

## IMP880 VoLL Discussion Guide

ECP Meeting 2

28<sup>th</sup> / 29<sup>th</sup> August 2019

Objective- To understand how customers evaluate the VoLL questionnaire key features

GROUP STRUCTURE (1½ HOURS):

1. Moderator Introduction (2-3 minutes)
2. Differing VoLL for different customer groups (20 mins)
3. Large scale but infrequent interruptions (25 mins)
4. Service Attributes and Levels (25 minutes)
5. Socialisation of costs (15 Minutes)
6. Close (2-3 minutes)

### 1. Moderator Introduction (2-3 minutes)

- Re-introduce yourself
- Explain purpose of discussion (to help inform the design of a much larger piece of customer research regarding the reliability of customers' electricity supply and the impact of power cuts).
- Confidentiality is guaranteed, no right / wrong answers, interested in everybody's opinions, in as much detail as possible
- What were the key things you remember regarding the last session?
- Any questions?

### 2. Differing VoLL for different customer groups (20 mins)

Last time we talked about how the figure that the electricity industry use to place a value of the impact of a power cut (the Value of Lost Load or VoLL). We also discussed how this may be different (or worse) for different customers. This card **SHOWCARD A** shows the kind of customer groups that previous research identified as having a higher VoLL than other customer groups:

- Fuel poor customers
- Electric vehicles
- Rural
- Low income groups
- Age 30-44
- Aged 60 plus
- Experienced NO planned or unplanned power cuts
- Vulnerable customers (average high, medium & low dependency)

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- Off gas network

**PROBE** on each of the above for the following:

- Does it make sense this group have a higher value? Why?
- What about the scale of the difference, would you expect it to be even higher or not as high?
- Are any of these surprising to you, why?
- Are any missing that you would expect to be there? Which ones and where might their value sit in this list?

And now thinking about small or medium sized business customers....

## SHOWCARD B

- Have experienced 4 or more **unplanned** power cuts
- Rural
- Off gas network

**PROBE** on each of the above for the following:

- Does it make sense this group have a higher value? Why?
- What about the scale of the difference, would you expect it to be even higher or not as high?
- Are any of these surprising to you, why?
- Are any missing that you would expect to be there? Which ones and where might their value sit in this list?
- Thinking about the differing VoLL on cards A and B - do you think that everyone is able to fully express the true impact of a power cut on them personally?
  - PROMPT: Why? Do the panel believe that some groups more politically vocal? Is this affected by age, demographics and income? Are more vulnerable groups less likely to have a voice/be heard?

## 3. Large scale but infrequent interruptions (25 mins)

Now I want to move on to thinking again about how an unusually long power cut, or one that affects a large number of people might affect how much support some people need in a power cut, or might leave otherwise comfortable people in a vulnerable situation.

I want you to imagine that your home or business has suffered a power cut that has lasted 24 hours so far. You are not sure when the power will be restored, only that ENW are working on it and there are some complications because storm damage has made fixing the problem difficult. Currently they estimate that it could take another 12 hours to restore power. The area affected is wide....to help you plan how you manage another 12 hours without electricity, what kind of information would be MOST useful to know about the **area** affected....

## SHOWCARD C

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1. The number of properties affected
2. The number of miles radius affected
3. The geographical locations (your village, town or county names)
4. The distance to drive before you reach and area where the power is working
5. The area shown on a map

**IF RESPONDENTS STRUGGLE TO IMAGINE SCENARIO PLEASE SHOW THIS VIDEO OF 12 HOUR BLACKOUT:**

**MODERATOR INFO:** <https://www.facebook.com/dukeslancaster/videos/blackout-behind-the-scenes-with-the-community-cast/10155675216437822/>

- Explore reasons for answering as they do. Would they like more than one way of describing the area? What would they use this information for?
- During a power cut that lasts for a long time, are there any wider costs that you might not have thought of before? **PROBE** ie complications/worsening of a chronic health condition from spending a prolonged period in a cold house).
- What about effects on the whole community? In the examples shown, the power cut is affecting several towns and villages....What difference does this make to the impacts not just on you, but on that community?
- How does a community begin to assess the full extent of long power cut and the wider social consequences of power cuts on a community?
- What about the impact on doctors and hospital admissions?
- What about the disruption from having to carry out repairs?

