

Paving the Way for a Smart Society

**Information Enabler**

**Provider of Customized Solutions**

**Big Data Analyst**

**Communication Technologies**

# manage energy better

## TURNOVER IN BILLION USD

1.659

## R&D IN % OF SALES

9.8 %

## EMPLOYEES

5,919

## SITES

72 in 30+ countries

## ENGINEERS

1,389 in 24 R&D centers

Landis+Gyr is the leading global provider of integrated energy management solutions for the utility sector. Offering one of the broadest portfolios 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 over 30 countries across five continents. With sales of approximately USD 1.7 billion, the Company employs some 6,000 people with the sole mission of helping the world manage energy better. More information is available at [www.landisgyr.com](http://www.landisgyr.com).

Since the successful Initial Public Offering (IPO) on July 21, 2017 and the listing of Landis+Gyr Group AG, the registered shares of the Company have been traded on the SIX Swiss Exchange under the ticker symbol LAND.

Financial data of Landis+Gyr Group AG for the fiscal years ended March 31, 2016 and March 31, 2015 together with the report of the independent auditor to the Board of Directors on the consolidated financial statements 2016/17 can be found at [www.landisgyr.eu/investors/financial-information](http://www.landisgyr.eu/investors/financial-information)

## TABLE OF CONTENTS

### THEME

# Landis+Gyr as Smart Partner of Utilities

Digitalization and the Internet of Things (IoT) will revolutionize the traditional business models of utilities. Renewables, microgeneration and PHEVs will add further complexity and new challenges to the energy system which shall offer stable services at lower cost to increasingly demanding consumers. Between these poles, Landis+Gyr is offering its services to energy utilities around the globe.

- 24 Smart Partner of Utilities
- 26 Master of Metrology and Communication Technologies
- 28 Big Data Analyst
- 30 Provider of Customized Solutions
- 32 Transformation Enabler
- 34 Paving the Way for a Smart Society

### FINANCIAL YEAR 2016/17

- 04 Milestones 2016/17
- 06 Interview with the Chairman and the Group Chief Executive Officer
- 12 Landis+Gyr Group
- 18 Americas
- 20 EMEA
- 22 Asia Pacific

### OUR COMMITMENT

- 36 Committed Employees (44, 50)
- 38 Our Products and Capabilities
- 40 Our Solution Suite: Gridstream®
- 42 The Segments We Serve
- 46 Corporate Social Responsibility

### COMPANY INFORMATION

- 52 Executive Management
- 54 Group Companies
- 56 Addresses
- 58 Glossary

## MILESTONES 2016/17

**LANDIS+GYR** revealed a new Energy and Capacity Optimization System (ECOS) for utilities that intelligently combines demand response, distributed energy resource and voltage management technologies.

**USA:** Landis+Gyr was chosen to participate in a groundbreaking energy storage project in Arizona in partnership with E.ON and Tucson Electric Power.

**NORTH AMERICA:** Landis+Gyr completed production of the 50 millionth Advanced Electricity Meter at its North American manufacturing plant in Reynosa, Mexico.



MAY JULY SEPTE  
APRIL AUGUST OCT  
JUNE

**USA:** Alabama's largest electric cooperative, Baldwin EMC, received the Best Devices, Data & Analytics Project award from CS Week, recognizing the utility's deployment and use of Landis+Gyr's Gridstream® AMI solution for Advanced Metering and Load Management.

**FRANCE:** Enedis chose Landis+Gyr to supply Smart Electricity Meters as part of a project to renew all of its meter parks for small to mid-sized industrial and commercial customers across the country.

**FROST & SULLIVAN** named Landis+Gyr its 2016 Global Company of the Year, and recognized the Company with the 2016 Global Frost & Sullivan Award for Technology Leadership.

**LANDIS+GYR** introduced the M250, a new intelligent gas module that records and transmits pressure and temperature reading data from commercial/industrial gas line monitors.

**LANDIS+GYR** successfully completed Wi-SUN certification of the radio technology used in Gridstream® solutions and deployed globally in Smart Grid IoT devices.

**USA:** Texas utility CenterPoint Energy selected Landis+Gyr to provide an Advanced Grid Analytics solution.

**LANDIS+GYR** added real-time voltage monitoring capabilities to its grid analytics suite of products leveraging expertise at the edge of the grid.

**AUSTRIA:** Consortium-led utility Energie Steiermark chose Landis+Gyr to supply 330,000 Smart Meters for residential end consumers in the country's state of Styria.

**LANDIS+GYR** introduced the Network Model Validator, a distribution system model validation application to improve grid operations and planning as part of the Company's comprehensive Advanced Grid Analytics platform.

**USA:** Landis+Gyr and Sentient Energy announced the integration of Landis+Gyr's Network Node radio into the S610 Line Sensor developed by Sentient Energy, increasing the transmission range and edge computing capabilities of the device.

**SPAIN:** Landis+Gyr signed an order from Iberdrola to supply more than 700,000 Smart Meters to equip all its domestic electricity customers with Smart Meters by the end of 2018 and further promote grid digitalization throughout the country.

**USA:** Clay Electric Cooperative selected Landis+Gyr's Gridstream® AMI solution, providing an RF Mesh IP network platform capable of connecting meters and intelligent devices across the utility's service territory in north central Florida.

# NOVEMBER FEBRUARY MARCH DECEMBER JANUARY OCTOBER

**GUAM:** Landis+Gyr was selected by Guam Power Authority for a comprehensive suite of Advanced Grid Analytics solutions along with professional implementation and consulting services.

**BARBADOS:** Barbados Light & Power selected Landis+Gyr for a comprehensive Smart Grid technology project that will help the island meet its long-term goal of establishing a 100% clean energy power grid by 2045.

**LANDIS+GYR** launched its Reliability Planner application that offers utilities the ability to accurately calculate and display reliability performance indicators as part of the Company's Advanced Grid Analytics platform.

**LANDIS+GYR** released Command Center 7.0, the latest version of its Smart Grid network operating software that expands capabilities for connecting and communicating with intelligent devices for electric, water and gas distribution systems.

A WELL-PLANNED TRANSITION TO SECURE CONTINUITY



**THE BOARD OF DIRECTORS APPOINTED ANDREAS UMBACH CHAIRMAN OF THE BOARD OF DIRECTORS AS OF APRIL 1, 2017. IN PARALLEL, THE BOARD OF DIRECTORS PROMOTED RICHARD MORA TO THE POSITION OF CHIEF EXECUTIVE OFFICER OF LANDIS+GYR GROUP AG. SINCE THE COMPANY'S SUCCESSFUL INITIAL PUBLIC OFFERING (IPO) AND LISTING ON THE SIX SWISS EXCHANGE ON JULY 21, 2017, LANDIS+GYR IS AN INDEPENDENT PUBLIC COMPANY.**

**Andreas, after 18 years of management responsibility at Landis+Gyr, during which time you built the Company into a leading provider of integrated energy management solutions and worked with multiple owners to bring Landis+Gyr to the next development stage, you are handing over your responsibilities as CEO to Richard Mora. How do you feel?**

This is a very emotional moment for me. It fills me with great joy to see the Company in such a strong position with industry-leading intelligent solutions for current and future social and technological challenges in the energy markets. Landis+Gyr possesses tremendous know-how and experience and its entire staff lives the Company's vision to help energy utilities and consumers manage energy better. I am very proud and honored to remain part of the leadership team. In my new position as Chairman, I will deal with shareholder-related matters, represent – in conjunction with the CEO – the Company externally and lead strategic projects that will help Richard push the Company to the next stage. I am deeply convinced that high aspirations and unwavering dedication are key drivers for healthy and sustainable growth.

