

SUBSTATION SYNERGY:

Putting Intelligence to Work

ComEd has developed an innovative solution for using intelligence from microprocessor devices in a substation and putting that intelligence to work – around the clock. This project is titled The Intelligent Substation and it is located in the ComEd Innovation Corridor just outside the City of Chicago in Oak Park, Illinois. The design is focused on integrating the intelligence of microprocessor-based protective relays, transformer monitoring, and thermography devices using an Ethernet communications platform.



BEFORE



BEFORE



AFTER



AFTER



AFTER

Gathering the wealth of data from these various devices and getting it out of the substation is just the first step. Software applications continuously operate “behind the scenes”, analyze and act on this substation intelligence - putting it to work.

End users no longer need to pour over tables of detailed data; it will now be presented in high level graphical displays. When this intelligence indicates a potential problem with key substation assets such as transformers and circuit breakers - a proactive email is automatically generated to alert the

appropriate engineering personnel. These new functionalities allow for proactive equipment health monitoring, focusing ComEd resources on the right work and providing cost saving predictive maintenance techniques.

Combining microprocessor technology with automated software applications, the Intelligent Substation creates new synergies for both engineers and system operators which will increase productivity, reduce emergent outages, increase reliability and ultimately improve customer satisfaction.