

NPCC Lesson Learned

Generator Plant Gas Supply Event #1

Primary Interest Groups

Reliability Coordinator (RC)
Transmission Operator (TOP)
Transmission Owner (TO)
Balancing Authority (BA)
Generator Owner (GO)
Generator Operator (GOP)

Problem Statement

A pressure drop in natural gas supply resulted in the simultaneous loss of three generating units.

Details

A gas pipe line owner supplying a generation station failed to notify the plant owner that one of the three valves in the outlet header pipe that supplies the generating units had been closed by the gas company. A single natural gas supply lateral, supplying the generating plant, feeds into an inlet header pipe that is comprised of three valves in parallel. The three valves proceed to an outlet header pipe that supplies three units at the generation site. One of the three valves was closed (isolated) by the gas pipeline owner during a prolonged generation unit outage at the plant. When the generating unit was returned to service several months later, the increased demand for natural gas caused a drop in gas pressure and delivery capacity to the plant. All three generation units were set to trip at the same minimum gas pressure of 30 pounds per in² (PSI). The result of the pressure drop resulted in the simultaneous tripping of three generating units

Corrective Actions

Upon review, different minimum gas pressure trip settings were established for each generation unit to permit a staggered loss of generation units and prevent the simultaneous loss of all units at the same pressure level.

Lesson Learned

All multiple unit gas generation sites supplied by a single gas source should be reviewed and evaluated to ensure that the minimum gas pressure settings for each individual unit are staggered to prevent the simultaneous loss of all units at the same pressure level.

For more Information please contact:

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