**During your tenure, you successfully navigated the Company through up and down cycles. How have the business landscape and customer requirements changed?**

The most significant change was the transformation of the electricity distribution system from a one-way power flow system to a two-way communication network that turned the concept of liberalized markets and distributed generation into reality and made it possible to use data for a wide range of applications. As a result of this seismic shift, the energy sector and the global meter market have been in a state of flux. In response to growing demand for renewable energy sources, increased competition and pricing pressure on household bills, technological breakthroughs and the advent of Big Data and the IoT, utilities today are crafting new business models based on solutions that enable a more efficient management of their assets and greater consumer engagement by utilizing the vast pools of data created through digitalization.

**Landis+Gyr has undergone a transformation as well. What were the most drastic changes?**

Evolving markets and new customer needs required multiple realignments of our priorities to keep pace with technological innovation and adapt the organization and its footprint to ongoing structural change in the markets. That's why we enlarged our core competencies from metrology to communication technology and software, boosted our investments in R&D and transformed the traditional product business into a comprehensive solution business with a very strong focus on service activities. Management launched various initiatives, designed

to improve time-to-market and the competitiveness of the product portfolio. In parallel, Landis+Gyr redefined its innovation processes with a particular focus on the alignment of the Group's research and development capabilities across the globe, driving simplicity and ensuring proximity to the business while improving day-to-day management.

#### SUPPORTING UTILITIES' TRANSFORMATION

«Keeping the pace with technological innovation and continuously adapt to changing customer requirements was challenging but opened up great opportunities to Landis+Gyr.»

Andreas Umbach, Chairman



**During this period, Landis+Gyr was also owned by various companies, ranging from Siemens, KKR and Bayard Capital to Toshiba. Now, Landis+Gyr is again a publicly listed company. Does this latest transition keep you awake at night?**

On the contrary, it marks the beginning of an exciting new chapter in the long history of Landis+Gyr. What's decisive for Landis+Gyr's future success are our dedicated and committed people who create and promote our unique portfolio of intelligent solutions for mastering the opportunities and challenges ahead in the energy sector. Our priority will be maintaining and further strengthening the close partnerships with our many customers worldwide through our commitment to innovation and quality. This approach has proven successful regardless of who owned Landis+Gyr and will remain our approach for future success. Fostering the Group's excellent market position will be in the greatest interest of our

shareholders. With Richard as the new CEO, a man who has already proven himself as a successful Chief Operating Officer and Executive Vice President for the Americas with a tenure of more than 17 years, I can't imagine a better successor to take on these tasks. I am absolutely convinced that in cooperation with his experienced leadership team and our highly motivated staff, he will be able to add another chapter to Landis+Gyr's success story.

**Richard, how does it feel to be the new CEO of Landis+Gyr?**

First and foremost, I am extremely proud and grateful. Being entrusted with the position to lead this 121-year-old icon and its 6,000 incredibly talented staff is a great honor and a huge responsibility. Of course, I'd also like to thank Andreas for his passion and vision as the leader of the Company for 16 years, making Landis+Gyr the leading global provider of integrated energy management solutions for the utility sector.

**What is the essence of Landis+Gyr?**

Landis+Gyr is a smart company – just like our products and services are. That means we are reliable, customer-focused and always committed to innovation and quality. Most importantly, we see ourselves as a partner for all our customers operating in countries worldwide under different regulations, with diverse infrastructure and geographies and varying sociodemographic characteristics and environmental requirements. Of central importance is our entire staff, who will always listen carefully to our customers and untiringly work on developing and upgrading our state-of-the-art solutions portfolio to meet their specific future-oriented needs. That's how we pursue our mission to help the world manage energy better. For more than 12 decades, Landis+Gyr has always been in a position to adjust its offering to the changing needs of its customers. This makes me very confident that our teams will demonstrate the necessary agility and flexibility to achieve new growth in the future.

**DRIVING UTILITY VISIONS FORWARD**

«A unique portfolio of intelligent solutions and the untiring commitment of the entire staff to be the best partner utilities can turn to are the key drivers of Landis+Gyr's success.»

Andreas Umbach, Chairman

**What are the biggest challenges utilities are facing today?**

Today, utilities must learn to embrace uncertainty and change and increase consumer-orientation – quite a challenge for companies that were used to operating and investing on a large scale and over long time frames. For a very long period, their business model has been to generate, transport and distribute electricity and collect payment for it. As the number of consumers and average consumption were always rising, the basic equation was simple: increasing consumption meant

higher revenues. Nowadays, evolving technologies, environmental standards and consumer requirements offer a wide range of new business opportunities along and across the value chain, allowing new players who provide new applications tailored to the specific needs of their customers and who support new business models or complementary services to enter the competitive field. The pressure on our customers' traditional business model is rising, but at the same time utilities have been given a historic opportunity to reinvent themselves.

#### **Where is the journey heading to in the smart energy sector?**

From a societal perspective, efficiency, environmental sustainability and inclusion will be the top priorities. An increasing number of people and devices will be connected with each other through the IoT. The Smart Grid offers the appropriate solutions that enable utilities to effectively manage increasing complexity in the system. It will enable the integration of distributed energy resources, enhance demand response and load control to balance fluctuating generation and consumption, optimize investments, offer consumers more transparency and help them save energy as well as money and hence contribute to an efficient, connected, more sustainable energy future.

#### **And from a technological perspective?**

Big Data, the IoT, predictive analytics and artificial intelligence are the revolutionizing forces. Digitalization allows utilities to be much more active participants in the energy market and makes them part of a larger ecosystem that benefits all stakeholders. Advantages of a digital Smart Grid include greater reliability, the ability to effectively manage intermittent energy sources of varying sizes, the inclusion of energy storage solutions, and the creation of new utility services capable of adding value to both the end user and the energy company. At the same time, stringent security safeguards that protect system integrity and data privacy need to be put in place. The potential combined result of these advances is a fully automated, highly efficient, resilient, "self-healing" and secure energy network.

### **TECHNOLOGIES AND TRENDS TRANSFORMING THE MARKETS**

«Utilities have been given a historic opportunity to redefine their business models and reinvent themselves.»

**Richard Mora**, Chief Executive Officer

#### **What will the utility of the future look like?**

Change is being driven by an energy supply system that is becoming more and more data-driven and decentralized. These trends are paving the way for greater consumer engagement, empowering prosumers to engage as partners in increasingly complex and dynamic markets. This development is opening windows of opportunities for very different, more specialized business models that

## PROVIDING SOLUTIONS TO NEW CHALLENGES

«The Smart Grid offers the appropriate solutions that empower utilities and distribution system operators to effectively manage increasing complexity in a system that is becoming more and more dynamic, data-driven and decentralized.»

