National Power Cut and Electricity Network Safety Number

3 Digit Number Application

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Energy Networks Association

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Related Documents

Reference 1	Severe Weather – Christmas 2013 - a review of Electricity Distribution Industry Performance; March 2014; DECC Storm Report.
Reference 2	December 2013 storms review – impact on electricity distribution customers; 6th March 2014; Ofgem Storm Report.
Reference 3	Single Emergency Number Service Requirements Specification (ENA-SEN-SCH_A-1.0) – 28th August 2014.
Reference 4	ENA SEN 3DN Research Findings – Jigsaw Research. 16th September 2014.
Reference 5	British Standard BS 18477:2010. Inclusive service provision – Requirements for identifying and responding to consumer vulnerability. November 2010.
Reference 6	Civil Contingency Act 2004. Civil Contingency Act 2004.
Reference 7	Consumer Vulnerability Strategy – Ofgem. 4th July 2013. Consumer Vulnerability Strategy.
Reference 8	National Single Non-Emergency Number: Proposals for number and tariff- Ofcom. 27th October 2005. Home Office 101 3DN Consultation

Distribution

Ofcom
Department for Energy and Climate Change (DECC)
Ofgem
Distribution Network Operators (DNOs) and Independent Distribution Network Operators (IDNOs)

Contents

1 Introduction

1.1 Background

The severe storm events over the winter 2013/14 period and the electricity supply disruptions they caused, highlighted that the general public is confused about what number to call to report an electricity network supply issue and obtain important information or advice – with many contacting their electricity supplier. This confusion was the subject of much media coverage at the time.

These storm events and the manner in which the electricity industry dealt with the related issues were subsequently the subject of a number of high profile reviews. Soon after, the Secretary of State for Energy and Climate Change, Rt Hon Ed Davey MP, met with CEOs of the Electricity Network Operator organisations; the Energy and Climate Change Select Committee (ECCC) also considered the matters in detail; and, in the following months, both DECC[1] and Ofgem[2] published reports of their findings (Reference 1 and Reference 2).

A common theme arising from these reviews was the need for a single nationwide number for the general public to be able to contact their Electricity Network Operator. This is to overcome the confusion arising from:

- each Electricity Network Operator currently having a different number and some have a different number for each area they operate in - and the regional dependency that this creates;
- Electricity Network Operator companies not currently having a high profile with the general public – and the general public not being aware of their role.

In his official statement after the meeting with industry CEOs in January, the Secretary of State said:

> "*people need to know how to contact the network operator in their region if there is a power cut, and we're looking to introduce a single emergency number which people can call irrespective of where they live*".

Accordingly, in March 2014, the Electricity Networks Association (ENA) was charged by DECC to deliver a single number for use in England, Wales and Scotland, on behalf of all Electricity Network Operators.

[1] Department of Energy and Climate Change.
[2] Office of Gas and Electricity Markets.

1.2 3 Digit Number

In considering delivery of a power cut and network safety number, we have reviewed why members of the general public might need to contact their Electricity Network Operator. It is clear that, in addition to the distress that can be caused by power outages, there are often very serious safety and welfare implications for the general public.

Life threatening situations relating to the supply of electricity can be experienced by all members of the general public at or away from their home. They are diverse in nature and can relate to a risk of electrocution or to the loss of welfare related electrical equipment. Unfortunately there have, on occasion, been fatalities and serious injuries. Of course, the acute distress that a power outage can cause is also a serious welfare issue for many members of the general public - particularly for the elderly or those with specific needs such as mothers with new born babies or young children.

It is therefore very important that the general public is readily aware of the number that they should call if there is an issue of any sort with the electricity supply network; and that this should be capable of dealing with the extremely high call volumes that would be experienced in the event of a severe storm. This necessitates not only that there is a single number for the general public to call but that this number is memorable and strongly associated with the critical service it accesses. We believe that a 3 digit number (3DN) is required to achieve this.

1.3 3DN Application

We appreciate that there is a limited set of 3 digit numbers (3DNs) available and that Ofcom[3] has the responsibility for ensuring that these are used in a way that maximises benefits to citizens and consumers. This document forms ENA's formal application for 3DN "105" for use as a national power cut and electricity network safety number – for members of the general public to contact their Electricity Network Operator about a network related safety issue, power outage or associated welfare related issue.

The document is structured as follow:

- Section 2 – describes the services that the 3DN would access;
- Section 3 – presents the case and evidence in support of a 3DN;
- Section 4 – confirms the tariff arrangements;
- Section 5 – considers the options available and compared the respective impacts;
- Section 6 – provides a cross reference to Ofcom's 3DN assessment criteria; and
- Appendices – contain further detailed evidence supporting a 3DN.

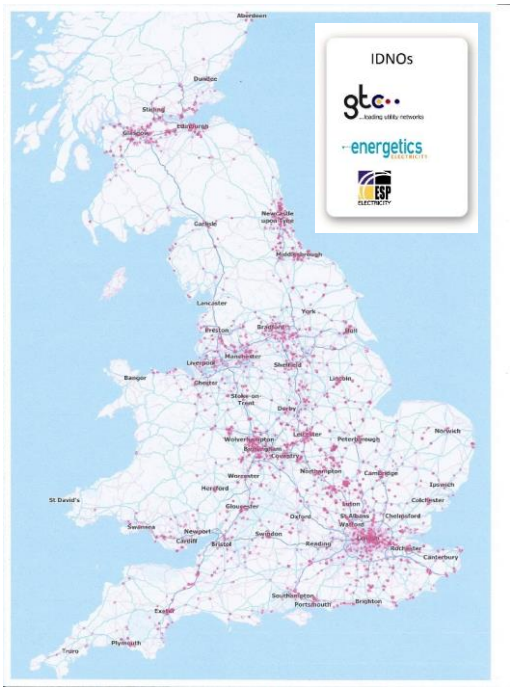
[3] Office of Communications.

2 National Power Cut and Electricity Network Safety Number

2.1 Background

There are currently 14 large electricity distribution networks in Great Britain operated by 6 Distribution Network Operator (DNO) companies. Within these large networks, there are a multitude of much smaller independent electricity distribution networks currently operated by 3 Independent Distribution Network Operator (IDNO) companies[4]. Collectively, these networks deliver electricity to in excess of 29m homes and businesses.

14 Distribution Networks operated by 6 companies



Multitude of independent distribution networks

The geographic areas of these networks do not align with any common area defining boundaries – such as county, town or postcode. In addition, the role of a Network Operator is often not understood by members of the general public – with many confusing it with the role of an energy Supplier. As a consequence, members of the general public very often do not know who their Network Operator is or who to contact in the event of a network related safety issue, power outage or associated welfare related issue.

[4] Throughout this document Network Operator is the term used to refer to DNOs and IDNOs generically.

Each of these network companies has a different 0800 "emergency and power loss" number to report such issues and some have a different number for each area they operate in. This provides for at least 18 different Network Operator numbers – and these all have 10 or more digits in them. And so those members of the general public that did happen to know who to call are very unlikely to know which number to call – and would instead have to look the number up. This can be very challenging in many circumstances, as internet search devices might not be powered; and darkness might preclude finding and using phone directories or electricity bills, for example.

As a consequence, when a member of the general public encounters a network related safety issue, experiences a power outage or has an associated welfare related issue, there are very often unnecessary delays in them being able to contact the appropriate Network Operator. These delays can increase the risk of injury when it is a safety related matter; increase the impact of welfare related issues; and increase the power restoration time in the event of power outages.

2.2 Service

The service accessed by the national power cut and electricity network safety number will operate in the whole of England, Wales and Scotland. When a customer calls the number, the service will route them to the existing call handling platform of the appropriate Network Operator, so that existing Network Operator safety, welfare and fault management procedures can be invoked promptly.

The manner in which the caller is routed will take into consideration the fact that the call could be about a network related safety matter close to or far away from their home; or be to report a power outage at their home. It will also take into consideration the fact that the location of the call could be being made close to or far away from the location of the incident being reported; and the location of the call and / or the incident could be close to the border between two networks.

