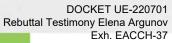
Gridstream Solution

Grestream MDUS Software



Landis |Gyr⁺ manage energy better



Gridstream MDUS

Plug-in to better energy management



Gridstream MDUS

Gridstream MDUS (Meter Data Unification and Synchronisation) is Landis+Gyr's unique solution that enables end-to-end-business processes by connecting smart metering landscapes to SAP® for Utilities. Gridstream MDUS integrates your Advanced Metering Infrastructure with your daily processes like billing, contract management and customer service. It allows utilities to get the most out of their smart metering investment.

Landis+Gyr is the premier smart metering solution provider. Together with SAP we have developed a solution that acts as the bridge between smart metering and the SAP for Utilities systems. The result, Gridstream MDUS, integrates the systems and combines the expertise and experience of the world leaders in smart metering technology and business software.

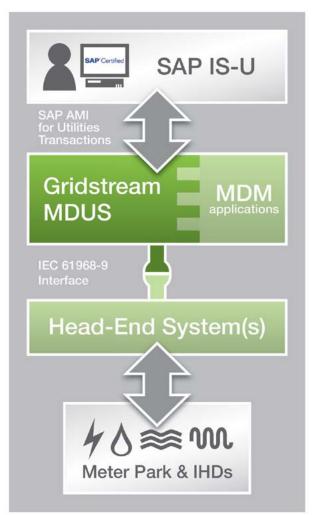
Optimizing business processes

Gridstream MDUS provides a platform for smart metering functionality in the SAP system, as well as a data repository for all smart metering data. With its bi-directional gateway from SAP for Utilities to a single smart meter and back, MDUS realizes smart metering benefits in daily business processes. Actual consumption information is available for billing purposes and customer service, either scheduled or ondemand. In contract change situations and removals the meter can be read and power connected or disconnected easily by customer service personnel. Also, in complaint and troubleshooting situations, the access to near real time metering data is readily available – directly from SAP for Utilities.

The end of complexity

Gridstream MDUS is integrated with SAP for Utilities, so there's no need to use a new system in order to realize the benefits of smart metering. Daily operations are smooth and efficient, as smart metering operations can be managed from the SAP interface. The initial phase of a smart metering project is easier, too, because with Gridstream MDUS the work is already done and expensive and time-consuming integrations are a thing of the past.

Our product allows you to utilize a single system for managing smart metering operations, independent of the Head-End System provider. As all the smart metering data is stored in one place, data duplication challenges cease to be an issue.



Ready for progress

Gridstream MDUS technology is developed based on the expertise of industry leaders and according to the highest quality standards, it's a SAP Qualified Business Solution. The system is built on a platform that has proven its reliability and scalability in high-volume smart metering operations.

The software architecture follows industry standard IEC 61968-9, so it can be used for fast integration of any HES using the same standard. Vendor independence allows flexible expansion of device infrastructure and minimizes the risks and costs of smart metering investments. The open architecture of Gridstream MDUS enables the addition of new MDM and smart grid applications as utility needs and technology continue to evolve.

Landis+Gyr SAP For Utilities Adapter (SUA)

The Landis+Gyr SAP For Utilities Adapter supports EhP7. 50+ Service Operations are supported (including Bulk Service Operations). 35+ Use Cases are supported in the following areas:

- Creating and Configuring Devices (Meters), Registers, and Measurement Tasks
- Device assignment (CT/PT) and Relationships (Breaker)
- Location and Point of Delivery (PoD)
- Setting up Meters for Billing
- Billing of Meters
- Installation and Removal reads
- Meter Reading Documents
- Time Series Query and Calculations
- On-Demand Requests of Meters:
 - Read
 - Operational State
 - Disconnect/ReconnectCreation, Modification, and Cancellation of Disconnect/Reconnect reading
- Creation and Cancellation of meter state change notification
- Events
- Text Messaging
- Replication
- Reversals

Full access to Gridstream solution

The Landis+Gyr smart metering portfolio covers the entire metering value chain. The extended portfolio of our smart metering products is available with Gridstream MDUS, making additional benefits available to our customers. With a century of experience in the electricity metering business, we are the undisputed leader in smart metering technology. Providing intelligent solutions to the energy industry is our core business.

Learning from the best

Through co-operations with major utilities worldwide, we have gained a unique understanding of diverse business requirements. We base our knowledge on large-scale commercial deployments and have rolled out 300 smart metering systems globally. That's why we can guarantee field-tested reliability under high-demand conditions.

DOCKET UE-220701 Rebuttal Testimony Elena Argunov Exh. EACCH-37

Gridstream MDUS benefits at a glance

- End-to-end business processes
- Single point of entry
- Single data repository for all metering data
- Secure investment
- Meets the highest quality standards
- Flexible head-end system selection via standard interfacing

Delivering peace of mind

Plugging into the highest level of energy efficiency has never been easier. We have translated our unique expertise of utility processes into an integrated energy management solution. With Gridstream MDUS this translates into fully automated common tasks, which frees up your time from daily routines. The advanced dashboard functionality provides you with accurate information on AMI network and the data acquisition progress as well as advanced tools for troubleshooting. We provide cutting edge technology that delivers

Gridstream MDUS in action: proven benefits

Landis+Gyr implemented Gridstream MDUS software at DONG Energy. The offering comprised of an Enhancement Pack 7 installation for its 1.2 million endpoints which enables unification and seamless integration of data in the utility SAP system. Benefits included optimizing daily processes and increasing operational efficiency.

DONG Energy is one of the leading energy groups in Northern Europe. DONG Energy's business is based on procuring, producing, distributing, and trading in energy and related products in Northern Europe.

Benefits

Key performance indicator	Impact
Time to manage connections for new and departing customers, customer move in/out (average reduction from 10 minutes to 2)	-80%
Time for regular meter readings (on-demand readings now performed in 2 minutes)	-99%
Total work hours saved (based on 40,000 customer moves and 330,000 regular per year meter readings)	-25,000 work hours/ year
Meter reading lead time (from start time to reading entry)	-99%
Meter reading intervals	From yearly to monthly



Manage energy better

Landis+Gyr is the leading global provider of integrated energy management solutions for the utility sector. Offering the broadest portfolio of products and services to address complex industry challenges, the company delivers comprehensive solutions for the foundation of a smarter grid including; smart metering, distribution network sensing and automation tools, load control, analytics and energy storage.

Landis+Gyr operates in 31 countries across five continents as an independent growth platform of the Toshiba Corporation (TKY:6502) and is also 40% owned by the Innovation Network Corporation of Japan (INCJ). With annualized sales of more than US\$1.5 billion, the company employs 6,036 people with the sole mission of helping the world manage energy better.

More information is available at www.landisgyr.com.

Landis+Gyr in short

- Broadest portfolio of products and services in the industry
- 30 years of smart metering experience
- 1000 AMM systems delivered
- 300 million energy meters produced
- Largest relevant engineering capacity in the industry
- 70 years of direct load management experience
- 25 million load management receivers produced
- ISO certified for quality and environmental processes
- World leader in integrated energy management solutions
- Committed to improved energy efficiency and environmental conservation
- Solid and established partner network

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