

Experiences and Issues for Rural Energy and Water Customers in Priority Services Register Code Groups

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A report by the Countryside and Community Research Group and Rural England C.I.C.

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Executive summary

The study built upon previous research to better understand the electricity, gas and water utility needs and impacts of an outage or stoppage on people in the following groups in rural areas:

- People with mental ill-health and/or dementia(s)
- People who are dependent on electrical medical equipment, e.g., stair lift, ventilator, dialysis pump, oxygen concentrator, apnoea monitor
- People who are blind or partially sighted.

We collected primary and secondary data to carry out the objectives. Alongside a literature review, interviews and focus groups were held with people within the target Priority Services Register (PSR) groups and organisations supporting them. Overall, 27 people from the PSR target groups were involved in interviews or a focus group, and 11 interviews were held with people across 10 support organisations.

Our evidence found difficulties accessing specialist services, poor transport, and issues around isolation, as well as issues around PSR services.

Households who rely on medical equipment revealed that loss of electricity was the utmost concern. The most severe consequences would be for people whose lives may be put at risk if they rely on machines, including CPAP/APAP, oxygenators, heart monitors, etc. Those with complex conditions that require multiple devices are also seriously affected during an electricity outage. A direct solution would be the provision of backup batteries.

Stoppages to heat sources (electricity or gas) can also be detrimental for people with medical devices, amongst other PSR code groups. Certain conditions leave people housebound or more vulnerable to cold or hot temperatures. In addition to drinking water, some households require running water for washing and cleaning due to issues such as incontinence as well as washing for skin conditions.

Increased electricity, gas, and water use for households with people living with mental ill-health and/or dementia(s). This need is due to additional heating and cleaning requirements resulting from various expressions of the conditions. Disruptions to utilities can break people's routines, which people and carers rely upon to get through the day.

The impacts of planned or unplanned utility outages.

For people with sight loss, the lack of light during a stoppage of electricity was the most common concern. Another issue which worried respondents from this group was the flushing of water through the taps, as they could not see when the water came through dirty. The disruption of the walking routes by maintenance works on the roads was also noted.

Work towards better communication of the PSR and how it supports vulnerable groups. The most common criticism of participants was that they were not contacted or offered any additional support before a planned or unplanned outage by their specific utility network. Poor communication infrastructure in rural areas was likely a contributory factor.

Additional rural-specific findings.

People in rural areas are more prone to utility outages, often have a shortage of local services in general, including poor public transport and can experience social isolation in remote areas, compounding vulnerability.

The **digitalisation of telephones, whilst outside the scope of this study**, was a serious concern raised by some participants in more remote locations due to the limitations it places on their ability to communicate during an electricity cut.

Concern was that stoppages to electricity could impact the water supply for those with boreholes.

All these factors led some interviewees to expect a second-class service.

A cross-cutting issue was the ability of people in the target groups to pay bills. People's conditions may lead to higher utility use, while barriers to employment or leaving employment to take on caring responsibilities can lower financial security.

The data analysis suggested greater collaboration could improve the overall functionality of the PSR. Some participants observed that the PSR required more coherence and clarity in the communication and operation between different utility operators and providers. A key element in this is data matching.

The report offered the following recommendations:

Recommendations specific to utility network operators and suppliers

Seek opportunities to actively listen to people on the priority services register.

- Representatives from utility network operators should regularly attend events, forums, and meetings held by and for people on the PSR. This will serve to both promote the register and to listen to the ideas and concerns of rural (and other) customers. This needs to be done at a national, regional, and local level.
- Anybody who works in a customer-facing role and especially those who regularly communicate with people on the register should be encouraged to attend a forum of this type. Undertaken as a form of training and development, this could upskill staff to better support people on the PSR, not least those from specific groups with particular needs.

Strive to make communications as accessible as possible.

- Written communications to people on the PSR should be available in accessible formats, such as larger font and alternative communications with the key messages clearly explained.
 - Companies to achieve accreditation, such as the [BSI](#) or [ISO](#), to ensure a consistent service for PSR customers.
- If feasible, accessibility best practice should be applied to all written communication.
 - Please see [government guidance](#) on accessible communication formats for more information.
- All online videos should have subtitles and be available in multiple accessible formats where possible.
- Websites should be reviewed to ensure they comply to best practice on digital accessibility.
 - Please see [government guidance](#) on digital accessibility for more information.

Provide further support when flushing water through the system.

- Target at PSR groups such as people with sight loss and people who are immunocompromised.
- Offer advanced warning with precise times as to when flushing takes place. If feasible, a service to check the water could also be offered to the most vulnerable households.

Run targeted local promotional campaigns about the PSR, its existence and what it does.

- Target the campaign at the groups most vulnerable to a planned or unplanned outage as well as those identified as being underrepresented on the register.
 - Build upon existing work, such as that with the ACRE Network
- Work extensively with the types of gatekeepers identified in this report.
- Utilise multiple channels and media likely used by PSR-targets, as identified in this and other reports.
 - For example, parish newsletters, talking newspapers and local Facebook groups.

Ensure support provisions are in place for people with specific water needs.

- Explore options that would enable those with requirements for running water in their daily lives to maintain hygiene and dignity.

Wider recommendations, including those requiring intervention from government and statutory services.

Increase collaboration between utilities and with statutory and non-statutory organisations to enhance the support offered to customers on the PSR.

- Explore all possibilities for data-matching. However, to be truly effective, this would **require legislative changes**.
- Work with **all levels of government** to both promote the PSR and create strategies to support vulnerable people in their jurisdiction.
- Expansion of the PSR to cover landline and broadband would enable much more comprehensive support for vulnerable people. This would also require government intervention and legislative changes.

Work with the UK government and BT (Openreach) to ensure rural customers are supported during the completion of digitalisation of the telephone network.

- Practical solutions include providing longer-lasting battery backup units for use in the event of a power cut, home mobile landlines for people without broadband, and hybrid home phones.
- Utilise the existing PSTN Switch Off sub-group to highlight the concerns raised in this report.

Automatic enrolment on the PSR for those most at risk of disruptions to their utilities, with an opt out.

- This would function with effective data matching in place across utilities.
- Would require the **UK government** to legislate the change in consultation with all utility companies and representative organisations for PSR groups.

Explore the provision of backup batteries to high-risk customers with medical devices in rural areas.

- Work with the **NHS England** and health and social care departments in **local governments** to investigate the feasibility of offering subsidies or full grants for PSR customers to purchase a backup battery or upgrade to a device with inbuilt battery.
- Make this target based on criteria for risk to life and factors associated with rurality, including distance from services and frequency of electricity outages.
- Negotiate and cooperate with medical device and battery providers, to achieve the best deal for all involved.
- Understand the backup role of low-carbon energy sources such as solar power to store energy in the home, as aligned with the [UK Government's Heat and Building Strategy](#).

Glossary

Fuel Poverty	When a person or a household is left with a remaining income below the official poverty line after heating their home to the required amount. Household income, household energy requirements and fuel prices all play a significant role in determining fuel poverty (BEIS, 2021).
Priority Services Register (PSR)	<p>A database which utility network operators are legally required to keep. It contains names and contact details of customers who have applied to be registered who may require additional support and are the highest priority to receive support during a disruption. Households listed on the PSR have someone who meets at least one of these basic criteria, defined by Ofgem (2021) as:</p> <ul style="list-style-type: none"> • have reached your state pension age, • are disabled or have a long-term medical condition, • are recovering from an injury, • have a hearing or sight condition, • have a mental health condition, • are pregnant or have children under 5, • have extra communication needs (such as if you don't speak or read English well). <p>Ofgem also states that there are other situations where you will likely be able to register, such as 'if you need short-term support after a stay in hospital' (Ofgem, 2021).</p>
Rural	Settlements with a resident population less than 10,000 are defined as rural. On that basis, rural settlements include small towns, villages, hamlets, and isolated dwellings (ONS, 2020a).
Rurality	The level at which something is considered rural. A higher degree of rurality implies that the situation is further away from an urban categorisation.
Utility providers or suppliers	The companies that supply gas and electricity to whom bills are paid.
Utility network operators	Utility network operators run the pipes and wires that bring water, gas and electricity to our homes and businesses. There are different owners in different parts of Great Britain. This incorporates Distribution Network Operators (DNO) for electricity, Gas Distribution Networks (GDNs) and water companies. Gas and electricity DNOs do not sell directly to customers, this is done by suppliers. However, water suppliers are also the sellers of their water and sewerage services.
Vulnerability	Vulnerability for this study is considered in relation to public utilities. Someone is considered to be in a vulnerable situation in this context if they require additional support in the event of a stoppage to one or more public utility. Vulnerability is also evident if someone has difficulties accessing public utilities in day-to-day life - for example, due to communication difficulties or financial restrictions.

Introduction

The Countryside and Community Research Institute (CCRI) and Rural England C.I.C. carried out a study in 2021 to explore how potentially vulnerable customers in rural areas were affected by disruptions to energy and water supplies. Associated with a wider study into rural communities, it focused upon people on the Priority Services Register in five rural case study areas across the Midlands, South West and Southern England.

A key finding was that rurality is a factor in vulnerability, with evidence that remoteness of location, in particular, is a factor increasing vulnerability and vulnerable situations – both direct and indirect. There was also evidence of resilience borne of the perceived realities of living in a rural area, as well as strong social connections in some settings. Furthermore, there were several factors that were interlinked and had the effect of compounding vulnerability. These included remote location, distance from services, living alone, getting older, health conditions, and caring responsibilities. Its findings and further information can be found [here](#).