## 4. Service Attributes and Levels (25 minutes)

**READ:** As we discussed in the last meeting, there are different factors that affect customers' perception of supply reliability such as the scale, frequency and duration of interruptions.

**PRESENT SHOWCARD D: "ATTRIBUTES AND LEVELS".**

**READ:** This grid represents three different aspects of service we would like to focus on, as we are thinking about rare but long interruptions. I would now like to look at the grid one row at a time.

1. Length of power cut/Duration of power cut to your electricity supply
  - Is the difference between the levels clear? Is any further explanation required?
  - Is the range of service levels appropriate? Do we have the right number of levels?
  - If you have experienced a power cut before, think about the level of service you believe Electricity North West currently delivers?
2. Scale of interruption/power cut
  - Is the difference between the levels clear? Is any further explanation required?

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- Is the range of service levels appropriate? Do we have the right number of levels?
  - If you have experienced a power cut before, think about the level of service you believe Electricity North West currently delivers?
3. Frequency of power cut to your electricity supply
- Is the difference between the levels clear? Is any further explanation required?
  - Is the range of service levels appropriate? Do we have the right number of levels?
  - If you have experienced a power cut before, think about the level of service you believe Electricity North West currently delivers?

## OVERALL

- Overall have we missed any important aspects or levels of service in the grid?
- If Electricity North West were to make improvements to specific service factors; which ones are likely to have the greatest influence on your perception of the reliability of your electricity supply? **LIST THE ATTRIBUTES ON A FLIPCHART.**

This grid will be used in an exercise like the one shown here **SHOWCARD E** to make survey respondents trade off different elements of their service against one another. This is an example of how this exercise will look in an online survey.

- Could you answer this example?
  - If not, why not?
  - If so, what is your answer and why?
- Is it clear what you need to do?
- How about the question wording – does it make sense to you? If not, why not?

## 5. Socialisation of costs (15 Minutes)

**READ:** If a person, business or a developer wants to connect a new building to Electricity North West's network, they are charged for the connection. Similarly, if an existing customer wishes to increase the amount of electricity they use, they may be charged because Electricity North West needs to ensure that the additional power is available. Customers will also be charged if they want to the DNO to re-route cables (ie should they want to build an extension, demolish a property or move a meter).

As such, the customer that has specifically requested the work, and will therefore directly benefit from it, pays.

**This kind of work is different than investments that Electricity North West has to make to maintain and upgrade its infrastructure, to make sure that its customers have safe and reliable electricity supply.**

You may remember that in the last meeting we explained that around 16% of your electricity bill goes to the DNO to 'distribute' electricity around its network. A simple analogy is a DNO is effectively an 'electricity haulage company' and moves electricity from the National Grid directly to homes and businesses

These costs are shared by every customer – i.e every home and business in Electricity North West’s region will pay a small proportion towards every upgrade in the region and the cost of every repair when power cuts occur, as part of the 16% ‘distribution charge’ element of their bill. You may have heard about charges being ‘socialised’. This is what it means when costs are split across a large number of people in this way.

## PAUSE – CHECK FOR UNDERSTANDING BETWEEN BILL PAYMENT AND CONNECTIONS PAYMENT

**EXTRA INFORMATION IF NEEDED:** Every property with an electricity supply is given a unique reference known as the Meter Point Administration Number (MPAN). The MPAN is extremely important and holds all the information that Suppliers need to bill you correctly for your electricity usage. DNOs also use the MPAN to map every supply (property) on its network. The MPAN is used by DNOs to pinpoint the location of customers when they are affected by faults and it holds information about the type and size of their supply.

**READ:** The following briefly explains how distribution costs are passed on to customers:

Electricity North West uses electricity consumption information from meter readings, to bill the various Suppliers for all the electricity that their customers have used in its region.

Distribution charges are levied proportionately, based on how much energy a customer uses, rather than a set rate where everyone pays the same. It forms a part of the charge for each unit of electricity you use. This approach means that **large users pay proportionally more distribution costs than low electricity users.**

**PROBE:** What do you think of this approach?

- Do you think it is fair?
- Do you agree higher users of electricity proportionally pay more towards the upkeep on the network (effectively pay a small subsidy) to fund the overall running and improvement costs?

