



## WHAT DO WE DO?

AllumiaX Engineering is a professional electrical engineering company that provides power system study and analysis services in the following industries:

1. industrial & commercial & processing plants
2. hospitals, medical centers, surgery rooms
3. power generation plants & Co-gens
4. schools, universities, & corporate campus
5. water, wastewater, wells, lift stations, etc.
6. hotels, resorts, casinos
7. Data centers & mission critical facilities

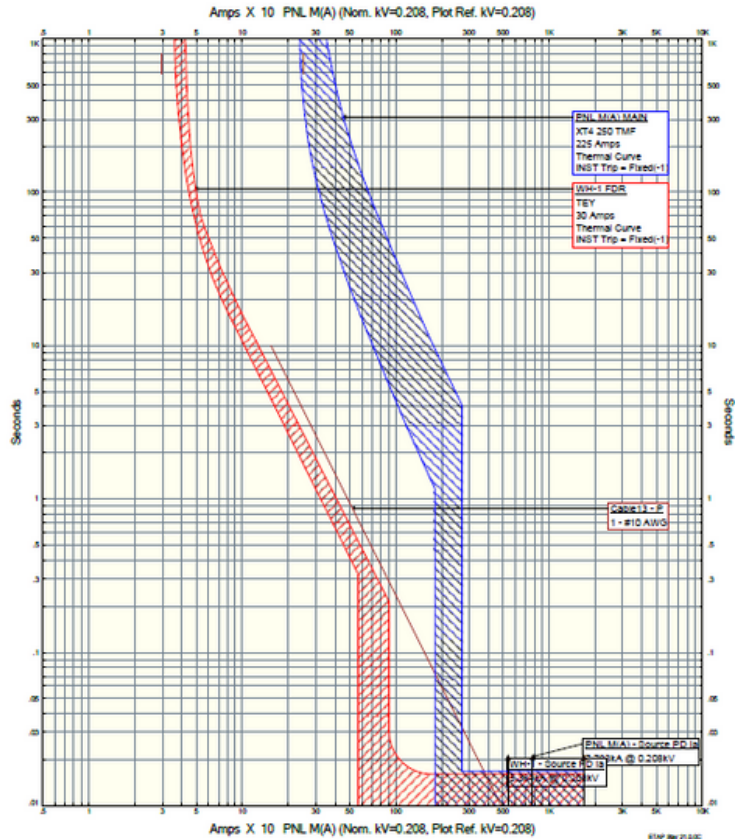
## WHO DO WORK WITH?

1. Equipment Distributors & Manufacturers
2. Electrical Contractors & Installers
3. Engineer of Records & Designers
4. A&E, EPC, MEP, Civil Engineering Firms
5. Facility owners, Building Managers, Maint. Planners

We design and study electrical power systems. We help our clients meet OSHA regulatory requirements and engineering design specification requirements for new construction or existing facilities.

## WHAT DO WE OFFER?

1. Arc Flash, Short Circuit, Coordination Studies
2. Selective Coordination Studies per AHJ or HCAI/OSHPD
3. Equipment Failing Short Circuit Solutions
4. Motor Starting Studies
5. Power Quality and Harmonic Studies
6. Step & Touch Potential Ground Grid Studies
7. Transient & Snubber Circuit Studies
8. Power Flow & Voltage Studies
9. Electrical Engineering Design Services
10. Maintenance Planning for 24/7 Operations
11. SEL, GE, Siemens, Eaton Relay Settings



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OVERLAKE  
MEDICAL CENTER & CLINICS

# OUR CLIENTS



# OUR

ELECTRIC POWER  
RESEARCH INSTITUTE

# AFFILIATIONS





## Arc Flash Study

Arc flash analysis ensures protection during electrical explosion that occurs when an electrical fault causes current to flow through the air.

## Power Flow Study

Used to determine how much power is being generated, transmitted, and consumed within the electrical system, and voltage drop.

## Snubber Circuit Study

A Snubber Circuit Study seeks to improve the reliability of the system by minimizing the damaging effects of switching transients

## Engineering Design

We help our clients bridge the design gap between the EOR drawings and construction.

## Short Circuit Study

A Short Circuit Analysis is used to determine the min & max available fault current at each location and validate the short circuit equipment rating.

## Transient Stability Study

Examines the behavior of the electrical power system in the real-time domain and considers transients such as sudden changes in power demand, breaker opening, etc

## Ground Grid Study

Analyze the step and touch potentials and prevent the occurrence of shock related incidents using ground mat or ground grid.

## PE Consultation

We provide expert Professional Engineer consultation for electrical construction, commissioning, and maintenance.

## Coordination Study

To selection, arrange, installation, and maintenance protective devices with objective of protection and coordinating.

## Motor Starting Study

A motor starting study is used to determine and analyze the behavior of a motor during its starting stage in order to avoid voltage dips.

## Power Quality Study

A Power Quality Study seeks to determine power quality by analyzing both power flow and related factors such as grounding and harmonics.

## Maintenance Planning

For a 24/7 electrical operation, it may be difficult to coordinate a planned shut-down. We offer maintenance planning services.

## DID YOU KNOW?

1. All electrical work should occur in de-energized state. If electrical equipment cannot be de-energized, all liabilities falls on the owner. The only two exceptions are greater hazard for de-energizing and life safety equipment. Arc Flash, Short Circuit, Coordination Studies help increase safety and minimize liability and risk for owners.
2. As of 2023, NEC requires owners to maintain electrical equipment. This harmonizes with NFPA 70E article 300 which also requires maintenance requirements to be followed for electrical equipment, which is part of an electrical safety program because the arc flash evaluation takes in account equipment maintenance.
3. OSHA fines for facility owners for electrical injuries can exceed \$1,000,000.
4. As of 2020, available fault current (AFC) labels shall be posted on service entrance equipment as well as all equipment electrical distribution equipment such panelboards, switchboard, MCC, etc. regardless of voltage (NEC 408.6).
5. Each piece of equipment operating at 50 volts or more and not placed into a deenergized state must be evaluated for arc flash and shock protection. This evaluation will determine the actual boundaries (i.e. prohibited, limited, restricted etc) and will inform the employee of what PPE must be worn - per OSHA and Workplace Safety Awareness Council.
6. The calculations for your electrical system need to be periodically reviewed every 5 years. Maintenance requirements are prescriptive, and customized to a facility.