A detailed specification of the service being procured is included as part of our application (Reference 3).

2.3 Use of the Service

The service is designed for contacting the relevant Network Operator in the event of a network related safety issue, power outage or associated welfare related issue. The reasons for needing to make contact could be very urgent on occasions – and, in the context of network safety, could sometimes be an emergency. However, the national power cut and electricity network safety number is not intended to be a substitute for the existing emergency services accessed via 999 and 101.

In an emergency situation where there is a serious risk to human life or welfare:

- the Network Operator should be contacted in the first instance if the principal immediate risk is network apparatus that is potentially live – so that the circuits can be isolated and the situation made safe as soon as possible;
- otherwise, the emergency services should be contacted first, followed by the Network Operator if there is a secondary network related risk or issue.

In more typical power outage events, where there is no serious risk to human life or welfare, Network Operators should be contacted so that fault investigations can be instigated and power can be restored.

In emergency situations the emergency services and Network Operators do function as a team – and operatives of both are trained to ask the caller appropriate questions about the situation being reported so that the correct advice can be provided and to ensure the appropriate services have been / are notified of the incident.

The messaging in relation to use of the service will need to be refined and conveyed in a simple and effective manner in the awareness campaigns prior to the service launch - and it will be of paramount importance that the general public is not left confused. This point was reinforced in the surveys we conducted with the general public, support organisations and local resilience forum organisations[5] – where several comments suggested that calling the service a "Single Emergency Number" would cause confusion. We have acted on these comments and now refer to the service as a "National Power Cut and Electricity Network Safety Number".

[5] Detailed in Appendix A, Appendix B and Appendix C

3 3DN Case and Evidence

3.1 Case Foundation

Our case for a 3DN is founded on three key themes. These are as follows:

1. **Urgency of Contact.** The need to contact a Network Operator includes incidents in relation to: a non-trivial network related safety issue with the risk of serious injury or even death; a serious welfare issue associated with power outages; and notification of a power outage.

2. **Issues Making Contact.** A significant proportion of the general public do not understand the role of a Network Operator and would not know what organisation to call in the event of a network related incident. Only a very small proportion know what number to call; and many have difficulty finding out the correct number.

3. **Need for Number Memorability.** It is not realistic to expect members of the general public to recall the 10+ digit "emergency and power loss" number(s) currently provided by each of the Network Operators or for them to remember a single 10+ digit 0800 number – no matter how well it was advertised. It is realistic to expect a significant proportion of the general public to recall a single 3DN and the service it accesses – if branded and advertised appropriately.

3.2 Urgency of Contact

The reasons for needing to call a Network Operator are diverse in nature. They include reporting or seeking critical guidance on a network related safety issue; and reporting a power outage or an associated welfare related issue. These are non-trivial issues requiring urgent contact with the relevant Network Operator.

3.2.1 Safety Issues

Network Operators are required to record incidents with serious safety implications. These include deaths, injury, fire, explosion, implosion – and "near misses" of these; as well as the dangerous situations of overhead lines below a certain height and damage to underground cables. A summary of these records at the various network voltage levels is provided in Appendix E and this shows that there were in excess of 10,000 of these incidents in the year May 2013 to April 2014.

A typical example of such a situation is provided below and further examples are provided in Appendix D.

> *31 Aug 14. Farmer was spraying his fields with tractor which had a 36 meter boom either end. Once the farmer had finished spraying the land he retracted the sprayers which went up into air and hit one of the 132kV circuits. Farmer*

immediately stopped when it came into contact with the line. He was unsure who to contact and dialled 999, who in turn then contacted [DNO] so that we could isolate that part of the network. Luckily there were no reported injuries but demonstrated the potential risk if customers are unsure who to contact. 14:23 (auto fault was created on network). We [DNO] received a call from fire brigade 12 minutes later at 14:35.

The issue of metal theft from the electrical supply infrastructure is also a serious safety issue with a high risk of electrocution - as well as the consequential interruptions to supplies. Appendix E shows the number of these incidents over the last 4 years. They peaked at over 500 per month in 2011 and are currently occurring at approximately 200 per month.

3.2.2 Welfare Issues

Power outages have differing impacts on members of the general public – depending on their disposition and situation. Most find them very inconvenient but for some they are a serious welfare issue – causing distress, risk of illness or, in extreme cases, risk of death.

Serious Welfare Issues

Examples where a power outage can cause a serious welfare issue include customers:

- on dialysis machines or requiring electrically powered breathing apparatus;
- that require hoists for their bath, bed or chair – with the risk of being left stranded in a dangerous position part way through a lifting procedure; and
- who store medication, that needs to be kept cool, in their fridge – such as insulin.

Such customers should be on the Priority Service Register (see Appendix G) which gives them access to a range of priority services from Network Operators via a dedicated phone number or a priority call answering mechanism. However, many of these customers are not on this register – despite the rigorous processes Network Operators have for raising awareness of the register and for maintaining it.

Significant Distress

Examples where a power outage can cause customers significant distress include:

- heating and hot water – with a power outage precluding all electrified heating and a significant proportion of gas heating[6] – leaving households vulnerable to the effects of cold, particularly babies and the elderly.

[6] With many modern gas boilers being reliant on power to operate.

- reliance on a stair lift – with a power outage either trapping customers upstairs or downstairs; or leading them to take risks using the stairs to get to the bathroom, kitchen, telephone etc.
- reliance on lifts in blocks of flats – with a power outage either rendering them homebound or leading them to take risks using stairs to get provisions, or to get in contact with friends or family etc.
- searching for telephone numbers in the dark – potentially using candles for light - in cupboards or under the stairs, with a risk of falling, injury or fire.

Such customers would not necessarily be eligible for the Priority Service Register; and for a higher proportion in this situation, the vulnerability is transitory[7] rather than permanent, meaning it is even less likely that they will have access to priority services.

Vulnerability

The reasons why a member of the general public might be or feel vulnerable are diverse. They are a function of the individual concerned as well as the circumstances they find themselves in.

- British Standard BS 18477 (Reference 5) notes that: *consumers are all different with a wide range of needs, abilities and personal circumstances; and that these differences can put some consumers in a position of vulnerability in certain situations*.
- Ofgem's Consumer Vulnerability Strategy (Reference 7) notes that: *vulnerability is about the situations consumers are in and can be transitory as individual consumers' circumstances change.*
- The Civil Contingencies Act (Reference 6) recognises electricity one of the "*essentials of life*" and encompasses the loss of electrical supply in its definition of "*emergency*".

Further details are provided in Appendix G.

Support Organisations

In the survey we conducted with support organisations representing those most likely to experience welfare issues in the event of a power outage (see Appendix B), the following statements received average scores of 9.5 and 9.1 respectively – where 10 is strongly agree and 0 is strongly disagree:

[7] For example, mothers with new born babies; mothers with a temporarily ill infant; those temporarily less mobile through injury or illness.

- "Many members of my customer group could be distressed if they experienced a power outage".
- "It could be a welfare related concern for some members of my customer group if they experienced a power outage".

3.2.3 Power Outage Rectification

We have a very high and increasing societal dependence on electricity and so power outages affect the lifestyle of most members of the general public – with consequential impacts. As described above, they also have serious welfare implications for some – and can cause distress, risk of illness or, in extreme cases, risk of death. In addition, power outages impact local businesses when they have not put in place suitable business continuity arrangements – causing them and the local economy financial loss.

Much of the national electricity infrastructure is above ground[8] and is susceptible to damage in severe weather, particularly from high winds, heavy snow and lightning strikes - with corresponding impact on supplies, which can be widespread on occasions. The quicker Network Operators know about a power outage, the quicker they can identify the fault and restore supplies – minimising these impacts on the general public and businesses.

In the period January to December 2013 there were 442,613 fault incidents on the electricity distribution networks nationally, collectively impacting millions of customers. Only 6.5% of these faults were on parts of the network infrastructure with automatic fault detection mechanisms. 93.5% of them (414,797), causing 42% of the customer impact of faults, required a customer to notify the relevant Network Operator of the issue before fault identification and supply restoration processes could commence.

