Optimize Planning for FCI Placement to Improve Outage Restoration Process

Overview

Landis+Gyr's Advanced Grid Analytics Fault Circuit Indicator (FCI) Optimization application provides rapid, accurate and cost-effective determination of FCI investments in any given distribution network for improved network reliability.

The application applies algorithms developed and field tested by utility engineers for determining the optimum number and placement of FCIs in a feeder network for required improvement in CAIDI, with maximum cost-benefit. Planning time is significantly reduced, process efficiency is increased and results are more accurate. Detailed financial analysis for FCI quantity and location optimization, includes NPV, IRR, MIRR, payback calculations and cash flow analysis. The utility can evaluate alternative scenarios by adjusting the fault related parameters or FCI related costs.

When coupled with Landis+Gyr’s S610 RF Line Sensor, the utility has an end-to-end solution for planning and placement of sensors to detect faults and improve grid resiliency.

The browser-based, dynamic user interface offers exportable reports and geospatial visualization of full distribution connectivity model and grid assets by utilizing Google Maps™ mapping service. The database and analytical capabilities allow interactive, color-coded, geographic display of proposed FCI locations and associated cost/benefit financial calculations.

FEATURES & BENEFITS:
Why Landis+Gyr makes a difference.

- Identify optimal number and location of FCIs for maximum reliability improvement
- Accurate and very quick feeder analysis compared to manual effort
- Increase customer satisfaction due to reduction in CAIDI
- Optimize CapEx and OpEx spending for FCI procurement and deployment
Advanced Grid Analytics: Fault Circuit Indicator (FCI) Optimization

Sample Screenshot: FCI Optimization Application – cost/benefit analysis

Platform
The grid analytics solution consists of a powerful enterprise platform and modular, web-based, user friendly applications. The platform enables utilities to leverage data integration, visualization and advanced algorithms for multiple analyses and benefits. Given the modular nature of the applications, as needs change or grow, the same platform and data can be utilized, leveraging economies of scale and eliminating data silos and the need to manage multiple vendor systems.

People
Landis+Gyr’s professional services team offers a unique combination of power system engineers, subject matter experts, software and technology architects and integration specialists. By leveraging Landis+Gyr’s proven and best in class implementation methodology and standard-based adapters, utilities can start realizing benefits quickly.

Pathway
Landis+Gyr provides various deployment options that are cost-effective, robust, scalable and meet service levels now and in the future. The solution can either be deployed at the utility’s data-center or hosted at Landis+Gyr’s cloud-based, secure and SSAE-16 compliant Network Operations Center.

Specifications

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<tr>
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<th>Windows or Linux</th>
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<tbody>
<tr>
<td>Supported Operating Systems</td>
<td>Recommended Memory</td>
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<tr>
<td>Required Third Party Licensing</td>
<td>Google Maps API Corporate License and Optional Mongo DB Enterprise License</td>
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<tr>
<td>Interface Standards Supported</td>
<td>CIM, MultiSpeak, DNP3/ICCP, GIS Shape files and other file based formats</td>
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<td>Pre-built Adapters</td>
<td>Landis+Gyr Command Center, USC and MDMS; CYME, ESRI GIS</td>
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<tr>
<td>Data Types Required</td>
<td>Connectivity model, Historical CAIDI and Faults information (if available)</td>
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