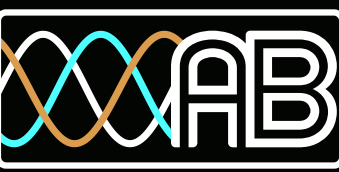


# AMPBLOC

EXPERT POWER SYSTEM ENGINEERING SERVICES

**We design and engineer power system protection and control solutions for utilities, industrial facilities, data centers, and government agencies.**



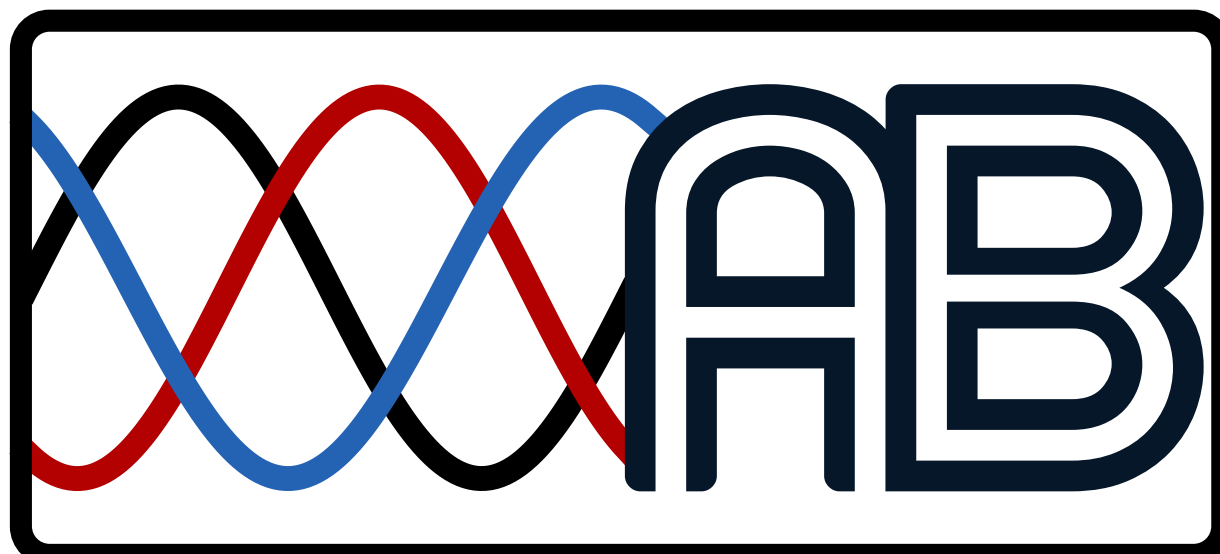
# OUR SERVICES

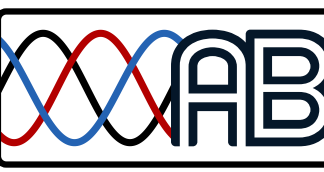
- › Protective Relay Settings
- › Protection and Control Design
- › Power System Studies
- › Power System Automation
- › Arc Flash Studies
- › Event Root Cause Analysis
- › Testing and Commissioning
- › Site/Factory Acceptance Test
- › Utility Interconnection
- › Data Center Power System
- › Standard Template Development
- › Review/Quality Control
- › NERC Compliance
- › Project Management
- › Owner's Engineer Services
- › Mathcad Conversion

# RELAY SETTINGS

Optimize your system's protection with our expert relay settings services. We configure both electromechanical and microprocessor-based relays to maximize reliability, safety, and compliance with industry best practices and IEEE guidelines.

- **Relay Settings Criteria Development**
- **Relays Settings Guidelines Development**
- **Relay Settings Calculation**
- **Relay Setting Coordination**
- **Relay Setting Verification**
- **Relay Setting Testing**
- **Relay Setting Documentation**
- **Relay Settings Management**
- **Custom Logic Development**

