OUR PRODUCTS AND CAPABILITIES

THE ENERGY INDUSTRY IS CHANGING RAPIDLY. NEW TECHNOLOGIES ALLOW COLLECTING AND ANALYZ-ING DATA LIKE NEVER BEFORE. ADVANCED SYSTEMS PROVIDE REMARKABLE COMMAND AND CONTROL **FUNCTIONALITIES. THE PROMISE OF A SMARTER** GRID WITH GREATER EFFICIENCY, BETTER INSIGHTS, AND A MORE CONSCIOUS USE OF RESOURCES IS WITHIN REACH. UTILITIES REQUIRE CONFIDENCE IN A PARTNER WHO CAN BUILD AND MANAGE AN **INCREASINGLY INTELLIGENT GRID, ABLE TO PROVIDE** RELIABLE AND INTEROPERABLE PRODUCTS AND SOLUTIONS BASED ON STATE-OF-THE-ART TECHNOL-OGY. IN SUPPORT, WE HEAVILY INVEST IN OUR OFFER-ING TO HELP OUR CUSTOMERS MASTER THE CHAL-LENGES THROUGHOUT AN EVOLUTIONARY JOURNEY.

- Products
- Gridstream® Distribution Intelligence
- Gridstream® Advanced Metering Infrastructure
- Gridstream® Customer Intelligence
- Services

MEASURE

ELECTRICITY

- Meters for residential, commercial, industrial and grid applications with modular or integrated communication
- Meters with credit or prepayment functionality
- Interoperable devices with industryleading security and sophisticated fraud-detection features

GAS

- A full complement of modular metering solutions including superior ultrasonic technology with modular or integrated communication for billing and cost allocation in industrial, commercial and residential applications
- Credit and prepayment
- Ready for integration in a multienergy environment

HEAT/COLD

■ District heating/cooling products with modular or integrated communication for billing and cost allocation in industrial, commercial and residential applications

COMMUNICATE

> NETWORK

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- RF Mesh
- Cellular ■ PLC
- Blended network solutions combining various communication technologies

GATEWAYS

- Data concentrators
- Routers and repeaters as key elements of communication networks

COMMUNICATION MODULES >

For electricity, gas, heat and water meters including

- PSTN, GPRS, LTE
- PLC including PST, OFDM
- RF Mesh

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- M-Bus, Wireless, Ethernet
- ZigBee, WiFi

MONITOR

AMI SYSTEM PERFORMANCE >

- Head-End System (HES) software
- implementation
- Proven scalability to support the world's largest utilities

CONSUMER PORTALS

■ Secure web portal

- network monitoring and supervision

CONTROL AUTOMATE OPERATE

- SUPPLY SIDE MANAGEMENT
- Communication networks and devices
- Monitoring and control software
- Micro Energy Management solutions

DATA CENTER HOSTING

- Fully staffed, round-the-clock data warehousing
- Offering primary hosting, data backup or full outsourced solutions

MANAGED SERVICES

- Meter reading from one provider, across the entire utility's customer
- Installation management and logistics, meter maintenance and
- disaster recovery services ■ Configurable system and individual

ownership models

VIRTUAL POWER PLANT

- Products and solutions allowing utilities to monitor and adjust system load from the substation to the consumer
- Total solutions and services ensuring energy savings and protecting power quality

SOFTWARE AS A SERVICE

As an alternative to a fully owned and operated model, Landis+Gyr cloud offerings provide the flexibility to outsource portions of system support and management to our subject matter experts

Sensors and actuators

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ACT

- Market-leading security

- Mobile applications

GRID SENSORS AND TOOLS

- Sensors and sensing solutions
- Integrators and solutions for mv/lv

IN-HOME DEVICES AND SMART THERMOSTATS

- In-home displays and control devices
- Programmable and communicating thermostats, providing Advanced Load Management capabilities
- A secure web portal and optional mobile application allowing to adjust settings remotely

DEMAND RESPONSE

- Monitoring and sensing devices
- Switches and other load control devices
- Communication networks and software for sending pricing signals for implementing events

ASSET MANAGEMENT

- Sensors and software solutions for asset monitoring and control
- Tracking multiple parameters and performance characteristics

DISTRIBUTED ENERGY RESOURCE MANAGEMENT

- Sensors and actuators
- Communication networks and devices
- Monitoring and control software
- Micro Energy Management solutions

POWER QUALITY

- Sensor- and software-based information
- Tracking intermittent source impacts
- Monitoring RMS trends, harmonics and voltage dynamics

OUTAGE MANAGEMENT AND RESTORATION

- Sensors and repeaters
- Communication networks and devices
- Software for optimized distribution network management

ADVANCED GRID AND DATA ANALYTICS

Advanced analytics system software for

- Forecasting and simulations
- Network performance analysis and modeling
- Grid situational awareness

METER DATA MANAGEMENT

- Software for validation, estimation and editing as well as processing and storage of meter data
- Integrating with systems including HES



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::: Gridstream

OUR SOLUTION SUITE: GRIDSTREAM®

FOR UTILITIES SEEKING A FLEXIBLE PARTNER TO BUILD AND MANAGE AN INCREASINGLY INTELLIGENT GRID, GRIDSTREAM® IS THE INTEROPERABLE, FUTURE-READY SUITE OF SOLUTIONS DELIVERING PROVEN ADVANCED METERING INFRASTRUCTURE, DISTRIBUTION INTELLIGENCE AND CUSTOMER INTELLIGENCE APPLICATIONS FOR TODAY AND TOMORROW. GRIDSTREAM® HELPS UTILITIES AND THEIR ELECTRICITY, HEAT AND GAS CUSTOMERS CONFIDENTLY REALIZE THE FULL POTENTIAL OF AN INVESTMENT BY PROVIDING ACCESS TO BETTER, FASTER, MORE ACTIONABLE DATA AND THE COMMAND AND CONTROL APPLICATIONS TO ULTIMATELY MANAGE ENERGY BETTER.

