate. In particular, Panellists talked about experiences of spikes in the power supply which could damage electrical equipment and they felt could pose a risk to safety. Moderators did not

probe on the frequency of these occurrences although some in Abergavenny and Cambridge mentioned they had personal experience of surges. Whether or not they have experienced them, Panellists who spoke about them assumed that surges are dangerous and should be avoided if possible.

Other targets mentioned in this area included:

- Comply with BSI standards
- Give safety instructions to those who live near wires/substations, and
- Substations and wires to be kept secure i.e. anti-theft measures should be put in place.

5.7 Environmental Impact

Most Panellists initially found it difficult to develop targets in this output area. Views were greatly influenced by their more general attitudes to 'green issues'. In Abergavenny, some Panellists came to the conclusion that environmental impact targets were potentially irrelevant and therefore low on the agenda. Only a few considered this was the most important area due to their conviction that everyone should be doing their utmost to be energy efficient and reduce their carbon footprint.

The most important targets in this output area were:

Improve efficiency of wires: Panellists made comparisons to leaky water pipes and thought that companies should be trying to repair/upgrade wires where necessary to reduce loss during distribution.¹⁵ Measuring "wastage" in the network and having targets for reducing it year on year was suggested as one way of doing this.

In some areas, Panellists thought that this target was best seen as part of a system-wide effort to improve efficiency. An example of a target suggested was that the DNOs should work with the supply chain to ensure the whole system is energy efficient and communicating how consumers can be more energy efficient.

Undergrounding wires: Panellists mentioned several reasons for wanting DNOs to do this including

- Decreasing visual impact. was important to some Panellists across the workshops, and not just those living in rural areas;
- Improving the efficiency of wires. It was presumed underground cables were more efficient; and
- Improving reliability. Underground wires are perceived to be less likely to be affected by severe weather.

There was debate in some locations including Ayr and Liverpool as to whether undergrounding was necessary, as the benefits may not match up to the required cost. The general conclusion was that when *replacing or upgrading* wires they should be undergrounded where possible and this process should not be "*too expensive*".

¹⁵ There was low awareness of exactly how much was lost during distribution or what makes a 'good wire', so these discussions were based mostly around Panellist assumptions.

Reduce carbon footprint of the DNO as a company: Panellists suggested cutting down on use of energy where possible, recycling, and being early adopters of energy efficient technology such as electric cars.

“They should lead by example, publicise their own usage of electricity and how they’re minimising their carbon footprint. To demonstrate ‘this is what we’re doing.’”

Educate/Encourage consumers to be more energy efficient: this was seen as a ‘nice to have’ indicator, but nevertheless one that DNOs could pursue as part of the wider societal effort needed to meet emissions targets. A small number of Panellists linked this back to future capacity issues and noted that helping people cut their energy use could mean that less investment in capacity might be needed in the future.

Other targets mentioned in this area included:

- More help with incentives for wind and solar panels at home
- Decrease the disruption of upgrading/repairing wires, and
- Innovation/investment in schemes to reduce carbon emissions (e.g. looking for an alternative to traditional wires).

5.8 Connections

Again, Panellists struggled to come up with targets for this area as few had experienced new connections and thus had little understanding of the processes in place. Much of the discussion centred on the cost of connections. It was mostly felt that new connections should be paid for by those who need them if the cost is “reasonable”.

“Why should we pay to subsidise the cost of a new house?”

The exception was in Ayr, where it was thought that the government has a duty to cover the cost of connections to remote areas.

As we have previously discussed, Panellists tended to think that the costs for network reinforcements (where extra capacity is needed because of changes to demand) should be built into bills (in the same way that DNO costs currently are), as they believed that those living in the areas who need them would end up paying more through their bill in any case, because of the extra energy that they would use. In addition, they felt that where the additional demand was as a result of “good reasons” (e.g. consumers requiring medical equipment in their homes), it would be unfair to ask these individuals to pay for the reinforcement.

“If it’s because they need a dialysis machine or something then the company should have a pot of money set aside, out of their own charitable giving, for these reinforced connections”

Whilst Panellists felt that individual customers should not have to carry the cost of network reinforcement, they were unsure as to who should bear this cost. DNOs, local authorities and central government were all suggested.

When discussing the cost of connecting distributed generation¹⁶, it was presumed that those who are generating will ultimately profit from it, so the cost of connecting distributed generation should be borne by the generators themselves.

The most important targets in this output area were:

Targets for connections: Panellists thought that these should be available almost immediately or at least within a few weeks, and always before building projects are complete. An example of a target mentioned in several workshops was that there should be an electricity connection before a new property is occupied.

A few Panellists argued that the best way for DNOs to ensure this is to have close contact with local authorities and to be involved with planning decisions from an early stage, i.e. to plan for future connections insofar as possible.

Panellists were pragmatic about this target however, noting that connecting a whole housing estate would have different timescales from connecting one house.

Guarantees for connections: Panellists also said that they would want clear and agreed timescales for the provision of any new or reinforced connections on a case by case basis (although these would potentially be irrelevant if there are strict targets that are met across the board). In particular, Panellists want to be told how long the work is going to take from start to finish.

They also thought that good customer service was particularly important when DNOs are providing new or reinforced connections (as it is one of their few direct interactions with customers). Panellists suggested that DNOs should ensure that there is one point of contact for each customer throughout the process.

Other targets mentioned in this area included:

- Prioritise new connections for social purposes: e.g. to hospitals and schools, and
- No interruptions to existing customers to provide new connections.

¹⁶ Distributed generation is the generation of electricity from many small energy sources e.g. solar Panels.

