

Success Story

Generator control upgrade

Market served
Waste water treatment



Generator overhaul gets operations flowing smoothly

Location

Toronto, ON

Segment

Waste water treatment

Problem

Need a complete generator control upgrade

Solution

To design, supply and commission the switchgear protection upgrades

Results

A new generator control panel. Project started March 2007 and was completed in November 2009.

Background

A major regional waste water pumping station underwent system upgrades, including upgraded pump controls, and emergency generator paralleling and load controls, as well as generator and pump protection upgrades.

Challenges

Eaton was awarded a contract to design, supply and commission the switchgear protection upgrades and the new generator control panel.

Solution

The electrical switchgear upgrades included:

- Supply of new switchgear doors to match existing
- New generator protection relays for three emergency generators (750 and 1500 kW)
- New motor protection for four 750 kW waste water pumps
- Transformer protection relays for two main transformer breakers
- Remote pump control panels complete with RTD temperature monitoring
- Installation of pre-wired switchgear doors for generator, main breaker, tie breaker and motor feeder cells

Results

The project included the design, supply, test and commission of a new generator control panel (GMCP) for control of the three existing emergency generators.

The GMCP provided the following controls:

- Automatic generator starting upon loss of power
- Generator sequencing
- Generator auto-synchronizing and paralleling
- Generator load control

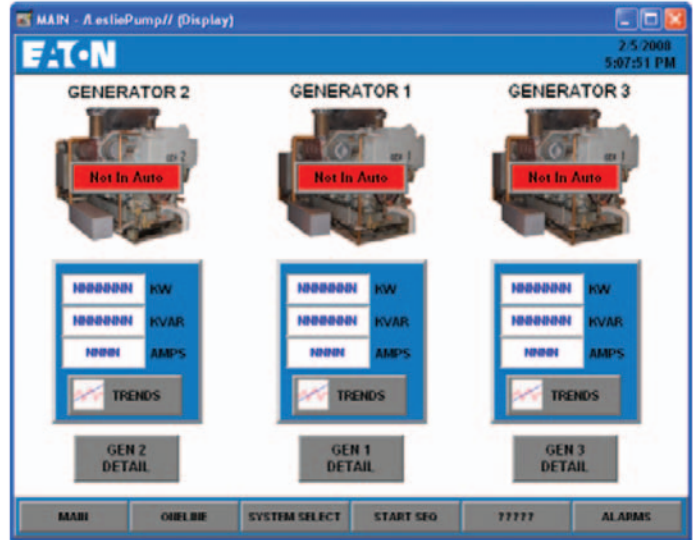
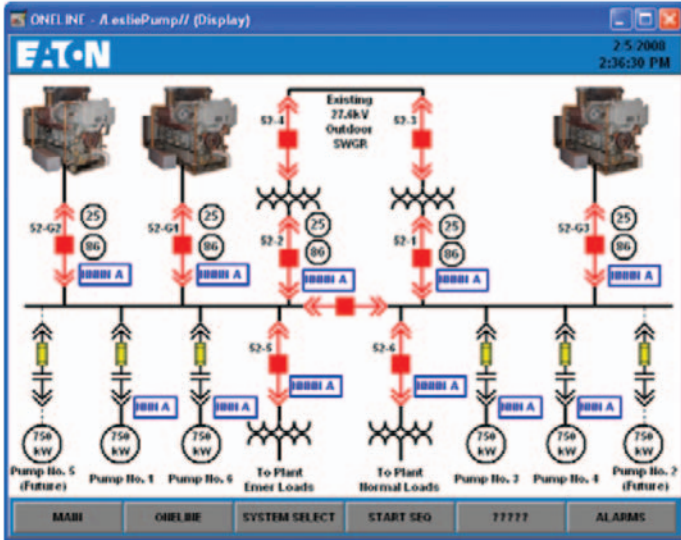
GMCP controls included provisions for future closed transfer control for return to normal power.

Project highlights:

- Generator protection
- Auto synchronizing
- New protection

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