**Richard Mora**, Chief Executive Officer



will complement and substitute traditional models in future. There will be many more and new actors in the field, such as smaller generators, storage operators, aggregators, retailers, energy management companies or infrastructure providers for electric vehicles. Business models will also depend on diverse local factors and on the future impact of global megatrends on society and the industry. Imagine a utility operating in a burgeoning Asian megacity and another in the vast prairies in North America – it is very conceivable that they will be confronted with quite different operational challenges. What unites them is the goal of supplying their customers with safe, reliable and affordable energy. That's why we address the underlying technologies and trends such as digitalization, distributed energy resources and consumer engagement and focus on offering flexible, scalable and reliable solutions that can be adapted to specific requirements and evolving needs.

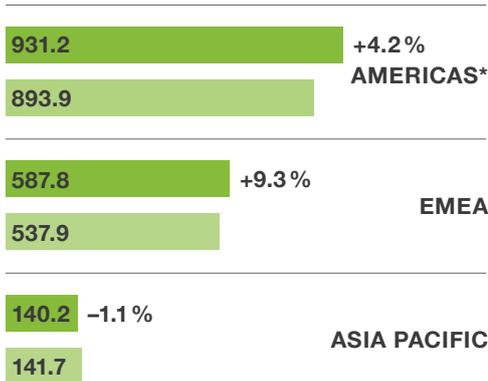
**Andreas and Richard, many thanks for providing our readers with these very valuable market insights and your views on future developments.**

It is upon us to acknowledge our highly skilled and experienced teams and we express our gratitude to all our employees for their hard work and tremendous dedication. It is their know-how and expertise that built the Company's leading market position and that continues to drive the Group's success. We would also like to thank Hiroshi Kurihara, our former chairman, as well as our shareholders and customers for their support and trust. Let's continue the journey with our combined resources and common goals!

## LANDIS+GYR GROUP

### SALES IN MILLION USD

# 1,659.2

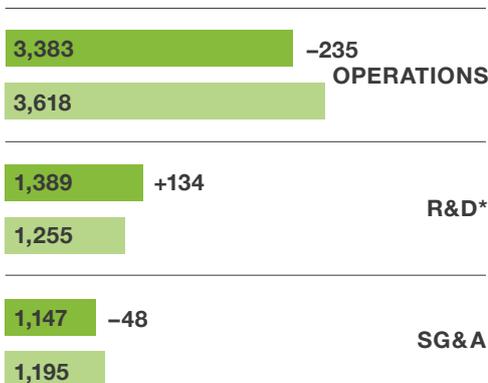


\* Including Japan

■ 2016/17 ■ 2015/16

### EMPLOYEES

# 5,919



\* Including Product Management

■ 2016/17 ■ 2015/16

IN THE FINANCIAL YEAR 2016/17, LANDIS+GYR STRENGTHENED ITS POSITION AS A LEADING GLOBAL PROVIDER OF INTEGRATED ENERGY MANAGEMENT SOLUTIONS FOR THE UTILITY SECTOR. THE GROUP INCREASED ITS SALES TO USD 1.659 BILLION. THE MAIN PILLARS OF THIS SUCCESS WERE SEVERAL NEW LARGE CONTRACTS, MAINLY IN THE US AND IN EUROPE.

Offering the industry's most comprehensive and interoperable portfolio of intelligent energy management solutions, Landis+Gyr is tapping into new business areas and allowing utilities to realize efficiency gains and adapt their operations to the changing market environment and the needs of their customers.

#### Digital Technologies Disrupting the Energy Sector

The transformation process in the energy utilities sector continued to gain momentum. The main forces at work here include digitalization, decentralization and decarbonization, which are creating a large number of potential new business opportunities throughout the value chain of utilities. The implementation of regulatory policies, which vary in speed and maturity across geographies, provided further impetus. The transformation process was particularly dynamic in North America and Europe, driven by the kickoff of a second wave of Advanced Metering Infrastructure (AMI) rollouts and investments in Smart Grid solutions in North America and the accelerated implementation of energy-related regulations in Europe. Markets in South America were still affected by a soft economic cycle that produced further delays in major projects. However, initial signs of recovery have been observed. Markets within the Asia Pacific region continued to offer important opportunities as utilities focused on upgrading energy distribution infrastructure and exploring new business models.

The disruptive shifts in the energy sector are offering providers of Smart Grid technology a wide range of new opportunities to address the specific needs of their customers, to come to terms with the growing complexity in the system, and to help utilities embrace complexity as a means of increasing efficiency. Responding to these market requirements, Landis+Gyr's R&D teams successfully continued to expand the functionalities as well as the added value of the Gridstream® solution, especially by leveraging applications to exploit the potential of the Internet of Things (IoT), Big Data and analytics. Given its deep and broad expertise and its unique portfolio of end-to-end solutions with a differentiated value proposition, Landis+Gyr demonstrated an unrivaled commitment to supporting its customers as they navigate the transformation pathways that will help them manage energy better.

### **Increasing Demand Despite Challenging Business Environment**

Unaffected by Toshiba Corporation's financial challenges and despite a tough international growth environment and currency impacts, Landis+Gyr significantly increased sales by 5.45 % to USD 1.659 billion (2015/16: USD 1.574 billion) in its financial year ending March 31, 2017. In local currencies, sales grew by 6.8 %. Order intake amounted to USD 1.3 billion (2015/16: USD 2.0 billion). After a year marked by various major orders won whose rollouts will generate sales over several years to come, order intake normalized to the budgeted amount of USD 1.3 billion (2015/16: USD 2.0 billion). With a total order backlog of USD 2.5 billion (2015/16: USD 2.9 billion), which attests to the firm demand for the Company's innovative solutions, Landis+Gyr is well positioned for sustainable growth in the years to come.

In the reporting period earnings before interest, taxes, depreciation and amortization (EBITDA), normalized to eliminate the result of certain nonoperating effects, amounted to USD 212.0 million (2015/16: USD 221.0 million), a decrease of 4.1 %, caused by unfavorable foreign currency movements and other effects. Driven by consistent annual operating cashflow of more than USD 100 million, Landis+Gyr has consistently reduced its net debt since the acquisition by Toshiba and INCJ. At the end of March 2017, net debt stood below normalized EBITDA level. With an equity ratio of 66.0 % (March 31, 2016: 62.1 %), Landis+Gyr is very favorably positioned to finance its future growth strategies.

### **Sales Growth in the Americas and in EMEA**

Both the Americas and the EMEA regions reported strong external sales growth despite the limited global business growth environment prevailing during the reporting period and the disruptive forces that are transforming energy markets. In Asia Pacific, Landis+Gyr recorded a slight decline in sales. This overall performance establishes a solid foundation for continued success across the Company's worldwide organization.

