Decision Metrix: A New Approach to Voltage Quality Monitoring on the Irish Distribution Grid

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Distribution Service Operators (DSO’s) have historically ensured voltage quality with a range of strategies. However, DSO’s now face tough challenges addressing voltage quality due to a number of emerging drivers. Integration of renewable energy into the distribution grid, increased sensitivity of customers to voltage quality and ongoing regulatory developments are increasing the workload of DSO’s.

This paper introduces Decision Metrix, a vendor neutral software solution developed to address the needs of ESB Networks and other network operators in regards to grid wide performance analytics. Specifically Decision Metrix continuously evaluates the voltage quality performance of bulk supply points and at the point of connection with generators and demand customers. The system is capable of embedding EN 50160 and internal standards in a flexible rules engine for continuous evaluation.

Decision Metrix was deployed in ESB Networks (The Irish distribution system operator) in summer 2012. Significant benefits have been seen in relation to automated compliance monitoring, proactive network management, increased awareness and preventative maintenance through risk identification. Our experience shows that an advanced compliance monitoring tool is an essential component for delivering a secure, sustainable and low carbon electrical network of the future.

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