



## Fact Sheet - HV Protection Grading

### What is HV Grading?

In essence this is the ability of the HV electrical system under fault conditions to be able to operate the protective device that is nearest to the fault within a time that prevents further damage occurring to electrical plant or equipment; in many respects it is similar in philosophy to the “discrimination” that should occur between LV devices. The stakes though in achieving correct grading across HV devices (as it also is between HV devices & main LV switch board incomers) are high; if a system is poorly designed and/or devices are incorrectly set then a comparatively minor event (perhaps even one occurring on your low voltage system) could result in a total loss of supply to the entire site (which could result in the need to call out the local DNO in order to re set their circuit breaker) – highly undesirable.

### HV Grading Study:

The solution of course is to verify that the system’s protective relays & devices have been correctly selected and set; EME Power Systems have in house technical expertise capable of carrying out this work for you; we achieve this through first of all carrying out a site survey of the system & it’s associated protective devices which we then utilise in a technical desktop study of the network. We utilise the latest industry design software to examine how the system would react under fault scenarios and with the grading study complete, we are able to advise of any suggested changes to devices or their settings, a preventative measure to protect site production against un necessary outages occurring in the future.