

Introduction to DC Power Systems Engineering

1. General

- 1.1 This addendum is issued to change and/or supplement specific information contained in BR 790-100-651. This is a merged Practice (MP), which provides standards for SBC Companies.

2. Responsibilities

- 2.1 The SBC power equipment engineer may hold responsibility for the engineering and planning of either Central Office or Remote Terminal applications. These responsibilities include the monitoring, planning and deploying of all DC and associated AC standby power equipment. For Central Office application, the Common Systems Planning & Engineering Center (CSPEC) shall assign all floor space to insure that floor space is used, planned and managed properly. It is the goal of the SBC power equipment engineer to accomplish the optimal plan with priority on safety, reliability, efficiency and economics.
- 2.2 The planning process involves obtaining input from various sources/customers including Network Operations, Maintenance Engineers, Corporate Real Estate (CRE), Operations Systems Support, Network Distribution Services, Subsidiaries, Environmental Management, Collocation, OSP Designers/Planners and Centralized Staff.
- 2.3 The functions of the SBC power equipment engineer shall include but not be limited to the following:
- A. To ensure the proper maintenance of the appropriate mechanized database. This information may include all central office and RT power equipment including current and historical power plant load information.
 - B. To process power studies and provide appropriate feed back.
 - C. Input, update and record pertinent data¹ into the PowerPro database.
 - D. To process requests from Maintenance Engineering or Operations personnel. These may be submitted as Central Office/Remote Terminal (CO/RT) Equipment Recommendations (COER) or Maintenance Request (MR).
 - E. To review grounding audits and schedule updates as required.
 - F. To formulate recommendations and initiate supporting budget and scheduling documentation.
 - G. To prepare telephone equipment orders via traditional written TEO or the 13-State Mechanized Systems, depending upon the region.
 - H. To request and review firm price quotes (FPQ), review power to frame (PTF) dates, and issue authorizations.

¹ Data may include; AC PDSC&DC Forms, Drain Studies, and etc.

- I To ensure the proper coding of supplier invoices for input into DCPR records.
 - J To coordinate and monitor job progress and completion.
 - K To provide the client base with appropriate forecasting and cost estimates upon request.
 - L To analyze technical feasibility of power related products, services and practices upon request.
 - M To provide technical support for CRE, NSS, LRTP, Network Operations, Collocation, OSP Construction & Engineering (C&E) and Network Maintenance Engineering.
 - N To assist in emergency situations to prevent service interruptions and/or in restoration of service.
- 2.4 A general outline for the SBC Power Equipment Engineers process is as follows;

- The SBC LEC power equipment engineer shall initiate the order for installation of power equipment based upon information from a number of sources. These sources could be, but are not limited to the following; Wire Center Forecast Form (WCFF), Space Assignment Form (SAF), drain studies, collocation requirements, maintenance request, PowerPro Planning, new technologies deployment, network growth, etc.
- The CSPEC floor space planner shall be contacted for approval of the required floor space assignment for any new CO equipment installations.
- Once the order is originated and release is approved, as required by SBC, the order shall be submitted to the detail engineering service provider (DESP) for the engineering and FPQ process.
- When the DESP's response is received, the FPQ and PTF date shall be reviewed and approved as required by SBC.
- The SBC power equipment engineer shall communicate approved dollars to the purchasing organization via SBC Mechanized System.
- Notify Environmental Management (EM) of the anticipated equipment install dates.
- Upon completion of the job the SBC power equipment engineer shall ensure that requirements have been met to close out the job and actualize the PowerPro office records..
- The project "actualized completion date" shall be the flag for quality auditing to begin their process.
- The SBC power equipment engineer shall ensure the proper correlation for DCPR records upon the installation or removal of any equipment.