In the Americas region (including Japan), sales grew by 4.2 %, thanks to accelerated deployments and driven by new business opportunities in connection with digital technologies and the willingness of many North American utilities of all sizes to increase the share of renewable energy sources in their energy mix. Growth in North America offset a drop in sales in the South American markets. Especially in Brazil, AMI deployments continued to be postponed due to the ongoing soft economic cycle. Sales in the EMEA region increased by 9.3 %, headlining the Group's top-line performance. The implementation of large-scale Smart Meter rollouts gained momentum in several European countries as local regulations have been put in place to meet the EU's stated goal of replacing at least 80 % of installed electricity meters with Smart Meters by 2020. In the Asia Pacific region, sales slightly receded by 1.1 % compared to the previous year. An important step in the region came from intelliHUB, a new business unit that offers comprehensive service solutions to energy retail customers in Australia. Other countries in the Asia Pacific region, more specifically India, China and other Southeast Asian countries, are preparing the ground for large-scale AMI rollouts.

Guided by the tremendous expertise of Landis+Gyr's North American technology teams, the Tokyo Electric Power Company (TEPCO) landmark project reached a new milestone as deployment of the solution surpassed 10 million installed end points on the Gridstream® IoT network by the end of fiscal year 2016/17. Upon completion, the project will include more than 27 million meters

## LANDIS+GYR GROUP



«With our suite of interoperable, expandable and future-proof technologies and services and major contracts won in all regions around the globe, we are extremely proud of the Company's unique ability to help the world manage energy better.»

**Richard Mora**  
Chief Executive Officer



«With top-line growth of more than 5 %, we continued to expand sales faster than the global economy. Looking ahead, Landis+Gyr is on track for further revenue and profit growth and consistent cash generation.»

**Jonathan Elmer**  
Executive Vice President and Chief Financial Officer

and millions of other devices transmitting 1.3 billion interval data packages daily that will all be processed by Landis+Gyr's Head-End System and Meter Data Management Solution. Driving the connected platform is Landis+Gyr's IPv6 multi-technology network that connects utility and consumer devices blending RF Mesh, G3 PLC and cellular communications in the same network and providing Wi-SUN-compliant connectivity to the premise. TEPCO is the largest electric utility in Japan and the fourth-largest in the world.

In North America, Landis+Gyr signed new contracts for Smart Grid technology and services with numerous utilities, including We Energies for the deployment of an additional 0.5 million AMI end points and CenterPoint Energy for Advanced Grid Analytics of 2.3 million meters. Key milestones in Europe included major wins in the UK, France, Spain and Austria, where utilities are modernizing their infrastructure to meet regulatory requirements. Project highlights in the Asia Pacific region included deals signed with China Light & Power (CLP), Hong Kong, and with Tata Power in India, for the deployment of AMI.

Backed by the broadest portfolio of products and services to address complex industry challenges, Landis+Gyr is looking to the future with confidence. The Company's regional organizations made good progress with major AMI deployments and won further groundbreaking projects from renowned customers around the globe. Interest in managed services, cloud services including Software as a Service (SaaS) offerings as well as consulting services have increased.

### **Investments in Innovation Leadership**

Landis+Gyr again invested heavily in Research & Development (R&D) to further strengthen its state-of-the-art offering aimed at supplying its customers with game-winning solutions to current and future business challenges. In the financial year 2016/17, R&D spending hit a new record high of USD 162,8 million, equivalent to 9.8% of the Company's annual sales. The strategic vision focused on identifying and developing solutions aimed at increasing IoT enablement and leveraging the use of Big Data and analytics to improve forecasting, network modelling, management strategies and system reliability. Consequently, the share of R&D investments directed at software projects increased significantly during the reporting period.

A core element of Landis+Gyr's R&D initiatives are metering and communication technologies that promote connectivity and interoperability and ensure data security. In August 2016, Landis+Gyr successfully completed Wi-SUN US profile physical layer certification of the radio technology used in Gridstream® solutions. The industry alliance certification ensures future interoperability of RF-enabled hardware deployed in Smart Grid networks. A series of additional functionalities were added to Landis+Gyr's comprehensive Advanced Grid Analytics platform, which uses advanced algorithms to resolve grid management challenges and offers a full suite of applications that leverage existing Smart Grid investments. The addition of real-time, active voltage monitoring capabilities and visualization tools helps avoid power-quality issues, reduce field effort and minimize customer complaints. The Network Model Validator improves reliability, quality of service and safety. The Reliability Planner supports grid reliability initiatives and reduces outages. With the release of Command Center 7.0, a Smart Grid network operating software, Landis+Gyr expanded the range of capabilities for connecting and communicating with intelligent IP-based devices used in distribution-line sensors, controllers and streetlight controls for electric, water and gas distribution systems. Furthermore, in July 2016, the 50 millionth unit of Landis+Gyr's industry-leading advanced electricity meter FOCUS AX-SD was produced at the North American manufacturing plant in Reynosa, Mexico, which is a clear proof of the popularity of this groundbreaking device among its customers.

## LANDIS+GYR GROUP



«Accelerated AMI rollouts underpin Landis+Gyr's future top-line growth and set the stage for further value-creating opportunities beyond Smart Metering.»

**Roger Amhof**  
Executive Vice President and Chief Strategy Officer



«Strict auditing according to the highest industry standards and close cooperation with our key suppliers on every step of the value chain, backed by our state-of-the-art e-sourcing procurement tool, ensure cost-competitive products and the highest service quality standards.»

**Dieter Hecht**  
Executive Vice President and Chief Procurement Officer

### **Committed to the Highest Quality**

One focus in the past financial year was on promoting the Company's Zero Defects Initiative. Zero Defects describes Landis+Gyr's ambition to meet the commitments it makes and consists of an overall process approach aimed at achieving quality leadership in markets worldwide. Landis+Gyr's customers in the utilities sector expect products and services that deliver the required functionality from day one, around the clock, 365 days a year. In order to meet their expectations, Landis+Gyr is dedicated to providing a zero-defect outcome for every component of its product and service portfolio, through its full lifecycle. The initiative is directed at encouraging employees to prevent mistakes. Thus, by developing a constant, conscious emphasis on quality in every step of the process from concept to design, manufacturing, delivery and service. This goes in line with defining a performance standard and sharpening their ability to recognize what meets the standard.

In line with the commitment to quality, Global Procurement secured high availability of key components by strengthening the partnership with key suppliers. Regular audits helped keep quality levels high. Furthermore, long-sighted strategies and close cooperation with strategic partners allowed to secure favorable conditions, essential to sustain competitiveness of Landis+Gyr's material costs.

Based on the Group's outstanding achievements in promoting innovation and quality, Landis+Gyr received the 2016 Global Frost & Sullivan Award for Technology Leadership as well as the 2016 Global Company of the Year Award. Landis+Gyr was awarded this distinguished recognition by Frost & Sullivan for the third year in a row, honoring the Group's visionary implementation of best practices in the Advanced Metering market and the solutions it delivers for resolving the complex challenges utilities are facing today.

### **Executive Transition**

As part of a well-planned transition for management continuity, the Board of Directors has promoted Richard Mora to Chief Executive Officer of Landis+Gyr, effective April 1, 2017. He succeeds Andreas Umbach, who became Landis+Gyr's Chairman. In this function, Andreas Umbach will focus his attention on the strategic direction of the Group. Richard Mora joined Landis+Gyr in the year 2000 and has been a key contributor in transitioning the Company from a dedicated metering provider to the most advanced provider of networking and IoT solutions in the energy industry.

