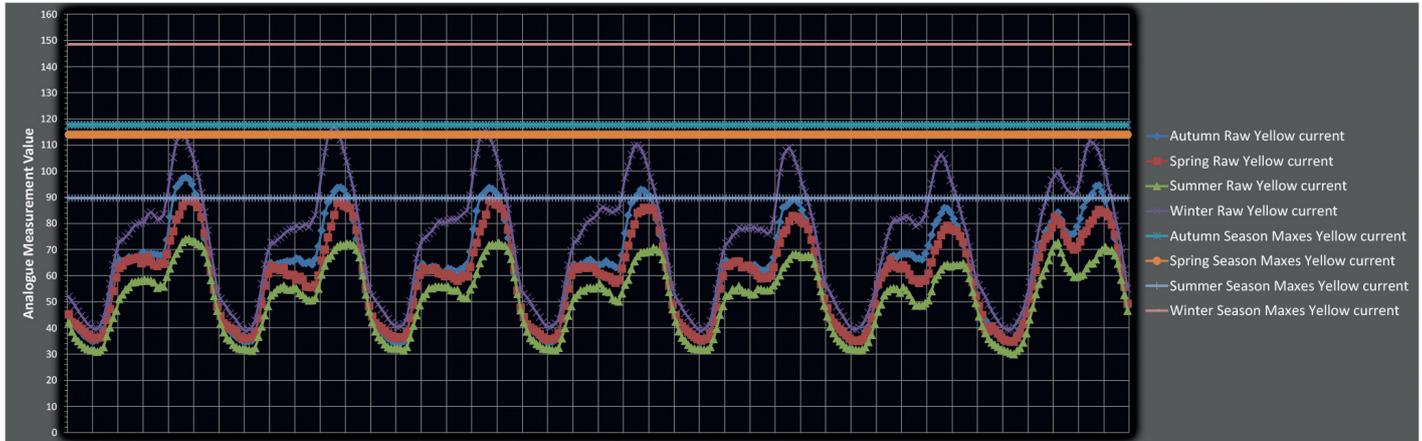# WESTERN POWER DISTRIBUTION
TIME SERIES DATA QUALITY

Project Description

The quality and availability of real time and time series data has organically grown over the years as the technology deployed within the electricity distribution networks has evolved. Recently, with the move towards actively managed networks, DNOs must now ensure, more than ever, that both their historic and instantaneous data gives a complete and accurate picture of state of the network.

This project seeks to utilise 'Big Data' analytics to analyse available time series data in a wholesale repeatable fashion in order to identify defective data and rectify as necessary.

The project will also seek to develop rules to identify trends. One use of which could be to identify reverse energy flows where directional measurement devices are not present.

Areas of Work

Two years' worth of historic time series data for the Western Power Distribution South-West License area will be exported from the available databases and used for data analysis by a combination of specialist 3rd party contractors and internal resource.

The outputs will be a set of repeatable and scalable processes to;

- Identify gaps
- Identify suspect/defective data
- Create rules to replace missing/defective data
- Assign directions to power flows
- Identify the causes of suspect data through common patterns

The project will also look at what other information could be incorporated in to the 'Big Data' analytics to further validate data quality.

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