Conclusions

Section 6: Conclusions

Priorities for DNOs

While the concept of price control was difficult for some Panellists to understand, most were able to comment on the output areas that have already been set out under RIIO. They felt that these output areas that are in place for the next price control period are focussed on broadly the right areas in order to protect existing and future customers.

Due to their lack of interaction with DNOs, it is very difficult for consumers to decide on priorities for them. However, both their spontaneous and considered reactions illustrate that, for consumers, **reliability is the most important measure of performance**. If they can pay their bills and use electricity when they want to, then consumers will be satisfied with their DNO, although not consciously so. The prevalence of reliability measures throughout the workshop discussions indicate that consumers would expect that reliability measures are given the greatest weight within the new price control 'contract'.

Consumers understand that 100% reliability cannot be guaranteed. **In the event of interruptions to power supply, quality of customer service is hugely important** to them. This was the other key target that emerged from discussions of DNO priorities. Consumers expect that DNOs should have to prove that they have good communications procedures and back-up plans in place in order to fulfil their obligations under price controls.

Relationships with DNOs

The low level of prior awareness of DNOs and their role should be borne in mind when considering how consumers might react to any communications from DNOs in the future. Unless they are better informed about the shape of the entire electricity system, consumers might be confused about the distinction between suppliers and DNOs, and who to contact when. Given that the complexity of the energy market has been a key issue for Panellists throughout all three Panel events, there is a risk that more contact with DNOs could lead to increased dissatisfaction with the market. Overall, outside of interruptions, **consumers do not particularly want relationships with DNOs** as this would be a sign that "*things have gone wrong*". For many, the supplier is more rightly seen as the DNOs' primary consumer.

The regulation of DNOs

Once informed about DNOs' role, consumers think that regulating DNOs – natural monopolies who they perceive could have a lot of power - could be challenging. However, there is **little appetite for being informed about how DNOs perform** against the output areas, since they cannot choose their DNO. While previous Panel work has found that consumers would like Ofgem to publicise their regulation of suppliers, findings from these workshops would suggest that most consumers would be happy with Ofgem's regulation of DNOs if they do not experience interruptions to their supply.

Instinctively, most consumers do not want Ofgem to incentivise DNO performance and there is some concern in relation to the use of fines or penalties, as Panellists were concerned that these may be passed on to the consumer. This was perhaps partly driven by the broader debate happening at the time of the workshops, regarding fines in other sectors such as banking. The key issue here is that the incentive structure within price control does not resonate with consumers' prior understanding of incentives and fines. Any consumer communications about price control would have to take this into account.

How DNOs should plan for the future

It is difficult for consumers to engage with the idea of rising electricity usage and many noted the difficulty in predicting future usage. Many believe that energy efficiency will offset any increase in the use of electricity, while others are sceptical about the electrification of energy demand. In any case, they assume that, as, historically, the network has successfully 'flexed' to meet capacity; it will always do so in future.

However, Panellists do **want DNOs to focus efforts on ensuring reliable supply now and in the future**. There is no consensus on how DNOs should plan for coping with future changes to electricity use. Consumers are unwilling to accept higher bills, though they are likely to blame any increase in electricity prices on suppliers due to their limited awareness of DNOs (which may further reduce their trust in the energy market). Conversely, consumers are also unwilling to accept decreased access to electricity. They expect Ofgem to set sensible investment limits to ensure current levels of reliability in the future, unless strong arguments can be made that the cost of increasing capacity would be prohibitive. If this were to be the case, then consumers would expect the 'pain' of reduced access to be shared fairly across society (i.e. access should not be restricted through economic means), and for any solution to ensure consumers retain the freedom to use electricity how they choose within specified limits.

Appendices

Appendices

Appendix 1: Discussion Guide

Ofgem Consumer First Panel

Workshop 3 – Electricity Distribution Network Operator Priorities

The overall objective for the third Panel event is:

To understand consumers' priorities for electricity distribution network operators over the next 10-15 years including views of how future scenarios may impact on the network. These priorities will feed in to Ofgem's forthcoming ED1 price control.

The research questions that the workshops will seek to answer are:

Timing	Exercises / activities	Comments
10 min	<u>Introduction:</u> Re-introduce the Ofgem Consumer First Panel; explain the purpose of this session and how it links to previous sessions	
15 min	<u>Section 1: Future electricity supply and use</u> AIM: to understand Panellist perceptions of how energy use and supply will change in the future, and introduce ideas about how this will affect electricity distribution network operators and their interface with customers.	
30 min	<u>Section 2: Introduction to DNOs and discussion of their role</u> AIM: to introduce Panellists to DNOs and their role, to understand Panellists' spontaneous views of DNO priorities, and to explain the RIIO model and output-led framework.	
25 min	<u>Section 3: Flexibility and capacity</u> AIM: to understand Panellists views on DNO flexibility and future capacity in the distribution networks, building on discussions of future electricity supply and use. The discussion of these overarching themes will inform the later sections on the six detailed output areas.	
15 min	<u>Break Section 4: Discussion on 6 key output areas</u> AIM: to allow Panellists to think about their preferred indicators and targets for each of the six key DNO output areas and to understand in detail Panellists' views on the six key DNO output areas:	
50 mins	environmental impact, customer satisfaction, connections, reliability and availability, safety, and social obligations.	
25 mins	<u>Section 5: Prioritisation exercise</u> AIM: to understand Panellists' priorities for DNO performance both across and within the six key output areas. <u>Section 6: Close</u> AIM: to bring the Panel to a close and allow participants to comment on what they've discussed and learned as members of the Panel and across all three Panel events.	

