

## Power Systems Consultancy

Optimising network performance for a safer, stronger, smarter network

### Who are we and what sets us apart?

EA Technology is a world leader in products and services which enhance the performance, reliability, safety and cost-efficiency of power assets and systems. Our mission is to enable our customers to manage their assets more efficiently, with fewer failures, outages, greater safety and lower costs.

Within EA Technology the Network Studies team provides independent, highly responsive and flexible consultancy services aimed at optimising electrical networks to achieve desired performance levels while complying with all the relevant regulatory codes.

We pride ourselves for our high delivery standards across sectors that include industrial and manufacturing sites; owners, operators and/or companies that maintain electrical networks; renewable energy and generating plants amongst others, covering low to extra high voltage power systems.

Our in depth-knowledge on power systems combined with over 50 years of project delivery experience across multiple areas, allow us to analyse customer's problems from different angles, recognise key performance factors at early stages and recommend optimum solutions to:

- Improve network reliabilities
- Reduce risks
- Comply with latest standards and regulations
- Decrease system losses
- Maximize cost reduction
- Avoid or decrease financial penalties

### Network Studies Services

- Network modelling
- Load flow, voltage regulation & power studies
- Fault level analysis
- Dynamic & transient stability studies
- Protection coordination & settings
- Harmonic compliance & power quality assessments
- Arc flash studies
- Failure analysis
- Flicker evaluation
- Switching surge studies
- CRATER – Thermal cable rating tool assessments
- Grid code compliance
- Grid connection feasibility
- Generation integration
- Project management
- Independent verification
- Power systems training

*“EA Technology provided a comprehensive power quality analysis service that highlighted the presence of problematic harmonics and recommendations of remedial actions”*

**Alan Wildman, Senior Authorised Person  
(Electrical), Springfield Fuels Ltd**

# Credentials

We have been intimately involved and at the cutting edge of technical, legislative and regulatory developments for over 50 years.

40% of our workforce have worked directly for uk distribution network operator (dno) companies. This invaluable experience provides us a clear understanding of dno requirements, translated into a higher client satisfaction.

We are renowned for our outstanding technical ability and first-class project outputs.



Our consultants are highly skilled users of different leading industry software modelling tools: DigSILENT Power Factory, IPSA, OpenDDS and Debut.

We are very familiar with requirements for data confidentiality and high-level security clearances having worked for sites including the nuclear industry and defence, where we have current contracts for network modelling and studies in both the nuclear fuels manufacturing/supply

Our network studies focus on the analysis of the customer & adjacent electrical network to provide recommendations on how to optimise its performance while improving the security of the supply. Some of the services that we provide include:

- **Power System Analysis** – we can build any electronic network model to simulate all type of operating conditions with no limit to network sizes. Some of the time & frequency domain analysis we undertake include: Load Flow, Fault Level, Protection Grading, Arc Flash, Flicker, Dynamic/Transient Stability/Fault Ride Through, frequency sweep studies.
- **Power Quality Assessments** – we can monitor and analyse site voltages, currents, power, harmonics, distorting loads, power factor, etc. to identify maloperation plant/equipment issues, assess the impact of future connections, undertake failure investigations and provide recommendations on how to reduce risk, optimise performance and enhance capability.
- **Generation Studies** – Our extensive experience in distributed generation studies including CHP and renewables help you predict and resolve problems before they happen. We have also been involved with projects concerning grid connections, compliance and integration for windfarms and solar installations.

## Our customers



To get further information and advice please contact us on +44 (0) 151 347 2313 or email: [sales@eatechnology.com](mailto:sales@eatechnology.com)

Safer, Stronger,  
Smarter Networks