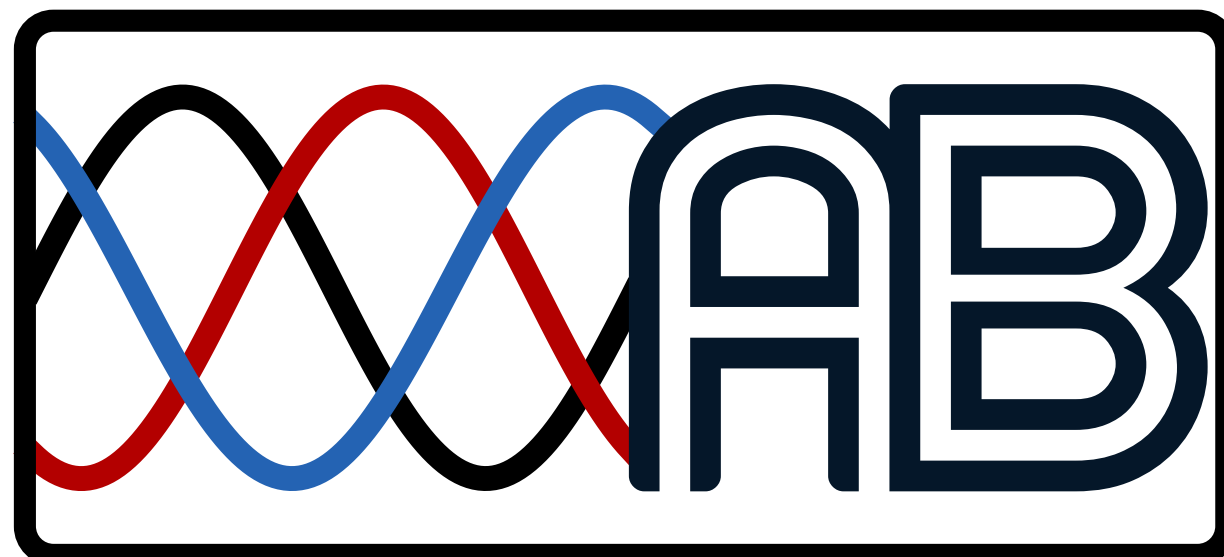




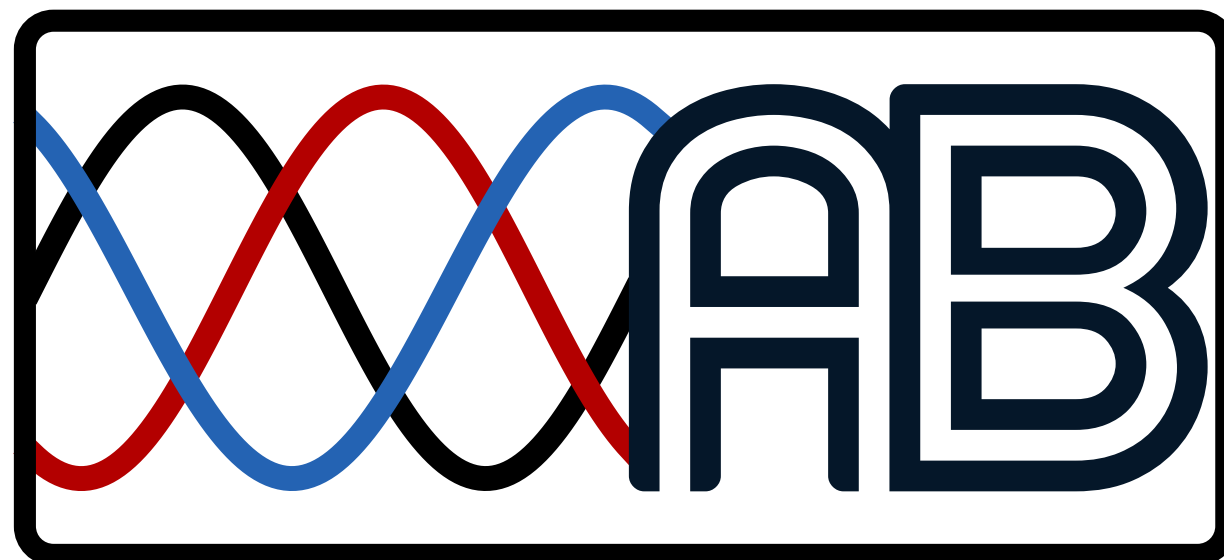
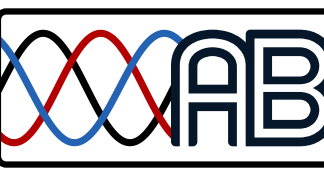
# DESIGN & DRAFTING

Streamline your projects and improve operational efficiency with our high-quality engineering deliverables. Our experienced team uses state-of-the-art tools to produce detailed drawings and documentation.

- **Oneline Diagrams**
- **Three line Diagrams**
- **Schematic Diagrams**
- **AC/DC Distribution Diagrams**
- **Wiring Diagrams**
- **Bill of Materials (BOM)**
- **Communication Block Diagram**
- **As-Built Drawings**
- **Panel Layout**



ENGINEERING • DESIGN • SERVICES

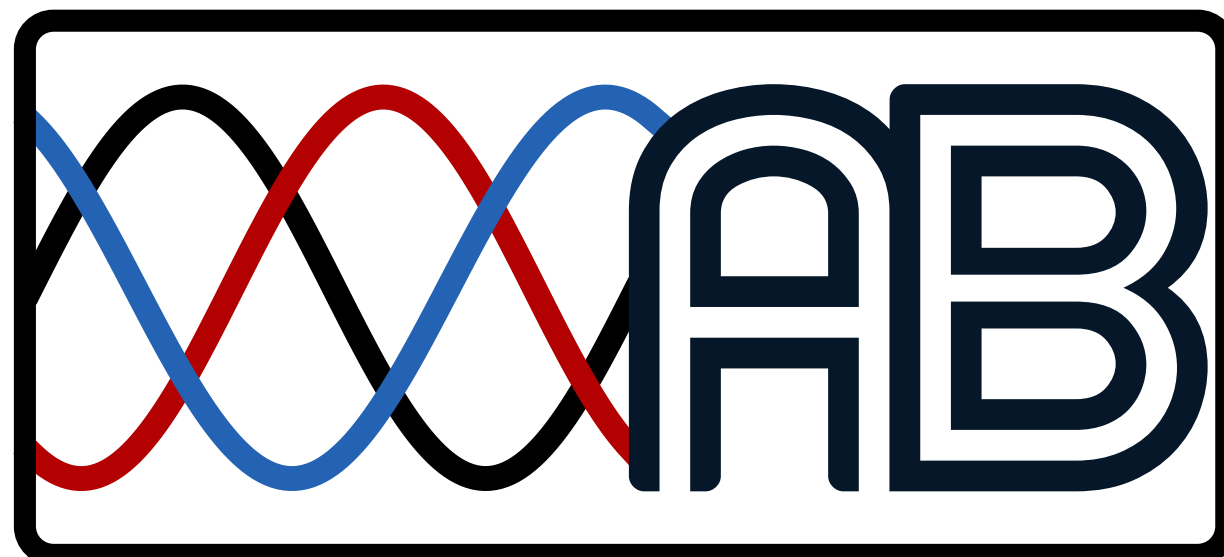
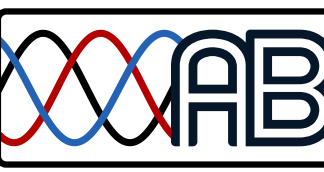


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# SYSTEM STUDIES

Partner with us for electrical system studies and analysis. We'll provide in-depth analysis and solutions to optimize the reliability, safety, and resiliency of your systems.

- **Short-Circuit Studies**
- **Protection and Coordination Studies**
- **Arc Flash Studies**
- **Load Flow Studies**
- **Voltage Drop and Cable Sizing Studies**
- **Motor Starting and Acceleration Studies**
- **Renewable Energy Integration Studies**
- **Power Quality Studies**
- **Islanding and Microgrid Studies**

