



Revenue Protection



Accurately Identify, Manage and Prevent Energy Theft to Protect and Recover Revenues

Overview

Landis+Gyr's Advanced Grid Analytics platform harnesses meter data information from both advanced metering systems and other key IT and operational data stores (GIS, CIS, weather data) to help swiftly and accurately identify areas of potential revenue loss such as theft/tamper situations and other un-metered energy use. The solution utilizes proactive and predictive analysis of historical and current meter and sensor data to provide utilities with actionable information to reduce the time, effort, and operational costs typically associated with investigating energy theft.

Landis+Gyr Revenue Protection application provides utilities with a quickly deployable solution to help maximize their investments in advanced metering infrastructure and protects revenue that may otherwise be lost due to energy theft or malfunctioning meters.

Harnessing meter data information from one-way and two-way advanced metering systems and other key IT

and operational data stores (CIS and demographic information, weather data, networking model data), the solution transforms this data into actionable information with proactive and predictive analysis of historic and current meter and sensor data.

The application revenue protection functionality takes a meter-centric approach by comparing meter consumption data and events with historical consumption data and known theft/tamper patterns. This analysis provides visibility into suspicious meters and detects a number of usage and event patterns, helping utilities identify malfunctioning field assets, theft and ultimately identify lost revenue.

The application's energy diversion functionality provides the ability to look at a system-level view of the distribution grid—comparing meter consumption data with other grid sensors to identify areas of loss. The solution utilizes algorithms that leverage the network connectivity model of the grid in order to calculate total usage for all parts of the distribution grid network.

FEATURES & BENEFITS:

Why Landis+Gyr makes a difference.

- Automated process for identifying abnormal energy consumption and meter conditions, providing a prioritized list of leads for investigation
- Adaptable algorithms and analysis to meet unique utility business cases
- Historical and present meter data analysis to accurately identify the times and duration of power theft, in system-wide energy diversion and meter-centric revenue protection views
- Optimized field crew utilization by saving significant time, effort and operational costs
- Rapid and accurate identification of transformer/ feeder areas where theft is occurring across the distribution grid
- Demonstrated equitable and objective response to energy diversion across all customer classes and locations
- Comprehensive view of all potential areas of revenue loss down to a meter or premise level
- Visual geospatial display of distribution network and locations of potential revenue loss

Key Solution Functionality

- Visual replication and display of distribution network and the areas of potential theft and/or excessive line loss.
- Customizable event sequence filters and queries to help identify new use cases and/or repeated instances of specific use cases.
- Overview dashboard of revenue protection and energy diversion metrics.
- Ability to quickly switch between the system-wide view of Energy Diversion and the meter-centric view of Revenue Protection.
- Web browser-based, rich, dynamic, interactive User Interface, with exportable reports.
- Full interactive drill-down functionality, with detailed data retrieval and display for individual meters.
- Standard Integration to third party AML and MDMs systems with GRIDlinks.
- Pre-integration with Landis+Gyr Gridstream® MDMS, Command Center and Utilinet.
- Solutions Center – making integration and implementation quicker and easier for the utility.
- Full integration of Google Maps® with network model, database, and analytic capabilities, allowing interactive, color-coded, detailed geographic display of all individual system components.

Pre-Configured and Customizable Algorithms

Landis+Gyr's Revenue Protection and Energy Diversion Application is designed to address multiple utility business cases. Pre-configured analytic capabilities to identify:

- **Stopped Meters** – Meters that are no longer showing consumption as expected
- **Partially Bypassed Meters** – Meters that are showing less than expected consumption
- **Spiking Meters** – Meters with unexpected jumps in consumption
- **Missing LP Intervals** – Meters with a higher than expected percentage of missing intervals
- **Inactive Meter Consumption** – Meters showing consumption when inactive
- **Meter Change-Outs** – Meters with a significant change in consumption following change-out

Additionally, event sequence filters can be designed to increase the accuracy of finding non-performing assets.

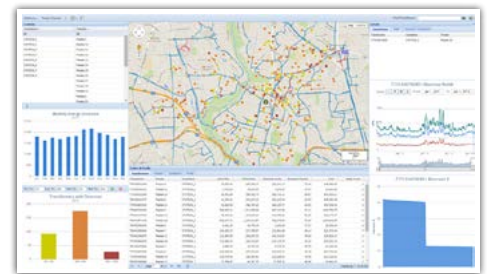
Examples include:

- Tamper event followed by a slowing meter
- Frequent outages followed by a stopped meter
- Isolated outage followed by a slowing meter
- Meter disconnected due to non-pay, outage event, load-side voltage

Platform

The Revenue Protection 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.



Energy Diversion Screenshot