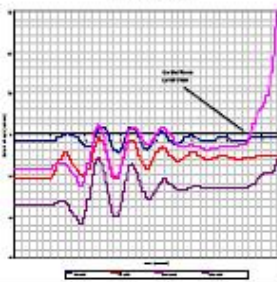
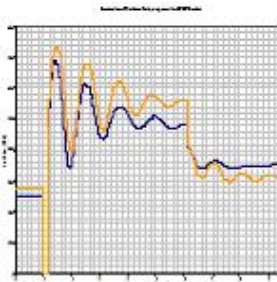


PROJECT DATA

System Protection Scheme for Basslink



CLIENT	Hydro Tasmania
PROJECT LOCATION	Hobart, Tasmania
DATE OF PROJECT	2001-2005
SERVICES PROVIDED	<ul style="list-style-type: none">• Pre-feasibility studies on basis of design• Due diligence assessment, including development of criteria for assessment

Basslink (a 500 MW HVDC link between Tasmania and the Australian mainland) is significantly larger than any other source or sink of power in the Tasmanian power system. The inadvertent disconnection of Basslink will cause a very rapid rise (or fall) in system frequency in Tasmania. A System Protection Scheme (SPS) will trip generation or load to compensate for the large power imbalance caused by loss of Basslink.

In addition to the frequency event, the transmission system would require major upgrades to support the higher flows under export of power from Tasmania, especially considering the diversity of generation patterns that are possible in the mainly hydro system. The decision was made to allow non-firm operation of transmission lines with the SPS to provide generation tripping if an overload was triggered by the loss of a line.

So the SPS is a complex series of triggers and rules that transform the Basslink operating environment risks into similar risks to those that the power system faces in the pre-Basslink environment, without major upgrades to transmission infrastructure.

We were involved, with the proponent for Basslink, in providing a basis for the design of the system and then consequently assessing the design against system performance criteria agreed between the stakeholders.

The design was later augmented to cover non-intact (secure n-1) conditions in the transmission system, again with our involvement in pre-feasibility and subsequent due-diligence.



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