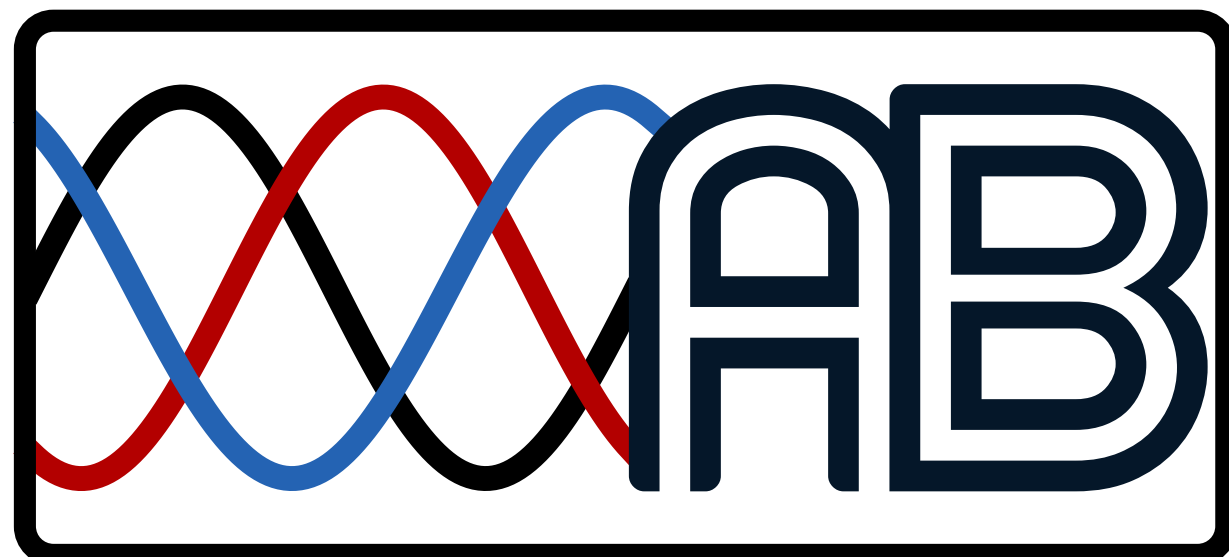
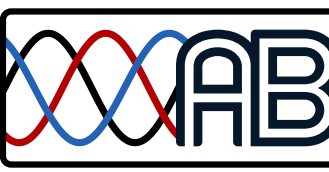


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# AUTOMATION

Enhance grid performance and optimize operations with our advanced automation solutions. We leverage intelligent devices, SCADA systems, and modern protocols like IEC 61850 to automate your substations, relay protection, and load management processes.

- **System Design and Integration**
- **Substation Automation**
- **Relay Automation**
- **Data Acquisition and Analytics**
- **Load Shedding and Demand Response Systems**
- **System Commissioning and Testing**
- **Maintenance and Troubleshooting**

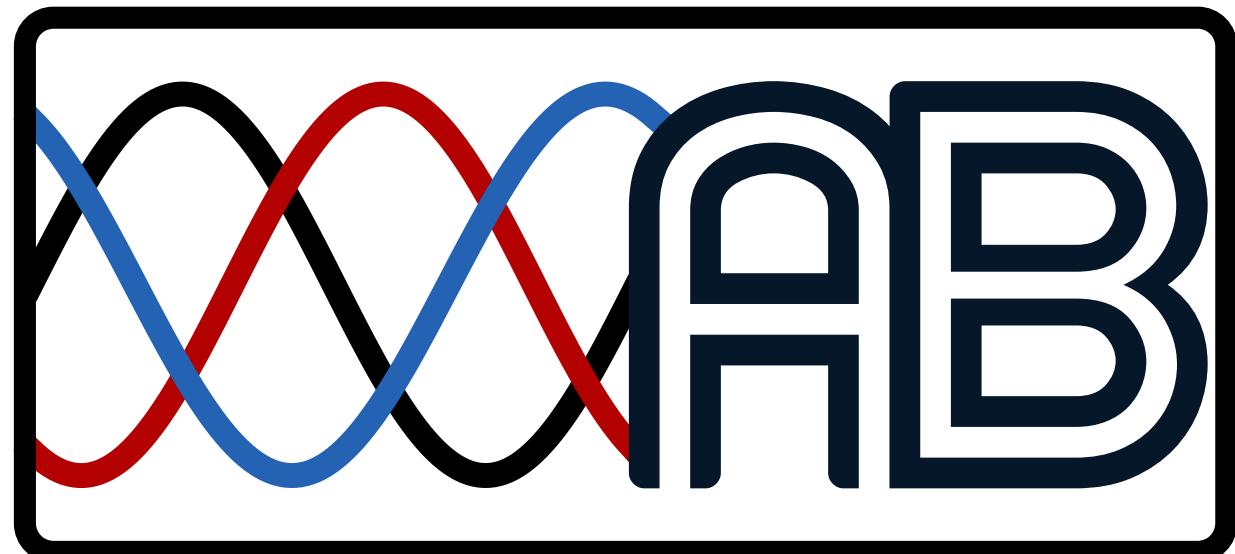


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# ARC FLASH STUDIES

Minimize arc flash risks and ensure a safer work environment. Our experienced engineers assess your electrical systems and ensure compliance with safety standards.

- **Compliance with Standards: NFPA 70E and IEEE 1584**
- **Data Collection and Preparation**
- **Arc Flash Calculations and Analysis**
- **Mitigation Techniques for Risk Reduction**
- **Protective Equipment and Hazard Labeling**
- **Workplace Practices and Training**
- **Post-Study Recommendations and Documentation**



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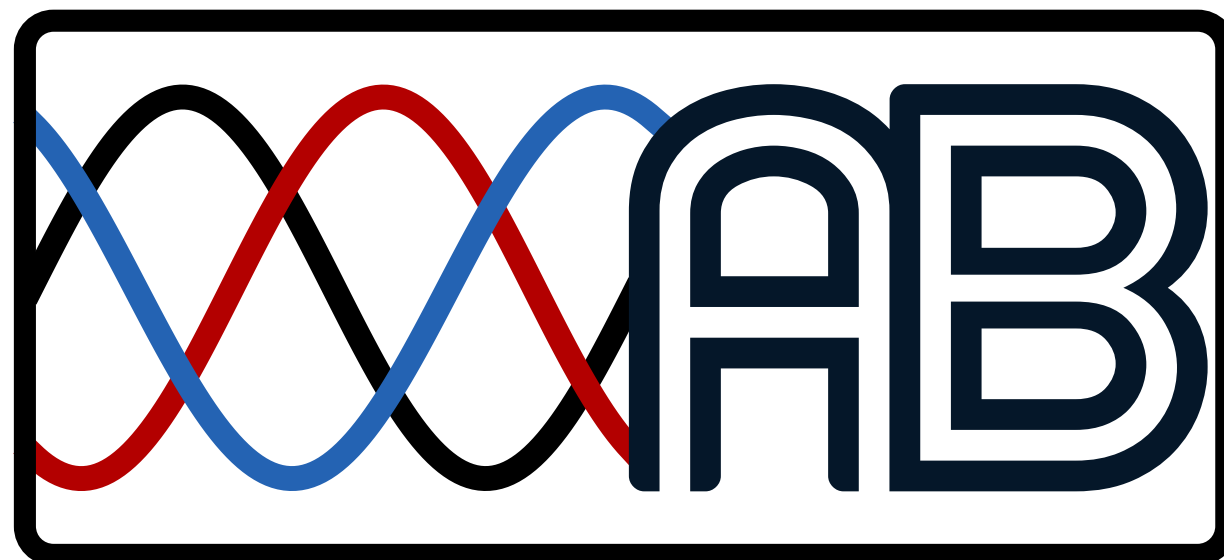
# EVENT ANALYSIS

Prevent future system failures and operational issues with our expert root cause analysis services.