10 min		
<p>17.45-18.15</p> <p>18.15-18.25</p> <p>10 mins</p>	<p><u>Arrival and Registration</u></p> <p><u>PLENARY Introduction</u> <i>LEAD MODERATOR to welcome, introduce the team and clients (as applicable), housekeeping.</i></p> <p><i>Use SLIDE 2-5 to introduce what will happen this evening and to feed back summary of findings from last session explaining how they were used.</i></p> <p><u>TABLES</u> Introductions around the table.</p>	
<p>18.25-18.40</p> <p>15 mins</p>	<p><u>Section 1: Future electricity supply and use</u> <u>TABLES</u></p> <p>Thinking about your personal use of electricity, how would you say it has changed over the past few years? Do you have any electrical appliances that you didn't have 5/10 years ago?</p> <p>How do you think overall use of electricity in society has changed?</p> <p><i>USE SLIDE 5 (handout) to introduce the growth and change in domestic electricity usage since 1970. Explain that overall consumption has doubled, and point out the increases in usage for home computing and consumer electronics. Explain that there might be other new technologies in the future that could increase our use of electricity in the way e.g. computers have.</i></p> <p>Let's think about the next 10-15 years; how do you think your household's use of electricity will change? What new electrical products might your household gain?</p> <p><i>MODERATOR TO FLIPCHART RESPONSES</i></p> <p>What about other households? <i>(If necessary, ask respondents to think about different types e.g. a family with children, working couples, retired people, disabled people and people with long-term health conditions, etc.)</i></p> <p>And other types of buildings, such as businesses, offices, shops, and public services such as schools and hospitals?</p> <p>Can you think of any other reasons why demand for electricity might change?</p> <p><i>IF NOT COVERED PROBE ON:</i></p> <ul style="list-style-type: none"> • Working at home • Increased use of household gadgets • Energy efficient appliances • Climate change, leading to more extreme weather / hot or cold • More people living alone or in smaller family units • Electricity based cooking/heating systems • Increased ownership of products/appliances that run on electricity e.g. cars <p><i>When discussing the final two prompts, explain that meeting GB targets for reductions in carbon emissions may require significant</i></p>	<p>MODERATOR NOTE:</p> <p><i>The function of this section is to help participants to start thinking about how electricity demand (and to a lesser extent supply) might change in the medium term. This will help them to better understand the potential constraints on DNOs when trying to work out priorities.</i></p> <p><i>It is essential to cover these probes as they introduce the idea of potential need for increased capacity in electricity distribution networks</i></p> <p>See interviewer</p>

	<p><i>electrification of energy use in cooking, heating and transport.</i></p> <p>What effect do you think this might have on how energy is delivered to your home? Probe on existing level of understanding of how energy / electricity is delivered to people's homes. Can you think of any other reasons this might be affected?</p> <p><i>IF NOT COVERED INTRODUCE/PROBE ON:</i></p> <ul style="list-style-type: none"> • Small-scale electricity generation (e.g. solar Panels) • SMART meters/grids <p><i>Ensure that Panellists understand these concepts and their potential effect on capacity before moving to the next section.</i></p>	<p><i>briefing note for short definitions</i></p>
<p>18.40-19.10 30 mins</p>	<p><u>Section 2: Introduction to DNOs and discussion of their role</u></p> <p><u>DNO Teaching quiz (handout) (10 mins)</u></p> <p><u>PLENARY</u></p> <p><i>LEAD MODERATOR to explain that the rest of the evening will be spent talking about Electricity Distribution Network Operators (see moderator note to the right).</i></p> <p><i>Use SLIDE 7 to explain their place in the network – transmission as motorways, distribution the A and then smaller roads.</i></p> <p><i>Panellists to work in pairs on short quiz. LEAD MODERATOR to work through answers (use SLIDE 8 to illustrate Q1 and Q6). Explain why each is important (see quiz moderator version)</i></p> <p><i>Use SLIDE 9 to explain the importance of wires, particularly in maintaining and ensuring a reliable supply of electricity – if there is not enough capacity in the network or it is not maintained well enough then you may not get the electricity you need.</i></p> <p><u>Spontaneous views of DNO priorities (10 mins)</u></p> <p><u>TABLES</u></p> <p>How would you know if you had a good DNO in your area?</p> <p>And how would someone recognise a bad DNO?</p> <p>FLIPCHART RESPONSES</p> <p>What should the main priorities of a good DNO be? Why? And what's less important? Why?</p> <p>Is it important/unimportant to you that you know what a DNO is doing/prioritising these things? Why/why not?</p> <p>What level of contact, if any, would you like to have with your DNO? Why is that?</p> <p>Ofgem is responsible for making sure that the DNOs work in the interest of both current and future consumers. If you were in charge of Ofgem, given that we now know that customers have no choice over their DNO (i.e. you can't switch to another one unless you move to a different part of the country), how would you make DNOs act in the public interest? How would you know that they are acting in the public interest?</p> <p>Spontaneous responses but probe if necessary on:-</p>	<p>MODERATOR NOTE:</p> <p><i>NB – the companies are referred to DNOs throughout the guide, but please use the language that Panellist's use to describe them once they have begun to discuss. What are they more comfortable with?</i></p> <p>MODERATOR NOTE:</p> <p><i>If participants struggle here, introduce the 6 output areas(customer satisfaction, connections, safety, reliability and availability, social obligations and environmental impact) as prompts at this stage</i></p> <p><i>NB less interested in what companies should do, than how we should go about making them do it (i.e.</i></p>