This project aims to explore in more detail the experiences of people living in rural areas who may be on the Priority Services Register and are particularly vulnerable to energy or water supply disruptions. Specifically, this research aims to understand in greater depth the situation of people in the following groups:

- People with mental ill-health and/or dementia(s)
- People who are dependent on medical equipment, e.g., stair lift, ventilator, dialysis pump, oxygen concentrator, apnoea monitor
- People who are blind or partially sighted

These groups were chosen for different reasons, which will be expanded upon in the background analysis section. Common to each is a desire on the part of the project sponsors/funders and research team to understand the particular needs for utility use and PSR support. It must be stated clearly that each participant is unique. While the intention is to gain an understanding of themes and commonalities within certain groups to enable targeted support, this study never aims to ignore the individual experience.

Opposed to the previous phase of this research, which was limited to the case study areas, the only geographical limitation for this study is that the participants are on the PSR are within England.¹ Due to the sampling/recruitment processes (see below), most of the participants fall within the catchment area of the utility network operators funding this study. The focus of this research is to understand in much greater depth the experience of those with certain characteristics rather than to compare the experience of people living in particular areas. Thus, this phase of the research is complementary to the previous project.

¹ One respondent was living along the English-Welsh border, and while they lived in Wales, they accessed medical services in England.

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- Care & Repair Cymru
- Lancashire VI Forum
- Lincoln and Lindsey Blind Society
- Royal National Institute of Blind People
- Rural Mental Health Matters
- Sight Advice
- Sight Loss Councils, Thomas Pocklington Trust
- Swansea Carers Centre

Research Objectives and Approach

To build upon the first project and provide an evidence base to enable utility providers to enhance their PSR support, the objectives of this research are:

- Understand how rural-based customers eligible for the PSR within the specified groups, rely on and experience electricity, gas and water,
- Explore how those customers have been or could be impacted if there is a planned or unplanned supply outage of electricity, gas or water at their property,
- Consider how far existing PSR support is likely to address or mitigate those impacts and whether that support could be developed to better meet their needs,
- Identify what organisations or groups people with specific needs tend to turn to for help or advice, who might be useful partners to promote PSR take-up.

It is recognised that vulnerability experiences may differ between hamlets and small towns. Therefore, as far as possible, data was collected from differing types of rural locations.

Stages of the Research

Stage 1: Review of existing evidence

Desk-based analysis of existing evidence on the target groups was undertaken. As well as relevant general information, rural-specific information and that relating to utility use, was included if available.

Stage 2: Development of data collection framework

The research team worked together with the sponsors to develop a formal framework for data collection using the PSR databases held by the utility network operators, ensuring alignment with data protection legislation. The majority of the interview schedule was maintained from phase one of the study to ensure consistency across data collection. The same protocols were put in place to ensure compliance with ethics standards.

Stage 3: Data collection

Data was first collected from support organisations through interviews. This group was targeted first to both inform the PSR interviews and seek advice from those experienced with the target groups to ensure the sampling and data collection were accessible and properly informed. A mixture of national and local organisations that represented the interests of the target PSR codes were identified and invited to participate. 11 interviews were undertaken from 10 organisations via telephone or videocall from February 2023 to July 2023.

This was followed by data collection from the target groups on the PSR. Households were identified containing people who registered on the PSR as belonging to the target groups and carers for those in these groups. Postcodes in the catchment areas of the utility network operators were analysed and coded as 'deep rural', 'intermediate' or 'market town'. Potential participants were selected from each category, to increase the diversity of rural experiences covered and invited to participate in the study by the utility network operators.

20 interviews were undertaken via telephone or videocall, with an additional focus group of six participants over videocall and one written survey. Data collection amongst this group took place from April 2023 to September 2023. Here is a breakdown of the participants by PSR code:

	PSR Group			
	Mental Health and/or Dementia(s)*	Blind and Partially sighted	Medical Equipment	Total**
<i>PSR participant numbers</i>	10	9	10	29

*Six were coded under mental health and four under dementia(s)

**As some participants fell under more than one code, they are counted more than once in the total

Stage 4: Data analysis

The secondary desk-based analysis was used to contextualise the primary data gathered from interviews and surveys. All interview notes or transcripts and survey responses were coded and analysed iteratively, to generate and interrogate specific themes emerging from the analysis, combining, and contrasting the results across target groups and specific personal situations. This took place in September 2023.

Background Analysis

An appraisal of relevant existing evidence was undertaken for this report. Where possible, the data and evidence included are rural-specific; however, indicative of a key issue in research and policy making in this field is the lack of rural-specific information. This is particularly true of quantitative data.

Blind and Partially Sighted

Also referred to as visual impairment (VI) or sight loss, around 360,000 people in the UK are registered as blind or partially sighted, while more than two million people are estimated to have sight loss (RNIB, 2021). Up-to-date statistics on the prevalence of visual impairments in rural areas in the UK are not readily available. However, it is generally considered there are proportionally higher numbers of people with visual impairments in rural areas, due to factors such as a higher median age (Hashemi, et al., 2017; Public Health England, 2018)

Age-related visual impairments, such as age-related macular degeneration (AMD) is one of the most common causes of visual impairment in older people (Public Health England, 2018). It affects the central vision and can result in difficulties with reading, recognising faces, and driving tasks. A key consideration for utility network operators is the provision of accessible information, as legislated by the Equality Act and Accessible Information Standard legal duties requiring accessible communications (RNIB, 2021).

People living in rural areas face unique challenges in accessing support and services due to geographical limitations and transportation issues (RNIB, 2023). In an in-depth study by RNIB (2009), the biggest change in the lives of many blind and partially sighted people was the loss of independence that accompanied the loss of sight. Whilst energy costs can be higher for people with VI due to more usage, 75% of visually impaired people of working age are not in employment (Miller, 2022). The recent rise in the cost of energy and general living costs has restricted independence and increased isolation of people who are blind or partially sighted (Miller, 2022).

Mental Health and/or Dementia(s)

Mental Health

The World Health Organisation (WHO) (2022, p.vi) defines mental health as: "... a lot more than the absence of illness: it is an intrinsic part of our individual and collective health and well-being" enabling "people to cope with the stresses of life, to realise their abilities, to learn well and work well, and to contribute to their communities". The absence of mental health is commonly referred to as mental ill-health or mental health issues. In the UK, mental health charity Mind report that each year 1 in 4 people experience a common mental health issue like anxiety and depression (Mind, 2023).

It is difficult to accurately ascertain the prevalence of mental ill-health in rural areas. The UK Environment, Food and Rural Affairs (EFRA) Committee in its 2022 inquiry into rural mental health highlighted the issue of 'a lack of health, mental health and well-being data differentiated between urban and rural areas' (UK Parliament, p.10). An additional problem in data collection is outlined by Sarah Hughes from the Centre for Mental Health, who identified low levels of self-reporting of mental health issues due to stigma (Hughes, 2022).

What has been referred to as 'green social prescribing', the exposure to nature and the countryside, is a positive factor for the mental health of people living in rural areas (UK Parliament, 2023, p.3). However, the countervailing impact of the remoteness of some rural locations can be social isolation, which contributes to 'stress, anxiety and depression which can have a detrimental effect on people's mental health and wellbeing.' (Costas and Smith, 2020).

Access to statutory and non-statutory support services, for mental health, is consistently identified as a significant problem for rural areas. The centralisation of these services in towns and cities creates an access barrier, which is exacerbated by inadequate public transport and poor digital connectivity (UK Parliament, 2023, p.4). These also contribute to feelings of social isolation and loneliness.

A key consideration is rural deprivation. This is often found in areas, which 'can be concealed – and exacerbated – by nearby areas of relative wealth and privilege' (Allwood, 2020, p.3). Again, a lack of granularity in the available data makes it difficult to identify, which has implications for service provision. The Committee's report emphasises that rural deprivation is inextricably linked to poor mental well-being (UK Parliament, 2023, p.3). The Centre for Mental Health also emphasised this in its report on children's mental health in isolated areas concluding that "by the age of 11, children from the poorest 20% of households are four times as likely to have serious mental health difficulties than those from the wealthiest 20%" (Allwood, 2020, p.8).

Farm workers and vets are identified in various studies as being at risk (Costas and Smith, 2020). A 2018 survey of its members by the British Veterinary Association found that 77% of respondents had been concerned about a colleague or fellow student's mental health and well-being (UK Parliament, 2023).

There is also a gendered dimension to mental health in rural areas. A study from the Samaritans (2022) found only 43% of men in rural areas would reach out for support or talk to someone if they are struggling with their mental health, compared to 51% of men in urban areas, making them the least likely demographic group in the survey to seek help. This figure was higher (60%) for women in rural areas.

Dementia(s)

Dementia(s) is an umbrella term under which Alzheimer's disease, vascular dementia, and Lewy body dementia are some most commonly observed. These diseases affect memory, thinking, and the ability to perform daily activities (WHO, 2023). Dementia(s) has physical, social, and economic impacts, not only for the people living with dementia(s) but also for their carers and families.

While prevalence data are of poor quality and somewhat historical, it is estimated the number of people living with dementia(s) in the UK in 2021 was 944,000 (Dementia Statistics Hub, 2022). According to the Office for National Statistics (ONS, 2023) dementia(s) was the leading cause of death in the UK in 2022 and as of May 2023, dementia(s) had been the leading cause of death in England for 23 months in a row.

Prevalence is higher in older people, with one in 11 people over the age of 65 having dementia in the UK (Dementia Statistics Hub, 2022). While there is no nationally disaggregated data for rural areas in the UK, given the percentage of older people (65+) can be as high as 56%, dementia(s) is highly likely to be more prevalent in rural areas (Bould et al., 2018, p.9).

Dementia(s) poses unique challenges in rural areas due to factors such as limited healthcare infrastructure, geographical isolation, and reduced access to specialised care and support services (Sherriff, 2018, p.5). Issues such as long waiting times, limited availability of dementia specialists, and the need to travel long distances for consultations are prevalent. Furthermore, the social isolation experienced by individuals with dementia(s) and their caregivers in rural areas is a concern, compounded by poor local services in rural areas 'such as regular buses, pubs, shops, and post offices' (Bould et al., 2018, p.18).

