



## Transmission/Distribution Data Verification and GIS Mapping

PowerComm Engineering offers comprehensive verification of transmission and distribution circuit data. Verification can include cross checking of:

- Single line diagrams
- Plan and profile drawings
- Geographic information systems
- Ratings databases
- Power flow and short circuit models.

Additionally, PowerComm provides field reviews of equipment type, location and configuration to identify discrepancies between geographic information system (GIS) data and actual field conditions.

### Circuit Data Verification

Differing update frequencies and procedures for data maintained on various platforms can result in data inconsistencies. These inconsistencies can take the form of redundancies, omissions and conflicting circuit data and lead to unnecessary effort or potential errors in the planning, engineering and operation of the system.

PowerComm performs a “side-by-side” comparison of data to ensure consistency across all platforms. The comparison can include look up of equipment ratings to ensure “weak links” are properly represented as well as calculation of impedances to ensure power flow and short circuit models are within normal tolerances.

Discrepancies between different platforms are logged and resolved by examining original design drawings or field inspection to determine actual system components and configuration. A summary of the discrepancies and proposed resolutions is provided in concise report form for documentation purposes.

PowerComm can implement the changes or provide the summary report for customer implementation.

### GIS Data Validation

Accurate representation of equipment and configuration in a GIS is critical to ensuring the full benefits of a GIS can be realized. PowerComm provides detailed GIS data verification for transmission, sub-transmission and distribution circuits, including field survey of overhead lines and pad mounted equipment. Field reviews are performed by experienced personnel who compare the GIS representation to actual field installations.

PowerComm provides data validation through visual inspection for overhead lines including:

- Circuit Phasing
- Pole Location
- Transformer Sizing and Phasing
- Capacitor Bank Sizing and Phasing
- Switch Location
- Protective Equipment Locations

Pad-mounted equipment location, type and sizing are visually verified. Additionally, equipment at normally open points is opened to verify system configuration. Condition/configuration reports are provided for each piece of pad-mounted equipment, including “as found” and “as left” documentation.

Discrepancies with the GIS representation are logged and resolved, when possible. PowerComm can implement the changes in the GIS or provide summary drawings “mark-ups” for later customer GIS updates.

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