**MODERATOR EXAMPLE IF NEEDED:** *Example of alternative cost-reflection model: Traditionally, water bills, which charge customers for both the supply and delivery of water were based on the ratable value of the property, leaving considerable scope for a disconnect between consumption and charge, and consequent cross-subsidy between customers. Other models use a fixed “flat” tariff applied equally across all users (ie a postage stamp – it costs the same to send a first class letter from Land’s End to John O’Groats as it does to send it to someone in the same town.*

**RECAP:** Now that you understand how Electricity North West gets its revenue to run the network, we want your opinions on how and where these resources are used and how it makes important investment decisions

**BACKGROUND INFORMATION TO READ:** Electricity North West invests heavily to ensure that its infrastructure is upgraded and maintained to a high standard and its customers continue to have a safe

and reliable electricity supply. The amount that it has to spend and how this money is spent is strictly regulated by Ofgem. These controls ensure that the revenues collected from customers are linked to company performance. Regulation limits the amount that costs can rise to make sure customers get value for money. Income in each year is largely fixed but can increase or decrease depending on performance against the outputs of a number of incentive mechanisms. These mechanisms aim to promote good customer service, minimise the number of interruptions that customers suffer and the average length of those interruptions.

These regulations also govern how DNOs must prioritise investment in their infrastructure, to ensure that they provide their customers with a safe and reliable supply of electricity **NOW** and target improvements in the right areas, to manage the risk of equipment failing in the **FUTURE**.

Therefore, they continuously monitor the age, condition and performance of assets and then target resources accordingly. This ensures that they are constantly looking to the future and make the right decisions to ensure that all customers continue to receive a safe and reliable supply, years on year.

## EXAMPLES: SHOWCARD F

So let's look at the example we used in the previous meeting (**showcard F**). Electricity North West has assessed there is a future risk that these two substations could develop problems and must make a choice about which it should replace **FIRST**. This decision is based on complex cost benefit analysis principals and Ofgem regulations mentioned earlier.

In the same way, it may need to **prioritise** which sections of its overhead network, feeding different rural communities, should be upgraded. Again, **this decision is firmly based on the age and condition of the overhead equipment, cables and poles and the 'whole life' costs and benefits of the decision.**

So, when a decision is made about which substation or span of overhead line should be replaced or refurbished, we understand that all the customers that are specifically supplied by that particular substation or that span of overhead line will receive a direct benefit from the investment, because it reduces the risk of them having power cuts in the future.

**However, the entire cost of the work are socialised and shared across every customer in every home and business in Electricity North West's region.**

This is considered a fair way of investing to maintain and improve the performance of the **whole** network because ultimately, every part of the network will be upgraded, as and when required, and everyone benefits in the long run. ie we may not need to replace the substation that supplies your home or business for another 30 years; *so you are not directly benefiting from the investments we are making at the moment, but you will eventually.*

**PROBE:** Do you understand the trade off between a customer paying more and receiving a benefit?

- Does this seem fair to you?
  - Why?
  - Why not?
  - Could investments be made in a different way?

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**CUSTOMER DIMENSION:** We want your opinion on how **fair** you think it is to introduce a ‘customer dimension’, as a new **additional** factor that we may consider, within the existing rules and regulations, when we decide which of our investments are **prioritised over others**.

**REMEMBER THIS IS NOT ABOUT WHO LOOSES OUT BUT WHO SHOULD BENEFIT FIRST.**

**PLEASE CONSIDER SCENARIO 1:**

## Fuel Poverty Scenario

We can see from **Showcard A** that the value of a power cut for customers in fuel poverty (ie are below the poverty line once they have paid fuel costs) is almost double the average, because they don’t have the means to cope ie having residual income to replace lost fridge and freezer contents.

Because customers in fuel poverty tend to be on low incomes and have to carefully manage their budgets, they are more likely to try to use less electricity, to keep bills down. However, they may have older, less energy efficient appliances and more difficult to heat homes. If we make a blanket assumption that fuel poor customers, the elderly and the most vulnerable tend to be low users to cut down on their bills, they will also pay proportionally less for the upkeep of the network.

**MODERATOR INFO:** We need to ensure that the panel recognise that we understand these are sweeping generalisations but we have simplified the issue to establish their view.

**SHOWCARD G:** Now consider an area which is more affluent and ENW know that increasing numbers households in the area are starting to change gas central heating for electric heat pumps and switch to electric vehicles.

If all the other factors that influence the decision are the same, ie the risk of future faults, which area do you invest in first to prepare for the next 6 years?