	<ul style="list-style-type: none"> • Incentives (what would this look like?) • Fines for poor performance. <p><u>RIIO presentation (10 mins)</u></p> <p><u>PLENARY</u></p> <p><i>LEAD MODERATOR to use SLIDE 10-12 to introducing the RIIO model (i.e. the idea of price controls and incentives)</i></p> <p><i>Invite questions after presenting the price control slide. Ofgem can help to field any which are particularly detailed.</i></p> <p><i>Then introduce the six key areas in the output-led framework.</i></p> <p><i>Explain that flexibility and capacity (which we are about to discuss) is the seventh overarching area. One of the key challenges for DNOs is to ensure a reliable future supply for all customers. As we discussed earlier, it is not always clear how demand and supply are going to change, and thus it is difficult to judge the appropriate level of investment; if they over-invest and the capacity isn't needed then consumers will be paying higher bills for no reason, if they under-invest then consumers may not always have access to the electricity that they demand.</i></p> <p><u>TABLES</u></p> <p>Thinking back to the conversation we just had about the idea of a good DNO, how do these six areas match up with your idea of a good DNO? How do they differ? Are you surprised by any of them?</p> <p>Should any other areas be added? Why?</p> <p>If you had to explain price controls to a friend, how would you do it?</p>	<p>regulation)</p>
<p>19.10-19.35 25 mins</p>	<p><u>Section 3 Flexibility and capacity</u></p> <p><u>TABLES</u></p> <p><i>Moderators to remind participants about the challenges of ensuring adequate flexibility and capacity in the network, and how that interacts with Price Control (as outlined by the LEAD MODERATOR in presentation (see paragraph in italics above). PLEASE ENSURE THAT ALL PANELLISTS UNDERSTAND THESE ISSUES, and take time to explain and discuss them..</i></p> <p>Thinking about this, I'd like us to discuss some different approaches to dealing with this...</p> <p><i>INTRODUCE SLIDE 13 (handout).</i> <i>Explain that at one end of the spectrum (SCENARIO A) DNOs could be allowed to invest in the network so much that there is no restriction on capacity in the future no matter how much pressure (demand or supply) is placed on the network. Bills would therefore be high.</i></p> <p><i>At the other end of the spectrum, bills could be lower, but there would either</i></p>	<p>MODERATOR NOTE:</p> <p><i>This section is crucial to ensure that participants are thinking about these issues when discussing the six output areas after the break</i></p>

	<ul style="list-style-type: none"> - <i>be restrictions on use of non essential appliances (e.g. electric cars, air conditioning) at peak times, AND / OR additional costs associated with using the network at peak time (SCENARIO B) OR</i> - <i>we could have less investment in the network and an increase in unplanned power cuts due to lack of capacity (SCENARIO C).</i> <p>Does anything in particular stand out for you about these three possible approaches? Why? What are the advantages of this? What are the disadvantages?</p> <p>Why? Flipchart advantages/ disadvantages FOR A, B and C</p> <p><i>For each approach, ask:</i> Is this approach fair? Why/why not?</p> <p><i>When discussing (SCENARIO B) ask:</i> Would it make a difference which appliances/equipment were restricted? Are there any appliances/equipment which should never be restricted? Would it make a difference if you knew in advance of buying the appliance that restrictions might apply?</p> <p>Would having a higher price for electricity that you use at times of high demand be better or worse than restricting everyone's access to electricity at times of high demand? Who would be affected by this approach? Does it matter?</p> <p><i>When discussing (SCENARIO A), ask:</i> Is there a % of the overall cost to the consumer of electricity above which this approach would become unacceptable? Why so? <i>Remind Panellists that it has already increased as a proportion of electricity bills (from 15% to 19%) in the past few years</i></p> <p>Does it make a difference to your preference where the pressure on the network comes from? For example, you might not increase your own need for electricity, while some of your neighbours might start to use significantly more electricity than you at peak times.</p> <p>What about if the pressure on the network comes from other types of electricity consumers? e.g. a business such as a factory, or a community consumer such as a school</p> <p>What are the advantages to all consumers paying for the cost of changing network capacity? And the disadvantages?</p> <p>Does your view change if certain customers are using technologies that help GB to reduce carbon emissions?</p> <p><i>When discussing SCENARIO C, ask:</i> By what amount would your bills have to go down for you to accept and increase in unplanned power cuts to your home?</p> <p>Which approach, or combination of approaches, do you prefer? Why?</p> <p>Another approach to managing capacity might be to ensure that the DNOs had better information around demand at peak times.</p>	
--	---	--

	<p>One way to ensure this might be to increase their awareness of your additional requirements for electricity <i>Explain that this could be through consumer notification (e.g. texts or emails), but could also be via smart meters</i></p> <p>Does anything in particular stand out for you about this approach? Why? What are the advantages of this? What are the disadvantages?</p> <p>Why? <i>Flipchart advantages/ disadvantages</i></p>	
<p>19.35-19.50</p>	<p>BREAK AND ASK PANELLISTS TO RETURN TO BREAKOUT TABLES</p>	
<p>19.50-20.45</p> <p>50 mins</p>	<p><u>Section 4: Discussion of the 6 output areas</u></p> <ul style="list-style-type: none"> • Environmental Impact: Help to reduce emissions, decrease overall impact on the environment • Customer Satisfaction: Maintain/increase customer satisfaction levels • Connections: Connect customers in a timely and efficient way • Safety: Provide a safe network in compliance with health and safety standards • Reliability and availability: Promote reliability of supply e.g. fewer interruptions, make sure customers are reconnected quickly • Social obligations: Treatment of vulnerable customers and people who experience ‘fuel poverty’ <p>TABLES <i>Each table will take three areas to focus on (spend about 15/20 minutes on each).</i></p> <p><i>Explain that under price control, Ofgem will ask the companies to meet targets across the six different areas for each of the six key output areas (SLIDE 14 handout). It hasn't yet been decided what those targets are. For the next hour or so, we're going to thinking about what you as an electricity consumer think that those targets should be.</i></p> <p><i>Remind groups keep the issues covered before the break in mind i.e. changes to electricity demand and supply and the potential for future strains on network capacity.</i></p> <p><i>Work through the 3 output area for your table in turn.</i></p> <p><u>Reliability and availability</u> <i>Break table into pairs and ask them to spend a few minutes brainstorming what indicator/targets they think that DNOs should meet in this area. Panellists to write these on post-its. Encourage groups to think of as many indicators as possible, even if they don't think that some are particularly important.</i></p> <p><i>Moderators to allow 2/3 minutes to brainstorm indicators/targets in pairs, then ask Panellists to hand them to him/her. Read them out then place them on flipchart on which you have drawn a priority scale, asking Panellists where they should go.</i></p> <p><i>PROBE on why they have chosen that indicator/target and that priority</i></p>	<p><i>TABLE 1 (lead mod) Reliability Social obligations Safety</i></p> <p><i>TABLE 2 Customer satisfaction Environmental impact Connections</i></p>

