Arc Flash Assessment Procedure and Deliverables

Introduction:
NPM will provide an Arc Flash Hazard Analysis in accordance with the NFPA 70E - Standard for Electrical Safety in the Workplace and IEEE Standard 1584 - Electrical Guide for Performing Arc Flash Hazard Calculations. NPM will collect electrical system information, model the electrical system using engineering software, analyze the electrical hazards, provide a written report with mitigation recommendations, and install arc flash hazard warning labels.

The assessment will begin at the utility service point and will include all significant three phase loads and power distribution equipment including switchgear, switchboards, panels, disconnects, transfer switches, starters, busways and motor control centers which are likely to be serviced under live (energized) conditions.

Scope of Work:
The following will be included in the scope of work:

1. Collect system data during onsite visit(s)
2. Model the electrical system in power system analysis software
3. Calculate the fault current (worst case short circuit current) at each piece of equipment and compare this to the short circuit rating of the equipment
4. Review system coordination and provide recommendations to improve system reliability
5. Analyze the arc flash hazards and provide recommendations to mitigate high energy locations by changing circuit breaker settings or changing fuse types where appropriate
6. Compile results and recommendations into an easy to read report
7. Print and install arc flash hazard warning labels

Deliverables:
Upon completion of the project, NPM Services will deliver the following which will satisfy the NFPA-70E hazard analysis requirements:

- Electrical one-line system drawings will be provided.
- The arc flash report will include an executive summary, detailed descriptions of the results, graphs, and tables. The arc flash table will include calculated values at each piece of equipment including the incident energy, arc flash boundary, working distance, nominal voltage, upstream protective device, arc fault current, arc duration, and more. Where appropriate, circuit breaker settings will be provided with the system as found, as well as recommended settings to mitigate arc flash incident energy.
- Arc flash hazard labels (printed and installed by NPM Services). The arc flash labels will comply with NFPA 70E requirements and will show the unique calculated results at each piece of equipment and including the incident energy, site specific PPE level, arc flash boundary, limited approach (shock) boundary, restricted approach (shock) boundary, and nominal voltage.

Contact us today at 270-678-1712 for more information!