

MANAGED ENGINEERING SERVICES

Essex Energy can deliver a professional managed distribution engineering service while minimizing the time and resources required by your distribution company.

CREATE MODEL

- One time set-up of distribution system model

MAINTENANCE

- Electronic/Paper based updates in GIS/Mapping
- Essex Energy maintains the engineering model for you

SYSTEM STUDIES

- Short Circuit Analysis
- Arc Flash Analysis
- System Optimization
- Device Coordination & Protection
- Connection Impact Assessments
- Load and Contingency planning

Protection Coordination:

A protection coordination study is essential if an electrical system is to function in an optimal manner. It is unbeneficial as well as inefficient to have an upstream protection unit function before a downstream unit is given a chance to clear a fault. This situation will cause a greater affected area and more potential damage to equipment and personnel than would be necessary. A protection coordination study will provide details surrounding the recommended type, location and settings (if applicable) for protective equipment in the field. This will minimize the impact of a short circuit fault because it will allow appropriate protective equipment to function.

Arc Flash Analysis:

A significant number of personal injuries and fatalities are caused by arcs created during short circuits and switching procedures. Exposure to incident energy created by arcing faults can cause blindness, ear damage, serious burns, fire, and shock hazards. Essex Energy will identify the risk of personnel injury as a result of exposure to incident energy released during an arc flash event for each specific electrical component, identify the current appropriate ratings of personal protective equipment (PPE), establish the Flash Protection Boundary as required by CSA Standard Z462 and provide equipment specific environment and chemical arc-flash hazard warning labels per CEC Rule 2-306. These efforts are to properly inform employees of potential hazards in the workplace, and perform every reasonable effort for their safety.



WHY PERFORM SYSTEM STUDIES?

- Effectively Plan and Validate Capital Expenditures
- Control System Losses
- Identify Overloaded Assets
- Assess Voltage and System Performance
- Contingency Planning

Connection Impact Assessment (CIA)

A connection impact assessment is a detailed analysis of a project's impact on the power grid. This may be an expansion or modification of an existing power generation facility or a new project. The report results include a technical report detailing project feasibility, technical specifications required for the project and the impact the project would have on the power grid. Essex Energy can help utility clients formalize and complete the assessment documentation such as a line map, single line diagram, generator characteristics, loading data and point of common coupling (PCC) along with related protection/coordination schemes.



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