Ensure the reliable performance of your protection systems with our expert relay misoperation diagnostics and resolution services.

- **Incident Identification**
- **Data Collection**
- **Event Timeline Reconstruction**
- **Root Cause Identification**
- **Solution Development**
- **Implementation and Monitoring**
- **Documentation and Reporting**



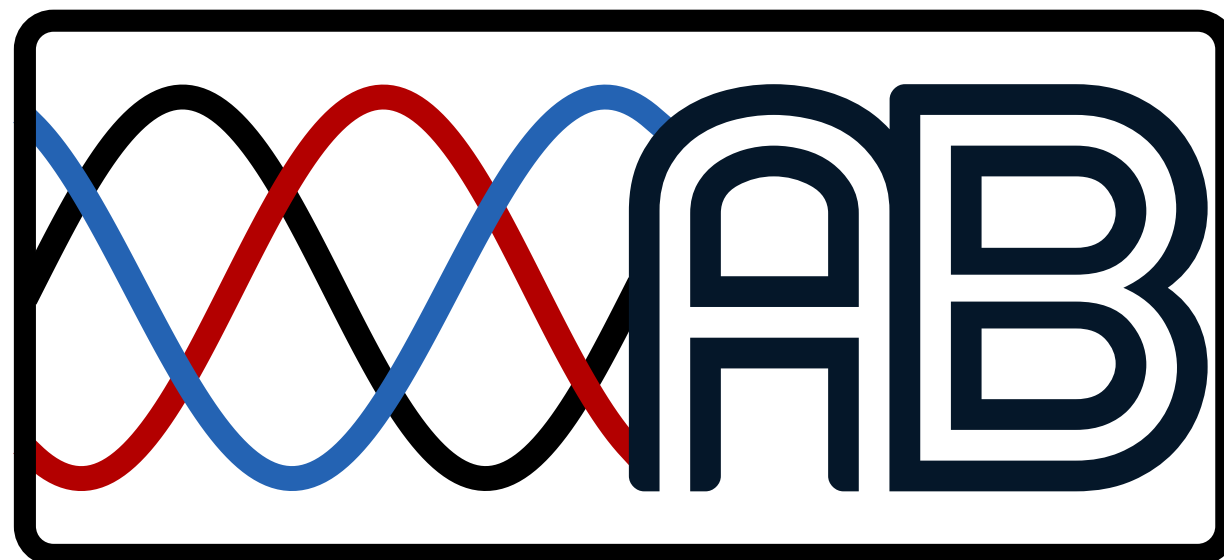


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# TESTING AND COMMISSIONING

Prevent costly system failures with our expert relay testing, covering all major microprocessor-based (SEL, GE, ABB, Siemens) and electromechanical relays. We use industry-leading relay test sets including Omicron CMC Series, Doble F-Series, Manta MTS Series and ISA T&R Test Equipment.

- **Custom Test Plans**
- **Pre-Test Inspections and Equipment Checks**
- **Factory (FAT) and Site (SAT) Acceptance Testing**
- **Relay Calibration and Testing**
- **End-to-End Line Testing**
- **Secondary Injection Testing**
- **Substation Control Circuit Testing**
- **Relay Settings Review and Logic Validation**
- **RTU and Communication Processor Testing**

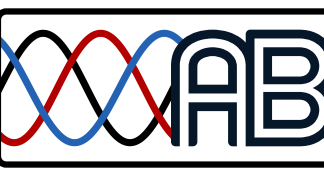


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# SITE/FACTORY ACCEPTANCE TEST

Minimize your risk of system failures with our FAT/SAT services, ensuring your protection and control systems meet all requirements before and after installation.

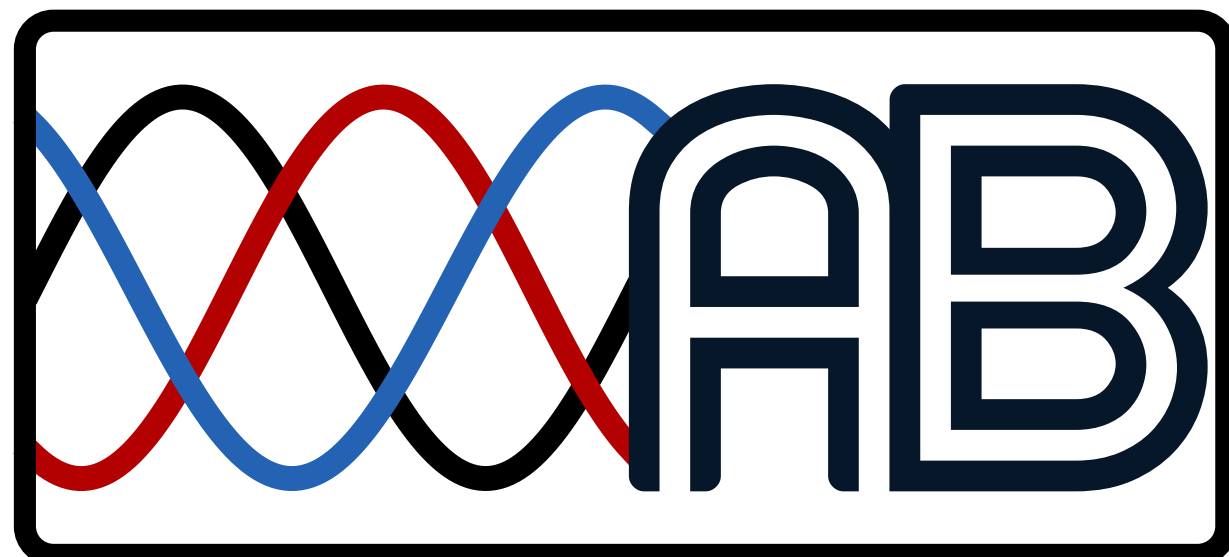
- **Planning and Scheduling**
- **Scope Definition and Test Criteria Development**
- **Test Plans and Procedures Development**
- **Identifying Roles and Responsibilities**
- **Execution and Monitoring**
- **Documentation and Reporting**
- **Vendor and Contractor Coordination**
- **Test Tools and Equipment Provision**
- **Quality Assurance and Compliance Verification**



