

Electrical Engineering – Capability & Deliverables

Blackwell Langford Electrical & Control Solutions

Third-Party Electrical Engineering Services
Supporting EPC Contractors & Engineering Consultants

Industries Served: Oil & Gas | Water & Utilities | Industrial Projects

CONFIDENTIALITY NOTE

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1. Introduction

Blackwell Langford Electrical & Control Solutions provides **third-party electrical engineering services** to EPC contractors, engineering consultants, and system integrators. Our scope covers **electrical system studies, detailed engineering, layouts, and documentation**, executed in alignment with EPC standards and project-specific requirements.

Our experience is built on the expertise of senior professionals who have delivered projects across multiple EPC environments, supported by a scalable engineering delivery model.

2. Electrical System Studies & Calculations

We undertake electrical system calculations and engineering studies to support safe, reliable, and compliant power system design.

Typical Deliverables Include:

- Electrical load list and load summary preparation
- Transformer sizing calculations
- UPS and battery sizing calculations
- Electrical power cable sizing calculations
- Cable tray sizing calculations
- Cable tray routing layouts and fill reports
- Lighting calculations and illumination design

3. Electrical Design & Engineering Documents

We prepare core electrical engineering documents forming the basis of detailed design and execution.

Typical Deliverables Include:

- Electrical Single Line Diagrams (SLDs)
- Lighting and small power looping diagrams
- Motor datasheets
- Electrical Bill of Quantities (BOQ)

4. Electrical Layouts & Routing

We develop coordinated electrical layouts ensuring constructability, accessibility, and compliance with project standards.

Typical Deliverables Include:

- Electrical lighting layout drawings (normal & emergency, as applicable)
- Earthing (grounding) layout drawings
- Cable tray and cable routing layouts
- Electrical Local Control Station (LCS) location layouts

5. Substation & Electrical Control Room Design

We support the design and layout of substations and electrical rooms to ensure safe equipment arrangement and maintenance access.

Typical Deliverables Include:

- Substation and electrical control room design
- Electrical panel layout drawings

6. Vendor & Package Engineering Support

We support EPCs during vendor coordination and package integration stages.

Typical Deliverables Include:

- Electrical vendor drawing review
- Technical comments and consolidation
- Support during vendor document approval cycles
- Review of vendor documents for compliance with project specifications

7. Deliverable Formats

Engineering deliverables are typically issued in the following formats:

- AutoCAD (DWG)
- Excel-based calculation sheets and schedules
- PDF as per EPC / client templates
- Native calculation formats as agreed with EPC/client

8. Codes, Standards & Practices

Engineering deliverables are prepared in accordance with:

- Applicable IEC / IEEE / BIS standards
- Project specifications and data sheets
- EPC and client-specific engineering practices

(Standards applied as per project requirement.)

9. Industry Application (Informative Only)

The above electrical engineering services have been applied across industrial projects including Oil & Gas and Water & Utilities, with deliverables aligned to project-specific requirements and EPC standards.

10. Scope Exclusions

Unless explicitly stated in the project scope, the following are **excluded**:

- Site installation, construction, or supervision activities
- Procurement of equipment or materials
- Electrical commissioning and site testing
- Site-based as-built verification and field surveys
- Detailed hazardous area classification studies

All services are provided **strictly as engineering and documentation support**, based on inputs received from the client or EPC.

11. Commercial Note

Final deliverables, level of detailing, and scope boundaries shall be confirmed during project kick-off and aligned with contractual agreements.

12. Closing Statement

Blackwell Langford Electrical & Control Solutions operates as an **extension of EPC and consultant engineering teams**, delivering accurate, reliable, and timely electrical engineering support across project lifecycles.