

emc

CYBER
ESSENTIALS

CERTIFIED

Electrical

Our Electrical engineering team brings extensive expertise across both brownfield upgrades and greenfield developments.

Our Engineers and Designers are highly skilled in a wide range of engineering tools, enabling accurate, streamlined, and effective delivery of electrical engineering and design tasks.

Engineering Expertise from Concept to Completion

At EMC, we blend technical expertise with forward-thinking solutions to deliver digital electrical engineering services from concept development to detailed design.

Our seasoned team brings decades of experience in delivering cost-effective, schedule-aligned electrical systems that address complex industrial challenges with consistent, high-quality outcomes.

From greenfield installations to brownfield modifications and asset upgrades, we provide innovative, fit-for-purpose electrical design strategies tailored to each client's needs.

With a technology-neutral mindset, we utilise the latest codes, standards, and best-in-class tools to deliver solutions that uphold the highest levels of safety, efficiency, and system reliability.

AVEVA
Partner Ecosystem

System
Integrator

MEMBER

Engineering Services

Electrical Engineering Capabilities

Our Electrical team has broad experience delivering both brownfield modifications and greenfield installations across onshore and offshore environments.

Advanced Engineering Tools for Smarter Delivery

Driving Accuracy and Assurance in Electrical Engineering

At EMC, we utilise a robust set of industry recognised tools to ensure efficient, precise, and compliant electrical engineering and design. From intelligent schematics and cable routing to load analysis and 3D integration, our approach enables seamless execution and coordination across every phase of the project.

Key Tools We Use:

- AVEVA Electrical – Comprehensive electrical design and data management, covering single-line diagrams, load lists, cable schedules, and panel layouts.
- AVEVA Engineering – Centralised 1D data platform supporting equipment datasheets, interface control, and tag management.
- AVEVA Everything3D (E3D) – 3D visualisation for electrical layouts, tray routing, and spatial coordination.

Why It Matters:

- ✓ Early detection of power distribution issues and load imbalances
- ✓ Effective integration with mechanical, instrumentation, and civil disciplines
- ✓ Greater design accuracy and documentation traceability
- ✓ Optimised tray layouts and cable routing across the digital plant environment

With EMC, you gain an electrical engineering partner who combines technology with deep expertise, delivering clarity, compliance, and confidence at every step of your project.

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Commitment to Quality and Compliance

At EMC, the technical quality of our work is underpinned by our robust Quality Management System, Health, Safety & the Environment to the latest industry codes and standards.

Our structured approach, featuring Discipline Engineers, Technical Authorities, and Discipline Management, ensures all designs go through project multi-discipline reviews and approvals by qualified and experienced professionals, maintaining the highest standards of engineering integrity.



Aveva Systems Integration Partner

EMC Supports the full Engineering suite embracing EPC4.0 and ENG4.0 roadmaps with the release of EMC4.0™

- PRO/II Simulation
- Electrical
- Instrumentation
- Engineering for Process and Mechanical
- P&IDs
- ERM
- ISM/AIM-A
- PCM

Capabilities Snapshot

- Offshore and Onshore oil and gas design
- Brownfield electrical upgrades, switchgear replacement, and power distribution enhancements
- Electrical systems design for FPSOs including power generation, distribution, and lighting
- Integration of electrical layouts and cable routing within AVEVA E3D for coordinated design
- Electrical load studies, fault level analysis, and protection coordination
- Arc flash analysis and compliance with IEC/IEEE standards
- Point Cloud integration for a clash free design
- Conceptual design, feasibility studies, and detailed electrical engineering
- Development of electrical deliverables including single-line diagrams, cable schedules, and termination drawings
- Construction-phase electrical support including inspections and redlining
- Onshore and offshore surveys
- On-site support for electrical installation, testing, and commissioning

Let's Engineer, Design & Build something exceptional together.

Contact us today to learn how our engineering expertise can bring your project to life.

Contact EMC today! Email colin.fairweather@emcserv.com or gary.patterson@emcserv.com or call us on 020 363 363 03 (Option 2), and let's get started.