

Frequently Asked Questions (FAQs): Our response to Storm Arwen

These FAQs have been collated to help inform our customers about the approach we've taken and why. They also provide answers to some of the key questions that we've been asked by some of our customers. We will continue to update this FAQ to support all our customers.

Why was Northern Powergrid's network so damaged?

Storm Arwen caused extreme levels of damage to parts of our network and was by far the largest storm we have seen in at least 20 years. Winds, which peaked at 98 mph, were widely recorded at above 90mph across our region and caused significant damage to our overhead network. Power line icing (the build-up of ice on overhead lines) caused broad sections of overhead conductor to become heavy and snap as well as causing poles to bend or break due to this weight and also be more susceptible and vulnerable to the strong winds. (Information from the Forestry Commission indicates that Storm Arwen felled around 8.5 million trees.)

Storm Arwen's impact on our network on Saturday (27 November) was more than three times greater than the total impact over the protracted period of the 'Beast from the East' in 2018. Our experienced engineers and helicopter pilots, as they moved around our region, indicated this was the worst damage they have ever seen to our network in their careers, witnessing an extensive trail of destruction in many of our wider communities.

To get the lights back on our teams had to do an enormous amount of work, responding to more than 1,200 concurrent reports of damage with some of these requiring the delivery of major rebuilds to restore the power. In some cases, we deployed temporary generation to get customers back on supply as the work needed to repair would have meant customers being without power for even longer.

As a 24/7 365 organisation the work didn't stop when the power was restored. Our dedicated teams continued the work into the New Year to carry out the permanent repairs needed to put our network back to full strength for our customers as soon as possible.

What did you do to support customers?

We worked with a range of partners including local resilience forums (comprising councils and emergency services) to keep them informed of the scale of impact and damage and provide extra help and support for our customers.

Where there were larger communities affected, we set up welfare centres, where possible, providing hot food and respite. We commissioned mobile food vans to travel around the worst impacted communities to provide hot food and drinks. We provided more than 20,000 meals and distributed thousands of winter warmer packs. We also organised hotel accommodation on behalf of more than 1,300 vulnerable customers and went above and beyond regulatory requirements by announcing additional welfare arrangement to provide financial support to customers so they could be reimbursed for reasonable costs incurred for accommodation, food or alternative power generation whilst they were without power. Our Customer Support Vehicles were fully deployed every day during the event and through our partnership, the British Red Cross was deployed to support customers more than 250 times.

Why couldn't you restore power more quickly?

Our teams worked tirelessly throughout the incident to restore power as quickly as possible but the

scale of the damage was extensive. In the industry we have a mutual aid agreement (NEWSAC) with other network operators in which we can access the additional resource required to help speed up restoration efforts. NEWSAC met prior to the storm and on Saturday 27 we formally requested additional support and welcomed additional teams from right across the UK and Ireland from several different companies to support our response from Sunday 28 November onwards. The transfer of colleagues under NEWSAC was the largest we have ever facilitated.

With almost 280,000 customers affected and over 1,200 concurrent reports of damage on the network which each needed a team or teams allocated to in order to assess the destruction and carry out work to restore power – the task was huge. We prioritised this work programme to reconnect the largest numbers of customers first and did everything we could to restore everyone as soon as possible. The vast majority of our customers were reconnected within the first day of the event and around 90% had their power restored within 48 hours.

Why did it take so long to say when people's power would be restored?

The scale of the damage was extensive and due to the ongoing challenging weather conditions, we were unable to start the necessary aerial inspections or work safely on overhead power lines until the Sunday afternoon. Wherever possible we restored customers' supplies by switching electricity through alternative routes on our network.

The inspections, which had to be carried out across extensive spans of our network from the air and from the ground, unveiled the true extent of damage and helped to inform our restoration programme which was one of the largest and most complex we have ever undertaken in a weather event.

We had more than 1,200 concurrent reports of damage which required teams to be allocated to assess and coordinate restoration and carry out temporary and/or permanent repairs. The size of the task was of a scale not seen since a weather event back in 2005. The work was very resource intensive due to the scale of the damage. For example, in Teesdale and Weardale we successfully completed in one week a major overhead line construction project spanning almost 7km that would normally take many weeks and did it in extremely challenging conditions. In other locations we had hundreds of time-intensive restoration work incidents with multiple points of damage that were geographically spread out across our operational areas that would only bring small clusters of customers back on supply at any one time. This inevitably meant that restoration for all customers was extended which we understand was frustrating for those affected customers.

Is your network back to full strength?

Our network is almost back to normal thanks to the great work done by our teams. Across our business our people have worked relentlessly to carry out the extensive permanent repairs needed to put our network back to full strength for our customers.

Storm Arwen proved to be one of the most challenging weather events that our customers, our people and the communities we serve had to face in decades.

Our response included hundreds of people from both within our business and from network companies across the UK and Ireland.

Their combined efforts helped us deliver rebuilds, repair damaged equipment and ensure the vast majority of our customers who had to be temporarily powered by generation were reconnected to our wider network before the festive period ensuring greater security of supply.

We successfully reduced from more than 330 generators in the peak to final 10 in Northumberland with 15 customers, who are associated with the same job in College Valley near Kielder, needing our continued support. The Forestry Commission has been carrying our major clearance work in the area following significant tree damage.

