

Fault Current Limiting Interrupter at a CHP site

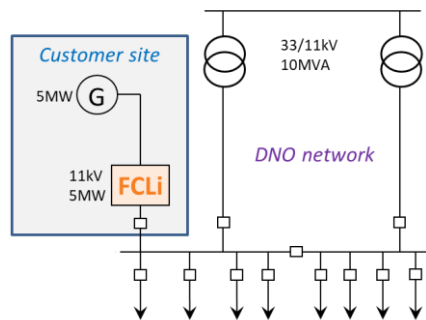
GridON's power electronics Fault Current Limiting Interrupter - installed at Western Power Distribution substation - is believed to be the first of its kind in the UK.

The electricity market is going through a global revolution in an effort to connect distributed generation, renewable sources, and thousands of industrial and commercial cogenerators. A major challenge caused by adding power generation is the increasing current that flows under network fault conditions. Increasing fault currents exceed switchgear ratings, causing power outages and damage to equipment, and ultimately affecting supply to customers.



GridON offers a power-electronics Fault Current Limiting Interrupter (FCLi), which instantaneously interrupts the current upon detection of short circuit condition. Implementing a sophisticated electronic circuitry for fault detection, the ultra-fast FCLi breaks the current flow typically in less than 500 microseconds - two orders of magnitude faster than conventional circuit breakers. It also limits short circuit currents from the grid to the generators. Following the isolation of the faulted network section by the network's switchgear, the FCLi is immediately switched back on to resume normal operation.

Warwick University was chosen as a testbed due to the volume of current it generates through its combined heat and power (CHP) generator-set into Western Power Distribution's network.



Refer to the following publications describing the successful installation:

[Warwickshire on the cutting edge of power innovation](#)

[WPD trails "kilo-quick" fault limiter on its grid](#)

This novel solution is expected to play a key role in the future of electricity networks - enabling mass deployment of distributed generation, renewable sources such as biogas, solar, and wind, and CHP cogenerators. While improving the availability and power quality of distribution networks, the FCLi enables sale of excess generation capacity to the grid, and defers switchgear upgrades and early retirement of fit-for use equipment.

About GridON Ltd

GridON is a leading provider of Fault Current Limiting solutions - for increased connectivity of electricity networks, and for cost-effective deployment of distributed generation and renewable energy sources, allowing sale of excess generation capacity.

Fault currents in electricity grids keep rising with new generation sources added to meshed networks, often exceeding existing switchgear ratings. GridON offers to utility network operators, independent power producers, and industrial and commercial customers, a cost-effective solution which eliminates fault current contribution from such new generation sources. The products enable deployment of massive distribution generation, and the connection of utility grid sections - improving the availability and power quality of distribution networks.

GridON is offering a scalable product line, from low to very high voltage and power ratings.

GridON's solid-state Fault Current Limiting Interrupters (FCLi) enable connection of Independent Power Producers (such as natural gas, biogas, solar, and wind) and private cogeneration to low-to-medium voltage networks. Designed with compact footprint and low price tag, the FCLi is a cost-effective solution.

GridON's Fault Current Limiter Diverter (FCLd) is designed for medium-to-high voltage networks. This power-electronics based product enables connection of grid and substation sections, as well as connection of distributed generation to high voltage networks.

GridON's legacy saturated-core Fault Current Limiters (FCL) product line is offered for high to very-high voltage networks. This scalable solution is well suited for distribution and transmission networks.

GridON's products improve grid resilience and reliability and significantly lower capital expenditures and operating costs, while eliminating network upgrades and early retirement of fit-for use equipment.

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