



# ELECTRICAL SYSTEM PLANNING

*DESIGNED TO HELP YOUR COMMUNITY SUCCEED*

**“Enhancing economic development through infrastructure”**

**Why you should choose SPECTRUM for ...**

## • **Substation Maintenance**

Municipalities, universities, rural electric cooperatives, and industries that own and operate their own utilities know that maintenance and repair are vital to providing reliable, low-cost power to their customers. Spectrum is here to assist in the maintenance and repair of any substation equipment.

Our complete substation maintenance and repair services include...

- Overall electric power substation inspection
- Thorough cleaning of each device
- Troubleshooting of any equipment operation
- Mechanical and electrical testing of all substation apparatus
- Troubleshooting of any substation electrical system
- Design modifications required for equipment replacement
- Electrical wiring replacement
- Testing of any substation relay for proper operation
- Verification of protective device coordination
- Complete relay system upgrades
- Full testing and commissioning
- Complete test reporting

The following is a list of our current test equipment utilized during substation maintenance and repair:

- Megger PF Tester, Capacitance & D.F. Bridge
- General Radio Megohmmeter
- Biddle Instruments Lo Resistance Ohmmeter, DLRO
- Megger Ground Test Set, Earth Tester
- AEMC Instruments Ground Tester

- Schweitzer Electronic Time Travel Tester
- Doble Relay Test Set
- Megger Transformer Turn-ratio Test Set
- EIL Instruments Protective Relay Test Set

Any maintenance and/or repair project generally follows a process which includes our...

- Meeting with the utility owner to discuss what maintenance or repair is needed
- Providing a written document of work
- Scheduling outage times
- Cleaning, maintenance and testing on all equipment
- Discussing repairs with owner, if damage is found
- Repairing any damaged equipment, if possible
- Providing a list of parts required to repair damaged equipment that cannot be repaired during the outage
- Documenting all cleaning, maintenance, testing and repair results on test record sheets
- Turning equipment back to owner
- Providing complete test report with all documents including a written report indicating the health of each piece of substation equipment.

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