This is supported in Ofgem's review of the impact on customers of the storm events last winter (Reference 2) which comments that contact is, "*critical as it may be the first knowledge a DNO has that a fault has occurred on its network*".

3.2.4 Conclusion

The evidence presented above demonstrates that there are many circumstances when members of the general public need to contact their Network Operator as a matter of urgency - where any delay in contact could have serious network related safety or welfare related implications; or delay the restoration of power following an outage.

[8] Circa 34% by length overall; and 53% by length for the high and extra high voltage tiers of the network.

3.3 Issues Making Contact

The key issues in relation to making contact with the Network Operator in the event of a network related safety issue, power outage or associated welfare related issue are:

- not understanding that it is the Network Operator that should be contacted;
- not knowing the number to call; and
- having difficulty finding this out.

3.3.1 Role of a Network Operator

The structure of the electricity supply industry is such that Network Operators do not have a high profile role amongst the general public. Suppliers engage with their customers frequently as part of the services they deliver, via a range of channels - obtaining meter readings, issuing bills and selling value added services. However Network Operators do not have these same engagement channels or opportunities and, as a result, are not as well known. As a consequence, when a member of the general public has an issue relating to the electricity supply network, they very often do not know who to call or think that they should call their Supplier.

In the independent market research we commissioned (see Appendix A), only 5% of the general public said that they would contact their Network Operator in the event of a power outage or network safety issue. 45% said that they'd contact their Supplier.

31% claimed to be aware of what a Network Operator does but, of these: only 36% (11% in total) correctly attributed the role of a Network Operator; and 25% (8% in total) knew the difference between a Network Operator and an electricity Supplier. This indicates that about 90% of the general public do not know what the role of a Network Operator is.

This is supported by that fact that Suppliers take a significant number of calls per year about issues that relate to Network Operators (such as power outages). Lawrence Slade, Chief Operating Officer for Energy UK, commented, "*a service that more effectively directs customers to their Network Operator in the event of a power outage has to be of benefit both in terms of speed of restoration of supplies and reduction in the number of misdirected calls to supplier call centres*".

3.3.2 Knowing the Number to Call

Each Network Operator currently has their own "emergency and power loss" number – and some have a different number for each area they operate in. This provides for at least 18 different Network Operator numbers – and these all have 10 or more digits in them.

In our independent market research (see Appendix A), 27% of the general public claimed to know the number to call in the event of a power outage or network safety issue – but only 6%

of these (2% in total) correctly attributed the role of a Network Operator. This indicates that about 98% of the general public do not know what number to call to report a power outage or network safety issue; with 73% readily acknowledging that they do not know the number to call; and 25% thinking that they know they number to call, but this not actually being the case.

The confusion about what number to call is substantiated by Network Operator misdirected call volumes and customer comments made in regulatory satisfaction surveys. Approximately 5% of calls taken by all but one of the main Network Operators are not for them – usually because the call should have been made to a different Network Operator or to a Supplier. This confusion is further evidenced by customer comments in relation to ease of contact. Several typical examples are provided below and further examples are included in Appendix F.

> *"I found it hard to contact them as I was unaware that during a power cut I had to call my distributor rather than my supplier. They could make it more obvious who needs to be called in a power cut."*
>
> *"The advertisement that tells me who I need to ring doesn't say which areas it covers. They should make it clear what their jurisdiction is so I know who to call."*
>
> *"I think the telephone number needs to be made more accessible to make the initial contact."*
>
> *"Firstly the number in the local yellow pages was incorrect so I had trouble getting connected. Secondly as I do not have a telephone line that does not use electricity this made it even more difficult to get through."*
>
> *"There should be a way of finding the number to call in case of power cuts without using a computer as this usually requires power."*

In the survey we conducted with support organisations (see Appendix B), the following statements received average scores of 8.7 and 8.4 respectively – where 10 is strongly agree and 0 is strongly disagree:

- "Many members of my customer group would not know what number to call if they experienced a power outage or had an electricity supply safety issue".
- "Many members of my customer group would not know what organisation to contact if they experienced a power outage or had an electricity supply safety issue".

In the survey we conducted with members of local resilience forums, who are part of the civil contingencies incident support infrastructure (see Appendix C), 71.3% said that not knowing the telephone number would / did cause a delay when needing to contact their Network Operator; and 36.3% said that it would / did prevent them from contacting their Network Operator.

The political and regulatory reviews of the winter storms of 2013/14 are consistent with the findings above. The DECC review of the way in which the industry dealt with the storms (Reference 1) commented that "*there was significant confusion for customers regarding who they should contact*". The Ofgem review of the impact on customers (Reference 2) commented that many customers "*experienced difficulty trying to contact their DNO*" and cited "*ease of contact*" as one of 3 key areas for improvement. Tim Yeo, chairman of the Energy and Climate Change Commons Select Committee, commented, "*when we had the power cuts this winter most customers didn't know who to call*".

3.3.3 Searching for the Number to Call

In our independent market research (see Appendix A), of those that did not claim to know the number to call in the event of a power outage or network safety issue, 43% said that they were concerned about having to search for it; of those that are disabled, 51% said that they were concerned; of those in the working class or non-working social grades (DE), 49% said they were concerned. 6% said that they would look the number up on the Network Operator website; 29% said they'd do a Google search; 20% said they'd look it up in the Yellow Pages; and 15% said they'd call their Supplier. However, some of these means of searching for the correct number might not be available in a power outage situation where landlines might not be working, mobiles might not be charged / have internet capability and there could be darkness. 72% said that not knowing the number did / would delay them contacting their Network Operator; and 56% said that it did/might prevent them from reporting a problem – both of which could have network safety and power outage restoration time implications.

In the survey we conducted with support organisations (see Appendix B), the following statement received an average score of 9.0 – where 10 is strongly agree and 0 is strongly disagree: "Many members of my customer group would find it difficult to find out quickly the appropriate number to call if they experienced a power outage or had an electricity supply safety issue".

In the survey we conducted with members of local resilience forums (see Appendix C), 15.6% said that they'd search for the number in the phone book; 48.0% said they'd search on the internet; and 21.3% said they'd look for an electricity bill (although this option is diminishing with more customers moving to on-line billing).

The DECC review of the way in which the industry dealt with the storms (Reference 1) is consistent with these finding – commenting that "*Although these numbers are on bills and in telephone directories, customers who were affected during the Christmas storms often struggled to find the right number*".

3.3.4 Conclusion

The evidence presented above demonstrates that:

- the vast majority of the general public do not know who to call and / or what number to call in the event of a network related safety issue, power outage or associated welfare related issue;
- many members of the general public have difficulty finding this out quickly in the circumstances they find themselves in; and
- as a consequence, they are often either: delayed in contacting their Network Operator; contact the incorrect organisation; or do not make contact.

3.4 3DN – Memorability and Awareness

In order that members of the general public can make prompt contact with their Network Operator in the event of a network related safety issue, power outage or associated welfare related issue - they need to know the number to call. The situations they might find themselves in when needing to make contact are diverse and, prompt contact will often be hindered by having to look the number up. As a consequence the number needs to be memorable and members of the general public need to be made aware of it.

3.4.1 Memorability

In general, numbers with fewer digits in are intrinsically easier to remember than numbers with more digits in. "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information[9]" is one of the most highly cited papers in psychology. It concludes that the number of objects an average human can hold in working memory is 7 ± 2. Whilst there are undoubtedly many factors that influence the ability to recall telephone numbers – those with 3 digits are unquestionably significantly easier to recall than those with 10 or more.

In our independent market research (see Appendix A), 84% of the general public said that a 3DN is easier to remember than a 0800 number. In research conducted as part of the Home Offices' 101 3DN (Reference 8), 93% of consumers agreed strongly with the statement that the number was easy to remember because it only had 3 digits.

In the survey we commissioned with support organisations (see Appendix B), there was strong support for a 3DN based on its memorability, with the following statement receiving an average score of 8.5 – where 10 is strongly agree and 0 is strongly disagree: "A single national emergency number to report power outages and electricity supply safety issues would be significantly more useful to my customer group if it was a memorable 3 digit telephone number

[9] The Magical Number Seven Plus or Minus Two: Wiki Article; Miller's Paper.

akin to 111, 121, 999 - rather than a longer 0800 number". In the survey we conducted with members of local resilience forums (see Appendix C), 81.9% said that they would prefer a 3DN over a 0800 number.

