Powertech’s Generation Services group can support your preventative maintenance and asset management strategies to help extend the life of your generators and strategically allocate and optimize your reinvestment budgets.

Generator condition assessment is an essential requirement of effective asset management programs, which are conducted to reduce forced outages due to unexpected failures or to identify causes of degraded performance. Accurate condition assessments of generators help utilities to invest their capital budgets wisely and to establish maintenance programs that address the most at-risk components of the machine.

Many failure mechanisms can be detected early on by targeted visual inspections; hence, visual inspection is a key part of generator condition assessment studies. Commonly inspected components include stator and rotor winding and insulation systems, cores and frames, brushgear, and sliprings. Our generator specialists can provide a detailed visual inspection, supplemented with electrical tests to achieve a comprehensive condition assessment of your generators.

Powertech is experienced in a variety of diagnostic tests to evaluate generator condition. We provide a customized package of tests for each machine, based on the operation and maintenance history, design, and needs of the specific generator.

Diagnostic tests and services include:
- Visual inspection
- Off-line and on-line partial discharge (PD) test
- Visible corona on end-wdings
- Corona (TVA) probe test
- Dissipation factor and tip-up test
- DC ramp and step test
- Insulation resistance and polarization index
- AC and DC hipot
- Winding resistance
- Stator core evaluation by EL-CID
- Stator wedge tightness test
- Pole drop test
- Failure/post-mortem analysis
- Non-destructive testing/examination (NDT/NDE)
- Stress analysis and materials evaluation
- Consulting on equipment health rating (EHR)

Generation Services
The Powertech Generation Services group is focused on large power generators, providing condition assessment and specialized diagnostic tests, performance and acceptance testing of stator bars and coils for OEMs and asset owners, and testing and modelling of generator performance for NERC and WECC compliance.

FOR MORE INFORMATION CONTACT:
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