



&



BICE Engineering and Consulting

Arc Flash Analysis & Training

Arc Flash Hazard Analysis & Mitigation

- Determine the risk of personnel injury as a result of exposure to incident energy (IE) released during an arc-flash event
- Provide recommendations for appropriate arc-flash hazard protection
- Inform the personnel about the existing arc electrical safety
- Comply with OSHA, NEC, and NFPA 70E requirements

Short Circuit Studies

- Calculate the fault current at various locations in the plant
- Identify whether the system and the equipments could withstand the available fault current
- Specify the ratings of the equipments for future expansions
- Improve the reliability of the system

Over-current Protective Device Coordination

- Prevent injury to personnel
- Minimize damage to system components
- Limit the extent and duration of service interruption whenever equipment failure, human error, or adverse natural events occur on any portion of the electrical power system

Dynamic Motor Starting Analysis


- Determines the expected voltage dip and acceleration time for a motor
- Examines the impacts of motor starting on an electric power system

Equipment Assessments

- Identify the under-rated equipments that cannot safely interrupt the fault current
- Recommend replacements to the "failed" equipments
- Avoid extensive equipment failure, system outages, and personnel injury by underrated equipments in the event of a fault

Development of Single Line Drawings For As-Builts

- Point-to-point sketch of actual connected plant loads, beginning at the PCC, and collection of all pertinent component data
- Based on the collected information, single-line diagrams are re-



created to show the current configuration and modes of operation of the system

- SKM PTW or ETAP EE software is used for creating single-line diagrams and modeling the components

Load Flow Studies

- Component or Circuit Loading
- Bus Voltage Profiles
- Real and Reactive Power Flow
- Power System Losses
- Proper Transformer Tap Settings

Power Factor Correction Studies

- Release of Power System Capacity (kVA)
- Improved Bus Voltage Profiles
- Reduced Power System Losses

<http://www.technicaldiagnostic.com/Training.html>

<http://www.technicaldiagnostic.com/Services.html>