The selection of 105 as the 3DN received very strong support based on its ease of use – with the number 5 having a dimple on many phone keypads. In the survey we commissioned with support organisations (see Appendix B), all organisations who expressed a view supported this. Action for Blind People commented: "*Brilliant idea needs to be done. Definitely would help our customer group*".

In our independent market research, 77% said that a 3DN would enable then to report a power outage or network related safety issue more quickly than a 0800 number – and prompt contact is the fundamental objective of the national power cut and electricity network safety number.

3.4.2 Awareness

For any national power cut and electricity network safety number to be effective in the event of a network related safety issue, power outage or associated welfare related issue, it is important that the general public is aware of the number to call and the service it accesses. This would be achieved through awareness campaigns and initiatives; and these would be supplemented by the focussed dissemination of information whenever there was a significant regional or national incident.

Awareness Campaigns

Creating awareness of the number to call in the event of a network related safety issue, power outage or associated welfare related issue is a pre-requisite to remembering the number. It is planned to achieve this via national and regional awareness campaigns using a broad range of communication channels. These campaigns would be extensive in advance of the launch to create awareness; and would need to continue at an appropriate level thereafter to maintain awareness. A national power cut and electricity network safety number means that these communications can be consistent nationwide.

Creation of a "brand" and awareness messaging strategy would be an integral part of planning an effective awareness campaign. The National Health Service commissioned independent research into this in 2010, in advance of the launch of their 111 3DN. This considered the marketing messages, "straplines" and branding logo. The 3DN provided many options in terms of creating a strong brand, far more so than a 0800 number would have. They concluded that "*the public tends to look for logos and brands to represent products / services*" and "*there are strong visual symbols available*". A number of examples they considered are show below:

These options would not have been available with a 0800 number, as it would take too much space on collateral to create a clear logo / effective message. A 3DN however, provides the opportunity to create an effective memorability assisting "3DN brand".

Third parties would be also able to take advantage of a national power cut and electricity network safety number when providing their customers with information - rather than having to deal with the 18 numbers they currently have to accommodate. For example, the support organisations listed in Appendix B would be able to include it on their respective websites and on their information collateral. Suppliers would also be able to include it on their website and play it on their out of hours IVRs. A 3DN would provide for more effective information provision, being more succinct and memorable than a 0800 number - and having the memorability assisting "3DN brand" that could be used on websites and collateral.

Incident Management

In the event of a major incident impacting electricity supplies, effective national and regional communication with members of the general public is invariably required. In preparation for such situations, DECC has an "Electricity Major Incident Communication Plan"; ENA has an "Incident Protocol Plan"; and Network Operators have their own communication plans. These plans typically cover subjects such as communication messages, channels, liaison with the media and relevant organisational spokespersons.

Such communications provide an ideal opportunity to convey the power network number to the general public – and a single number means that these communications can be consistent nationwide. However, 3DN would provide the opportunity for this to be more incisive,

accompanied by the memorability assisting logo / brand for visual communications[10]; and repeated in a short space of time in verbal communications[11]. This is more likely to result in members of the general public remembering which number to call to contact their Network Operator following the communication than a 10+ digit 0800 number would.

3.4.3 Conclusion

In order for members of the general public to remember the number to call to contact their Network Operator in the event of a network related safety issue, power outage or associated welfare related issue, the number must be memorable and must be communicated effectively. The conclusion from the evidence above is that a 3DN would achieve these two things far more effectively than a 10+ digit 0800 number.

3.5 3DN Case Summary

The evidence presented demonstrates that there are many circumstances when members of the general public need to contact their Network Operator as a matter of urgency - where any delay in contact could have serious safety or welfare related implications; or delay the restoration of power following an outage. However, this evidence also confirms the vast majority of customers do not currently know who to call and / or what number to call in these situations; and that many have difficulty finding this out quickly in the circumstances they find themselves in. To overcome this, it is very important that the general public is readily aware of the number to call. For this to be achieved, they need to be made aware of the number in an effective way - and the number needs to be memorable to them.

A 3DN provides for the creation of a strong brand – enabling more effective use of communication channels to promote awareness, including television, radio, internet and billboards. It is also significantly more memorable than a 0800 number because it has few digits. This will result in a far higher proportion of the general public remembering the number to call.

As a consequence, a 3DN will enable significantly more members of the general public to contact their Network Operator without delay, compared to a 0800 number, should they encounter a network related safety issue, experience a power outage or have associated welfare related issue.

[10] Such as via television; via billboards; or via the press.
[11] Such as via television; or via the radio.

4 Tariff Arrangements

4.1 Cost to the Caller

Calls will be free to callers. This is on the basis that the service is designed to deal with non-trivial and urgent situations relating to network related safety, power outages and associated welfare related issues, and, as with emergency services, it would not be appropriate for callers to be deterred from using the service through the call cost.

This is consistent with our independent market research (see Appendix A), in which 89% of the general public said that they would expect the call to be free to the caller. However, across the three surveys we conducted, the fact that the 3DN would be free was not assumed, and so this is an aspect that would need to be made very clear in the associated awareness campaign(s).

4.2 Cost of Calls

ENA is currently procuring a national power cut and electricity network safety number service and will enter into contract with the successful provider. Potential service providers are required to provide ENA with a tariff / tariff structure for the calls – and this will be a key commercial consideration during the tender evaluations. It is possible that this will differentiate between calls made from landlines and calls made from mobile phone, and that charges will depend on call volumes.

The selected service provider will charge ENA for calls in accordance with the agreed tariff / tariff structure. They will be responsible for pre-negotiating and agreeing tariffs with the range of Communications Providers that could carry the calls. This will be entirely their concern and will not impact the tariffs paid by ENA, once these have been agreed.

ENA will allocate the charges from the service provider to Network Operators using the service. The mechanism by which charges (including call charges) will be allocated has yet to be considered in detail but will be agreed, along with other service arrangements, well in advance of the service being implemented and will be included in the contract between ENA and individual Network Operators.

4.3 Cost Recovery

The costs of the services that Network Operators provide is recovered from users of electricity, indirectly, via their electricity bills. The vast majority of these costs relate to the multi-billion pound delivery of electricity via the overhead lines, sub-stations and underground cable infrastructure. A significantly smaller portion relate to other key services – including customer services.

The majority of these costs are regulated by Ofgem – with the amount of allowable income being a function of performance; including customer service performance. This is a complex

regulatory mechanism which is designed to ensure that costs passed onto customers (indirectly, via their electricity bill) represent value for money and that Network Operators continually improve their performance and customer service. The cost of the service (including calls) would be recovered from customers under this same regulatory mechanism.

5 Options – Impact Assessment

In considering the way forward in relation to members of the general public contacting the appropriate Network Operator in the event of a network related safety issue, power outage or associated welfare related issue, there would appear to be 5 options. These are:

- do nothing and continue with the existing separate "emergency and power loss" numbers for each Network Operator; or
- implement a national power cut and electricity network safety number for Network Operators using a:
    - 3DN;
    - 0800 number;
    - non-free phone number; or
    - 116 harmonised European six digit number (6DN).

Each of these options is considered below – in the context of the "do nothing" counterfactual.

5.1 Do Nothing

This option would not do anything to address the issue of wide spread confusion about the number to call to contact Network Operators and report a network related safety issue, power outage or associated welfare related issue.

Network Operators would continue with their own 10+ digit "emergency and power loss" reporting numbers – currently 18 in total. These numbers would not be memorable; and it would continue to be difficult to communicate the correct number to call because of the regional dependencies.

Members of the general public would continue to have to look the number up should they need to contact their Network Operator urgently; and would have to cope with the difficulties this presents.

There would be no costs associated with this option – other than lost opportunity costs.

5.2 3DN Service

This option would address the issue of multiple "emergency and power loss" reporting numbers. This would remove the regional dependencies and make it easier to communicate the number to call.

