



Reliability Planner



*Optimized Planning for Reliability Improvements,
Reduce Outages and Operational Costs*

Overview

Utilities are facing increased pressure to improve reliability while reducing operating costs. It has become imperative for utilities to have fact-based, cost-effective rationale to justify grid performance and reliability programs.

Landis+Gyr's Advanced Grid Analytics Reliability Planner application provides optimized planning for reliability improvement initiatives by analyzing historical outage data to recommend the most effective reliability improvements based on budget and metric goal attainment. The application displays the entire distribution network geospatially, allowing utilities to visualize and analyze outages.

Reliability Planner leverages advanced algorithms to quickly and accurately calculate key reliability metrics such as SAIDI, SAIFI, CAIDI and CEMI to determine the utility's worst performing substations, feeders and jurisdictions. The application then improves iterative planning efforts by creating a variation of optimized plans for improving grid performance, evaluating each unique financial and performance goal.

Reliability Planner provides recommendations for the ideal quantity and location of distribution automation devices, allowing utilities to optimize a combination of preventative solutions to maximize reliability benefits,

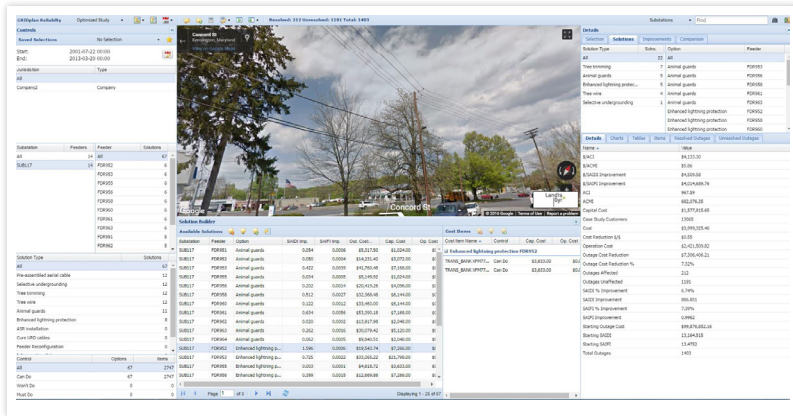
while keeping operational and capital costs within definable limits. These include:

- Undergrounding
- Asset replacement
- Animal guards
- Vegetation management
- Tree wires
- Lightning arrestors
- Automated sectionalizers and switches

This analysis allows utilities to optimize a combination of preventative solutions to maximize reliability benefits while keeping operational and capital costs within definable limits.

The browser-based, dynamic user interface offers exportable reports and geospatial visualization of the 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 all individual system components. The fully interactive, drill-down functionality displays outage information, solutions, and the cost-benefit and KPI improvements for individual substations and feeders.

Advanced Grid Analytics: Reliability Planner



Sample Screenshot: Reliability Planner Application

BENEFITS:

- Increased customer satisfaction and regulatory compliance
- Reduce outages, customer complaints, and unplanned restoration efforts
- Improve SAIDI, CAIDI, SAIFI and CEMI
- Improved reliability planning to avoid momentary interruptions and sustained outages, improving power quality
- Optimize asset replacement and maintenance spending, providing more reliability value for available budget, or to justify existing reliability budgets
- Complete cost-benefit analysis for multiple solutions based on utility-specific goals
- Analysis of past outages and mitigation options, allowing operators to better anticipate and respond to system disturbances
- Determine the ideal quantity and location for reliability improvements and distribution automation devices
- Optimally place switches and automated switches along a feeder and import switch placement results into reliability solution optimization to compare cost-benefits of ARS schemes with other reliability solutions

Platform

The Reliability Planner application utilizes Landis+Gyr's Advanced Grid Analytics platform that enables utilities to leverage data integration, visualization, and advanced algorithms for multiple analysis and business cases. With adaptive, modular functionality, the platform and data can be utilized to support evolving utility needs, leveraging economies of scale and eliminating data silos and the need to manage multiple vendor systems.

Each application can be deployed individually or as part of an enterprise solution. Flexible deployment options ensure that the benefits of the Advanced Grid Analytics platform are quickly achievable and easily accessible for utilities of any size, by deploying the platform within the utility's own infrastructure, hosted in the cloud or delivered as a service offering.

FEATURES :

- Visualize historical outages utilizing geospatial and tabular layouts
- Advanced filtering based on jurisdiction, substation, feeder, outage type and others
- Calculate SAIDI, SAIFI, CEMI, indirect customer costs, and other KPIs at the feeder, substation and jurisdictional levels
- Identify worst-performing feeder, substations and jurisdictions
- Define Major Event Days (MEDs) based on jurisdictional criteria and utilize them in all visualizations and KPI calculations
- Identify various reliability solutions – costs and impact on reliability
- Manually select specific reliability solutions and perform cost-benefit analysis
- Optimize reliability solutions to meet specific reliability index target and determine associated minimum solution costs