



PHI Atlantic City Electric Peerment 69/12kV Indoor GIS

Southern New Jersey

Sargent & Lundy EPC Joint Venture with Graycor Industrial Constructors:

- Engineering and Procurement
- Construction, Testing and Commissioning

The existing 23/12kV cottage distribution substation was taken out of service, demolished, and replaced with a new substation consisting of a 69kV GIS lineup, 12kV vacuum breaker switchgear, 2-56MVA power transformers, an indoor 69kV capacitor bank and related electrical and control equipment all housed in a single structure.

First EPC substation for PHI/ACE in recent history

- Part of a larger 69kV system upgrade including new 69kV overhead transmission upgrade from 23kV existing system.

New 69/12kV GIS substation

- Capacity/reliability upgrade from 23kV to 69kV to meet increased island load
- Location: Southern NJ (costal barrier island)
- 12,000 square foot indoor substation
- Removable openings for major equipment

High Visibility

- Residential location in ocean front community
- Significant architectural exterior elements in building design to meet municipal zoning requirements

Challenging Construction Duration

- No summer construction allowed (June-Sept)
- Weather and system issues further constrained substation construction schedule
- Accelerated engineering to obtain permits allowing for partial Spring 2015 construction
- Building designed to support staggered Spring and Fall foundation and superstructure install

Challenging Execution

- Residential site, limited laydown and access
- Winter construction

Achievements

- Substation livened, carrying load and turned over to owner on schedule to meet demand
- Met project goal of having all distribution feeders in service before Memorial Day 2016



Exterior of Peerment Substation



69kV GIS



Cable Vault