With this option there are considerably more "brand" opportunities to increase awareness of the number and the service it accesses; and the number would be significantly more memorable.

A much higher proportion of the general public would be able to use the number without delay should they need to contact their Network Operator urgently – and would not need to look it up.

Calls to a 3DN would be free to callers – regardless of whether the call is made from a landline or a mobile.

There would be service development and operational costs associated with this option and these would be paid by Network Operators. As described in section 4.3, the extent to which they would be passed on to consumers would be regulated by Ofgem, based on the scale of the customer service improvement.

5.3 0800 Service

Assuming a 0800 number can provide a technically feasible call routing solution for the national power cut and electricity network safety number, it too would address the issue of multiple "emergency and power loss" reporting numbers. This would remove the regional dependencies and make it easier to communicate the number to call.

Unlike the 3DN option, a 0800 number has no substantive "brand" opportunities to increase awareness of the number and the service it accesses; and the number would not be any more memorable than the current situation.

The vast majority of the general public would continue to have to look the number up should they need to contact their Network Operator urgently and cope with the difficulties this presents.

Calls to a 0800 number would free to callers calling from a landline. It is anticipated that they would also be free to callers from a mobile – but this is reliant on mobile operators implementing the regulatory changes to non-geographic calls in advance of the service implementation.

As with the 3DN option, there would be service development and operational costs associated with this option and these would be paid by Network Operators. These costs are likely to be very similar to the 3DN option. Again, the extent to which they would be passed on to consumers would be regulated by Ofgem.

If, following technical evaluation of proposals from prospective service providers, it transpires that a 0800 number cannot provide a suitable technical solution that improves the overall customer experience – a 0800 number would no longer be an option and all benefits could then only be accessed via a 3DN.

5.4 Non-freephone Number

As described in section 4.1, calls to the national power cut and electricity network safety number will be free to the caller. Network Operators have a regulatory licence condition that stipulates

this. For this reason non-freephone non-geographic numbers such as 0845 numbers have not been considered further.

5.5 116 Harmonised European 6DN

The national power cut and electricity network safety number service is an initiative that is confined to England, Wales and Scotland. There are no plans to extend it European wide – and so a 116 Harmonised European 6DN is not appropriate. As a consequence, it has not been considered further.

5.6 Comparison Tables

5.6.1 Benefits

Benefit	Do Nothing	3DN	0800
Addresses confusion arising from multiple Network Operator "emergency and power loss" numbers	☹	☺	☺
Enables effective commination of the number to call	☹	☺	😐
Is memorable, so it can be recalled when required urgently	☹	☺	☹

Should a 0800 number not be technically feasible, all of the benefits are then only accessible through a 3DN.

5.7 Cost Benefits

The development and operation costs of the service are not yet available – as the procurement process for the service is currently in progress. However, it is anticipated that the cost of a 3DN service will be similar to the cost of a 0800 service.

Option	Relative Benefits	Relative Costs
Do Nothing (counterfactual)	None	None
3DN	High	High
0800	Modest	High

Network Operators have committed to delivering a national power cut and electricity network safety number - subject to technically feasible solutions being available. This means that the cost of service development and operation will be incurred regardless. As a consequence the variable is the scale of the benefits, which are significantly higher for a 3DN compared to a 0800 number.

6 Cross Reference to 3DN Assessment Criteria

Regulatory assessment criteria have previously been established in relation to 3DN applications. These are detailed below and are cross referenced to the arguments and evidence we have presented in our application for a 3DN for a national power cut and electricity network safety number.

3DN Assessment Criteria	Key Arguments and Evidence
There is an overwhelming public interest argument.	The safety, welfare and power outage impacts experienced by citizens, described in section 3.2. The difficultly citizens have in getting in contact with Network Operators in relation to these impacts, described in section 3.3. The need for a highly memorable number that can be communicated effectively – for citizens to contact their Network Operator, described in section 3.4.
The proposed service has a national impact and/or national provision.	The coverage of electricity supply networks nationwide – and the commonality of safety, welfare and power outage issues across these. The national coverage of our survey of the general public, presented in Appendix A. The national coverage of the support organisations surveyed, presented in Appendix B. The national coverage of the support local resilience forum organisations we surveyed, presented in Appendix C.
The proposed service is not only for the public good but also used only where there is high demand based on high call volume.	The large number of calls made to existing Network Operator "emergency and power loss" lines, presented in Appendix F – with in excess of 4.3m calls being made in the last year. The difficulty in making contact that is currently supressing the number of calls made to existing Network Operator "emergency and power loss" lines, described in section 3.3.
The proposed service provision benefits everyone or at least a very wide part of society.	The fact that there are in excess of 29m premises supplied with electricity – covering the homes of almost all citizens nationally – meaning that any citizen could encounter a power outage as described in section 3.2.3 and could experience some of the welfare related impacts described in section 3.2.2. The fact that any citizen could encounter a safety issue, as described in section 3.2.1. The views of citizens in our national survey of the general public, presented in Appendix A – which, by design, canvassed the main sub-sectors of the population. The views of the support organisations surveyed, presented in Appendix B – which represent / provide services to sectors of citizens with particular needs.

In the event of a power outage, there is likely to be a restricted set of amenities available to the citizens impacted. Appliances including computers might not be powered; and lighting might not be available. This places citizens in a more vulnerable situation when needing to make contact with their Network Operator.

In our independent market research (see Appendix A), of those that did not claim to know the number to call in the event of a power outage or network safety issue, 44% said they would search for the number on the internet; and 29% said they'd search for the number in a phone directory / on an electricity bill. In the event of a power outage, it is quite possible that these means of finding out the correct number will not be available or practical.

As a consequence, the situation a caller might find themselves in when needing to contact their Network Operator might be an additional factor to consider in our 3DN application.

Appendix A – Independent Market Research

We commissioned Jigsaw Research, an independent market research organisation, to undertake market research on our behalf. They asked a series of 15 questions in relation to the:

- general public's thoughts, opinions, behaviours and trends when needing to contact their Network Operator;
- level of distress suffered during a power cut or safety issue;
- level of confusion – e.g. do they know who to call and where to look for the number;
- views on a Single Emergency Number; and
- benefits of a 3DN compared to 0800 number.

The fieldwork for the survey was conducted in two stages. The first stage was through Omnibus interviews. Jigsaw spoke to a nationally and regionally representative sample of 2,003 adults across England, Wales and Scotland. A form of random location sampling was used to ensure a good geographical spread. Controls were applied by region and sub-region, then quotas were set on age, gender, working status and tenure to ensure a nationally representative sample. By using this proven sample design, the omnibus was able to represent all main sub-sectors of the population, and provide robust findings across each of the main Network Operators (DNOs). The second stage targeted the smaller independent Network Operators (IDNOs) and was required because the first stage did not have a statistically robust sample of IDNO customers. All interviews were carried out in-home using computer assisted personal interviewing (CAPI). The data from both sets of fieldwork were weighted to be nationally and regionally representative.

Jigsaw's presentation of their findings are included as part of our application (Reference 4).

Appendix B – Support Organisation Survey

The market research we commissioned with Jigsaw Research (see Appendix A) focused on the general public. To complement this we undertook a survey specifically to canvass the views of organisations that provide invaluable support to certain sectors of general public with particular needs – that are more likely to experience welfare issues in the event of a power outage.

Our survey included 14 support organisations, covering a range of different types of support services. We asked a senior representative, authorised to speak on behalf of the organisation, 11 questions in relation to:

- welfare of the sector of the citizens they support
- ease of Network Operator contact
- Single Emergency Number proposals

The questions were sent to the senior representatives in advance and they were invited to make an appointment for a telephone interview to capture their responses. The interviews were conducted by UK Power Networks and were recorded.

The organisations surveyed, questions asked and survey results are detailed below.

