

## Electrical System Design Studies

Based in Essex, myElectrical Engineering Limited offers electrical design, peer review, site based commissionings, investigations, simulations and expert testimony for petrochemical, power systems, airports, rail, infrastructure and buildings.

Carrying out system studies to verify the correct operation of electrical networks under both normal and abnormal conditions is a large part of our work. Most of our studies involve modeling of the electrical systems using state of the art software including, ETAP, NEPLAN, EMTP-ATP, Amtech ProDesign and Matlab Simulink. Utilising our expertise, the following illustrate the breadth of studies we are able to carry out (both a.c. and d.c.):

- Load Flow
- Short Circuit (IEC & ANSI)
- Voltage Drop
- Cable Dimensioning (BS 7671, IEC & IEE/NFPA)
- Cable Thermal Analysis (IEC 60287 & Neher-McGrath)
- Power Factor Correction
- Low Voltage Calculations (Earthing and Electrical Shock) to BS 7671
- Harmonic Analysis
- Harmonic Filter Design
- Motor Starting and Acceleration
- Transient Analysis
- Power Quality Analysis
- Transformer Inrush Current
- Protection Device Coordination & Discrimination
- 400 Hz System Calculations
- Renewable Sources (Wind and Photovoltaic)
- Hybrid Energy Systems
- Earth [Ground] System Design
- Arc Flash Analysis
- Battery Discharge and Sizing
- Equipment Dimensioning
- System Reliability
- GIS Mapping



For more information, please contact us or visit our website at: [myelectricalengineering.co.uk](http://myelectricalengineering.co.uk).