There are key aspects associated with dementia(s) to be considered for the second part of this report. Someone with dementia(s) is more likely to have 'accidents, incontinence or difficulties using the toilet than a person of the same age who doesn't have dementia' (Alzheimer's Society, 2023). While certain types of energy for cooking and heating, such as solid fuel, oil, and gas, which are more common in rural areas are seen as potentially more dangerous for people living with dementia(s) (Rural England, 2016).

Medical Equipment Dependency

This PSR code includes people who require or use medical equipment in their homes. These can include stairlifts, ventilators, dialysis machines, oxygen concentrators, or positive airway pressure machines. There is not the space to provide an exhaustive summary of those who may be dependent upon medical equipment in their homes. This section will outline the most common and serious.

Assistance aids, such as stairlifts, adjustable beds, and controllable furniture are increasingly common equipment found in homes to enable independent living (Soubutts et al, 2021, p.3). They support the idea of aging in place, which is part of the WHO's plan for a 'Decade of Healthy Ageing' to tackle issues associated with an ageing population (WHO, 2020). They are used by a wide range of people including those with physical disabilities and problems with movement.

Obstructive Sleep Apnoea (OSA) is a respiratory condition related to sleep, 'leading to repeated temporary cessations of breathing because of a narrowing or closure of the upper airway during sleep' (British Lung Foundation, 2015, p.4). Untreated OSA can see people with the condition repeatedly stop breathing during the night, which can have significant implications for cardiovascular health, mental illness, and quality of life (Slowik et al, 2022).

Prevalence figures for the condition are not comprehensive nor up-to-date and vary across different studies. One of the most comprehensive is a 2014 British Lung Foundation study, which estimated that 1.5 million adults had OSA in the UK, of which 330,000 were diagnosed. While a 2018 National Institute for Health and Care Excellence (NICE) Scoping Review estimated that 5% of adults in the UK have undiagnosed OSA, equivalent to over 2.5 million people. Exact figures are unavailable for rural areas. However, the British Lung Foundation (2015) considers that older populations in rural areas are more likely to have OSA.

Continuous positive airway pressure (CPAP) or auto-adjusting positive airway pressure (APAP) machines treat OSA. These machines must be plugged into an electrical outlet or connected to a battery, charged from an electrical outlet.

Kidney dialysis is a treatment to remove extra fluid and waste products from the blood when the kidneys are not functioning properly. Nearly 30,000 people in the UK are on dialysis (Kidney Care UK, 2023). NICE guidelines estimate that a minimum of 30% of the current dialysis population in the United Kingdom could be on home dialysis. (Mc Laughlin et al., 2022, p.580).

Due to a lack of specialist clinics and poor transport links, 'access to dialysis services can be very challenging in some rural areas' (Kidney Research UK, 2019). Therefore, where appropriate, home dialysis may be more desirable for people in rural areas. The NHS is promoting home dialysis therapy, suggesting a minimum target rate of 20% of dialysis patients (NHS, 2021).

Findings

This section outlines the analysis of data collected from PSR customers and support organisations. Building on the findings in part one, it draws out a number of themes, relevant to the research objectives.

Some of these customer groups have complex and often quite specific needs. Given they potentially have high levels of vulnerability, it is very important that their experiences and views are incorporated into this study. However, this should also be considered as a factor when interpreting the findings of this report. This is particularly pertinent to the second part of the findings based upon the functionality of the PSR, as these should not be considered a general evaluation of the PSR. They are specific to this sample.

Understanding how rural-based customers within the target PSR groups rely on electricity, gas, or water and how they are impacted by planned or unplanned supply outage.

Blind or partially sighted.

Key points:

- Lack of light is a major issue for those who are partially sighted,
- Access to the internet a vital channel to support services,
- People with visual impairments unable to see dirty water during disruption,
- Maintenance in an area can disrupt walking routes.

The most common issue identified by participants relating to a stoppage in electricity was the lack of light. As one participant expressed it, *'I'm entirely reliant on electricity to see around the property.'* While another with macular degeneration explained that without electric lighting *'it's difficult for a sighted person to see inside the property. For me, it becomes impossible.'* This concept was expanded upon by an interviewee from a charity:

'for people with diseases such as retinitis pigmentosa, they have absolutely no sight in the dark. So, whereas you and I, our site will adjust to the light levels at night, this does not happen for them, so cuts to electricity can be quite problematic.'

One respondee with central vision loss who lives in West Cumbria, spoke of keeping *'LED torches that last quite a while with quite a few batteries'* in the event of a stoppage to his electricity. He explained the light given from torch batteries is not

very good for people with his condition as it is too harsh, so they only represent a limited help during an electricity outage.

One completely blind customer on the PSR also raised the point of co-morbidities. She mentioned that people in her family and others she knows have medicines that require refrigeration. She suggested it would not take long for an electricity cut to affect this medication.

Another customer spoke of the impact of being without internet:

'When there's no power, there's no internet. And when you live in a rural community, organisations like South Lanc's advice, Accrington & District Blind Society, they do a lot of their peer support groups online so people can connect. If you haven't got that connection, that leads to social isolation and loneliness.'

A water disruption issue, which particularly impacts people who are blind and partially sighted, is the occasional flushing of pipes in an area. This was raised by this participant in a focus group:

'It was only when my sighted daughter was quite young at the time, she said, "Oh, Mummy, all that water is dirty." That was coming out of the tap and because obviously I couldn't see and ... I didn't realise that the water was showing up as dirty and I was particularly concerned having two children with immune compromised conditions as well.'

There was consensus amongst the participants of the focus group with visual impairments that this was a common concern for them.

Another point of discussion during the focus group was relating the impact of utility maintenance and repair to people who are blind and partially sighted. The discussion was in reference to maintenance of gas pipes but could be applicable to all utilities. They spoke about how they had experienced problems due to the maintenance changing the physical geography of routes they may normally take. This included the instillation of bollards and new diversions, sometimes into the road.

Medical Equipment

Key points

- People with multiple or complex needs could be the hardest hit in the event of a stoppage to any utility,
- Stoppage to electricity was the biggest concern for participants, posing a threat to life for some,
- People have multiple devices that can be affected in an electricity outage,

- Ability to communicate during an electricity outage also a worry, especially in areas with poor mobile phone connectivity,
- Stoppages to heat sources (electricity or gas) can be detrimental for people with certain conditions,
- Running water is required for washing and cleaning due to issues such as incontinence as well as showering for skin conditions.

Whilst a more complex case than most interviewed for this study, this mother and carer for her daughter with multiple disabilities resulting from a rare disease, outlines the importance of different utilities in their daily lives:

'My daughter's got the following: she's got a stairlift and we'd have difficulties getting her a up and down the stairs for safety reasons; she has a heart rate monitor which is on throughout the night, which monitors her heart rate, because she's at risk of sudden expected death in epilepsy as well as cardiac death and we monitor that; she's got an electric bed; she's got a wet room; she's got an up and down shower to be able to get on and off; she's got the electric toilet but that wouldn't have much of an impact.

In terms of water, it'd be specifically around hygiene, preventing skin breakdown. Being able to wash it. She does have, this sounds really extravagant, but she does have a swim spa but we got a swim spa in the garden which actually doesn't take up much electricity despite the fact that it's huge. She uses that for hydrotherapy.'

Any outage is likely to have a significant impact on her care and a loss of electricity could pose a threat to her life, if her monitoring equipment loses power. The mother confirmed that even a minor interruption during the evening could reset the heartrate monitors, leaving them unaware if she had had an episode.

Due to the importance of electricity for most medical equipment, it was most discussed and considered the most consequential if lost. One charity worker was worried about:

'immediate threat to their lives effectively if anything happens to the medical equipment. So, the main ones, one of which is apnoea, the other one is dialysis, which is a big one that we have major concerns about. And then there's ones that are less specific but things like oxygenators for instance.'

Speaking of his CPAC machine, this customer on the PSR highlighted: *'I guess that's a fairly significant concern then if the electricity were to go out. Yeah, significant concern because if I stop breathing overnight.'* This concern was echoed by all four participants who had a similar machine in the household.

Impact of disruption to devices that would not normally be considered life threatening were still seen as worrying by the majority of those who fell into this category. Other relevant equipment or devices included stairlifts (5), electric hoists (2), electric recliners (2) and electric beds (2). Many reported having multiple devices, e.g., a CPAP machine and a stairlift. One manager of a charity that supports carers raised the point that *'for a lot of our clients there's an increase in use of assistive technology'*, which is reliant on electricity. This aligns with the evidence from the background analysis and is likely to carry on increasing with an aging population (ONS, 2023).

The effects of stoppages to electricity on communication was another concern amongst participants. As highlighted by this person on the PSR, as well as being isolating, it could also be dangerous:

'... being a bit cut off because obviously the phone goes off as well doesn't it and means that you lose everything. It's quite isolating sometimes, and I don't even think the pull cords work, so if I had a fall, I couldn't gain any access to anybody. You know that the time is going to be when your phone's flat your mobile's flat isn't it?'

As mentioned, people with medical devices may have multiple conditions and will be affected by stoppages to their sources of gas or electricity heating. This woman highlighted this point during an interview:

'I've got osteoporosis and arthritis and if I get cold, I fall about and that is my main worry. So, if it does go [off], then I just have to go to bed. That's it. I don't move around.'

Similarly, those categorised to this PSR code had specific requirements for water due to issues such as incontinence:

'I don't think we ever had any cut outs of our water supply, but it would be critical to us. I think the point I would make about water is that it's fine to have water bottle. You know, people set up sites where you can go and collect water, but that's good for drinking, but it isn't very good for anything else in terms, you could do cooking with it. But in terms of washing and if you have, as my wife is doubly incontinent, you really do need running water.'