### **Leadership Position and Favorable Regulatory Environment to Accelerate Growth**

As a global Company with the world's largest installed base in electricity metering and Advanced Metering Infrastructure (AMI), Landis+Gyr is well positioned to capture new opportunities. A favorable regulatory environment is expected to pave the way for accelerated AMI rollouts, underpinning Landis+Gyr's future top-line growth. Whilst continuing to serve the needs of utilities, management has identified further potential in the expansion of software and services activities and is continuously evaluating strategic acquisitions that would allow the Group to enter adjacent product categories or new geographic markets.

In North America, Landis+Gyr is well positioned to maintain industry leadership and to capture growth in Latin America. In the EMEA sales region, major AMI rollouts in France, the UK, the Nordics, Germany and Italy signal favorable growth prospects. In Asia Pacific, the Group expects the Australian market to be a key driver of growth and it aims to strengthen its leadership position in the higher value-added electricity and gas metering segments across the region by introducing the Company's AMI offering to Asia's emerging markets.

## AMERICAS



«It was another record year in which we experienced success thanks to our smart, market-leading solutions that empower utilities to obtain grid resiliency and operational efficiency improvements, support renewables integration, and engage consumers to manage energy better.»

**Prasanna Venkatesan**  
Executive Vice President Americas

**THE AMERICAS REGION EXPERIENCED ANOTHER EXTREMELY SUCCESSFUL YEAR. COMPARED TO THE PREVIOUS YEAR, SALES ROSE BY 4.2% TO REACH A RECORD HIGH OF USD 931.2 MILLION. DEMAND FOR AMI IN THE US AND CANADA HAS REMAINED FIRM AND THERE ARE INITIAL SIGNS OF A RECOVERY IN SOUTH AMERICA, ESPECIALLY IN BRAZIL.**

### **Growth Continues: Steady AMI Market Augmented by Smart Solutions**

**Prasanna Venkatesan**, Executive Vice President Americas

In the financial year 2016/17, the transformation of the American energy sector continued, driven by new business opportunities, the adoption of digital technologies, and the increasing growth of renewable energy sources. In this dynamic market, Landis+Gyr North America signed a number of new contracts for Smart Grid solutions and services with existing and new customers, across investor-owned, municipal and cooperative utilities. Landis+Gyr reported growth in new business and expanded sales volume in the Americas, despite soft demand in South America.

### **Utilities Seek Solutions for Managing Energy and Capacity**

Landis+Gyr's expanded portfolio of innovative solutions for energy and capacity optimization was positively received by the market. At its annual customer conference held in Phoenix, Arizona, the Company unveiled, to over 650 attendees, new product and service offerings that intelligently bundle grid management technologies to address distribution challenges.

### **SALES IN MILLION USD 2016/17**

**931.2\***

### **SALES IN MILLION USD 2015/16**

**893.9\***

\* including Japan

Most utilities across the state of Arizona have selected Landis+Gyr as their Smart Grid technology partner. In a groundbreaking project that demonstrates the integration of renewable-generating resources into the grid, Landis+Gyr was chosen to supply 10 MW of battery storage capacity for Tucson Electric Power, as it explores rapid response solutions for load balancing and frequency regulation.

Critical to supporting a resilient grid is the collection and use of data. Upgrades to Landis+Gyr's Advanced Grid Analytics offering help improve reliability, quality of service and safety, reduce outages and support planning initiatives. Industry-leading data conversions as PPL Electric and analytics programs at Center-Point Energy are just two of many opportunities that highlight these benefits.

#### 50 Million Smart Meters Manufactured in North America

An important milestone was achieved at the North American manufacturing plant in Reynosa, Mexico, in July 2016, when the business completed production of the 50 millionth unit of its industry-leading electricity meter. With a portfolio of advanced, residential and commercial solid-state meters and higher-function grid meters for distribution management, Landis+Gyr can deliver a complete solution of sensing, data collection and analysis.

In 2016/17, Landis+Gyr North America again won important customer contracts in addition to managing ongoing projects. Sixty municipal and cooperative utilities selected Landis+Gyr for projects that included AMI, Load Management and Smart Grid services – Clay Electric Cooperative, Huntsville Utilities, Duck River EMC and Nebraska Public Power District to name a few. New contracts from Seattle City Light, We Energies and Entergy show that activity in the investor-owned utility sector is also strong.

Growth in services contacts exemplify the leading position Landis+Gyr maintains in the industry. Deploying, maintaining and managing systems that daily collect and process over 7.5 petabytes of data demonstrates the breadth of this offer. Over 500 people and a host of certified processes set Landis+Gyr apart as a trusted service partner to utilities throughout the region.

In addition to expanding its client portfolio, the team continues to support the largest AMI deployment worldwide at TEPCO. The innovative and proven mesh and IPv6 technology deployed in Japan are the basis for new technology sales around the world. Working in cooperation with Japanese colleagues, Landis+Gyr is ahead of schedule and has installed over 10 million end points on this IoT network to date.

#### Signs of Recovery in South America

In South America, sales for the reporting period amounted to USD 58.9 million, a decrease of 24 % compared to the previous year. However, evidence of renewed customer interest in AMI solutions have been observed. Expectations for growth in South America are positive, as utilities in this region seek to obtain the same operational and grid resiliency benefits realized by North American utilities that implemented Smart Grid technologies.

Landis+Gyr's commitment to innovation and quality was recognized when it was awarded the 2016 Global Frost & Sullivan Award for Technology Leadership, and the 2016 Global Company of the Year Award for its outstanding growth born of its visionary implementation of best practices in the Advanced Metering market. Gartner, Inc. also recognized Landis+Gyr as a leader for Meter Data Management products.

### EMPLOYEES 2016/17

2,166

### EMPLOYEES 2015/16

2,241

### OPERATIONS

1,499

#### R&D

368

#### SG&A

299

## EMEA



«We are proud to help utilities across the EMEA region comply with regulatory requirements by offering solutions to capture new business opportunities in the context of Big Data and the IoT.»

**Oliver Iltisberger**  
Executive Vice President EMEA

**IN 2016/17, SALES IN THE EMEA REGION INCREASED BY 9.3 % TO USD 587.8 MILLION. IMPORTANT PROJECT WINS ACROSS THE REGION CONFIRM LANDIS+GYR'S POSITION AS THE PARTNER OF CHOICE FOR UTILITIES AND DISTRIBUTION SYSTEM OPERATORS, AS THEY MODERNIZE INFRASTRUCTURE AND TRANSFORM THEIR BUSINESS MODELS.**

### **Growth Opportunities Ahead**

Oliver Iltisberger, Executive Vice President EMEA

Landis+Gyr outperformed the general market and exceeded its own sales targets thanks to the successful execution of ongoing mandates. Securing new AMI contracts in important markets throughout the EMEA region (Europe, Middle East and Africa), the Company sustained its substantial order backlog. In Europe, the market gained some momentum in the financial year 2016/17, primarily as a result of EU energy legislation aimed at increasing AMI penetration in its member states. The EU reaffirmed its objective of replacing at least 80 % of installed electricity meters with Smart Meters by 2020, focusing on energy efficiency, the integration of renewable energies and transparency. Almost 200 million electricity and 45 million gas Smart Meters will have to be rolled out to meet this goal. 16 of the 28 member states have planned large-scale rollouts to date.

