integrated solutions

Case study on power quality investigation

100% uptime

From everyday phone calls to advanced networks running over the internet, Telecommunications Service Providers and Internet Service Providers' services underpin the success of tens of thousands of businesses around the globe. It is essential that the power supply systems in their technical centres are highly reliable. Any power interruptions will mean a significant loss of business and dissatisfied customers. Therefore their power systems need to run smoothly and efficiently and have adequate back up to ensure the continuation of services.

To meet this need to manage business critical systems effectively ERA carried out a survey of one ISP's power and cooling systems at various different sites. The aim was to collect data on installed equipment and loadings of the power systems to form the basis for improved forward planning.

ERA's team of power engineers surveyed each site nominated by the client and collected the required data on electrical ratings and cooling capacities for each piece of equipment. By establishing an efficient method of accurate data collection ERA managed to complete the task well within project deadlines.

The data was collected to allow the client to assess whether there was sufficient installed electrical capacity, including the back up uninterruptible power supply, to meet load demands at each site. It was uploaded onto a central system used to plan and allocate space and associated building services capacity in the client's technical buildings.

More and more, ERA is carrying out power analysis work in the communications sector as businesses have become increasingly dependent on reliable power systems to run the IT infrastructure. One recent project involved assessing the thermal capacity of cabinets containing data and telecommunications equipment. As the amount of electrical equipment housed in these cabinets increases, the heat input increases. As inadequate cooling will lead to overheating and equipment failure, having a significant impact on the business, ERA conducted a series of thermal tests to assess the impact of increasing power. This work identified cooling arrangements that can allow a four-fold increase in power density with improved operating temperature profiles.

ERA also provides health check services for critical IT and communications power supply systems to ensure their reliability by auditing operational status and integrity. This capability is strengthened by drawing upon another of ERA's roles as an independent investigator of standby power system failures.

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