Likewise, another respondee has this to say: *'[I use] hand equipment to irrigate my bowel, and I need hot running water for that.'* She also required extra water usage: *'... I mess on the floor. So therefore, I get loads of extra washes. Because I have to put loads of towels down, and there's always extra underwear and everything else.'*

Another specific use for running water was identified by this woman who cares for her father:

'... but in terms of being able to do laundry, or bathing and showering, obviously that that would be an issue. My father has a skin condition'

which means he has to shower daily with a special cream. That would cause him a problem if he had to go more than 24 hours without water.'

As referenced in the section for the previous priority code, there can be issues when the water is 'flushed through':

'They change the water every now and again. They flushed it through. Then I have to be extremely careful because I'm likely to pick up any kind of bug that's going around and that can make me quite ill, quite quickly.'

Mental Health and/or Dementia(s)

Key points:

- There is increased electricity, gas, and water use for households registered under this priority code due to heating and cleaning,
- Disruptions to utilities can break people's routines,
- Stoppages to electricity can impact the water supply of people rural areas.

There were multiple references to the need of households with someone with mental health conditions and/dementia(s) to use more electricity, gas, and water. One woman spoke of a grandson with autism who often removed clothing while in the house, meaning they had to maintain a steady temperature. He also played a lot of video games, which increases electricity consumption.

A support worker for a carers' organisation identified that for people with dementia(s), due to waking up in the night or to reduce confusion due to seasonal light changes, households tend to have their lights on more. While people living with dementia(s) can be housebound and more susceptible to the cold, so more heating is required.

As highlighted in the background analysis, someone with dementia(s) is likelier to have incontinence or difficulties using the toilet than similarly aged persons without the condition. This was repeatedly referenced as a concern in the interviews by those caring for people living with dementia(s). Increased water usage is a reality for some people:

'I know one parent; when she said to me, I was mortified, she said. For four years, her child has been projecting vomit every night onto the wall, onto the bed, onto the carpet.'

Similarly, a worker for a carers' organisation spoke of OCD behaviours they encounter, with excessive showering and washing. They spoke of:

‘very ritualised behaviour ... if water was disrupted, would, you know, be devastating for them. And, you know, possibly cause a bit of an emotional breakdown for that individual and put them into a state of panic and distress.’

This idea of rituals or routine was apparent for people within this priority code. Disruptions to this norm from utility stoppages can be problematic:

‘it can be incredibly unsettling. I think for the person with dementia and that would really worry the carer when they’ve got them in an OK routine every day. So, the disruption of that I think would be the biggest problem’ (charity worker).

Three participants in more rural locations accessed their water through a borehole. For them, a stoppage to electricity potential meant a disruption to their water supply due to the power required to pump the water into their home. For one woman on the English-Welsh border who cares for her husband with dementia and Parkinson’s disease, losing access to her water was her second biggest concern after not being able to use her telephone (see Telephones and digital phones):

“I am looking into getting a diesel generator. A backward step, isn't it going back to diesel but I'm looking at getting a diesel generator now because I think we're going to get more power cuts. I'll get a generator that will at least run my borehole ... I mean at the moment, I'm coping with him. But it gets worse from week to week, it's obviously getting worse. When you've got dementia and Parkinson's disease you have a lot more washing to do. Everything is more of keeping clean and keeping things clean. And if we start getting power cuts, I don't know how we'd cope. I can't think that far ahead.”

A lack of electricity is particularly impactful for those who are electricity only. As outlined by this person with clinical depression and chronic fatigue syndrome:

‘given that everything about my home ceases to function. If the electricity goes off, then it affects me immediately and directly. I wouldn't be able to do anything at all. If this occurred during the wintertime, there'd be no heating and no means of cooking. So yeah, it would be really severe. I've already once ended up in a situation with hypothermia.’

For some, any stoppages led to increased stress and anxiety.

Summary

Here is a summary of the above findings disaggregated by utility type.

Water

- When flushing the water through people with visual impairments are unable to see when there is dirty water coming through their taps. While those with weakened immune systems are more susceptible to potential problems if they were to drink water during this process.
- There is increased water use for people who are bed bound or with skin conditions due to the need for regular washes. Similarly, households with somebody who is incontinent also use more water for laundry. During a prolonged outage or stoppage, they would need more than just drinking water.

Electricity

- Heavily relied upon by people with medical devices. Stoppages or outages could pose a risk to life for people who require machines such as CPAP or heart monitors. Whilst households with other devices such as hoists and stairlifts will be strongly inconvenienced with significant risks for some.
- Increased used for lighting, heating, and games etc. to help care for people with mental ill-health and/or dementia(s).
- People with visual impairments such as macular degeneration are reliant upon light to see and are more negatively affected by disruption to electricity as a result. Torches only provide limited support.
- Whilst the spoiling of food from refrigerators and freezers was repeatedly referenced, the loss of refrigerated medicines would be the most acute concern.
- Some in more rural areas rely on electricity to access their water from a borehole and are therefore doubly inconvenienced during an outage.
- The situation is more acute for those who depend on electricity only.

Gas

- More heating is required by some groups on the PSR. Within the target groups, this was noticeable for people living with dementia(s) or specific conditions requiring medical devices.
- While not specific to gas, any maintenance or work which will impact walking or transport routes can impact people who are blind or partially sighted.

How far existing PSR support addresses or mitigates the identified issues and whether that support could be developed to better meet the needs of the target groups.

This section builds upon the learnings of utility usage from the previous section to explore the priority services register. It identifies themes that emerged from the data relating to support offered, issues, and potential improvements to the PSR. It also incorporates wider themes of living in a rural area, which impact the lives of the target groups and influence the effectiveness of the PSR.

As this study incorporated voices from across England and to a lesser extent Wales, any criticisms raised in the study are not necessarily attributable to study sponsors. However, as the aims of this report are to understand the functioning of the PSR and highlight where improvements can be made, it is important to explore the issues raised.

Accessibility

For the PSR to function effectively, it needs to be accessible to all those who require its support. Many participants had opinions on accessibility. While most of the comments were general suggestions for both utility suppliers and network operators, there was also targeted feedback on experience with the PSR itself.²

There was a consensus of avoiding a digital-only or digital-first service. As emphasised by this person with VI:

'I think a digital only process is problematic because visual impairment is an overwhelmingly age-related issue and as you know, digital exclusion amongst older people is quite high. Adding VI and it's even higher.'

This is supported by research from Age UK (2021), which highlights that close to 2 million people over 75 are digitally excluded in England.

Receiving written communication in an accessible format was also a key issue for those involved in the research, especially those who are blind or partially sighted, like this gentleman:

'These companies need to remember three-quarters of the VI population are partially sighted and not blind and can therefore read something. When they send out their letters and their information, just

² The research team tried to get respondents to differentiate between communications from utility network operators and utility providers, but they were often grouped together in their responses.

doing something simple, like putting in font 16 and Arial is going to make a massive difference to people.'

An interviewee from a VI support organisation thought while *'the utility companies are pretty good in sending bills in large print'* they are *'not always communicating with large print with other things.'* Something that was born out in the comments of a member of a focus group discussing when they first heard about the priority register:

'I found out about it at an event, and I was given some leaflets, and they had a dark blue background and white text, and I couldn't read them. I took them home and I put them in a drawer, and I forgot about them because I couldn't read them.'

An engagement officer for a charity working with people who are blind and partially sighted offered this advice:

'People [who are blind] like me use screen readers and voiceover. So, if I went onto the Western Power website, would it be obvious to me what support they offered for disabled people, people with VI on their homepage? Is the prioritisation service on their homepage? It certainly should be. There should be a very large banner. If you are somebody who needs assistance and support, please click on this link.'

A customer in Dorset suggested this is not just an issue for people with visual impairments: *'they send generic information when you get your bill in small print and that's not accessible for people with neurodiversity. Why is it hidden amongst everything else?'* She also outlines the type of service that would be more accessible:

'[information about the PSR] should be front and centre at the top ... and there should be a phone number to ring. If you'd like to talk to somebody about this, not just the generic 0800 number because when you ring an 0800 number, you get a series of people that might not actually understand when they've got depression.'

In reference to bills, one director of a mental health charity felt the lack of accessible communication was potentially dangerous for some people:

'A service that's set up to provide support for vulnerable people isn't really fit for purpose. There isn't really any support there ... if you've got any kind of anxiety or mental health or disability, you're going to probably just put that [letter] away in a drawer and not be able to deal with it emotionally and mentally, because it can set in an absolute panic attack or crisis, they could end up in acute hospital, because they haven't acted on things, when they first got the information because the information is generic. Then, you know, they just sort of tend to put things aside.'

Promotion of the Priority Services Register

There was differing opinion on the effectiveness of the promotion of PSR by utility network operators and others. A large majority thought there wasn't enough communication of the PSR in a way that was getting through to people. As one worker for a visual impairment charity suggested, *'in our experience, you can't tell people too often about something because if you tell them it 10 times it might register once.'* The need for a communication drive to promote the PSR was proposed by this customer in Lancashire:

'I don't think many people with VI are aware of that of the priority services. So, I think there's a big communication effort needed from the power companies.'

However, two of those interviewed highlighted that they disliked receiving invitations to join the PSR after already being registered. As evidenced by this respondent:

'I sometimes get a letter to say, do you want to sign up? That's a little bit confusing to me. I know that that's just like a generic thing, but to me that needs to be a bit more joined up if you've already got somebody on the register to then worry them and say would you like to join the register because then they start to think, why am I not on it? I thought I signed up. That can cause a lot of anxiety because already when you've got anxiety that can come alongside brain fog.'

This highlights a need for targeted, suitable advertising and well-maintained records to not repeatedly promote to people who are already on the register. This is something that could be improved by data sharing across different utilities, companies, and public agencies if data sharing regulations could be overcome (see A collaborative and coherent approach to PSR provision).

This interviewee was very positive about their experience:

'I would say very supportive. As I said, it's like a double check on whether I still need to be on the register. Every year I'll get an email from them. A couple of times I phoned just to make sure that I am on it when I changed address. I made sure with the register that the change of address they noted. The staff were really friendly, really helpful, no problems.'