	<p><i>order. Why is that one more/less important?</i></p> <p>Are there any more we could add?</p> <p>Does anyone have personal experience of interruptions to their electricity supply? If so, can you describe them and how it affects you? <i>PROBE on frequency and length of interruptions</i></p> <p>Is it more important for DNOs to focus their resources on trying to minimise the number of interruptions per household or the number or people who experience interruptions? What are the advantages/disadvantages of the different approaches?</p> <p><i>MODERATOR can reintroduce SLIDE 13 Trade-off between increased risk of interruptions and increased costs.</i></p> <p>Which approach do you prefer? Why?</p> <p>Would this change if the interruption only affected certain devices and maintained critical supply? What would you describe as 'critical supply'? Thinking about our discussion of future homes and other buildings, how do you think this will change in the future?</p> <p>Looking back at what we wrote earlier (indicate flipchart), would you change the order of importance now? (<i>MODERATOR TO MAKE ANY CHANGES TO ORDER ON THE FLIPCHART</i>)</p> <p><u>Customer service</u></p> <p><i>Break table into pairs and ask them to spend a few minutes brainstorming what indicator/targets they think that DNOs should meet in this area. Panellists to write these on post-its. Encourage groups to think of as many indicators as possible, even if they don't think that some are particularly important.</i></p> <p><i>Moderators to allow 2/3 minutes to brainstorm indicators/targets in pairs, then ask Panellists to hand them to him/her. Read them out then place them on flipchart on which you have drawn a priority scale, asking Panellists where they should go.</i></p> <p><i>PROBE on why they have chosen that indicator/target and that priority order. Why is that one more/less important?</i></p> <p>Are there any more we could add?</p> <p><i>If satisfaction data mentioned as an indicator:</i></p> <p>Which is more important as an indicator – the ability of DNOs to resolve complaints or the overall satisfaction amongst its customers? Why? What's the difference between the two approaches? What are the advantages and disadvantages of setting one or the other as a target?</p> <p><i>When discussing communications:</i></p> <p>In what kind of circumstance would you contact your DNO? What kind of response would you expect if you did? <i>NB Focus this on the activities of DNOs specifically, rather than a generic "polite, courteous, prompt" type response</i> What about if you had an interruption to your electricity supply, what would you expect then? Is this different to a general enquiry?</p> <p>How would you best like to be in contact with your DNO (if at</p>	
--	---	--

	<p>all)? <i>For each of the types of contact Panellists have mentioned (e.g. to inform the DNO about changes to your electricity use, to notify them in a power cut, to make a complaint) PROBE</i></p> <ul style="list-style-type: none"> • Query and answer (telephone/post/online) • Website • Proactive Text • Twitter feed • Other social networking (E.g. Facebook) <p>How would you feel about your DNO and supplier sharing your data in order to try to improve customer service? And for what reasons? <i>Explain that this might be data around your personal circumstances (i.e. your age, medical conditions, off gas grid customers) or your electricity usage patterns. Or a local authority giving the DNO a list of contact details for a street that is about to be dug up to improve wires in order for them to give advance warning.</i></p> <p>Looking back at what we wrote earlier (indicate flipchart), would you change the order of importance now? (MODERATOR TO MAKE ANY CHANGES TO ORDER ON THE FLIPCHART)</p> <p><u>Social obligations</u> <i>Break table into pairs and ask them to spend a few minutes brainstorming what indicator/targets they think that DNOs should meet in this area. Panellists to write these on post-its. Encourage groups to think of as many indicators as possible, even if they don't think that some are particularly important.</i></p> <p><i>Moderators to allow 2/3 minutes to brainstorm indicators/targets in pairs, then ask Panellists to hand them to him/her. Read them out then place them on flipchart on which you have drawn a priority scale, asking Panellists where they should go.</i></p> <p><i>PROBE on why they have chosen that indicator/target and that priority order. Why is that one more/less important?</i></p> <p>Are there any more we could add?</p> <p>Are there any particular groups of customers that DNOs should prioritise? Which, when and how? What about when there is a power cut? <i>PROBE around measures to help the vulnerable e.g. providing meals/a warm place to stay for the elderly until powers is restored and provisions for disabled / ill people who are reliant on electrical equipment / adaptations.</i></p> <p>How should this service be funded? <i>PROBE</i></p> <ul style="list-style-type: none"> • By all bill-payers equally • By those who use most electricity • By those who need priority service. <p><i>If Panellists argue that the government should fund explain that as this would be through tax it is similar to the first option)</i></p> <p>If so, how should the DNO work out which customers these are? Should it be down the customer to inform their DNO of any</p>	
--	---	--

