

# Services & Consultancy



## Forensic Failure Analysis

The EA Technology Power Forensics team investigates power asset aging, failure, incidents and fires; our expertise, experience, techniques and facilities can help you find out why your assets have failed, how they have failed and what you can do to prevent future failures. Our expertise includes cable insulation, conductors and fittings, transformers, and switchgear.



## Power System Studies & Analysis

Our network studies team is staffed with highly qualified engineers who have a wealth of experience performing load flow, fault level, protection, earthing and transient stability studies as well as identifying/determining equipment losses and recommending loss reduction initiatives. We undertake detailed analysis to support customers with their network management, achieve reduction in system losses, operating costs and carbon footprint and ensure that networks are reliable, safe and efficient.



## Transmission Tower Foundation Assessment

EA Technology has developed a set of non-intrusive assessment techniques to provide detailed information on the state of foundations and identify individual towers within a group which are most likely to have suffered significant steel corrosion and/or below ground concrete damage. The results of the inspections can be combined and used to estimate the likelihood and rate of future corrosion, and present recommendations regarding the need for refurbishment. Our knowledge of tower failure mechanism lets us predict lifespans for these foundations.



## Non-Invasive Asset Assessment

Our non-invasive asset assessment is a cost-effective way to assess the current condition of your electrical assets. EA engineers or certified inspection partners will use EA and other instruments and services to inspect your assets, whether its 10 transformers or all the assets in the network. We record and analyze the asset condition, predict remaining useful life and provide recommendations for refurbishment. The service provides total visibility of the condition of all your assets.



## Oil Analysis and Diagnostics

EA Technology's Oil Analysis & Diagnostics offers a wide range of oil analysis tests on electrical insulating oil from transformer, switchgear units and tap changers to determine their operational condition. At our in-house oil diagnostic laboratory, we use state-of-the-art equipment with high-end precision to ensure our customers receive precise, readable and in depth analysis of their samples, fast. We can provide end of life predictions and make recommendations of specific intervention strategies on how to best manage your oil-filled electrical assets.

# Consultancy



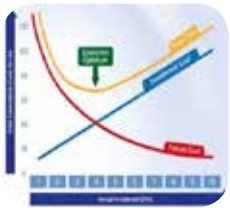
## Asset Registers and Asset Health Indices

EA Technology can help you create Asset Registers - databases of all your assets: and Health Indices - a simple yet powerful method of rating their condition and risk of failure. Used together, they are essential for creating an overview of all your assets, to prevent outages, manage maintenance and plan replacements more effectively. We can help you develop proper procedures to use this data for maintenance, operation, and financial gains.



## Condition Based End of Life Prediction

EA Technology has the expertise to take the asset health indices and combine them with powerful computer models of assets to predict how they will age. We can determine the effective economic end of life for all your assets using data you have or by taking new data for you. Oil sampling and analysis, partial discharge and infrared surveys, and asset history are all used to predict the lifespan of these valuable assets.



## Condition Based Risk Management

EA Technology's Condition Based Risk Management (CBRM) is the world's most effective methodology for managing power assets and optimizing investment decisions. It combines knowledge of the condition of assets, with the ability to calculate the financial risks of asset failures, to transform the way assets are managed. CBRM is specifically designed to provide financial, operational and engineering leadership with a common understanding of the benefits/risks in any plan to replace aging assets and justify investment proposals to stakeholders and regulators.



## ISO 55000 / PAS55

EA Technology is one of the initial authors of PAS55 and have been instrumental in the creation of ISO 55000. We can guide you through the journey to maximizing the value of ISO 55000. Our support and guidance towards ISO 55000 certification includes: ISO/PAS training for your staff, strategic guidance on how to use your assets to meet company objectives, gap analysis to provide an understanding of what's required to help you reach certification, asset management to assist in implementing your ISO 55000 'Road Map' and the required changes, and auditing & certification to ensure you are compliant pre-certification.

Safer, Stronger,  
Smarter Networks