Power Delivery

Chicago South Business District Project

Exelon ComEd
Chicago, IL

Sargent & Lundy Services:
- Substation Engineering
- Transmission Line Engineering
- Construction Management
- Electrical Testing & Commissioning

Exelon ComEd selected Sargent & Lundy to perform engineering and construction services for the Chicago South Business District project. This major transmission expansion and reliability upgrade project supports the addition of two autotransformers at the Fisk Substation and two 345-kV transmission lines from Crawford and Taylor Substations. These new autotransformers and transmission lines provide ComEd with two additional interconnections from the 345-kV system to the 138-kV system to improve the reliability of the system. The project included a major expansion of the Fisk Substation, along with additions to the existing air-insulated 345-kV Crawford Substation and 345-kV GIS Taylor Substation.

At the Fisk Substation, a new 345-kV GIS substation was added. This new four breaker (ten breaker ultimate) GIS ring bus was installed in a new GIS building. A new 345kV relay/control building was also designed and constructed. For further system controls, two sets of 138kV, 57MVAR capacitor banks were added.

The substation work at Crawford involved the installation of a new 345kV gas circuit breaker and transmission line position for the overhead line to Fisk. The substation work at Taylor involved the modification and expansion of the existing 345kV GIS ring bus with the addition of two new 345kV gas circuit breakers and a new line position for the connection of the underground line from Fisk.

A new section of 345-kV overhead line was installed to complete the connection at Crawford substation. New 345-kV XLPE cables were installed in underground duct between Fisk and Taylor to complete the transmission interconnection at each station.

Sargent & Lundy prepared the conceptual designs for the expansions at all three substations for ComEd. The Fisk substation final layout was a very challenging process due to the amount of equipment planned for the ultimate build-out and space constraints.

Sargent & Lundy also provided detailed designs to support all permitting required for the project as well as procurement services for the major GIS equipment and construction contracts for the project.

345 kV GIS Building under Construction

Installation of 345 kV GIS Equipment

The project was initiated in the fall of 2010. Sargent & Lundy supported a staged in-service schedule with portions of the project to be in service in mid-2011 through final in-service in November 2011.

Exelon's energy delivery companies - ComEd in northern Illinois and PECO in Pennsylvania - serve approximately 5.4 million electric customers.

Sargent & Lundy LLC

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