VII. Installation & Commissioning

1.0 Design

Design drawings produced by the Interconnection Customer (IC) that apply to the design, protection, and operation of the TO (s) electric system must be reviewed and approved by the TO(s) prior to construction/installation of those facilities.

2.0 Constructability

2.1 Construction clearances to energized operating facilities.

During the construction, space must be allowed to maneuver heavy equipment, cranes, man-lifts, etc., without infringing on OSHA stipulated electrical clearances and electrical clearance standards of the TO (e.g. Minimum Approach Distance(s), NESC, Internal Standards, etc.). Extra clearance may need to be designed in when locating new structures and facilities in proximity to existing structures, foundations, equipment, conduits or other below grade facilities in order to avoid outages to existing, adjacent / near-by, energized equipment, and facilities.

Sufficient space must also be provided for installation of all protection, control, metering, and telecommunications equipment, without disturbing energized operational equipment. These clearance concerns must be addressed per applicable PJM Manuals.

2.2 CUT-IN Sequence

A detailed plan of cut-in sequence must be approved by the TO, IC and PJM. Outages should be minimized both in number and duration. Generally lengthy outage cannot be tolerated and temporary measures may be required to be implemented to reduce outage risk. Complete testing and inspection of all electrical equipment, components, and systems for connection to the PJM Transmission System is a critical technical requirement. As such, this task must be considered in the early planning and design stages of a project. All interfacing points between the TO and IC substation, must be tested, approved, and coordinated with the TO utilizing approved testing plans and methods. The plans must be submitted by the IC and approved by the TO.

2.3 Temporary Facilities

In some cases, temporary facilities will be required to maintain service to existing equipment during construction and to facilitate cutovers. One of the design constraints for temporary facilities is minimizing outage time for installation and removal of equipment installed on a temporary basis. In certain cases temporary facilities can be built to less strict standards than the “permanent” facilities. However, some temporary facilities may need to be designed to the same standards as permanent facilities. All temporary electrical facilities, however, must meet OSHA, NESC, and the TO’s electrical clearances. All temporary facilities built to below permanent standards must be approved by the TO.