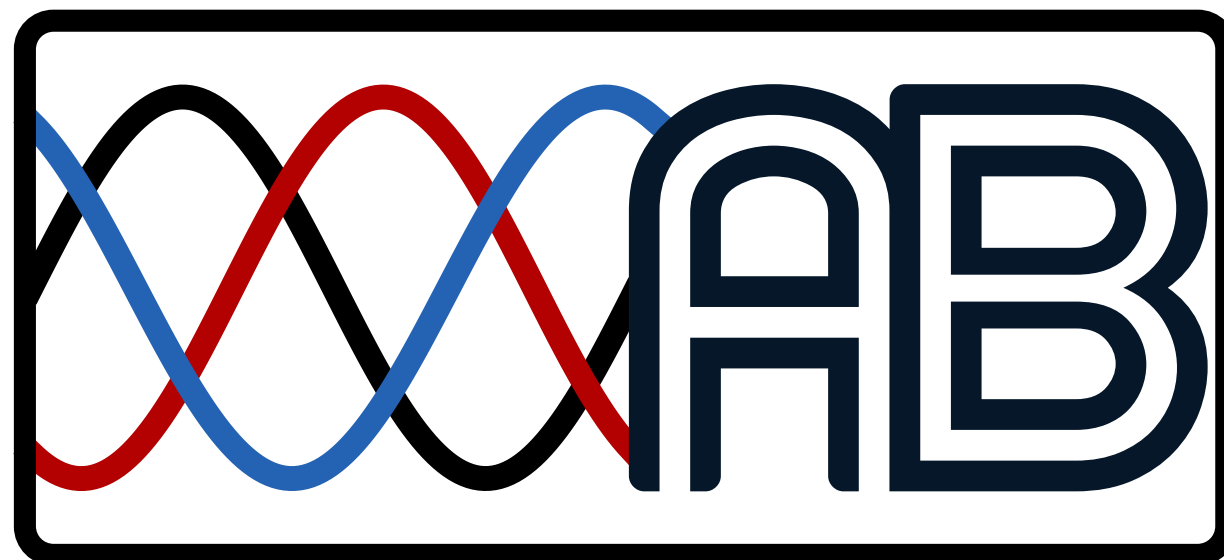
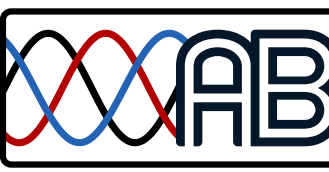
# UTILITY INTERCONNECTION

Benefit from our expert technical support for transmission and distribution interconnection, guaranteeing compliance for your generation and load facilities.

- **Co-generation and embedded generation plants**
- **Industrial Facilities**
- **Data Centers**
- **Wind Farms**
- **Solar Farms**



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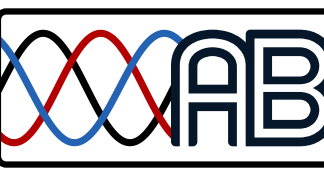


ENGINEERING • DESIGN • SERVICES

# DATA CENTERS

Maximize your data center uptime and reliability with our expert relay settings and commissioning services, optimizing your electrical power distribution system.

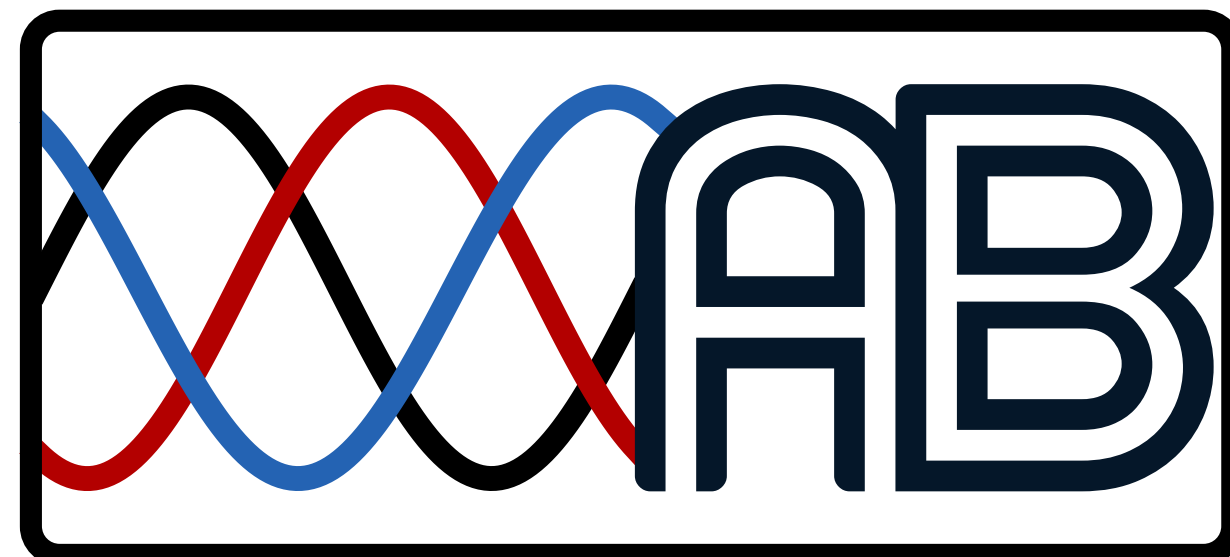
- **Utility Interconnection Support**
- **Design and Drafting**
- **Substation Protection and Control**
- **Generator Protection and Control**
- **Medium/Low Voltage Power Distribution**
- **Automatic Transfer Switch (ATS)**
- **Uninterruptible Power Supplies (UPS)**
- **Distribution Switchboard**
- **Power Distribution Units (PDUs)**