However, this was not universal, and it appears there is a lack of consistency in the communication around the PSR. It differs according to place and utility. An interviewee from a charity with a lot of experience in the area suggested awareness of the PSR may be lowest amongst those most in need:

'someone who's on dialysis ... may be unaware that they could get on the PSR simply because they've got so many things to be coping with in terms of their condition.'

This participant also raised the example of people in hospice or end-of-life care as being similarly under-registered. A point that was supported by this carer:

'I just came across it myself, I was looking to see if there are any sort of more efficient ... If you're on a low income, there's probably as a result of that and I realised then that he [her husband] would qualify for that, but it was me in my role as carer. I don't think my husband would have found that or even the motivations to register for it. I guess that would probably be where if somebody has a condition and doesn't have someone in our caring capacity or you know that that could be a problem for the that class of person.'

There were suggestions to improve the promotion of the PSR and its offerings. Some spoke of active community Facebook groups or pages, which people used to spread useful information and suggested placing more information in this medium. However, there is the need to consider some of the accessibility points raised above when promoting via social media, as raised during this focus group:

'if they do want to extend the reach and they're going to put this out on social media, I will ask the companies, will they make sure that that presentation is audio and its audio described because that will make visual impaired people go, it'll have the wow factor and to listen to it without the heavy background music which just distracts from it all.' (Focus Group Participant 1)

'So quite often you get videos, you know that have lovely scenery, lots of music, informational text and to most of us it just means it means absolutely nothing. So, actually having that audio output on a video, you know talking it through or having an alternative so that it is, you know, audio described video or audio file only. Just making this as many versions of formats so that people can choose which one they find easiest to access.' (Focus Group Participant 2)

Other more traditional methods were raised as being potentially successful:

'perhaps put advertisements in the local newspapers'

'I think I can always let our local parish council know as well and they can put it in the newsletter.'

'just something as simple as a small A4 poster put up in the local doctor's surgery.'

These were seen as beneficial as many communities used them to spread useful information. As was this best practice example:

'Actually, companies have given us fridge magnets to put on the fridge where you've got the number there. You haven't got to think about it. You just got a number straightaway.'

While a couple of respondents spoke of the benefits of talking to someone over the phone, there was widespread caution over cold calling:

'feel like they're being cold called, and then they're very nervous about giving their information to go on to a list. I think we've become quite protective of our data in terms of how it's being used. And of course, when you have got older people more vulnerable people, people with mental health issues, and they tend to be a little bit more or they can be a little bit more cautious, particularly the older generation.' (Carers Organisation)

The use of trusted third parties, such as voluntary, community, or public sector organisations was seen as a key tool to promote the PSR. These groups can help reduce the barriers and issues with the methods of communication mentioned previously, such as inaccessible material, digital exclusion, and fears of data security. Indeed, many of the organisations interviewed for this research were actively promoting the PSR to their beneficiaries or members.

One member of an organisation promoting the interests of people who are blind or partially sighted requested that utility network operators *'keep communicating with us, you know, keep communicating with the community.'* This she suggested was a way to both ensure the register is promoted and the companies receive feedback.

A point repeated by another advocate in Gloucestershire:

'I'm sure all these power companies have community elements to them and officers who deal with community liaison and that kind of thing. They should actually make a real effort to make communication with organisations and forums like mine, like any organisation'

Possible contacts or partners for promoting the PSR are listed in the following section.

Communication and support during a stoppage or outage³

³ As the interviews were taken with people throughout the country, not all the views relate to the services provided by the funders.

There was an array of opinions around how the PSR can, or has met, the needs of those who require its services. The majority of those interviewed had not used the support offered for those on the PSR, other than communication prior to, or during a stoppage. The majority did not have a strong opinion.

There was evidence of the system working well, as demonstrated by this woman:

'To be fair to is it Cadent, they're going to replace the gas main in my road in about 2 weeks' time and they've been to my door and I've told them I'm blind and visually impaired and I've told him I'm gas central heating and gas cooker. He said, "we will be providing electric hob and we'll make sure your heating's back on and if there's anything you need just let us know." They've been absolutely brilliant, so I can't fault them there.'

This can be seen as a best practice example with good communication and offers of additional support for someone on the PSR. Another interviewee who joined the PSR due to problems with anxiety and depression was also positive of her experience: *'when I had the electric go off and I spoke to them from my company and they were really supportive of telling me, it may not be long.'*

Despite not having used the service, these customers were reassured by being registered:

'I can't tell you how well the system actually works because I've never had to call on it, but it is a genuine reassurance and comfort to know that the registry exists and that I'm on it, and that if the power goes down or the water supply stops that somebody will have my back. That is a real comfort, a genuine relief to know that they help and support us.'

'What they've told me is that if there is a prolonged power [outage], they will bring a portable generator out to me so that I have electricity supplied directly into my home and which I hope is the case because I'd be absolutely stumped without it.'

Of those who had an opinion, there were unfortunately more who had issues with the service or communication they had received. Amongst this group, many spoke of having to contact the utility provider if they encountered a problem, receiving communication after the event, or simply not receiving any communication at all.

One woman in Gloucestershire, who looks after her mother in a different property in the same area who has medical equipment, offered this opinion:

'So, we have had some stoppages for the water in the past, and we got no notification and I did complain about that because they were supposed to have notified and they were supposed to deliver bottles of water that didn't do that either. It was just a shambles, really.'

She also claimed that while they did periodically receive text messages about water stoppages, they were normally after an event:

'I wouldn't say it's something that I feel I could rely on and feel reassured by. It's quite the opposite.'

Another customer in Dorset who experienced a gas outage was unhappy with their experience:

'I had a period of 48 hours in the winter with no heating. As a priority registered customer, I was just basically not given much priority. And but yeah, I know in other parts of the country, it's all singing all dancing, but not here.'

This interviewee said that in the area she previously lived, she had received a much better service. This raises the prospect of an uneven service around the country.

Another respondee did not perceive an active response to a stoppage:

'But the electricity people tend to be the same if you ring them as soon as the thing goes off. They're sort of kind of getting there waiting for people to ring them should, I think to actually give them an idea of how big the problem is. It's sort of waiting for people to complain before they decide how much effort they're going to have to do to make the problem go away kind of thing.'

One support worker also revealed a story of a service user's wheelchair running out of power during an electricity outage, after being told she could not get access to a generator due to insufficient supply.

A lack of mobile phone signal in some rural areas compounded the problem as people could not receive texts and if the issue was due to an electricity outage, they would be cut off from communication. This was explained by this person who cares for her husband who has issues with mental health:

'I just think the biggest thing is always the mobile reception here. And you know, we've been here nine years, and nothing has really been done about that. So, I think that communication for whichever utility you're dealing with, would be the biggest one to tackle first and to focus on ... because it's that it is the not knowing that can create the anxiety or not knowing. You know? How to best manage the situation. But if you know, or the power is anticipated to be off an hour or the water is off for three hours, then you can plan for that.'

Another woman who suffered from issues with mental health also wanted more communication during an outage:

'If there's an outage for those customers to be contacted to say, "Look, don't panic, or whatever. We're here for you. We know you've got no gas, we know you've got no electric, we already know you exist." That's what you're saying to that customer. "We know you exist. We've got your back. Don't worry, we will sort it". I think that needs to be done and I don't think that's done across the board. And I think that really increases people's issues around mental health and their anxiety and their worry.'

In the previous section, this issue of flushing the pipes was identified as a particular challenge for people who are blind or partially sighted:

'They managed to write to me, but they could only give you a range of dates when it might happen, but not an exact date. So, there was no way we could actually tell what day it happened.'

If someone is unable to check the colour of the water, this could raise safety concerns. It raises a need for additional communication and support from water companies.

A potential solution was offered by another respondent:

'So maybe it would be nice if they know that there's a blind and vision impaired person on that register in that area. If they would come to the house to run the water to make sure it is clean for them and, you know, make sure it's safe moving forward'.

If this level of support is not possible, more precise dates and timings need to be communicated to relevant groups on the PSR.

One customer with mental and physical health issues specified limitations they would have in collecting bottled water:

'If it was water, I'd be absolutely stuffed because I can't drive. If there was one of these distribution points where they're handing out bottled water, I couldn't get to one or even if it was within walking distance because of my health conditions. I couldn't carry any large amount of water back home with me so yeah, I would have real problems immediately.'

Finally, a woman with visual impairments in Lancashire raised the topic of training for staff who may deal with people on the PSR. She felt more needs to be done so either people on the PSR are automatically connected to a specialist service, or all customer facing staff receive training to raise awareness of issues customers may face.

Rural: difficulties, resilience, isolation, and social connections

It was identified in the report for phase one of this research, that rurality is a factor in compounding vulnerabilities (Dunwoodie Stirton, Dwyer, and Wilson, 2021). As outlined by this participant in this phase of the research, people in rural areas tend to be more susceptible to outages to utilities:

'I think we're probably more prone to outages. Being in a rural community. That's just my perception. Obviously, we do have the issues of the electric in the winter.'

This perception was widely felt throughout the participants, particularly in more deeply rural or isolated areas. Electricity was the most frequently affected. There was also a common thread, across participants of different areas and different needs as to the different life for people in rural areas, as exemplified by this interviewee:

'I find ... there's a sort of lack of appreciation of the difference between rural and urban areas between people who are based in urban areas and you simply get an attitude from some people that a rural area is just a place where people drive farther to go to work, rather than a distinct difference in the way people have to live and the different distance they have to go to services and all those kinds of things.'

A representative for a charity called into question the functionality of the PSR for some:

'In rural areas, you have a much higher prevalence in general of park homes and other non-domestic housing types ... priority services register is not particularly helpful for them when they can access it. And most of the time they can't because they're treated as commercial customers.'