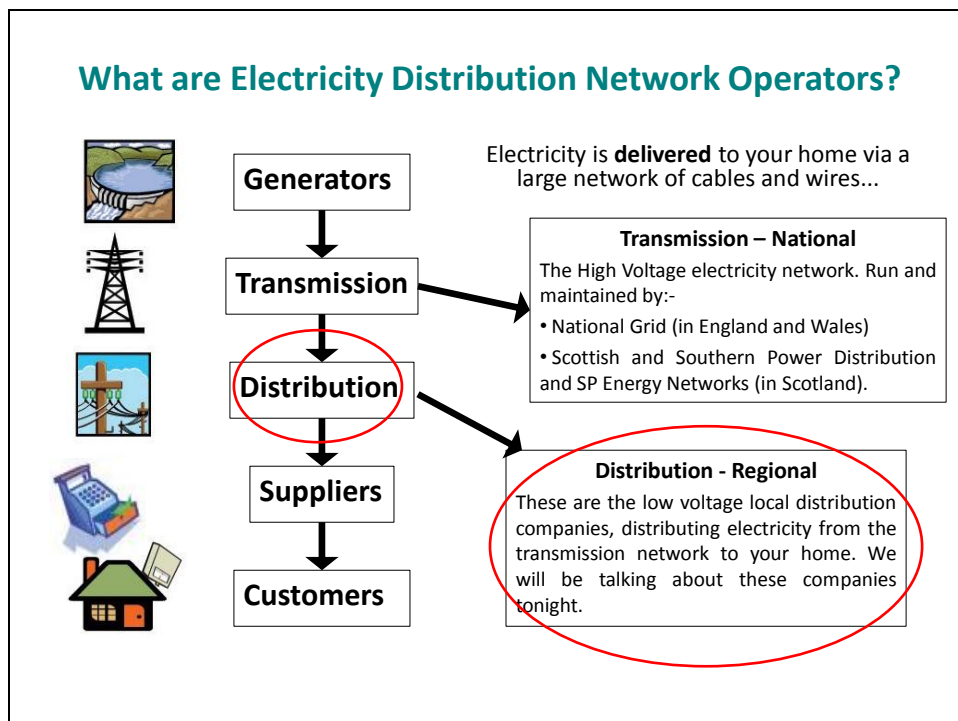
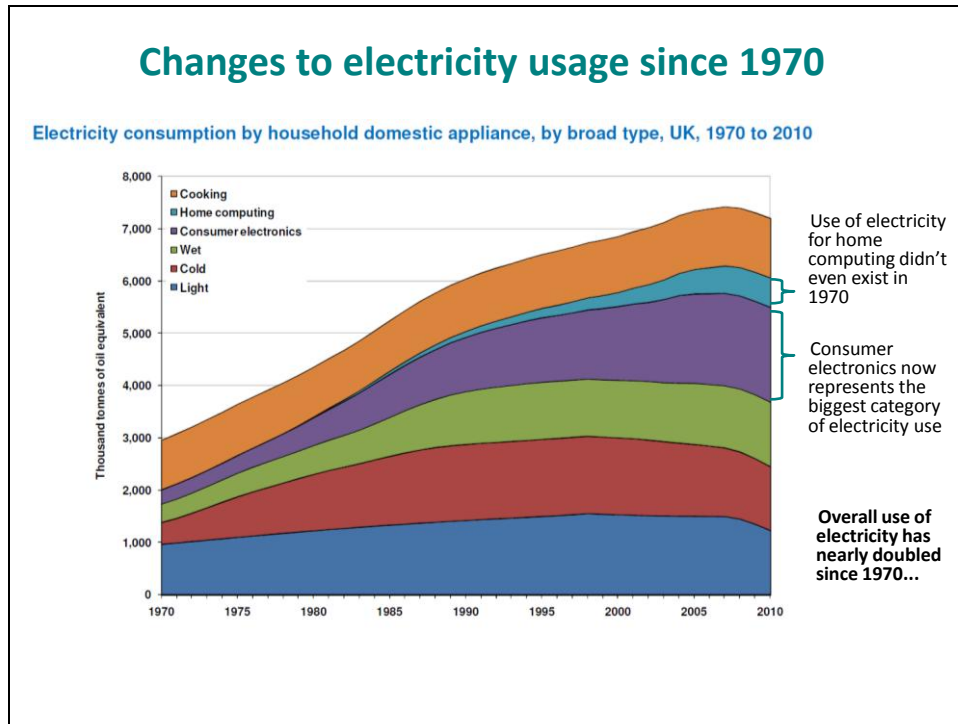
<p>special needs, or should the DNO proactively seek this information? <i>NB currently customers themselves inform DNO</i></p> <p>How would you feel about your DNO and supplier sharing your data in order to try to improve service to vulnerable groups (e.g. elderly people who do not have access to the gas grid and would struggle to heat their homes during a power cut)? And for what reasons?</p> <p><i>Explain that some customers do not have access to the gas grid. These customers usually have higher energy costs as they are forced to rely on oil/electricity for heating fuel. It can be very costly/impractical to hook everyone up to the gas network, but DNOs could help by enabling some customers to install domestic heat pumps (which help people heat their homes by using the thermal energy in the ground. This is more cost-effective than heating a house using electricity alone) instead. Increased use of heat pumps could put pressure on the electricity networks at peak times.</i></p> <p>Is activity in this area something that should be used as an indicator for DNO performance? Why? Why not? If so, is it important that they look to help all off-grid customers in this way or just some? Which ones?</p> <p>Looking back at what we wrote earlier (indicate flipchart), would you change the order of importance now? (MODERATOR TO MAKE ANY CHANGES TO ORDER ON THE FLIPCHART)</p> <p><u>Environment</u> <i>Break table into pairs and ask them to spend a few minutes brainstorming what indicator/targets they think that DNOs should meet in this area. Panellists to write these on post-its. Encourage groups to think of as many indicators as possible, even if they don't think that some are particularly important.</i></p> <p><i>Moderators to allow 2/3 minutes to brainstorm indicators/targets in pairs, then ask Panellists to hand them to him/her. Read them out then place them on flipchart on which you have drawn a priority scale, asking Panellists where they should go.</i></p> <p><i>PROBE on why they have chosen that indicator/target and that priority order. Why is that one more/less important?</i></p> <p>Are there any more we could add?</p> <p><i>Energy efficiency: Explain that wires can be upgraded, but that this can be more expensive than the less energy efficient ones.</i></p> <p>Which should be a priority for DNOs, minimising or investing in energy efficiency? Why? How should DNOs decide when to spend money upgrading their wires? Should there be efficiency targets for wires and who should set them?</p> <p><i>Visual impact: Explain that wires can be undergrounded, but that this can be more expensive than overground wires.</i></p> <p>Which should be a priority for DNOs, minimising bills or minimising the visual/environmental impact of distribution?</p>	
---	--