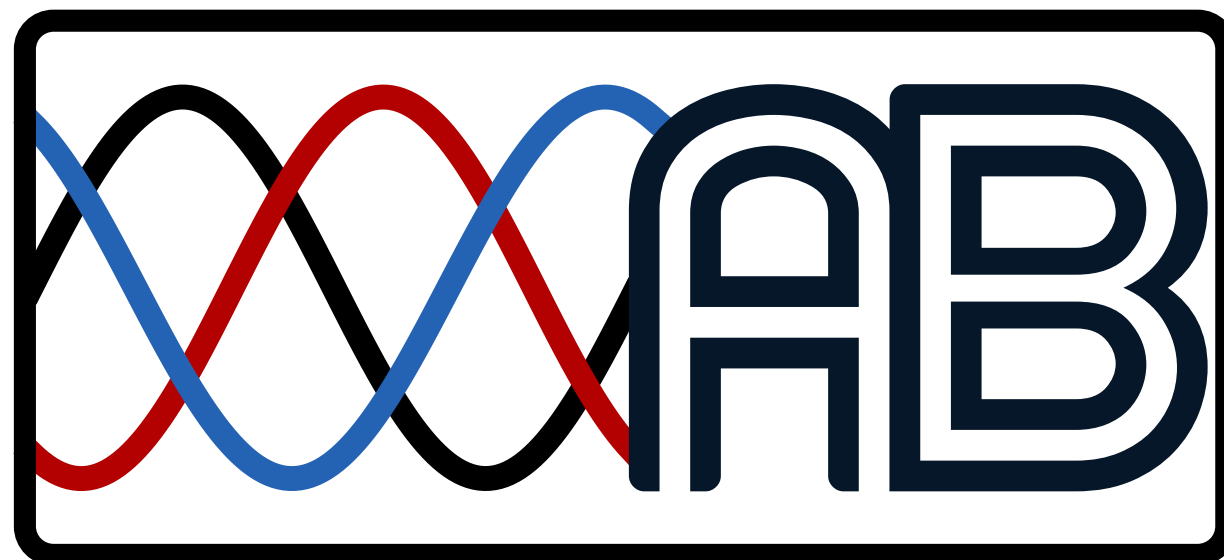
# STANDARD TEMPLATE DEVELOPMENT

Reduce errors and improve efficiency with our standardized templates for design, drafting, calculations, and relay settings.

- **Consistency and Accuracy**
- **Cost Efficiency and Savings**
- **Faster Project Turnaround**
- **Enhanced Team Collaboration**
- **Improved Quality Control and Assurance**
- **Easy Customization and Adaptability**
- **Comprehensive Documentation and Reporting**



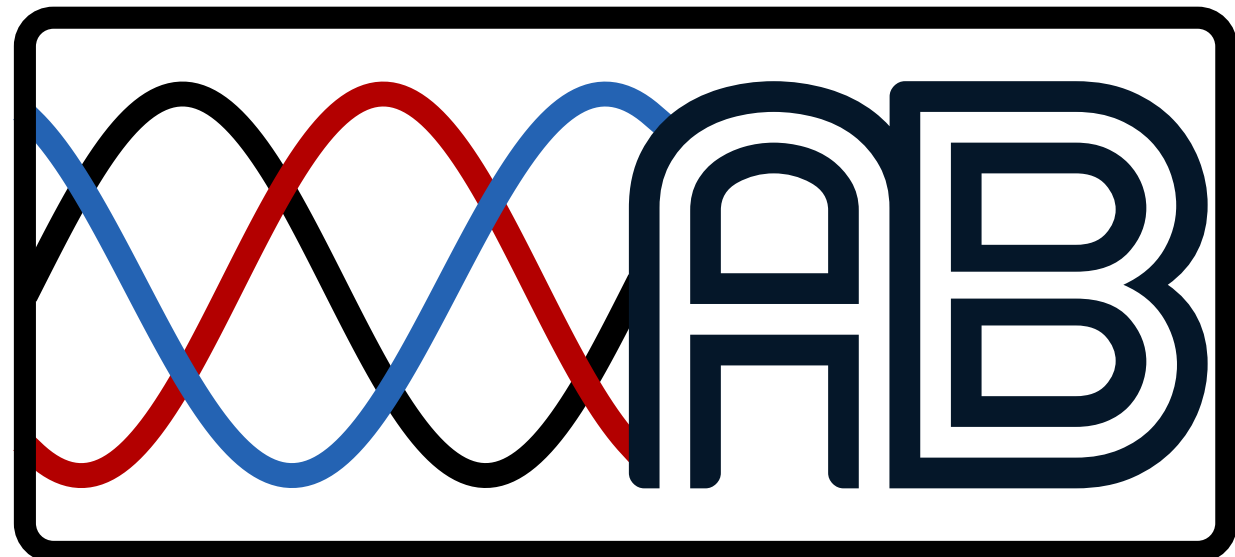
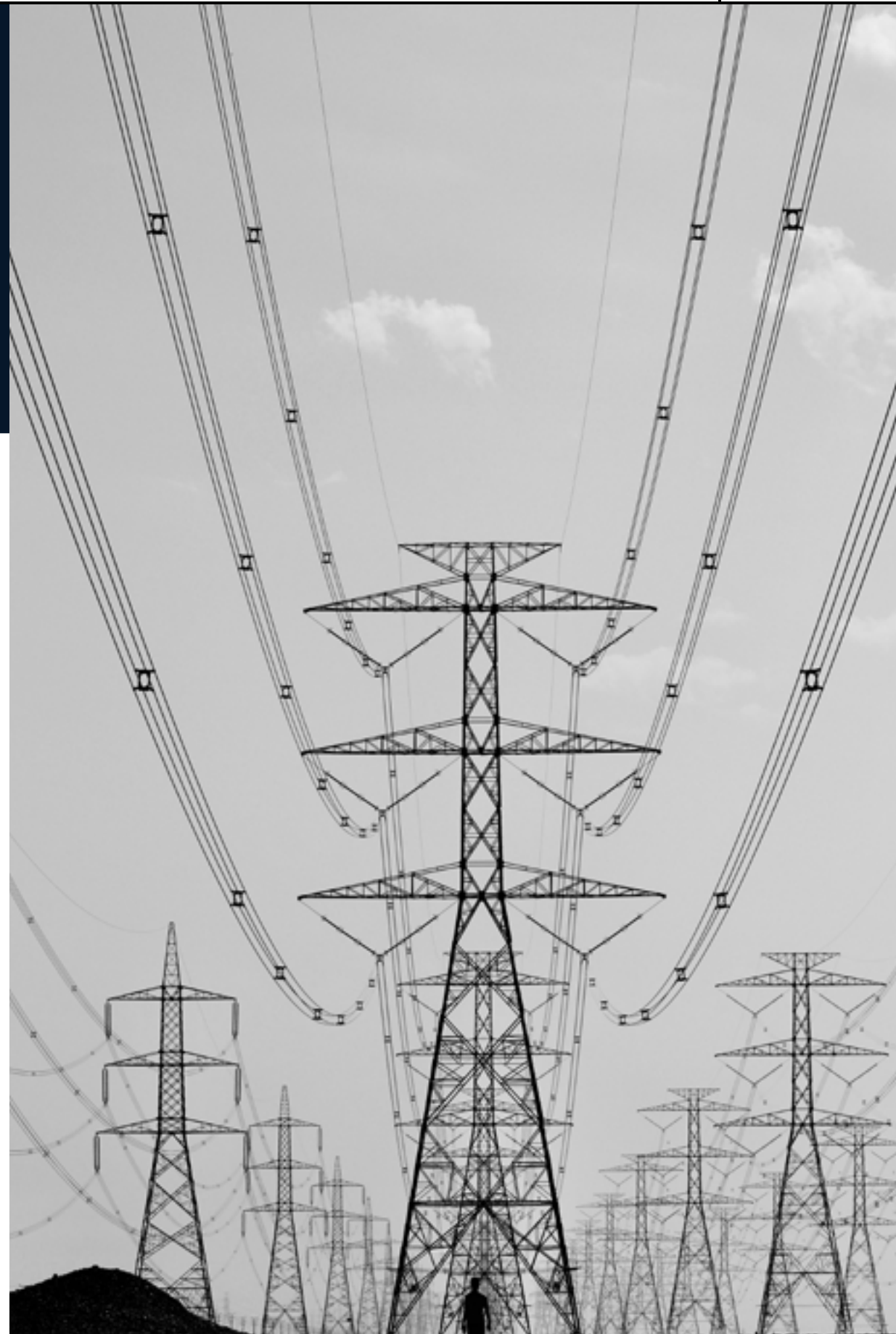
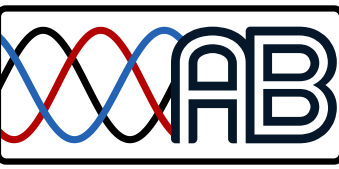
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# QUALITY CONTROL

