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Major Rebuild of Critical CBD Supply Substation

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Transmission and distribution

Rebuilding one of the most heavily loaded terminal stations in the Melbourne metropolitan area which plays a crucial role in servicing over 118,000 customers is a complex task. With aging assets that have reached the end of their economic life, the station is being completely redeveloped from Air Insulated Switchgear (AIS) to Gas Insulated Switchgear (GIS). The total capital value of the project is \$140M.

With three switchyards (220 kV, 66 kV and 22 kV) needing to be replaced, and security of supply to be maintained at all times, the project was undertaken as a series of twelve incremental stages which would be constructed over a period of five years. Beca was contracted to complete this very complex and challenging design. This presentation will look at some of the techniques used to complete the Secondary and Protection Setting elements, the challenges of implementing large scale, multi stage design, as well as a brief overview of the construction works to date.