**SALES IN MILLION USD 2016/17**

**587.8**

**SALES IN MILLION USD 2015/16**

**537.9**

### Enabling Transformation Across EMEA

Landis+Gyr won a series of new mandates in European countries modernizing their infrastructure, in order to comply with regulatory requirements. In the UK, the business extended its position by signing a new contract to supply utility SSE with Smart Meters, increasing the number of installed meter points in the country to 17 million by completion.

As part of a project to renew all of its meter parks for small to mid-sized industrial and commercial customers across France, French national electricity distributor Enedis chose Landis+Gyr as its supplier of Smart Meters. The three-phase direct voltage end points are specifically designed to meet the utility's requirements and will be produced at Landis+Gyr's site in Montluçon, France.

In Austria, Landis+Gyr won a tender to supply a consortium of utility providers in Styria with 330,000 E450 G3-PLC Smart Meters. The business also successfully concluded a pilot project that included the deployment of 20,000 Smart Meters in Burgenland, which by 2019 will be expanded by an additional 180,000 devices certified by the IDIS Association and the G3 Alliance. Landis+Gyr was the first company in EMEA to receive G3 Alliance certification for its Smart Electricity Meters, which ensure interoperability through compliance with international open standards and allow utilities to make long-term investments with confidence.

In Spain, Landis+Gyr has signed a contract with market leader Iberdrola for the supply of more than 700,000 latest-generation Smart Meters, which employ the latest PLC OFDM-based PRIME solution and offer other critical functionalities such as cyber security. The business has already provided Iberdrola with a total of 1.5 million devices over the past six years.

Landis+Gyr achieved a breakthrough in Kuwait by securing the prestigious Avenue Mall refurbishment project, marking its market debut with cooling meters in the Gulf country. In South Africa, Johannesburg's electricity utility City Power awarded Landis+Gyr a mandate to replace electricity meters with new locally developed and manufactured prepayment meters.

### Focus on Operational Excellence and Innovation

In the financial year 2016/17, Landis+Gyr continued the realignment of its regional organization structure in order to optimize its manufacturing strategy. The new customer segment-oriented structure enables the business to strengthen its customer and market focus and better meet the needs of the many utilities requesting value-added products, while maintaining its highest-quality standards and innovative spirit.

Showcasing innovation in electricity networks, Landis+Gyr participated in the 2016 InnoGrid2020+ conference in Brussels, Belgium. Members of the team presented data management and energy storage solutions that address the future network challenges that European transmission and distribution system operators must contend with as the IoT and grid digitalization continue to develop.

### EMPLOYEES 2016/17

2,534

### EMPLOYEES 2015/16

2,522

### OPERATIONS

1,468

### R&D\*

454

### SG&A\*\*

612

\* including Group R&D resources located in the region  
 \*\* including Group Headquarters

## ASIA PACIFIC



«We have built strong partnerships with our customer base that put the Company in a good position for future major deployments, supporting utilities in their transition to the smart management of their assets.»

**Ellie Doyle**  
Executive Vice President Asia Pacific

**IN A CHALLENGING ENVIRONMENT CHARACTERIZED BY STIFF COMPETITION, SALES IN ASIA PACIFIC SLIGHTLY DECREASED BY 1.1 % TO USD 140.2 MILLION. TEAMS MADE HEADWAY ON SEVERAL FRONTS, WINNING IMPORTANT NEW CONTRACTS AND PREPARING THE GROUND FOR FURTHER GROWTH.**

### **Strengthening the Regional Position**

Ellie Doyle, Executive Vice President Asia Pacific

In the financial year 2016/17, Landis+Gyr's Asia Pacific teams achieved major accomplishments in key markets and laid the groundwork for future growth. intelliHUB, the services subsidiary serving energy retail customers in Australia and New Zealand, gained traction. Thanks to its strong market presence in India and China and other Southeast Asian markets as well as its high-quality solutions offering, Landis+Gyr is well prepared to participate in future growth of this dynamic region despite tough competition from local and international players.

Among the major contract wins in the period were an Energy Australia pilot project, financed by Calvin Capital, which provides nationwide funding support for large-scale metering programs, and large-scale AMI rollouts for China Light & Power (CLP), Hong Kong, as well as Tata Power, India.

**SALES IN MILLION USD 2016/17**

**140.2**

**SALES IN MILLION USD 2015/16**

**141.7**

CLP’s selection of Landis+Gyr’s communications and metering solutions underscores its strong commitment to realizing the Smart Cities vision for Hong Kong. The Datong deal, another contract won by Landis+Gyr, set a new record for Chinese heating bids in recent years, and combines experts from R&D, Solutions and IT into one project task force, underlining Landis+Gyr Asia Pacific’s “one team” culture.

**First Smart Grid Project in India**

An important highlight was the contract signed with Indian utility Tata Power to launch a pioneering Smart Grid project in the megacity of Delhi. The project includes the design, supply, installation, testing, commissioning and maintenance of a single RF Mesh Gridstream® network platform that will support the utility with Distribution Automation, automated demand response, management of distributed energy resources and street lighting. Furthermore, the solution will enable Tata Power to introduce new applications that will provide real-time data on energy consumption and network status to their customers. This will help the utility to better regulate demand during peak times and increase energy efficiency. End customers will benefit from lower bills as a result of lower consumption.

**Regulatory Frameworks Supporting Smart Meter Rollout**

Landis+Gyr’s Australia teams strengthened their local presence, adapting the organization to the market’s emerging needs. Many customers are interested in metering as a service, as opposed to the large-scale purchase of a technology suite in a constantly evolving market environment. Over three years, the team has worked hard to build its intelliHUB business, which provides an end-to-end Smart Energy infrastructure service tailored to the individual needs of retail customers, as well as the safe and reliable installation and maintenance of metering assets. Local management expects another significant wave of business, in response to national electricity regulations requiring all new or replaced meters for residential customers to be smart, as of December 1, 2017.

Fresh tailwinds are also expected in various Asian markets. Based on the proven benefits of modernized energy grids equipped with Smart Meters, China intends to install 380 million Smart Meters by 2020, and the Indian government, in conjunction with India’s Smart Grid Task Force, is aiming to have 130 million Smart Meters installed by 2021.

**EMPLOYEES 2016/17**

1,219

**EMPLOYEES 2015/16**

1,305

**OPERATIONS**

416

**R&D**

567

**SG&A**

236



# Landis+Gyr as Smart Partner of Utilities

**THE CHANGING UTILITY LANDSCAPE OFFERS UTILITIES AN HISTORIC OPPORTUNITY TO REVOLUTIONIZE THEIR BUSINESS MODELS, AS INNOVATIVE TECHNOLOGIES ENABLE THE INTEGRATION OF NEW ENERGY RESOURCES INTO THE GRID. THE INTERNET OF THINGS (IOT) HAS ALREADY BEGUN TO ESTABLISH AN AUTOMATED NETWORK OF INTELLIGENT AND INTERCONNECTED DEVICES THAT EXCHANGE, PROCESS AND GENERATE DATA, CREATING NEW OPPORTUNITIES FOR OPERATIONAL ENHANCEMENTS AND SERVICE OFFERINGS. THE PROLIFERATION OF DEVICES AND THE DATA THEY PROVIDE ENABLES A MORE EFFICIENT AND SUSTAINABLE UTILIZATION OF GRID ASSETS, AND PROVIDES THE FOUNDATION FOR A MORE RELIABLE ENERGY SYSTEM.**

While intelligence derived from new data enlightens utilities and helps streamline processes, upgrading grid infrastructure to make the best use of the information is still needed. These improvements will enable providers to offer intelligent services, dynamically control energy demand, and create solutions tailored to the specific needs of their clients, increasing customer engagement, satisfaction, and loyalty.