By working alongside the Forestry Commission, where tree clearance is complete, we have been able to start to rebuild and repair the damaged sections of network and we are on track to reconnect those customer back to our network by the end of January.

In the meantime, we are continuing with our robust arrangements to support these customers and ensure the generators are maintained. We continue to keep them fully informed directly and thank them for their ongoing patience and understanding.

We also thank our teams for their continued support and dedication to ensuring our network is returned to full strength.

Why has the number of overall customers affected increased from 240,000 to almost 280,000?

Our network spans thousands of square miles and not all areas are automated – in particular the more localised (low voltage) parts of our network like the local substations in your street and power lines that feed homes and businesses.

Following the storm, we have been ensuring that we capture all customers affected during the period, including those impacted by a snow and ice weather event on 4 December and Storm Barra on 7 November.

On some parts of our network, a customer may have been part of a wide area (high voltage) fault caused by the storm and, when this was fixed, were also found to be part of a more localised fault. In situations like this, we need to confirm with customers what they experienced. This helps us validate numbers and ensure those customers who are due a guaranteed standard payment are properly compensated.

Since the storm, our teams have been working hard, investigating network impact and reports and speaking directly with customers, where needed, to see how they were impacted. (e.g. on local areas of network, which have three separate cables from the substation (phases) to properties we may have found that all three phases were affected and not just one phase identified as a result of customers reporting their power cut.) Therefore, the overall number of customers who were impacted as a result of Storm Arwen has now increased to almost 280,000.

Why are overhead power lines not put underground?

Around 70 per cent of our power network is underground in urban conurbations. We have around 17,000 miles of overhead lines to deliver electricity to homes and businesses. They often run through long distances in our operating area which are very rural and as a result more exposed to external influences (like weather and vegetation).

All the costs associated with managing, maintaining and improving the region's electricity distribution network are paid for through our network related charges which appear as part of customers' bills from their chosen electricity supplier. This is around £90 a year for the average domestic customer.

Undergrounding of electricity networks has a much higher cost than building/installing overhead lines. It can cost up to 10 times depending on the voltage of the cable. Whilst underground cables do tend to be less susceptible to the effects of weather, cable faults do take much longer to find and fix. This is because the cables need to be excavated to access them to locate and repair the fault

Underground cable routes can also only be installed where ground conditions permit, and this can inhibit undergrounding in large spans of rural locations. They are also typically laid in highways however digging up roads in rural locations can cause significant, long-term delays that impact local communities and economies.

Across the UK overhead line routes have to date been the preferred, and in some locations the required option, for network design in rural locations because they are considered a better value use of customers' money, are easier to access, and can be installed and maintained with less disruption to local communities and customers.

Why could some customers not get through to you?

Storm Arwen resulted in unprecedented levels of contact from our customers. We had more than 64,000 calls into our contact centre, more than 24,000 contacts on social media and over 13,000 by email. Our teams worked hard to support customers but due to the volumes across the various channels we know the experience for some of our customers was not to the standard they expect and deserve, and we apologise.

Why did you fit generators?

To get our customers' power back on we either made permanent repairs by rebuilding sections of power network or provided temporary fixes. The temporary fixes included using generators to connect to single properties or up to around 200 properties in a community such as a village centre. We used generators where it would take too long to make permanent repairs due to the intensity and scale of the damage caused by the high winds and ice.

Why couldn't you give everyone generators?

Electricity networks are complex by nature so for engineering reasons, generators can only be safely connected to certain parts of the network.

We used all our available generators – and secured additional ones as soon as possible - to restore power to customers wherever we could.

We provided generators in critical situations where we knew the extent of damage was so significant it would have taken a number of weeks to complete a repair. Our strategy was to remove generators as soon as we could to ensure people were connected back to the wider network and release that generator to support customers in other locations, wherever possible.

How do you keep generators refuelled?

Our contractor has refuelling teams present in the areas where we use generators. These teams keep an eye on the fuel levels by either visiting site or making use of fuel gauges that send back information using remote telemetry. Some of the larger units also have an additional fuel tank.

When will you be removing the generators and returning remaining customers to a permanent grid connection?

By 24 December we had reduced the number of customers on supply via generation from more than 330 at the peak of the event to 14 generators. By 7 January this was reduced to 10 which are supporting 15 customers in Northumberland. These final customers will remain on generation until we are able to safely access our damaged overhead line equipment. This will only be possible once the Forestry Commission completes a significant amount of tree clearance in the area north of Kielder. Once the Forestry Commission completes its work, our teams will carry out the necessary repairs as quickly as possible to safely reconnect those customers, who we are keeping fully informed, back to the wider network.

What should I do if my generator stops working?

If you lose power, please get in touch with Northern Powergrid. We will respond whether it is a problem with a permanent grid connection or a temporary generator.

Contact us via our power cut reporting tool on our website or call us on 105.

What is the process for taking a customer off a generator?

We contact customers to let them know that they are being switched over. This is typically by visiting their premises or by calling/texting.

The process is generally quick. The maximum time without power while being switched over is around 30 minutes.

As at 28 January 2022