

## CATHENA Code Validation with Wolsong 4 Plant Commissioning Test Data

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### Abstract

The turbine trip test at 100 % full power performed during Wolsong 4 commissioning test period is simulated with CATHENA code to validate its application for plant transient analysis. The purpose of the turbine trip test is to check the correct actuation of condenser steam discharge valves and atmospheric steam discharge valves without opening the main steam safety valve and to show the plant can be maintained in the poison prevent mode. The turbine trip test at 100 % full power shows that the capacity of steam discharge valves is enough to prevent the MSSV opening while maintaining the plant in the poison prevent mode. The CATHENA simulation results show very good agreement with plant test data. Therefore, it is concluded that the CATHENA modeling for various plant systems including control programs are correct and the CATHENA code is appropriate to simulate CANDU plant transients.