

**B.E.S.T.**  
**(Bulk Electrical System Technology)**  
**Energy Services & Training**

## Course Outline

### **Background**

Equipped with knowledge and experience gained from working in the various electrical trades, and rigorous training programs specifically applied to system operating, System Operators are among the most specialized professionals in the electrical field.

This course, designed for System Operators working on the Bulk Electrical System, builds on the foundation of knowledge gained from field operations and operator training programs. It provides an overview of electrical theory, fundamental to the operation of a bulk electrical system including balancing, transmission and interconnected system operations. It is highly participative, using a variety of methods including instruction, discussion, practice and interactive lab work.

### Day One

#### Learning Topics

- Ohms Law, Kirchhoff's Law, Watts law
- Real Power(single and three phase power)
- Reactive Power

### Day Two

#### Learning Topics

- Synchronous machines(generators, synchronous condensers)
- Automatic controls (Governors, AVR's, OLTC's, JLC's, JVC's)
- AGC and interchange

### Day Three

#### Learning Topics

- Synchronizing and islands
- HVDC (asynchronous resources and ties)
- Interconnected Operations