Organisations Surveyed

Organisation	About	Website
Action for Blind People	A national charity with local reach, providing practical help and support to blind and partially sighted people of all ages.	https://www.actionforblindpeople.org.uk/
Action on Hearing Loss	Previously known as the Royal National Institute for Deaf People. A national charity providing support for people with hearing loss and tinnitus.	http://www.actiononhearingloss.org.uk/
Age Cymru	The leading charity for all older people in Wales.	http://www.ageuk.org.uk/cymru/
Age Scotland	The leading charity for all older people in Scotland.	http://www.ageuk.org.uk/scotland/
Age UK	A national charity that seeks to inspire, enable and support older people to make the most of later life.	http://www.ageuk.org.uk/
British Red Cross	A national charity that helps vulnerable people in the UK and abroad prepare for, withstand and recover from emergencies in their own communities.	http://www.redcross.org.uk/
Business in the Community	A national charity that works to shape a new relationship between business and society, in order to secure a fairer society and a more sustainable future.	http://www.bitc.org.uk/

Organisation	About	Website
Carers Trust	A national charity formed by the merger of The Princess Royal Trust for Carers and Crossroads Care in April 2012. Works to improve support, services and recognition for anyone living with the challenges of caring, unpaid, for a family member or friend who is ill, frail, disabled or has mental health or addiction problems. Aims to ensure that information, advice and practical support are available to all carers across the UK.	http://www.carers.org/
Citizens Advice Bureaux	National charity that provides the advice people need for the problems they face and improve the policies and practices that affect people's lives. Provides free, independent, confidential and impartial advice to everyone on their rights and responsibilities.	http://www.citizensadvice.org.uk/
Energy Action Scotland	A charity that campaigns for an end to fuel poverty in Scotland and is the only national body with this sole remit.	http://www.eas.org.uk/default.php
Environment Agency	An executive non-departmental public body, sponsored by the Department for Environment, Food & Rural Affairs. Works to create better places for people and wildlife, and support sustainable development.	https://www.gov.uk/government/organisations/environment-agency
Haste	A commercial organisation specialising in quick response to electricity and gas incidents impacting customers. Used by many of the Network Operators, particularly in relation to service provision to vulnerable customers.	http://www.hasteltd.co.uk/index.php
National Energy Action	A national charity which aims to eradicate fuel poverty and campaigns for greater investment in energy efficiency to help those who are poor and vulnerable.	http://www.nea.org.uk/
Royal Association for Deaf People	A national charity promoting equality for Deaf people through the provision of accessible services.	http://www.royaldeaf.org.uk/

Survey Questions

The interviewee was asked to indicate the extent to which they agree with the following statements where 10 is strongly agree and 1 is strongly disagree….

Welfare

1. "Many members of my customer group could be distressed if they experienced a power outage".
2. "It could be a welfare related concern for some members of my customer group if they experienced a power outage".

Ease of Contact

3. "Many members of my customer group would not know what number to call if they experienced a power outage or had an electricity supply safety issue".

4. "Many members of my customer group would not know what organisation to contact if they experienced a power outage or had an electricity supply safety issue".

5. "Many members of my customer group would find it difficult to find out quickly the appropriate number to call if they experienced a power outage or had an electricity supply safety issue".

Proposals

6. "Introduction of a single national emergency number would make it easier for my customer group to report a power outage or an electricity supply safety issue".

7. "A single national emergency number to report power outages and electricity supply safety would be significantly more useful to my customer group if it was a memorable 3 digit telephone number akin to 111, 121, 999 - rather than a longer 0800 number".

8. "A single national emergency number would be of benefit to my organisation in supporting our customer group – for example in the various forms of disseminating information, across regions or nationally"

9. "A 3 digit number single national emergency number would be of more benefit to my organisation in supporting our customer group than a 0800 number".

10. "105" has been selected as the preferred 3 digit single national emergency number from the set that is available. This is on the basis that the number 5 normally has a dimple on it on phone keypads – which could help the blind / poor of sight dial the number, as well as those without power who might have to dial in the dark. Do you consider this a good basis for selecting the preferred 3 digit number? Yes/No.

Survey Results

Organisation	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Support Organisation 1	8	9	7	7	9	9	9	8	8	Yes
Support Organisation 2	10	10	10	5	10	10	10	10	10	Yes
Support Organisation 3	10	10	5	5	5	6	10	2	2	Yes
Support Organisation 4	8	8	-	-	-	7	3	8	3	-
Support Organisation 5	10	10	10	10	10	10	10	10	10	Yes
Support Organisation 6	10	8	8	9	10	8	8	7	5	Yes
Support Organisation 7	9	6	7	8	8	7	10	5	9	Yes
Support Organisation 8	10	10	10	10	10	10	10	10	10	Yes
Support Organisation 9	Did not respond to questions and instead provided commentary									
Support Organisation 10	10	10	7	8	8	7	8	10	10	Yes
Support Organisation 11	10	10	10	10	10	10	10	10	10	Yes
Support Organisation 12	10	10	10	10	10	10	10	10	10	Yes
Support Organisation 13	9	10	10	9	8	10	10	10	10	Yes
Support Organisation 14	10	7	10	10	10	2	2	2	5	Yes

Appendix C – Local Resilience Forum Survey

Local resilience forums (LRFs) are multi agency partnerships made up of representatives from local public services, including the emergency services, local authorities, the NHS, the Environment Agency and others. These agencies are known as Category 1 Responders, as defined by the Civil Contingencies Act.

LRF's are supported by organisations, known as Category 2 responders, such as the Highways Agency and public utility companies. They have a responsibility to co-operate with Cat 1 organisations and to share relevant information with the LRF. The geographical area the forums cover is based on police areas. LRF's also work with other partners in the military and voluntary sectors who provide a valuable contribution to LRF work in emergency preparedness and situations.

The LRF's aim to plan and prepare for localised incidents and catastrophic emergencies. They work to identify potential risks and produce emergency plans to either prevent or mitigate the impact of any incident on their local communities.

Survey

The survey was conducted via a common on-line survey engine. A link to the survey was sent to in excess of 1,000 employees of various levels of seniority in a broad range of LRFs. They were asked their personal views in the context of delivering the service their organisation provides. The survey was administered by UK Power Networks using their established customer survey methods.

Survey Questions and Results

The questions asked and survey results are detailed below.

Question	Respondents	Answers
Could/did not knowing the telephone number cause a delay when contacting your Distribution Network Operator to report a problem?	421	Yes 71.3% No 28.7%
Where would you look for or where did you find your Distribution Network Operators telephone number?	442	Phone Book 15.6% Internet 48.0% Electricity Bill 21.3% Other 15.1%
Would/did not knowing who to call prevent you from reporting a power cut or dangerous electricity situation?	430	Yes 36.3% No 63.7%
In your opinion, would it be beneficial to have a single national electricity emergency telephone number?	439	Yes 91.1% No 8.9%

Question	Respondents	Answers
Would you prefer to have a 3 digit national electricity emergency number (similar to 999 or 111) or a 0800 number?	442	0800 18.1%* 3DN 81.9%
Using a scale of 1 to 10, where 1 is strongly disagree and 10 is strongly agree, please tell me to what extent you agree with the following statement: *"A 3 digit number (similar to 999 or 111) would allow you to report a power cut or a dangerous electricity situation more QUICKLY than a 0800 number".*	442	8.15

* Main reasons cited:

- Free / reassurance of cost (1.81%).
- Avoid confusion with other national emergency numbers (7.47%).
- Similarity to gas (2.49%).

Appendix D – Safety Issue Case Studies

In situations where safety is at risk, it is essential that the Network Operator is informed as soon as possible so that they can take the appropriate safety action, such as isolating supplies. Vital minutes can avoid serious injury or death.

The 10 case studies provided below demonstrate the types of incidents that occur. In most, the risk of serious injury or death would have been reduced significantly by having a memorable power network number that could have been called to notify the Network Operator of the incident without delay.