There is an increasingly complex framework of intersecting regulatory, business and consumer demands in the market, including the growth of distribution system operators and more competitive markets.

The consumers of tomorrow will expect new services that go beyond the traditional supply of kilowatt-hours, and utilities will need access to the latest communication technologies and consumption information. Big Data allows providers to create new offerings, providing consumers with enhanced solutions that help control and optimize their energy consumption.

To meet these changing requirements, utilities need an innovative and trusted partner who speaks their language; a partner who can help them develop new capabilities and allows them to meet the rapidly changing requirements of their markets.

Gridstream<sup>®</sup>, Landis+Gyr's comprehensive energy management solution, provides flexible components that can be tailored to meet the unique needs of utilities. The platform grows and adapts with their business model, helping deliver a more connected and sustainable future by empowering people around the world to embrace secure and reliable energy.

Landis+Gyr's mission is to be the partner of choice for utilities, providing the technology that enables them to manage energy better and paves the way for the smart energy revolution. As a leading provider of intelligent networks and distribution solutions, we offer unparalleled expertise and experience, including measurement and communication technology, Big Data analysis, resource management as well as customized solutions and services.



# Master of Metrology and Communication Technologies

TODAY'S ENERGY INFRASTRUCTURE MUST OPERATE WITHIN A FAST-CHANGING AND DYNAMIC ENVIRONMENT. THE GROWTH OF DISTRIBUTED ENERGY RESOURCES AND THE EMERGENCE OF NEW CONSUMER BEHAVIORAL PATTERNS HAVE CONTRIBUTED TO A SHIFT FROM ONE-DIRECTIONAL GRID INFRASTRUCTURE TO BI-DIRECTIONAL FLOWS. BY COMBINING INFORMATION, COMMUNICATION AND METERING TECHNOLOGY, SMART GRIDS OFFER THE FLEXIBILITY TO MANAGE A FAST-CHANGING UNIVERSE, WHILE ENSURING DATA PRIVACY AND SECURITY.

## LANDIS+GYR'S CAPABILITIES AND SOLUTIONS

With more than 25 years of experience in Advanced Metering Infrastructure (AMI), Landis+Gyr is the partner of choice for utilities, providing the technology and expertise to enable them to manage energy better.

Balancing increasing demand for service quality, control, and sustainability with a decades-old grid originally designed for one-directional energy flows is a significant challenge for utilities. Faced with numerous differences between existing and new network architecture, an evolving mix of power sources, and varied consumer preferences, providers continue to look for new network solutions at every voltage level.

Gridstream®, Landis+Gyr's proven, state-of-the-art, comprehensive Advanced Metering and Customer Intelligence solution, is designed to modernize the entire grid infrastructure. The Gridstream® suite ensures reliable energy management and full interoperability among network systems, meters, and communication technologies.

Compatible with all standard industry protocols, including G3 PLC, RF Mesh, IPv6 and cellular technologies, it can be used in networks in which numerous technologies are integrated and works effectively across deployments of all sizes, from a few thousand to more than 30 million. Gridstream® provides utilities with a flexible and efficient solution and unprecedented data granularity.

# Case

## netz BURGENLAND

As one of the first utilities to implement Smart Metering in Austria, Netz Burgenland has chosen Landis+Gyr as its partner for providing and deploying Smart Meters throughout its entire supply area. This will prepare Netz Burgenland for the requirements of future energy management and will help its customers save costs on energy.

### NETZ BURGENLAND

With more than 200,000 metering points in its network, Netz Burgenland is among Austria's largest electricity Distribution System Operators (DSO). It is a fully owned subsidiary of Energie Burgenland AG.

### SMART METER ROLLOUT IN AUSTRIA

According to a decree of the Austrian Ministry of Economy, Family and Youth from 2012, at least 95 % of all Austrian households must be equipped with Smart Meters by the end of 2019. After a successful pilot in 2015 comprising the installation of 3,000 Smart Meters from Landis+Gyr, Netz Burgenland started the mass rollout with the installation of another 17,000 devices in 2016. By the end of 2019, all 200,000 meter points will be replaced, hence allowing the DSO to fulfill the regulatory requirements in due time.

### LANDIS+GYR SOLUTION: FAST, RELIABLE, SECURE

For the Smart Meter rollout, Netz Burgenland has chosen Landis+Gyr's Gridstream® solution based on G3 PLC communication technology. G3 PLC enables faster and more reliable communications in a Smart Grid infrastructure and flexible connectivity with new intelligent applications. It is highly resistant to disturbances and capable of adapting to changes in network conditions automatically. In addition to the E450 Smart Meters equipped with a consumer information interface, Landis+Gyr supplies data concentrators and a Head-End System (HES) to Netz Burgenland. The solution will provide customers with access to information on their level of consumption and enable the utility to better plan energy supply, reduce surpluses and offer customers tariff packages tailored to their consumption behavior. The solution meets highest security standards for data transmission. Each device is equipped with an individual password, which ensures safe end-to-end encryption.



# Big Data Analyst

AS THE NUMBER OF SMART METERS DEPLOYED AND THE DATA THEY COLLECT CONTINUES TO GROW WORLDWIDE, UTILITIES HAVE BECOME INCREASINGLY DATA-CENTRIC COMPANIES. OVER AN INTELLIGENT NETWORK, DATA CAN BE COLLECTED, ANALYZED, AND USED BY UTILITIES TO IMPROVE GRID MANAGEMENT, ENGAGE WITH CONSUMERS, IMPROVE RELIABILITY AND SECURITY, AND CREATE NEW SERVICES AND OFFERINGS. THE GROWING UNIVERSE OF IOT WILL FURTHER BOOST THE POTENTIAL AND RELEVANCE OF DATA ANALYTICS.

## LANDIS+GYR'S CAPABILITIES AND SOLUTIONS

Data is the new currency, and Landis+Gyr's Smart Grid technologies are structured to capture it. Big Data, the IoT, and efficient analytic tools have become an integral element of future utility business models. Data-analytic solutions provide a competitive edge by supporting more efficient processes, improve infrastructure management and planning, and result in a more reliable power supply.

Landis+Gyr's Gridstream® analytics solution enables utilities to leverage existing Smart Grid investments and more efficiently plan and operate the grid of the future. Employing a bespoke technology platform, Landis+Gyr's comprehensive Advanced Grid Analytics applications harness the power of data to effectively respond to and meet the demands of a fast-evolving grid. Visualization and insights to help integrate and manage a growing fleet of distributed energy resources are a key benefit to the market.