- Do you think it’s fair one area receives investment before the other?
  - What other information would you like to know
  - What other considerations do you take into account
- Is it right that we consider the needs and reliance of different customer groups in our wider decision making process?
  - Are the impacts different?
  - Should they be assessed differently or should all customer groups be treated the same?

**PROBE ON:** Do the wider societal and environment benefits of prioritising investments to accommodate more electric vehicles justify the decision?

- ie an investment to upgrade supply in one region, to accommodate a large increase in electric vehicles may mean that other improvements are delayed which increased the risk of customers in other areas having a powercut.

**MODERATOR INFORMATION ABOUT CONSEQUENCE OF EVS:** Can costs be justified if it helps to deliver

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less tangible benefits for or the greater good, ie an overall improvement in air quality associated with a reduction in emissions from combustion engines, improved health outcomes resulting in reductions in GP appointments and hospital admissions; a positive step in the transition to carbon neutrality and the impact of climate change?

## BELOW ARE EXAMPLES OF HIGH USAGE IF MORE CONTEXT IS NEEDED

### PV Scenario

Let's look at another scenario. Customers who have solar panels may have lower bills, as they use less 'mains electricity', because their own generation covers a proportion of their electricity needs. These customers may also get income from selling surplus generated energy back to the grid. As a consequence, a customer who has solar panels may be a low 'mains electricity' user, and as a result pay a disproportionately low amount towards electricity distribution costs.

A lot of **generation** (ie solar panels) can overload an electricity network and cause faults in much the same way that too much **demand** causes faults. Electricity North West has to forecast which regions of the network it needs to invest in, to ensure that these customer can continue to generate electricity but also have a safe and reliable 'mains electricity supply' when they need it.

**PROBE** – Do you understand the difference in needs/usage between customers with solar panels vs without?

- Thinking again about the way that we **prioritise** our decisions and how these costs are spread across all customers, is it fair that this decision could delay work to upgrade other networks, supplying electricity to different types of customers?

### EV – Heap Pump Scenario

In the **last meeting** we spoke about the Climate Change Act and how we expect to see a significant increase in electricity usage as more people change their petrol and diesel cars to electric vehicles and switch from gas to electric heating sources. **Showcard H** helps to demonstrate how electricity demand is forecast to grow and it shows how Electricity North West's network will have to adapt to cope with this, particularly at certain times of day.

Look at the increase in load that is expected from electric central heating systems and electric vehicles. ENWL has complex forecasting tools which predict where it might start to see problems on its network if it does not invest correctly.

We are already seeing an increase in the number of people owning electric vehicles. This will only increase in future, putting more and more demand on the network. ENWL need to keep up by preparing networks that likely to have more electric vehicles than others. If it does not tailor investment in this way now, then what might be the consequence of treating all areas the same?

**PROBE:** Do you think this scenario will eventually lead to power cuts in these areas?

- Not everyone on these networks will have electric vehicles – is it fair that those without electric



vehicles could potentially have more power cuts if investment isn't targeted to meet the increasing electricity needs of other customers in the area?

## NOW MOVING ONTO BILL INCREASES -

**MODERATOR ASK** (This is a different scenario – the following is not about investment but about support to mitigate the impact of faults when they occur):

**PLEASE REMEMBER THAT THIS IS A HYPOTETICAL SCENARIO** but,

Thinking back to a large scale interruption and the increasing frequency of long weather related power cuts

If your bill had to increase to ensure that adequate resources were available to restore power to vulnerable customers, what level of increase would be acceptable to you, if any? The average electricity bill is currently around £600 per year with a 1-2 bedroom house/flat paying around £400 and a 5 bedroom house paying approximately £850 per year.

What about fuel poor customers?

What level of increase would be acceptable to ensure that Electricity North West supports communities that are affected by large scale events (ie providing a hot meal, hot drinks, charging points for mobile phones etc).

## SHOWCARD H

- Check with each respondent if they are able to answer, and if they are willing to share what they would pay (need to check the scale works and is in the right ballpark)
- Anyone not willing to pay anything on their bill?
- What are the problems, if any, with this scale?
- Who are they thinking of when answering this question (vulnerable, fuel poor, rural, EV owners etc?)

## 6. Close (2-3 minutes)

- Any questions from attending colleagues?
- Thank respondents & depart