Safety Issue Case Studies

Date	Incident
Not Provided	Contractors working in the road damaged a high voltage underground cable, [DNO] were already aware of the power loss in the area, but not aware of the cause. Sometime after the outage a contractor called through to [DNO] to report they had struck a cable. Engineers were diverted to the location, made safe and repaired the damage.
02/08/13	Whilst walking past 2-way pillar [street furniture electrical box], a 4 year old child was able to reach inside the pillar and has received a shock from the terminals. The child has attended NHS24 and has been treated for what appears to be flash wounds to their fingers. The Zone Team Leader has attended the location and spoken with the child's grandmother who reported that the door to the pillar was wide open as they were walking past. Pillar has been secured and full investigation is underway.
26/11/13	An 11kV circuit breaker tripped due to a suspected fault on the underground network, affecting supplies to 1700 customers. 11kv technicians were dispatched to fault switch on the network, restore customer supplies and isolate the faulty section of network. While technicians were on route, the Control Centre successfully re-energised a large section of the network, around 1550 customers in total, via remote tele-control. 20 minutes after the circuit trip time, the Contact Centre received report of a damage to a suspected 11kv cable. This information was instantly passed to the Control Centre and fault switching stopped until technicians arrived at the location of the damaged cable. The 11kv cable had been hit with a JCB while excavating. No one was injured. The technicians were able to isolate the faulty cable and restore all but one of the customers. A repair was made to the damaged cable and the supply to the remaining single customer was restored.
29/03/14	[DNO] received a call from [local] Police to advise a man had climbed a pylon and was threatening to commit suicide. The Police provided the location of the pylon, the pylon number and a mobile number of an officer on site. This information was quickly passed through to the Control Centre where the network diagrams were checked to establish which circuit needed isolating. During this time the Dispatch team raised an incident, notified the local team, and technicians were dispatched. The Control Centre made an isolation on the 132kv network without affecting any customer supplies. The technicians who attended advised a short time after they arrived on site that the man was safely brought down and [DNO's] 132kv network was restored to normal.
30/04/14 & 02/05/14	30th April - 360 metres of overhead electricity cable was stolen in the early hours at [location], again resulting in nearby properties being without power for more than 12 hours while repairs were completed. These are just the latest incidents where thieves have endangered public life. So far this year, [DNO] has suffered an average of 12 thefts from the power network per week, despite significant efforts to respond to the problem and working closely with the police and independent charity Crimestoppers. 2nd May - 400 metres of overhead electricity cable normally carrying 11,000 volts at [location], leaving nearby properties without power. The thieves left the cut cables, which are normally

Date	Incident
	suspended well above ground at a safe height, hanging low across a roadway where tall farm and heavy goods vehicles pass regularly. These are just the latest incidents where thieves have endangered public life. So far this year, [DNO] has suffered an average of 12 thefts from the power network per week, despite significant efforts to respond to the problem and working closely with the police and independent charity Crimestoppers. [X], Vulnerable Assets Manager at [DNO] said: "Once again, thieves are showing callous disregard for people's safety as they target the power network to steal cable with relatively little financial value. The consequences of leaving cut electricity cables carrying thousands of volts hanging dangerously close to a public footpath doesn't bear thinking about. Anyone touching these cables to simply try and move them out of the way would have suffered very serious injury or worse. We urge people to be vigilant and if they see any suspicious activity around the power network to report it to us immediately on our emergency 24 hour number [number], the police on 101 or give information anonymously to Crimestoppers on 0800 555111 where a reward of up to £1,000 is offered for information leading to an arrest and charge."
13/05/14	[DNO] received a call from a lorry driver who was making a delivery to a domestic customers premise, he had not noticed the overhead power line and his vehicle snagged and pulled the power line down. [DNO] engineers quickly attended site, made safe and re-erected new power lines.
29/05/14	[DNO] received a call from a member of the public who reported a tractor carrying bales of hay has just taken an overhead power line down across a road. They had also called 999 to get the Police to close the road. [DNO] engineers attended and found the power lines down across the road and re-erected.
20/06/14	[DNO] received a call from [local] Police to report that overhead lines were down across both carriageways of the [motorway], and that a transformer was on fire. Vehicles were continuing to drive over the power line. [DNO] control room were informed immediately to ensure the line was safe and not re-energised. A road closure was arranged and lines re-erected and transformer changed.
03/07/14	[DNO] received a call from a gentleman who was doing some work in a "tipper" vehicle in close proximity to some overhead conductors. The tipper was raised and subsequently came into contact with the overhead conductors, causing one of the phases to snap and come down resting on the vehicle. The Contact Centre agent advised the gentleman to remain in the vehicle and technicians and linesmen would be dispatched immediately. Once the incident had been passed to the local team, the customer was called back with an estimated time of arrival. While the call was being logged, the information was immediately passed to the Control Centre where the network diagrams were checked, and the appropriate 11kv feeder was isolated affecting supplies to approximately 750 customers. The technicians and linesmen who attended site confirmed with the Control Centre that supplies had been isolated and proceeded to remove the low voltage substation fuses as a safety precaution before removing the gentleman from the vehicle. The Control Centre were then informed it was safe to re-energize the 11kv network, restoring supplies to 700 customers. 50 customers remained off supply while repairs were made to the low voltage conductors and were later restored. The gentleman in the tipper received no injuries.
31/08/14	Farmer was spraying his fields with tractor which had a 36 meter boom either end. Once the farmer had finished spraying the land he retracted the sprayers which went up into air and hit one of the 132kV circuits. Farmer immediately stopped when it came into contact with the line. He was unsure who to contact and dialled 999, who in turn then contacted [DNO] so that we could isolate that part of the network. Luckily there were no reported injuries but demonstrated the potential risk if customers are unsure who to contact. 14:23 (auto fault was created on network). We received a call from fire brigade 12 minutes later at 14:35.

Appendix E – Faults and Safety Statistics

The tables below present information regarding faults and incidents on the distribution networks[12]. This includes:

- faults at the various voltage levels in the network;
- incidents on the network that have a serious safety implication; and
- incidents of metal theft from distribution networks.

Network Faults at Different Voltage Levels

January 2013 – December 2013			
Network Level	**Faults**		**Customers**
	Number	**Auto Detect**	**Approximate Customer Impact Percentage Split**
High Voltage	27,816	Y	58%
High Voltage	28,633	N	42%
High Voltage – Single Premises	8,621	N	
Low Voltage	112,244	N	
Low Voltage – Single Premises	265,299	N	

These statics include all network faults[13]. Only 6.3% of faults are automatically detected by network monitoring equipment – which is typically installed higher up the network. Network Operators are not ordinarily aware of 93.7% of faults until they are reported - accounting for 42% of the customer impact of all faults.

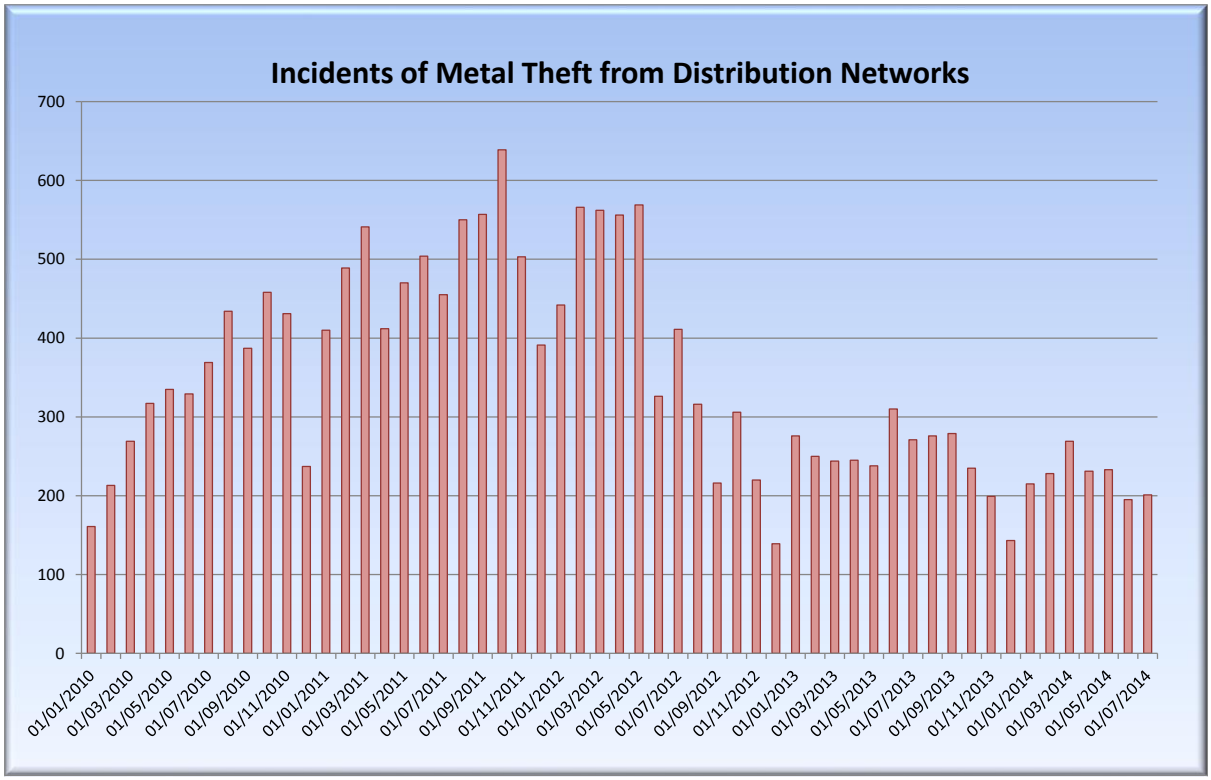
[12] From 13 of the 14 licenced Distribution Network Operator areas.
[13] Unlike regulatory returns, this includes "mains fuse failure" at the customer's premises.