<p>Why? Is this true for all different parts of the country? How should DNOs decide when to spend money on minimising the visual impact of new wires?</p> <p>Looking back at what we wrote earlier (indicate flipchart), would you change the order of importance now? (MODERATOR TO MAKE ANY CHANGES TO ORDER ON THE FLIPCHART)</p> <p><u>Connections (spend less time on this area)</u> <i>Break table into pairs and ask them to spend a few minutes brainstorming what indicator/targets they think that DNOs should meet in this area. Panellists to write these on post-its. Encourage groups to think of as many indicators as possible, even if they don't think that some are particularly important.</i></p> <p><i>Moderators to allow 2/3 minutes to brainstorm indicators/targets in pairs, then ask Panellists to hand them to him/her. Read them out then place them on flipchart on which you have drawn a priority scale, asking Panellists where they should go.</i></p> <p><i>PROBE on why they have chosen that indicator/target and that priority order. Why is that one more/less important?</i></p> <p>Are there any more we could add?</p> <p>Does anyone have personal experience of trying to arrange a new connection to an electricity network? How would you describe that experience? <i>PROBE on length of time and ease/difficulty with which they negotiated the process</i></p> <p><i>Explain that, as well as providing new connections, DNOs may also, in the future, might have to do more around reinforcing existing connections where capacity needs to be increased (linking back to earlier conversation around flexibility).</i></p> <p>Should this vary according to the type of customers? Should any particular groups of customers/types of buildings be prioritised for new connections/reinforcement of connections? For what reasons?</p> <p>Is connecting locally generated energy as important as providing/reinforcing connections for supply? Or more or less? Why so? <i>NB This is generation within a DNO area rather than larger scale generation that comes via the Transmission system. For example, a smaller scale windfarm. Also known as distributed generation</i></p> <p>Who should pay for new connections to the network in the future? Does it differ according to type of connection? Or customer? Why? <i>NB currently paid by customer</i></p> <p>Who should pay for reinforced connections to the network in the future? <i>NB increasing the available capacity to a connection because of an increase in demand from that particular customer (generally Business) or from an area (e.g. where new housing is being created). It relates back to the flex/capacity discussion.</i></p> <p>Does it differ according to type of connection? Or customer? Why? Does this change depending on why people need to reinforce</p>	
---	--

	<p>their connection (i.e. circumstance such as an elderly relative moving in, or choice such as using more electricity because you are using more appliances.</p> <p>Looking back at what we wrote earlier (indicate flipchart), would you change the order of importance now? (MODERATOR TO MAKE ANY CHANGES TO ORDER ON THE FLIPCHART)</p> <p><u>Safety</u> <i>Break table into pairs and ask them to spend a few minutes brainstorming what indicator/targets they think that DNOs should meet in this area. Panellists to write these on post-its. Encourage groups to think of as many indicators as possible, even if they don't think that some are particularly important.</i></p> <p><i>Moderators to allow 2/3 minutes to brainstorm indicators/targets in pairs, then ask Panellists to hand them to him/her. Read them out then place them on flipchart on which you have drawn a priority scale, asking Panellists where they should go.</i></p> <p><i>PROBE on why they have chosen that indicator/target and that priority order. Why is that one more/less important?</i></p> <p>Are there any more we could add?</p> <p>Areas to probe on if Panellists struggle:</p> <ul style="list-style-type: none"> • Maintaining overhead wires (e.g. inspection, tree cutting) • Substation security (e.g. ensuring children don't play too close to them) • Maintaining meters • Ensuring that overhead and underground wires meet statutory requirement e.g. depth underground or distance from buildings) <p>Looking back at what we wrote earlier (indicate flipchart), would you change the order of importance now? (MODERATOR TO MAKE ANY CHANGES TO ORDER ON THE FLIPCHART)</p>	
<p>20.40-21.05</p> <p>25 mins</p>	<p><u>Section 5: Prioritisation exercise</u></p> <p><u>PLENARY</u></p> <p><i>LEAD MODERATOR to lead room in a voting exercise – which should be the DNO priorities</i></p> <p>1) <i>Within output areas</i></p> <p><i>Work through all 6 areas in turn.</i> <i>For each output area, moderator to very briefly feedback what their tables top 3/4 indicators were for each area and why.</i></p> <p><i>Then LEAD MODERATOR to ask Panellists to vote on which they think the top priority should be within this area.</i></p> <p>2) <i>Across output areas</i> <i>Panellists are each allowed two votes in prioritising among the six areas. They can use both of their votes for one area if they think it is</i></p>	