For some interviewed, the realities of living in rural areas built a resilience born out when they experienced disruption to their utilities:

'I think people to be honest people living in this sort of environment by and large expect it [utility stoppage] and they sort of by and large plan for it anyway. So, you know, it's not like the end of the world for people that they've learned in this environment.'

This sentiment was echoed by another PSR user, who also emphasised the role community plays in building resilience:

'I guess I'm kind of a little bit used to it now and especially living in the countryside. I guess you would say you build up a sense of resilience to kind of know what you have to do. Yeah, I'm quite, we're quite prepared. And the neighbourhood is a very close-knit community. So, it's very good to know that the neighbours are always looking out for

people that they know will struggle in the event of a stoppage or something. So, we all sort of look out for each other which is good.'

Another participant spoke of being able to call on her nearest neighbours who are half a mile away for a generator if she needed to access water from her borehole. Where people had neighbours, friends, and/or family nearby, people felt much more able to cope during a stoppage to their utilities. Fortunately, this was the case for most of those interviewed on the PSR.

Not everybody has someone else nearby or all the time and they are left more vulnerable during a stoppage. This contrast was outlined by one respondent, who cares for two older relatives:

'My father's got good neighbours who live next door. They're retired and they're a bit younger. And so, he could call on them if he had a problem ... but my mother-in-law hasn't really got anybody because her neighbours may be the same age as her so they're both [in] the same situation.'

While for some, the rural life can be one of community and connections, others are left lonely and isolated:

'What's left of my mental health limiting my life absolutely. I don't have a life. I don't have a social life. I don't have a girlfriend. I do nothing, except sit at home and watch the world drift by. Not exactly ideal.'

As highlighted by the previous participant, those with mental health issues can be acutely affected by isolation and loneliness. This was reinforced by the director of a mental health charity, speaking of the key issues facing people with mental health issues in rural areas:

'I would say the isolation, the loneliness, the anxiety, and stigma ... that includes social isolation. So, if you're the only person struggling in your own mind, you're not going to ask anybody else because everybody else is doing fine. So, you don't want to burden people. And as I said, when there's nothing feasible for you to get help from very much it leads to a sort of stoicism where people just don't seek help until they're in a crisis or crises.'

They also referenced the negative impact of poor transport links, of which there is more information under Rural transport below. Stoppages to utilities can heighten this sense of isolation. As highlighted by this person with visual impairment:

'One of the key messages I particularly would like you to take back to the power companies and the utility companies is when the power is off and the phones are down, that is, that is impacting our social isolation and loneliness because we can't connect with our sight loss services. And once you go down that pathway that does affect your mental wellbeing, that would be a big one for me.'

The importance of having people supporting others was also reinforced by the multiple instances of support offered by carers interviewed for this study. In addition to the daily care, carers in rural areas spoke of all the precautions they took in case there were stoppages to utilities. This included buying bottled water, gas canisters and torches. For those with difficulties performing certain tasks, who live alone, there needs to be additional support provided by utility network operators in regard to mitigation and help if and when a stoppage may occur. This ties into the need for joined-up, intersectoral work (See below).

Telephones and digital phones

During the data collection, issues around the use of phones, both mobile and landline, became apparent as a concern for people in rural areas. As mentioned above, the lack of a mobile signal can be a problem for receiving information or requesting support during an outage. Another worry repeated by nine people across the PSR groups, and three support organisations was the digitalisation of phone lines as the old ASDN network is retired and all customers are moved to a voice over internet connection.

The concern was summarised by an officer from a national charity, who explained:

'BT trying to switch the telephone system to broadband-based, instead of landline-based. However, when the power goes out, the broadband goes down. It makes it a lot more difficult [for] people to contact anyone.'

Of those who have a mobile phone signal – not everyone in rural areas does – after a period of power outage, they may be unable to recharge a mobile phone without battery.

This example from one woman on the PSR in a deep rural area on the English-Welsh border is representative of others:

'I'm on Vodafone for a mobile phone signal, right? BT have changed their [land line] system. Now they're going on to this posh Fibre optics, right? Fibre optics no longer runs off electricity from the mains, from the exchange. It runs off my electricity. If I get a power cut, I have no phone line in the house. The phone goes down. So, what they tell you is you have to have mobile. I can tell you that the mobile phone mast opposite me, the emergency backup batteries on it last exactly four hours. Right then the mobile phone mast goes down. That officially you should be able to run them on GPS. But if I've had the bad luck that my phone wasn't fully charged when I come into a power cut, my mobile phone could be dead on me. That is my biggest worry because I have a husband who's got dementia and Parkinson's and suffers quite often from mini strokes. If I need an ambulance, I cannot get it if that happens.'

The lack of communication in the event of an electricity outage. was a real concern for participants and a limitation placed on the functionality of the PSR. Again, emphasised by this carer in the Forest of Dean:

'These days you've got digital telephones you know, I've got things like Alexa to keep in contact with mum and you know, if all of those are down because you know, like, hardly anybody else has a telephone that's not digital now, it's very difficult because then you lose contact with them, or they lose contact with you. It's really, it's a problem.'

Rural transport

One key issue that was mentioned by nearly every participant was the paucity of public transport in rural areas. While many were able to drive, not everybody had this option. This can impose limits on peoples' lives:

'My life is curfewed by the fact that the last bus through here goes through at about 5pm. So, my life you know, I haven't had these restrictions placed on my life since my mum and sister and I was back in home, had to get home in time for tea when I was a small child, it's horrific there's nothing I can do about it. So, I'm on opioid painkillers. I cannot drive, my concentration is screwed.'

One woman who is on the PSR due to her need for medical equipment in the home, also shared how it affects her:

'To go to the doctor's surgery, I need to get five buses and that doesn't always add up to the time your appointment is. If they're running late then you're stuck coming back. So that's the only thing but I mean, that's what is the price you pay for living rurally isn't it?'

This ties into what could be referred to as a poverty of expectation in rural areas.

Poverty of expectation in rural areas

There was the sentiment across participants, that due to the poor services available in many rural areas, the PSR would follow suit and was not likely to help them. Some expressed this in comparison to urban areas, where they assume customers receive a better service:

'You see things about other places where it [water] goes off and they have tankers and deliver water to people. They didn't seem to have anything like that or whether or not they thought that it was so few properties affected so maybe it wasn't something they had bargained

for. I feel in a similar situation, they do have a lot more arrangements in urban areas. And if a housing estate had lost its main supply of water for 24 hours, I think they'd have had more in place to actually mitigate that than they did in a rural area.'

There were some who felt that despite being on the PSR, they did not expect to be supported in the event of a stoppage:

'I'm aware that there is a priority register. I'm not sure how that would affect me ... I mean if there's a total outage then I'm not sure how much more they can do for us than they can do for anybody else.'

A collaborative and coherent approach to PSR provision

Analysis of the responses from PSR customers and support organisation indicates that a lack of coherence and inter-agency communication is limiting the possible benefits of the register. In other words, the PSR is hindered by a lack of collaboration between gas, water and electricity operators and providers, and different utilities such as telephone, mobile and internet, support agencies, and local and national government.

There has clearly been good progress on the part of the utility network operators to work together to improve the register, including work with outside organisations for promotion. However, there is scope for these links to be stronger and more extensive. This was apparent in the experiences of some participants who signed up to the PSR with one utility but were unsure if they were on the register for the others.

In rural areas, the implementation of the PSR is also operating in an environment undermined by systemic issues, such as poor transport, a lack of local support services, and inadequate communication infrastructure. This is undoubtedly wider and deeper than the remit of the utility network operators. Given the onus the statutory duty places upon them, it would be beneficial to PSR customers and make for a more effective service, if the utility network operators could continue to expand their efforts to work collaboratively with other organisations in this field.

Data matching or linking is an essential component. With the right leadership from national government and diligent oversight, it increases options for a more joined-up and effective service. The case for data matching throughout the industry was laid out by one respondent from a support organisation:

'Data matching is key. The government need to be, and I do say the government, because I think the data matching needs legislative changes in order to get it. There's no point just focusing on DNOs, suppliers and providers. The government needs to set a much higher ambition for data matching and we think that they can do that much better based on schemes, such as energy company obligation (ECO) and the Warm Home Discount (WHD).'

Hopefully the forthcoming water sector social tariff all have data matching potential and also in the case of WHD and ECO, they already have data matching systems in place. They're not perfect, they have flaws and they do miss a lot of people, but it is the option of being able to automatically enrol people with an opt-out process into the PSR.'

Linked to data matching, this customer expressed their desire for more coordination around the PSR:

'If there was a more cohesive package. For example, there are certain agencies that are contacted when someone needs help like adult services, social services. Whether there was a sort of joining, a bit like when somebody dies and you tell somebody once and they tell everyone, whether you could have the same service for somebody who's care need had increased. And telling a certain agency would trigger them saying, actually this person needs to go to the electricity company or water company and tell them all, rather than it's on the individual to approach each utility ... It's just a shame there wasn't more cohesion and transparency amongst those sorts of organisations.'

Although strides have been made by the utility network operators for more collaboration, if this were expanded, it's feasible to predict that more vulnerable customers could be protected by the PSR. Working more extensively with local statutory and non-statutory support services could promote the PSR as well as lead to more individualised support.

Here, another PSR customer outlined a sentiment held by others interviewed:

'I'd love the Priority Services Register to cover the telecom sector as well.'

There is obviously a link to the issues raised in the previous section on the digitalisation of telephones. Coordination between DNOs and parties involved in the digitalisation in rural areas is required, if not already in place.

This collaborative approach could be put into practice to resolve some of the issues raised in the following two final findings.

Bills, finance, and fuel poverty

The ability to pay for utilities, fuel poverty and wider concerns around money were consistently raised across the different PSR codes. As identified in the Background Analysis and supported in the findings of this report, people in all target groups may have higher utility needs than average. Furthermore, they may have other strains on their finances and additional barriers to employment.

