

## Switchyard & Substation Predictive Maintenance (PdM)

As utilities face the demand to supply more and more electricity while complying with local and NRC regulations, equipment reliability becomes a paramount concern. The **opX** Team analyzes the current condition of your switchyard and substation equipment, and identifies both major and critical groups. By evaluating the current maintenance (PM and PdM) tasks being performed, the tasks to improve performance and reliability can be integrated into the current program.



**opX** uses the most advanced technologies and process applications to assist your utility in increasing the reliability of the equipment and reviewing the effectiveness of the integrated maintenance work control. This includes the planning and scheduling of the maintenance of the switchyard and the directly related substation equipment.

### Benefits


- Identification of Major and Critical Equipment
- Optimization of Equipment Reliability
- Utilization of Resources/Staff
- Ensuring Sites Proper Response to SOERs



Predictive Maintenance means that maintenance is performed on troublesome equipment just before it fails. Therefore, PdM relies heavily on Condition Monitoring (CM) of the equipment and systems. Included in the Monitoring processes are the application of the available technologies and how they're used. The basic technologies are vibration levels and signature analysis, oil analysis (spectroscopy), infrared thermography, and acoustics.

Another important factor to consider when taking data and analyzing the results to determine equipment health is not only the level of the critical parameters, but also how these parameters are changing. This includes noting the value levels and the rates of change, and graphically trending this information. It is then possible to identify 'Alert' levels and 'Alarm' levels, and the frequency of testing, which should all be established based on the equipment condition and previous experience. This is where case histories and documentation play a very significant role.

Additional Information – for your evaluation of our effective Switchyard and Substation PdM Program more details can be provided on request. In addition, opX engineers are willing to visit your facility to present and discuss further aspects of the Program. Please contact us at our website, or you can call/fax us directly.

 Consulting provides a unique combination of operational, organizational and management expertise to deliver improved business management processes, organizational assessments and readiness, operational excellence and future-state performance through the application of industry best practices and technologies. Our firm's services build upon state-of-the-art industry recognized management theories and methods, business processes and technologies, research and developments of leading organizations such as the Project Management Institute, the Balanced Score Card Institute.

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