Power factor correction makes Valhalla cheaper to run

Valhalla, the £15million ride at Blackpool Pleasure Beach, is now 25 percent more power efficient thanks to ABB’s automatic power factor correction (PFC) equipment.

The Need
Designed to be the world’s biggest and most spectacular ‘dark’ ride, Valhalla places a very large demand on the Pleasure Beach’s dedicated three-phase power supply – drawing around 2000A per phase on initial installation. Without PFC correction the network could have required a costly upgrade.

Project details
Following the installation of the ABB automatic power factor correction equipment, comprising two banks of capacitors totaling 900 kVAr, the supply current was reduced to 1500A per phase, which means that the power required to operate the ride was reduced from 1.5MVA to a little over 1MVA – a reduction of approximately 25 percent.

Saving electricity
It is estimated that during the peak months for the ride from Easter to October/November the ABB PFC equipment is saving electricity costs of £1,500 to £2000 per month, so it should pay for itself in under three years.