People in rural areas are more at risk of fuel poverty (BEIS, 2020). A point that was emphasised by a contributor from a national charity:

'If you're using oil bottle, gas or coal, your fuel poverty gap, the depth of fuel poverty you're in is something like four times or five times higher than if you're using natural gas. ... The fuel poverty rates are higher and the depth of fuel poverty is higher and as a result, we find that within that you then get people who are on the PSR, who in general are more likely to have issues with covering their bills, partly because of the conditions they often have ... it sort of compounds the issues because we know the fuel poverty rate's worse for people with disabilities and long term health conditions.'

There is also no equivalent of the PSR for those using 'Alternative Fuels'.

This compounding of vulnerability is the key consideration for the PSR. As highlighted in the section on Accessibility, the stress around paying bills can have serious consequences to someone's mental health.

A support worker for a charity spoke of many carers for people living with dementia(s) facing mounting debt issues, while trying to ensure utility bills are paid to meet the needs of the person(s) they care for. Carers often have to leave their jobs to take up caring responsibilities, which also can increase indebtedness. The support worker offered one story of a woman caring for her husband:

'Her husband has had cancer and needs a dietary requirement. She's got three children she's supporting. She suffers with fibromyalgia, herself, depression and all sorts of medical conditions, who said "I just can't face it anymore. In this last four months [energy supplier] has been chasing me for over £2000. I'm aware I'm currently paying £120 a month for both gas and electricity, but they're chasing me over this debt and it's mounting up all the time and I've said to them that I'm having a problem and they said to me, well, you have to go to another advisor to negotiate.'

For those struggling to pay their utility bills, the negative impact of reducing consumption can be dangerous for some vulnerable people:

'It can have a serious negative consequence for their health and ultimately can lead to a higher risk of death ... So, once you're cold, your metabolism shuts down a lot. You're less likely to eat food, you're less likely to engage with neighbours, loved ones and those sorts of things.'

A mother whose daughter requires multiple medical devices, outlined the impact of rising energy costs on her household:

'We were on a fixed term contract and when we came off that, which was in February, our heating bill went from about £110 a week to

£195. When we realised it was the underfloor heating, we obviously switched it off, but it gets very cold in that room. My daughter's wet room can also get very cold in the winter. So yeah, we do struggle.'

Three of the people interviewed for the research were worried that a stoppage to their electricity could ruin the food in their fridge and/or freezer. Something they felt they couldn't afford.

A single mum with mental health issues wanted more financial support to be offered to people on the PSR:

'More support with the bills would be great because also we're single mums. We suffer because most of us are on universal credits. Mine pays my rent as well as some of my bills and I'm having to struggle to find the rest for my electricity and my water.'

A Policy Officer for another organisation suggested that the ability to pay, should be an associated factor with PSR codes:

'[PSR] codes in terms of where support goes need to be more accountable with things like the ability to pay principles and falling into debt. They cannot make these switch to a prepayment meter for vulnerable groups.'

A system which is more obviously linked with the financial situation of people in the target groups, if properly promoted, could also be a way to attract people to join the PSR. This point was raised by a charity support worker:

'People can be quite sceptical as well when you introduce PSR. The first question they want to know is basically what is it in for me? You know, do I get a special tariff, do I get my rates reduced? And when you say no, they feel like, well, what is the purpose of this then, but I advise them, when you have a problem, you approach them and that's the first thing you say, "I'm on your Priority Services Register. I'm in a predicament, etcetera, etcetera. How can you help me with that" then I think it would be good if energy advisors can be a bit more forthcoming with information and be prompt.'

Storage batteries for medical devices

Specific to stoppages or outages to electricity is the functionality of medical devices. For some on the PSR, an electricity outage could be life threatening. Whilst for many rural properties, there is both an increased likelihood of a power outage and more barriers to support during a disruption. A potential solution which arose from the data analysis was the use of batteries as a temporary backup energy source. As specified by this customer with a CPAP machine: *'if they were able to provide funding for the machine that did have a backup, that would be a solution.'*

Those with medical devices in rural areas that require electricity could be supported to get a backup battery, or upgrade to a device with a battery included. This could be

achievable in collaboration with statutory and non-statutory support services, such as NHS trusts, local authorities, and specialist charities.

Some devices already come with battery, but this is not consistent and the length of battery life differs between devices. This man from Gloucestershire shared his experience:

'My wife is disabled and has a standby battery, but it only lasts 24 hours. So, if it's longer than, it would cause a problem. We wouldn't be able to get her up and down stairs.'

Two respondents had battery storage linked to their solar panels, which they said could be used in the event of an outage to mains electricity.

Organisations and groups people in the target groups turn to for help or advice.

In addition to being part of the research brief, it was further emphasised during the data collection and analysis that support organisations are a vital component of a successful strategy to promote the PSR. As highlighted by this person on the priority services register, who also volunteers for a support organisation for people with visual impairments:

'it's about trying to communicate, creating a database, a list of organisations. And I don't mean just big organisations, whether they be national, regional, or local authority, but you know really drilling down into the more community-based groups that perhaps aren't well known and doing that potentially through, for example, local authorities, community, voluntary sector.'

Below is a list of the organisations used or suggested as potential partners by those involved in the study.

List of Support Organisations and Potential Partners

Code Key: D = Dementia(s); G = General; ME = Medical Equipment; MH = Mental Health; VI = Visual Impairment; O = Other

Organisation or Group	Code	Scope	Notes	Website
Accrington & District Blind Society / ELVIN	VI	Local	A resource centre offering the latest equipment and information to support people in East Lancashire	https://elvinet.org.uk/
Admiral nurses	D	National	Admiral Nurses are specialist dementia nurses supported and developed by Dementia UK; they provide support for families affected by all forms of Dementia(s).	https://www.dementiauk.org/information-and-support/specialist-diagnosis-and-support/what-is-an-admiral-nurse/
Age UK	G	National	Age UK is the leading charity for older people. It operates both nationally and locally.	https://www.ageuk.org.uk/
Alzheimer society	D	National	Care and research charity for people living with Dementia(s) and their carers. It operates in England, Wales and Northern Ireland	https://www.alzheimers.org.uk/
Baywater Healthcare	ME	National	An independent specialist provider of healthcare services to patients with long-term conditions	https://www.baywater.co.uk/
British Red Cross	G	National	A national charity and amongst other things are a voluntary network that help people in crisis. Suggested by an interviewee that coordination with local Red Cross teams would be useful in a crisis.	https://www.redcross.org.uk/
Cam Sight	VI	Regional	a Cambridgeshire charity that supports local people of all ages living with low vision and blindness. They work to enhance independence, improve well-being, and improve inclusion	https://www.camsight.org.uk/
National Association for Voluntary and Community Action	G	Local and National	Suggested by somebody with visual impairments in the context of Cambridge Council for Voluntary Service. The National Association for Voluntary and Community Action is	https://navca.org.uk/

			the national body for the local organisations. They in turn, advise organisations about good volunteering practices.	
Carers Trust	G	National	A network of 123 Carer Centres in the UK	https://carers.org/
Citizens Advice	G	National	Citizens Advice is an independent organisation specialising in confidential information and advice to assist people with legal, debt, consumer, housing, and other problems	https://www.citizensadvice.org.uk/
Community Centres	G	Local	Suggested by various participants as places where people go to participate in groups and seek advice	NA
Connect Health	MH	National	A private company that does some work with the NHS. Suggested by an interviewee who received Social Prescribing services for their mental health	https://www.connecthealth.co.uk/
Dementia matters	D	Regional	Specialist Dementia Charity in the North East, providing support services for people living with Dementia(s) and their families	https://www.dementiamatters.net/
District nurses	G	National	District Nurses work in the community with other groups, such as the social services, voluntary agencies and other NHS organisations and help to provide and co-ordinate a wide range of care services. They go into people's homes and into care homes. They were suggested by a few on the PSR as key points of contact.	NA
Doctors surgeries	G	National	Identified by interviewees as key places for promoting the PSR as they are frequented by vulnerable people.	https://www.nhs.uk/service-search/find-a-gp
Fight Back	O	National	Non Profit CIC offering welfare benefit advice. Identified by an interviewee with medical equipment as a source of useful information.	https://www.fightback4justice.co.uk/
Food banks	G	National	Identified by interviewees as key places for promoting the PSR as they are frequented by vulnerable people.	NA
Forest Sensory Services VI		Local	Supports local people coming to terms with and learning to live with sight and hearing loss in the Forest of Dean	https://www.forestsensoryservices.org/

Gloucestershire Deaf Association	O	Local	A charity providing vital practical and emotional support to children, young people and adults living in Gloucestershire who are deaf, hard of hearing or deafened	https://www.gda.org.uk/
Guide Dogs UK	VI	National	Help people with sight loss across the UK with the provision of Guide Dogs	https://www.guidedogs.org.uk/
Hope 2 Sleep	ME	National	Hope2Sleep is a Registered Charity for Sleep Apnoea sufferers. Suggested by an interviewee with a CPAP machine who uses their Facebook page for information.	https://www.hope2sleep.co.uk/
Library	G	Local	Highlighted by a resposdee in the Forest of Dean with as a focal point for the community and a useful place to promote the PSR	https://www.gov.uk/local-library-services
Macula Society	VI	National	Provide advice and support for people with macula disease	https://maculasociety.org/
Parish, County, District and Unitary Councils	G	Regional and local	Suggested by multiple participants as key stakeholders in their community. Parish councils often provide newsletters for promoting the PSR, while county and district councils could be partners to coordinate with during an outage or in reducing risks for the most vulnerable	NA
Parkinson's UK	O	National	A Parkinson's research and support charity in the United Kingdom. Its aims are to improve the quality of life for people affected by Parkinson's and find a cure for the condition	https://www.parkinsons.org.uk/
Private carers, networks or companies	G	National	As highlighted by an interviewee, carers that go into people's houses are often provided by private companies outside of the NHS. They are in frequent contact with vulnerable people in the target groups.	NA
Rehabilitation offices for visually impaired	VI	National	Part of local authorities' social services teams. An interviewee highlighted that they send out a handbook to everybody who registers with the service. Information about the PSR could be included.	https://www.gov.uk/find-local-council
Royal's Countryside Fund	MH	National	Formerly, the Prince's Countryside Fund. Have a network of farmer's support groups with rural hubs that also serve wider rural community	https://www.royalcountrysidefund.org.uk/

