

# ATC Consulting Services

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ATC Consulting Services is wholly owned by Associated Training Corporation.

Check out our website at [www.atc-trng.com](http://www.atc-trng.com)

Call us with your design and maintenance questions and issues!



## Providing Consulting and Analytical Services to Utility and Industrial Clients

### Why are we in business?

ATC Consulting Services exists because customers requested us to provide consulting services in addition to training. Our consultants have all been design, operation, maintenance engineers and managers making them intimately aware of system problems that prohibit a design being utilized to its maximum potential. Clients recognized this expertise in our consultants and ATC Consulting now focuses on streamlining existing systems to achieve maximum savings and benefit from any design. ATC Consulting has capitalized on the extensive operation and maintenance background of our engineers and safety professionals who specialize

in problem solving. This unique blend of professionals gives the customer a truly professional service specializing in making a design or system operate at its maximum ability. The client is now assured that their trained, qualified workers have a system that matches their abilities.

ATC Consulting engineers have conducted studies on new and existing electrical systems for decades. This experience enables our clients to build or expand their electrical systems and helps them

achieve improved efficiency, reliability, and safety in operation.

ATC Consultants specialize in problem solving and commissioning projects. Startup issues disappear when you have knowledgeable specialists who have experienced startup and commissioning problems. Let our field engineers save you time and money by solving problems before they ruin a good job. Let us review construction and design prints before they become costly errors that break the bank.

### Our Capabilities

**Conceptual Design:** Conceptual design review requires complete analyses of specific problems, investigation and determination of required parameters, calculations and presentation of alternative solutions. ATC Consulting Services design process identifies multiple design concepts only to the point that they can be evaluated objectively. Once a design model is determined a detailed engineering design is used for system modeling.

**Feasibility Studies:** Feasibility studies establish a workable, economical, and reliable configuration or reconfiguration of an electrical power system. Other factors considered in feasibility studies include worker safety, system reliability, ease of maintenance and operation, minimum power loss, interchangeability of equipment, and ability to serve increased loads.

## Our Capabilities continued...

**System Modeling:** Using one-line diagrams and existing data a reliable system model is developed. Basic system models should be sufficiently flexible to allow its use in various system studies. Field verification of data is used to verify data used in modeling and is formatted for input to appropriate digital models and programs.

**Short Circuit Analysis:** Fault current studies establish the maximum available energy at any given point on an electrical system. Precursor to coordination, equipment rating verification and arc flash studies this study establishes the functionality and reliability of any electrical system. To achieve adequate system reliability and protection time-current curves and equipment damage curves are reviewed and compared. Short circuit analysis and review are based on guidelines established in IEEE, ANSI, ASTM and IEC standards.

**Arc Flash:** With the advent of larger electrical systems the arc/flash hazard now requires review. Commonly referred to as "Arc Flash Hazard Analysis" AFHA addresses the probability of burns to workers during fault conditions. AFHA analyses are based on OSHA requirements using ArcPro®, NFPA70E, and IEEE 1584 standards as a basis for calculations. Effective January 2009 the NESC requires electric supply organizations to address arc/flash hazards for workers engaged in GT&D work

**Load Analysis:** Review of nominal and emergency equipment loading to prevent operational problems and/or premature failure resulting from thermal overloads. In large systems this may include load flow analysis. Load shedding feasibility and transient issues may also be included. Cable and conductor loading are natural by products of Load Analysis studies.

**Power Quality:** Power Quality addresses voltage dips, flicker, harmonics and transient switching issues. Motor starts, grounding issues and harmonics all contribute to "Dirty Power". Power Factor correction and capacitor applications are also addressed.

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**Helping You Solve  
Engineering Problems.**