	<p><i>especially important.</i></p> <ul style="list-style-type: none"> • <u>Environmental Impact:</u> Help to reduce emissions, decrease overall impact on the environment • <u>Customer Satisfaction:</u> Maintain/increase customer satisfaction levels • <u>Connections:</u> Connect customers in a timely and efficient way • <u>Safety:</u> Provide a safe network in compliance with health and safety standards • <u>Reliability and availability:</u> Promote reliability of supply e.g. fewer interruptions, make sure customers are reconnected quickly • <u>Social obligations:</u> Treatment of vulnerable customers and the fuel poor 	
<p>21.05-21.15</p> <p>10 mins</p>	<p><u>Section 5: Panel wind-down and close</u></p> <p><u>TABLES</u></p> <p><i>Bring discussion on DNOs to close – final comments/points participants would like to make.</i></p> <p><i>Remind Panellists that this is likely to be the last event and thus the end of their time as CF Panel members.</i></p> <p><i>Distribute feedback forms and give five minutes to fill out, then ask:</i></p> <p>What’s been good about being a member of the Panel?</p> <p>And what’s been bad?</p> <p>What are the most interesting things you’ve learned that you’d like to tell your friends/family/colleagues about?</p> <p>What one thing would help improve the Panel, if we were to run something similar next year?</p> <p>FLIPCHART RESPONSES</p> <p><u>PLENARY</u></p> <p><i>MODERATORS/nominated Panellists from each table present the good/bad/interesting thoughts back to the room.</i></p> <p><i>LEAD MODERATOR to thank Panellists for their membership over the past year.</i></p>	

Appendix 2: Stimulus Materials



Electricity Distribution Networks

- There are 14 electricity distribution networks, each operated by one of 6 network companies
- Your local electricity distribution network is...
 - London – UK Power Networks
 - Cambridge – UK Power Networks
 - Abergavenny - Western Power Distribution
 - Taunton - Western Power Distribution
 - Liverpool – SP Energy Networks
 - Ayr – SP Energy Networks



Why are wires important to me?

- They make sure that electricity gets to your home!
 - If the networks aren't well-maintained, this can result in an unreliable supply of electricity
 - If the way we use electricity changes in the future, it may be that extra 'capacity' needs to be added to the electricity network, so that everyone has access to the electricity they need, when they need it
- They enable customers to use new technologies that help Great Britain to reduce its carbon emissions



Price Control

- Due to the huge cost of putting the network infrastructure in place, the companies that run the electricity distribution networks (Distribution Network Operators - DNOs) are monopolies. This means you cannot choose which DNO you get your electricity from. There is no realistic way of introducing competition.
- The Distribution Network Operators (DNOs) have a lot of power due to the fact that they are not in competition. So, Ofgem protects customers' interests by deciding how much money these companies should receive, through:

Price Control – sets the amount of money network companies can charge the network users (your electricity suppliers)

Restrictions on expenditure

Incentives to be efficient and provide a good quality of service

When Ofgem reviews the price controls it looks to balance...

The need to **protect customers' interests**



The need to **allow companies appropriate resources** to run their business, cover costs, and run a reliable and efficient network

The next price control period runs from 2015-2023.

During this period, DNOs will

- be set an amount to invest in the network
- be incentivised to innovate (e.g. so the network is as efficient as possible)
- receive rewards or penalties based on how well they perform

This is set out in a 'contract' which will reflect expectations of current and future consumers

Proposal: Six key areas for DNOs

Environmental Impact: Help to reduce carbon emissions, decrease their overall impact on the environment

Customer Satisfaction: Maintain/increase customer satisfaction levels (e.g. are customers satisfied with how they are treated during a power cut?)

Connections: Connect new customers to the network in a timely and efficient way (e.g. making sure new houses can be connected to electricity network)

Safety: Provide a safe network to comply with Health and Safety standards

Reliability and availability: Promote reliability of supply e.g. fewer interruptions, make sure customers are reconnected quickly

Social obligations: Treatment of vulnerable customers and people in fuel poverty

DNOs will also have to ensure adequate **flexibility and capacity** in each of their networks as customers' use of electricity changes



Capacity and restrictions



At this end of the spectrum...

At this end of the spectrum...

A. No restriction on capacity in the future, no matter how much pressure is placed on the network (i.e. DNOs will spend as much money as necessary installing new wires). Bills are high as a consequence.

...where is the limit?

B. There is less investment in new wires and as a result bills are lower, but there are potential **restrictions on the use of electricity at different times**

...would you accept restricted electricity? Or higher charges for use at peak?

C. Another option might be less investment in new wires, leading to lower bills but with increased chance of **unplanned power cuts**

Appendix 3: Panellist Demographics

Gender	Achieved
Male	51
Female	45
Total	96
Age	
18-24	8
25-44	40
45-64	31
65+	17
Total	96
Ethnicity	
White British	77
White Other	6
Black or Minority Ethnic	13
Total	96
SEG	
AB	19
C1	29
C2	18
DE	30
Total	96
Rural vs. Urban	
Urban	68
Rural	28
Total	96
Electricity Only	
Electricity Only	14
Electricity and gas	82
Total	96
Tenure	
Owner Occupied	48
Social Rented	30
Private Rented	18
Total	96
Fuel Poverty	
Yes	30
No	66
Total	96

Employment status	
Employed	59
Unemployed	9
Student	3
Retired	18
Other	7
Total	96
Long-term condition or disability	
Yes	17
No	79
Total	96
Payment type	
Prepayment	19
Quarterly payment on receipt of bill (standard credit)	33
Direct debit	42
Payment card / book	2
Total	96
Family status	
Married / cohabitating with dependent children	27
Married / cohabitating with no dependent children	15
Lone parent with dependent children	10
Living alone	34
Unrelated adults	10
Total	96