GRIDSTREAM® DISTRIBUTION INTELLIGENCE

Distribution Intelligence solutions that enable utilities to model, operate and control their processes and assets

BENEFITS

- Grid security and data privacy
- Enhanced demand forecasting
- Improved power quality
- Effective asset lifecycle management
- Grid resilience and reliability
- Enhanced distribution grid planning
- Grid operational efficiency
- Regulatory compliance and monitoring
- Microgrid management
- Renewables and low-carbon technologies integration
- Transactive energy enablement

KEY FUNCTIONALITIES

- Outage management and restoration after failure on transmission or distribution level
- Distribution Automation
- Distributed energy resource management
- Dynamic voltage management (Volt/VAR)
- Distribution grid visualization of grid processes or status
- Energy storage
- Grid optimization and planning through analytics-aided planning, managing and controlling
- Grid monitoring and management
- Electric vehicle integration
- Demand Side Management to relieve capacity constraints due to limited network capacity

GRIDSTREAM® ADVANCED METERING INFRASTRUCTURE

Advanced Metering Infrastructure solutions for electricity, heat, gas and multi-energy projects that provide real-time, unprecedented access to energy usage data

BENEFITS

- Infrastructure advancement
- Billing accuracy
- Infrastructure communication and integration
- Revenue protection
- Operational efficiency
- Advanced grid functionality enablement
- Regulatory compliance
- Data privacy and security

KEY FUNCTIONALITIES

- Meter Data Management
- Data collection
- Command and control grid assets and selected appliances
- Monitoring consumption and voltage quality by measuring energy usage and supply at the consumer level
- AMI communication network monitoring and management
- Consumer connection and tariff management

GRIDSTREAM® CUSTOMER INTELLIGENCE

Customer Intelligence solutions that enable utilities to create greater engagement with their customers

BENEFITS

- Energy usage awareness
- Flexible pricing
- Improved customer satisfaction
- Data privacy and security

KEY FUNCTIONALITIES

- On-premise energy storage installed in end-consumer homes
- Prepayment
- Consumer consumption data to increase awareness of consumption
- Microgeneration monitoring and control for prosumers
- Demand-side-driven home automation of in-home highconsumption devices by integrating them in a Virtual Peak Plant solution
- Consumer connection and tariff management



THE SEGMENTS WE SERVE

OUR OFFERINGS HELP ENERGY UTILITIES MEET THEIR CUSTOMERS' NEEDS RELIABLY, EFFICIENTLY AND EFFECTIVELY. OUR SENSORS AND METERING DEVICES, COMMUNICATION TECHNOLOGY, NETWORKS AND SOFTWARE APPLICATIONS MEET THE VAST ARRAY OF INDUSTRY REQUIREMENTS.

1 ENERGY UTILITIES

- Planning and forecasting
- Network operations ■ Infrastructure protection,
- management and restoration
- Demand response ■ Energy services and Advanced
- Metering Management
- Virtual Peak Plant
- Billing

2 BIG BUILDINGS

- Energy metering for electricity, heat and gas
- Billing
- Power quality and power factor
- Energy services ■ Micro Energy Management
- including storage
- Virtual Peak Plant solutions

3 CENTRALIZED LARGE-SCALE GENERATION

- Measurement
- Forecasting
- Billing
- Power quality

4 COMMERCIAL ENERGY CONSUMERS

- Metering devices for electricity, heat and gas
- Load Management and scheduling
- Tariff Management and simulation ■ Energy consulting and services
- Virtual Peak Plant services

5 DISTRIBUTED GENERATION FROM RENEWABLE **ENERGY SOURCES**

- Measurement
- Power quality ■ Demand supply balancing
- Micro Energy Management System including storage

6 LARGE INDUSTRIAL CONSUMERS

- Energy metering for electricity, heat and gas
- Load Management and scheduling
- Tariff Management and simulation
- Power quality
- Billing

7 MICROGRID

- Metering devices for Time-of-Use/dynamic pricing
- Demand response
- Load shedding
- Virtual Peak Plant and storage
- Management and control of the operational aspects of microgeneration
- Personal Energy Management and Smart Home applications
- Energy services
- Billing

8 MICROGENERATION FROM RENEWABLES

- Demand supply balancing
- Transformer monitoring and control
- Micro Energy Management including storage
- Billing

9 PEAK GENERATION

10 PLUG-IN ELECTRIC

VEHICLES (PEVS)

■ Billing

■ Distributed Load Control

(charging and feed-in cycle)

- Forecasting and load shedding ■ Demand supply balancing
- Virtual Peak Plant and other
- types of storage ■ Infrastructure monitoring and
- shedding management Management and control ■ Capacity response and supply of microgeneration
- response ■ Billing
 - Personal Energy Management tools
 - Smart Home applications

11 RESIDENTIAL ENERGY

■ Electricity, heat and gas

■ Demand response/load

meters for Time-of-Use/

CONSUMERS

dynamic pricing

- Virtual Peak Plant solutions
- Energy services
- Billing of electricity, heat and gas

12 STREET LIGHTING

■ Controls, switches and software to manage public lighting

13 TRANSMISSION AND DISTRIBUTION **NETWORKS**

- Distribution Automation
- Meters, sensors and other devices for infrastructure monitoring and control
- Load Management and scheduling
- Power quality
- Outage management and restoration
- Demand response and capacity response