"REG 31" Regulatory Reportable Safety Incident Events

May 2013 - April 2014	<=1kV	6.6kV	11kV	33kV	66kV	132kV	Totals
Totals	**5,985**	**188**	**3,902**	**438**	**7**	**47**	**10,567**

These statistics include incidents where there is a risk of: death, injury, fire or explosion. The information is provided to Ofgem by Network Operators as part of their regulatory returns.

Incidents of Metal Theft from Distribution Networks



This graphs shows the incidents of reported metal theft from distribution networks. These peaked at more than 500 per month in 2011; and are currently occurring at circa 200 per month. They do not include undetected metal theft attempts.

Appendix F – Customer Contact

Customer Network Operator Contact Statics

The table below provided the number of calls made to Network Operator "emergency and power loss" numbers over a year[14]. With approximately 29.29m customers, this shows that, on average, each customer contacts their Network Operator, once every 6.74 years. This is not frequently enough for the average person to remember the current 10+ digit "emergency and power loss" number(s) through use.

Month	Total Number of Calls
Aug-13	243,297
Sep-13	220,286
Oct-13	537,747
Nov-13	292,756
Dec-13	814,648
Jan-14	377,906
Feb-14	660,948
Mar-14	247,324
Apr-14	221,605
May-14	231,044
Jun-14	228,088
Jul-14	272,305
Total	4,347,954

[14] Including the winter 2013/14 storm events.

Customer Comments

The table below provides a sample of "other comments" made by customers in general surveys[15] that Network Operators have to undertake in relation to the services they provide, as part of their Regulatory controls. They demonstrate that customers are confused about which number to call and that they find the correct number difficult to find.

Verbatim Customer Comments	
There should be a way of finding the number to call in case of power cuts without using a computer as this usually requires power.	*They could improve the location of the helpline number.*
Firstly the number in the local yellow pages was incorrect so I had trouble getting connected. Secondly as I do not have a telephone line that does not use electricity this made it even more difficult to get through.	*The number to contact the distributor should be a lot easier to find because obviously when the power goes off the internet goes off as well. Luckily I was at work so I was able to find the number on the internet at work and rang up and let my wife know at home what was going on. If I wasn't at work we'd have no idea what to do, so they really should make the number easier to find.*
They could have provided a more published number for whom to ring when the power is out.	*They could make getting through to them a bit more simple.*
I think they could have direct contact. I am unsure if I am calling [supplier] or [DNO].	*Made their number easier to find when using Google search.*
They could have provided us with a direct emergency number to report a powercut.	*The number was not easy to find and they should make it clear what number you need to call when experiencing a powercut.*
Make it easier to find the contact number as it was a long and confusing process.	*They could have made themselves more known, there should be something obvious in the phone book on who to call if you have a powercut.*
If there is a power cut who do you go to first. That information should be there so I know who to contact first.	*They could've made the number more easy to find in the case of a power cut.*
They should make it easier to find the number. I couldn't see it anywhere in the phone book.	*They could've made it clearer which number to call in the event of a powercut, as I initially called the supplier.*
They could've made it slightly more obvious who to call as I wasn't sure if the number on the bill or in the phonebook was the correct one.	*I found it hard to contact them as I was unaware that during a power cut I had to call my distributor rather than my supplier. They could make it more obvious who needs to be called in a power cut.*

[15] Not in the context of national power cut and network safety number proposals or a 3DN.

Verbatim Customer Comments	
They should make it easier to find the emergency number. They could have it somewhere obvious in the phonebook.	*They should supply a more direct phone number.*
The initial contact wasn't easy, this should be improved.	*They need to have a better way of us contacting them when there is a problem, there needs to be a simpler method.*
They could make it easier to find out who I should be calling	*The advertisement that tells me who I need to ring doesn't say which areas it covers. They should make it clear what their jurisdiction is so I know who to call.*
They could have provided a more direct number to call to report a powercut.	*The only problem was getting through to them in the first place, it wasn't easy to find the number; they could make that easier.*
It was very complicated to find the right person to call.	*I would of liked the correct number to get through to them in the first place. It took a while for us to find it.*
I think they could put the number either on the bills or on the meter because I couldn't use my computer to find the number, I had to use my mobile which was already running low on battery.	*I think the telephone number needs to be made more accessible to make the initial contact.*

Appendix G – Vulnerable Customers

British Standard BS 18477:2010

This British Standard BS18477 (Reference 5) addresses the subject of service provision to vulnerable customers. It acknowledges that all consumers are different, with a wide range of needs, abilities and personal circumstances; and that these differences can put some consumers in a position of vulnerability in certain situations. It asserts that consumer vulnerability is relative and dynamic, and a consumer's needs and abilities can change with time or circumstance.

Civil Contingencies Act 2004

The Civil Contingency Act 2004 (Reference 6) establishes local arrangements for civil protection and provides for emergency powers in defined circumstances. In this Act:

- "Emergency" means [list that includes] an event or situation which threatens serious damage to human welfare in the United Kingdom or in a part or region; and
- An event or situation threatens damage to human welfare only if it involves, causes or may cause [list that includes] disruption of a supply of energy.

Accordingly, the Act considers the supply of electricity one of the "essentials of life".

Ofgem – Consumer Vulnerability Strategy

In 2013 Ofgem published their Consumer Vulnerability Strategy (Reference 7). This Strategy recognises that light, power and a warm home are essential services for our society; and that vulnerability is about the situations consumers are in and can be transitory as individual consumers' circumstances change. The Strategy establishes an ongoing programme of work to identify and tackle vulnerability.

Priority Services Register

Under their licences, Suppliers and Network Operators must maintain a 'Priority Services Register' (PSR) – and put consumers from certain eligible groups on the register when they request it. The eligible groups are currently people of pensionable age, disabled people and those who are chronically sick. Customers on the register are given a special number to call in the event of a power outage or electrical supply related issue or need and this gives them access to priority services.

However, most consumers are not aware of the PSR or associated services and, despite the extensive efforts of Network Operators in raising awareness, most eligible consumers are not on the register. In addition, many consumers with transient vulnerability – such as mothers with a new born baby; or those temporarily immobile through injury or recent medical procedures – are not on the register. This means that many vulnerable consumers currently rely on the "emergency and power loss" numbers for contracting their Network Operator in the event of a power outage or if they have an electrical supply related issue or need.

The register and its operation are currently being reviewed by Ofgem as part of their Customer Vulnerability Strategy (see above) and this is likely to revise the eligibility criteria. However, the practical issue of keeping the register up to date with all eligible customers recorded will remain, and will be particularly challenging for customers with transient vulnerability.