

July 2023

LCT Installer briefing - Standardisation of the fuse installed in whole current metered connections.

Northern Powergrid, the Distribution Network Operator (DNO) for the North East, Yorkshire and northern Lincolnshire, will no longer be providing connections which incorporate a 100A fuse within domestic and small non-domestic cutouts for whole current metered connections.

We will standardise the fuse installed in whole current metered connections to 80A.

Why have we made this change?

Historically, domestic and small non-domestic premises had a connection installed which was fused at either 60A or 80A. In recent years, we've seen requests to increase that fuse size to 100A to accommodate the installation of Low Carbon Technologies (LCTs), typically EV chargers and heat pumps.

In the past, installing a 100A fuse in premises where customers would seldom consume the maximum power level near the maximum, and when equipment was installed in areas where the temperature would remain low, was deemed acceptable.

However, as our customers are adopting newer, greener technologies and their peak power consumption changes from the winter to any season, we have made the decision to reduce the fuse size installed within whole current metered equipment.

We will therefore standardise the fuse installed in whole current metered connections to 80A.

Why are we reducing the maximum fuse size?

The primary function of the DNO fuse is to disconnect the premises in the event of a fault occurring between the DNO and customers equipment. The DNO fuse should not be used as a method for limiting the electricity capacity within a customer's installation.

Installing a 100 Amp fuse will allow a current flow higher than the rating of the DNO equipment, the suppliers equipment, the meter and the consumer tails. This allows sustained current flows slightly higher than the equipment rating.

How will this affect customers?

Customers should not see a difference to the short term capacity made available through an 80A fuse. The 80A fuse can permit the flow of up to 100A of electricity for up to four hours.



Due to the cyclic nature of most loads (i.e. the load rises to 100A only for short periods of time before falling away again) during a 24-hour period, an 80A fuse can supply a 100A load.

What if a customer requests a capacity greater than 23kVA (100A)?

For normal domestic or cyclic loads, we will install an 80A fuse which can provide a 100A supply in these circumstances. Northern Powergrid will undertake this upgrade to the connection at no cost to the customer.

What if a customer/installer requests an upgrade to a 100A fuse for normal domestic or cyclic load?

We will not provide an upgrade to a 100A fuse, as there is already sufficient diversity within the customers premises.

What if a customer requests a sustained (non-cyclic) capacity greater than 18kVA or 80A?

Where a customer requires a connection with a constant current flow greater than 18kVA, the connection will be provided in one of three ways:

- three phase with an 80A fuse;
- split phase with an 80A fuse; or
- three phase with a cut out rated at a minimum of 130% of the sustained power requirement and a fuse rated at the sustained power requirement.

Is there any risk to those customers where we have installed a 100A fuse?

The risk is not significant given the cyclic nature of the load and there is a little risk of this impacting on the grading between DNO and customers equipment. A fault within a domestic premises will primarily be disconnected by lower rated customer-owned circuit breakers, which protect the individual circuits.

Will we be replacing the 100A fuses we have installed in customer installations?

Where 100A fuses are found after July 2023, these fuses will be replaced with 80A fuses.

There will not be a programme of replacement.

When will this change come into force?

The change will be implemented with immediate effect. Where a connection offer has been issued prior to this change, an 80A fuse will be used unless a constant, non-cyclic load is to be supplied. In this latter case one of the three options above should be employed. We will be contacting our customers in due course to inform them of this.