Slight loss Councils	VI	National	Provide accessibility awareness and engagement. Provided by the Pilkington Trust	https://www.sightlosscouncils.org.uk/
Sling the Mesh	O	National	A campaign raising awareness of the potential risks associated with vaginal and rectal mesh surgery. Identified by an interviewee with medical equipment as a source of useful information on multiple topics.	https://slingthemesh.co.uk/
Social prescribers/link workers	G	National	Social prescribing link workers also support existing community groups to be accessible and sustainable, and help people to start new groups, working collaboratively with all local partners. Social prescribing is an all-age, whole population approach that works particularly well for people who: have one or more long term conditions who need support with low level mental health issues who are lonely or isolated who have complex social needs which affect their wellbeing.	https://www.england.nhs.uk/personalisedcare/social-prescribing/
Talking News Federation	VI	National	The Talking News Federation (TNF) helps over 300 local Talking Newspapers to deliver local news and information in audio to visually impaired and print disabled people.	https://tnf.org.uk/
The Royal National Institute of Blind People (RNIB)	VI	National	A UK charity offering information, support, and advice to people with sight loss.	https://www.rnib.org.uk/
VI forum for the Lancashire area	VI	Regional	a group of blind and visually impaired people engaged with local authorities who offer peer support and share experiences	https://www.facebook.com/viforumforlancashirearea/?locale=en_GB
Visionary	VI	National	A membership organisation for local sight loss charities	https://www.visionary.org.uk/

Conclusion.

The first part of the findings revealed how participants use utilities and how they are impacted by planned or unplanned outages. For people with sight loss, the lack of light during a stoppage to electricity was the most common concern. Another issue which worried respondents from this group was the flushing of water through the taps, as they were unable to see when the water came through dirty. The disruption of the walking routes by maintenance works on the roads was also cited as potentially problematic.

Analysis of the data relating to households who rely on medical equipment revealed that loss of electricity was the most concerning. The most serious consequences would be for people whose lives may be put at risk if they rely on machines, including CPAP/APAP, oxygenators, heart monitors etc. Those with complex conditions that require multiple devices are also seriously affected during an electricity outage. The inability to communicate during an electricity outage, was also a worry. A potential solution could be the provision on backup batteries.

Stoppages to heat sources (electricity or gas) can also be detrimental for people with medical devices, amongst other PSR code groups. Certain conditions leave people housebound or more vulnerable to cold or hot temperatures. In addition to drinking water, some households require running water for washing and cleaning due to issues such as incontinence as well as washing for skin conditions.

There can be increased electricity, gas, and water use for households with people with mental ill-health and/or Dementia(s). This is due to additional heating and cleaning requirements resulting from various expressions of the conditions. Disruptions to utilities can break people's routines, which people and carers rely upon to get through the day.

The second section of the findings focused upon the PSR itself; how it supports these groups during a stoppage or outage and where improvements can be made. There were a cluster of themes relating to communication from utility network operators. There were some criticisms about the accessibility of communications sent by utility companies in general and study participants mainly offered best practice suggestions for communicating with the target groups. These are expanded upon in the Recommendations.

Regarding promotion of PSR, the main consensus was more should be done to communicate what the PSR is and support it offers to potentially vulnerable groups who qualify for the register. However, this needs to be done in a way to not confuse existing PSR customers to question if they are indeed on the register. Again, how this may be enacted in practice is explored in the Recommendations.

Communication during a stoppage or outage was considered as part of the overall support offered to those on the PSR in the relevant needs codes. It must be reiterated that the majority who contributed their experiences to the study had a

positive or neutral impression of PSR support. Many have not been through a serious outage and did not have a strong opinion as a result. Amongst this group, the idea of being on the register with the possibility of enhanced support was in itself comforting.

The analysis did highlight some areas of concern. The most common criticism of participants was they were not contacted or offered any additional support either before a planned, or during an unplanned outage. This left people worried and anxious. It is likely that poor communication infrastructure in rural areas was a contributory factor.

There were several additional rural-specific findings. People in rural areas are more prone to utility outages, often have a dearth of local services in general, including poor public transport and can experience social isolation in remote areas. The digitalisation of telephones was a serious concern raised by some participants in more remote areas, due to the limitations it places on their ability to communicate during an electricity cut. Another specific concern was that stoppages to electricity can impact the water supply for those with boreholes. All these factors led some interviewees to expect a second-class service as opposed to more urban areas.

This rural experience should be considered by utility network operators in relation to the PSR. In times of a stoppage, whereas someone in a town or city may be able to go to a café for a hot meal or to a laundrette to clean clothes, this option is often not available to people in rural areas, especially if people rely on limited public transport.

These negatives should not completely overshadow the positives which arose from the data analysis. Many respondents referenced the positives of living close to nature and social connections with a community, as significant benefits. The latter was important for reducing the vulnerability of people during an outage.

The data analysis suggested greater collaboration could improve the overall functionality of the PSR. This is in response to the sentiment of some participants that the PSR required more coherence, with a lack of clarity in the communication and operation of the PSR between different utilities and between operators and providers. A key element in this is data matching.

A crosscutting issue was the ability of people in the target groups to pay bills. People's conditions may lead to higher utility use, while barriers to employment or leaving employment to take on caring responsibilities, all can negatively impact financial security.

A number of local, regional and national organisations were identified as potential partners to promote the Priority Services Register. Working with these groups could help reduce barriers and issues faced by some in the target groups, such as inaccessible material, digital exclusion, and fears of data security.

Recommendations.

These recommendations are an amalgamation of suggestions from PSR customers and support organisation. They have been developed by the report's authors, incorporating learnings from the first phase of this research and other secondary sources used to write this report. Whilst most are aimed at the utilities sector, some are aimed at central and local government, as well statutory services.

Recommendations specific to utility network operators and suppliers

Seek opportunities to actively listen to people on the priority services register.

- Representatives from utility network operators should regularly attend events, forums, and meetings held by and for people on the PSR. This will serve to both promote the register and to listen to the ideas and concerns of rural (and other) customers. This needs to be done at a national, regional, and local level.
- Anybody who works in a customer-facing role and especially those who regularly communicate with people on the register should be encouraged to attend a forum of this type. Undertaken as a form of training and development, this could upskill staff to better support people on the PSR, not least those from specific groups with particular needs.

Strive to make communications as accessible as possible.

- Written communications to people on the PSR should be available in accessible formats, such as larger font and alternative communications with the key messages clearly explained.
 - Companies to achieve accreditation, such as the [BSI](#) or [ISO](#), to ensure a consistent service for PSR customers.
- If feasible, accessibility best practice should be applied to all written communication.
 - Please see [government guidance](#) on accessible communication formats for more information.
- All online videos should have subtitles and be available in multiple accessible formats where possible.
- Websites should be reviewed to ensure they comply to best practice on digital accessibility.
 - Please see [government guidance](#) on digital accessibility for more information.

Provide further support when flushing water through the system.

- Target at PSR groups such as people with sight loss and people who are immunocompromised.
- Offer advanced warning with precise times as to when flushing takes place. If feasible, a service to check the water could also be offered to the most vulnerable households.

Run targeted local promotional campaigns about the PSR, its existence and what it does.

- Target the campaign at the groups most vulnerable to a planned or unplanned outage as well as those identified as being underrepresented on the register.
 - Build upon existing work, such as that with the ACRE Network
- Work extensively with the types of gatekeepers identified in this report.
- Utilise multiple channels and media likely used by PSR-targets, as identified in this and other reports.
 - For example, parish newsletters, talking newspapers and local Facebook groups.

Ensure support provisions are in place for people with specific water needs.

- Explore options that would enable those with requirements for running water in their daily lives to maintain hygiene and dignity.

Wider recommendations, including those requiring intervention from government and statutory services.

Increase collaboration between utilities and with statutory and non-statutory organisations to enhance the support offered to customers on the PSR.

- Explore all possibilities for data-matching. However, to be truly effective, this would **require legislative changes**.
- Work with **all levels of government** to both promote the PSR and create strategies to support vulnerable people in their jurisdiction.
- Expansion of the PSR to cover landline and broadband would enable much more comprehensive support for vulnerable people. This would also require government intervention and legislative changes.

Work with the UK government and BT (Openreach) to ensure rural customers are supported during the completion of digitalisation of the telephone network.

- Practical solutions include providing longer-lasting battery backup units for use in the event of a power cut, home mobile landlines for people without broadband, and hybrid home phones.

- Utilise the existing PSTN Switch Off sub-group to highlight the concerns raised in this report.

Automatic enrolment on the PSR for those most at risk of disruptions to their utilities, with an opt out.

- This would function with effective data matching in place across utilities.
- Would require the **UK government** to legislate the change in consultation with all utility companies and representative organisations for PSR groups.

Explore the provision of backup batteries to high-risk customers with medical devices in rural areas.

- Work with the **NHS England** and health and social care departments in **local governments** to investigate the feasibility of offering subsidies or full grants for PSR customers to purchase a backup battery or upgrade to a device with inbuilt battery.
- Make this target based on criteria for risk to life and factors associated with rurality, including distance from services and frequency of electricity outages.
- Negotiate and cooperate with medical device and battery providers, to achieve the best deal for all involved.
- Understand the backup role of low-carbon energy sources such as solar power to store energy in the home, as aligned with the [UK Government's Heat and Building Strategy](#).

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