Minimize your project risks with our thorough quality assurance process. We meticulously review design documents, relay settings, and test results to ensure the highest standards are met, preventing costly errors and delays.

- **Thorough Review of Design Documents**
- **Verification of Compliance**
- **Evaluation of Relay Settings and Logic**
- **Inspection of System Integration**
- **Review of Test Results and Reports**
- **Validation of Equipment and Materials**
- **Identification and Resolution of Discrepancies**
- **Documentation of Quality Control Checks**
- **Continuous Improvement**

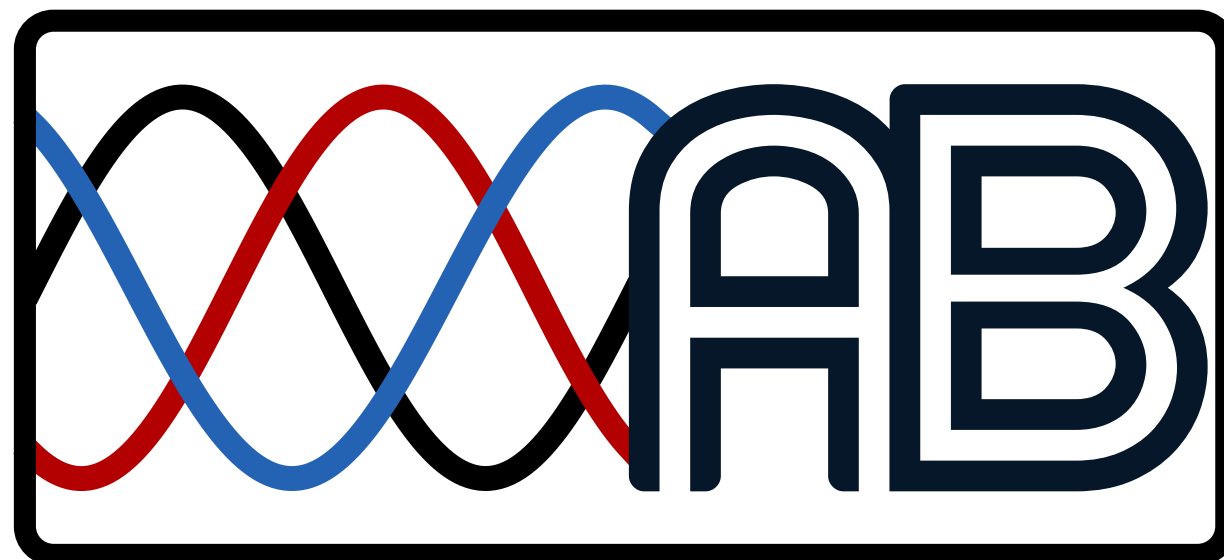


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# NERC COMPLIANCE

Benefit from reliable, compliant power systems with our Subject Matter Experts (SMEs) support, ensuring your system meets the North American Electric Reliability Corporation (NERC) standards.

- **NERC Compliance Audits and Readiness Assessments**
- **NERC Reliability Standard Gap Analysis**
- **Documentation and Evidence Preparation**
- **Event Analysis and Reporting Requirement**
- **NERC Compliance Reporting and Submittals**
- **Mock Audits and Pre-Audit Preparation**
- **NERC Standards Interpretation and Advisory Services**
- **Cybersecurity Risk Management for NERC CIP**



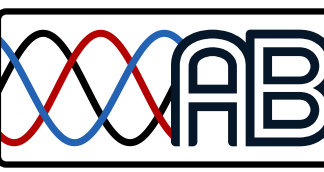
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# PROJECT MANAGEMENT

Benefit from on-time, within-budget, and high-quality project delivery with our experienced project managers.

- **Project Planning and Scheduling**
- **Project Coordination**
- **Budgeting and Cost Management**
- **Risk Management**
- **Quality Management**
- **Resource Management**
- **Procurement Management**
- **Project Monitoring and Reporting**
- **Project Closure and Evaluation**

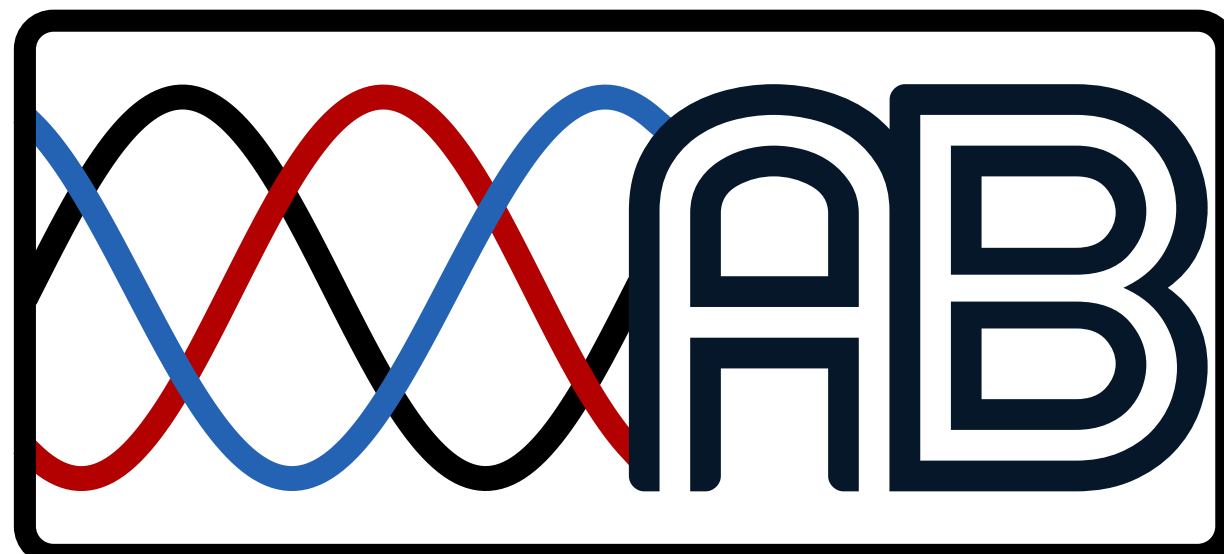




# OWNER'S ENGINEER SERVICES

Benefit from expert engineering support throughout your project lifecycle, from planning to commissioning and beyond.

- **Feasibility and Pre-Project Services**
- **Project Planning and Development**
- **Procurement Support**
- **Detailed Design Review**
- **Construction Phase Services**
- **Testing, Commissioning, and Handover**
- **Operational Support Services**
- **Regulatory and Compliance Services**
- **Post-Project Evaluation**

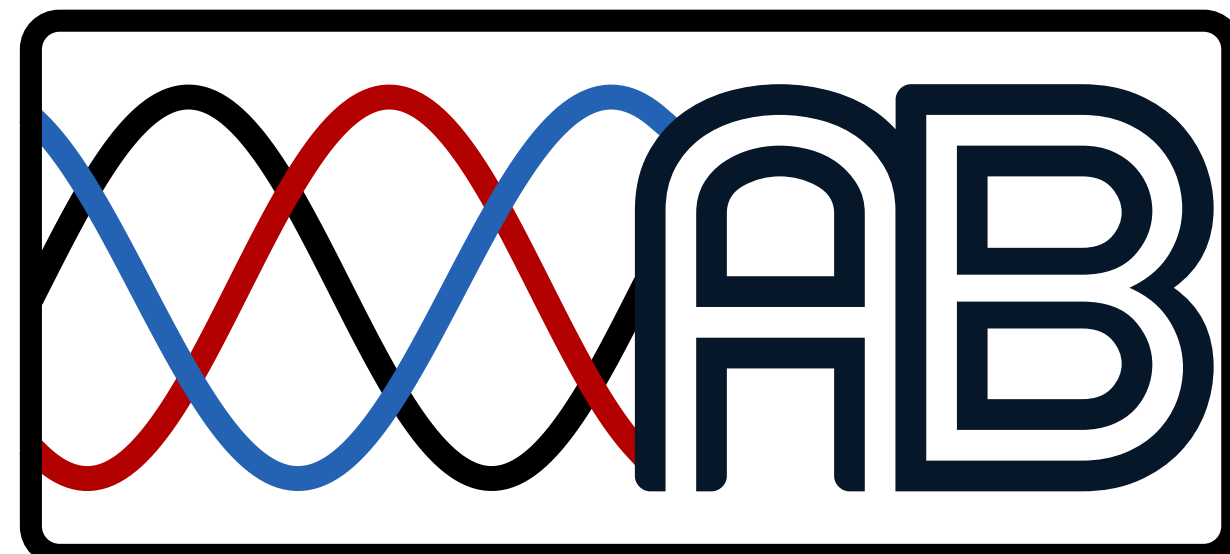


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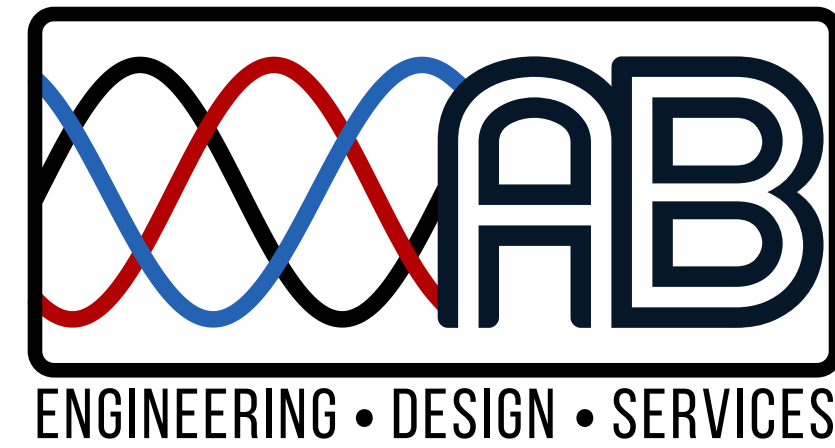
# MATHCAD CONVERSION

Modernize your engineering calculations and documentation by converting your legacy Mathcad 15 files to Mathcad Prime.

- **Mathcad 15 to Prime Conversion**
- **Comprehensive Worksheet Review**
- **Unit System Review and Verification**
- **Review and Verification of Plots and Charts**
- **Recalculation and Validation of Results**
- **Testing and Debugging for Accuracy**
- **Training and Ongoing Support**



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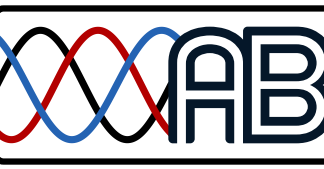


# ABOUT US

EXPERT POWER SYSTEM ENGINEERING SERVICES

# AMP+BLOC

**Our name reflects our mission: to provide services that form the building blocks of safe and reliable power systems.**



## OUR MISSION

Our mission is to provide protection and control system engineering services that amplify the safety, reliability, and resiliency of electrical power systems.

## OUR VISION

Our vision is to be our customers' trusted advisor and the leading provider of protection and control system engineering, design, and field services.

## OUR VALUES

Our values are the foundation of everything we do.

**Excellence • Partnership • Innovation • Community**