Employing physics-based algorithms, the analytics platform identifies and resolves potential system bottlenecks and applies scenario analyses to perform forward-looking planning studies. As a result, Landis+Gyr's Gridstream® solution offers a toolbox for converting a data-intense network into actionable insights which are more efficient for utilities and their customers.

# Case



Landis+Gyr has been selected by CenterPoint Energy, Inc.'s electric transmission and distribution subsidiary to provide an Advanced Grid Analytics enterprise solution to manage distribution transformer loading that tracks performance and delivers proactive guidance for improved transformer Load Management.

## CENTERPOINT ENERGY

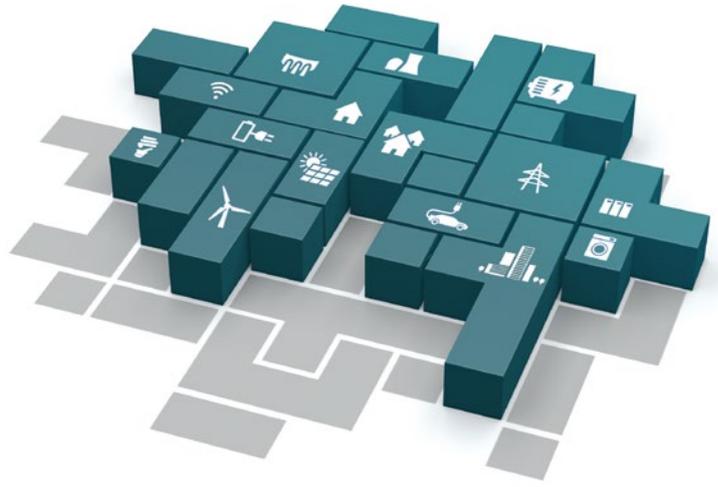
CenterPoint Energy is an electric transmission and distribution business serving a 5,000-square-mile electric service territory in the Houston, Texas, metropolitan area.

## MORE EFFECTIVE AND EFFICIENT GRID MANAGEMENT

CenterPoint Energy's objective was to replace its transformer management system with a solution offering more capabilities for improved reliability, operational efficiency and cost reduction. The requirements included identification of over- and underloaded transformers, as well as identifying other assets at risk of potential failure. The ability to utilize Advanced Metering and GIS data to geospatially visualize, and proactively identify, potential transformer failures to reduce the number of unplanned outages was an important factor. Besides quickly identifying and localizing outage risks, the utility aimed to reduce costs by actively addressing stressed assets through analytics-aided planning and proactive asset maintenance strategies, thereby improving reliability, grid performance and extending the life of assets.

## LANDIS+GYR SOLUTION: MATURE, RELIABLE, RESPONSIVE

Landis+Gyr replaced CenterPoint Energy's legacy transformer management system with its latest Advanced Grid Analytics Asset Loading application. Offering system-wide visibility of asset health, loading and performance, the application provides CenterPoint Energy with insights and tools that can be utilized by various departments inside the organization. Analyses of data from CenterPoint's 2.4 million meters across the grid increase the distribution operator's efficiency and empower CenterPoint Energy to develop proactive asset management strategies to enhance service levels and better meet customer needs. The ability to conduct loss-of-life calculations enhances economics-based decision-making for replacement, proper sizing, and location of transformers. By identifying, visualizing and monitoring changes across the grid as they occur, the advanced data analytics functionalities help CenterPoint Energy optimize grid management and realize added value.



# Provider of Customized Solutions

THE IOT UNLOCKS HUGE POTENTIAL IN THE WAY CONSUMERS EMPLOY TECHNOLOGY AND DATA, INCREASINGLY CONNECTING SMART CITIES, BUILDINGS AND DEVICES. DISTRIBUTED ENERGY RESOURCES (DER) WILL REQUIRE INNOVATIVE ADVANCEMENTS IN ENERGY MANAGEMENT AND OPTIMIZATION. CONSUMERS INCREASINGLY EXPECT PROVIDERS TO SUPPLY THEM WITH PERSONALIZED GUIDANCE ON HOW TO SAVE ENERGY WHILE OPEN MARKETS AND NEW POWER SOURCES WILL STIMULATE DEMAND FOR RESILIENCY AND MORE TAILORED SERVICES.

## LANDIS+GYR'S CAPABILITIES AND SOLUTIONS

To meet the unique needs of its customers, Landis+Gyr has developed a suite of technologies and solutions that enable utilities to embrace the wide-ranging opportunities that will come with data analysis and communication technology, including automatized systems that create a variety of new technical and commercial strategies for DSOs.

DER supply the grid with information as well as electricity, creating new opportunities for products, efficiency gains, and cost savings, while providing utilities and their customers with greater flexibility.

Landis+Gyr's Gridstream® solution provides utilities with a wide range of flexible and scalable products: AMI solutions offer unprecedented access to energy usage data in real time; Distribution Intelligence solutions allow utilities to operate and control assets more efficiently; and Customer Intelligence solutions provide the tools for utilities to engage with their customers more effectively. Collectively, these solutions help utilities to enhance their services and better meet the specific needs of their customers.



# Case



At the end of a government solar bonus incentive scheme, New South Wales households and businesses with small-scale solar systems were facing a significant change to the benefits on offer through their solar systems. In partnership with Landis+Gyr, Acumen Metering rolled out a new Smart Meter, designed to maximize benefits for Origin Energy's customers, both before and after the scheme ended.

## ACUMEN METERING

Acumen Metering is accredited by the Australian Energy Market Operator (AEMO) as a metering services provider and is fully owned by Australia's leading energy retailer, Origin Energy. It delivers market-leading electricity and water metering services.

## SUPPORTING SOLAR PROSUMERS IN AUSTRALIA

The solar bonus incentive scheme provided a defined feed-in tariff for eligible customers with small-scale solar or wind generators connected to the grid, for a fixed period that ended in 2016. To continue generating and using solar power in the home and export excess power to the grid, customers with gross metering were usually better off switching to net metering. Origin Energy offered to upgrade its customers to Smart Meters to implement this change.

## LANDIS+GYR SOLUTION: FIRST OF ITS KIND

Landis+Gyr developed a tailored Smart Metering solution for Acumen Metering that enabled a seamless automatic transition from gross to net metering and still allows the solar system generation to be separately measured. Unlike other options in the market, where two meters were required, Landis+Gyr's solution consists of a single, innovative Smart Meter that measures both gross and net household energy use, including hot-water energy consumption and solar generation.

In addition to protecting its customers' solar investment, the solution provides Origin Energy with the tools to increase consumer engagement, by offering timely and granular insights to customers on their energy usage and generation.



# Transformation Enabler

**AN INCREASINGLY DYNAMIC AND DECENTRALIZED ENERGY SYSTEM WILL REQUIRE UTILITIES TO EVOLVE EXISTING WAYS OF DOING BUSINESS AND PROVIDES OPPORTUNITIES FOR NEW OFFERINGS. SYSTEM OPERATORS PLANNING TO UNDERTAKE STRATEGIC INVESTMENTS IN NEW TECHNOLOGIES AND ASSETS WILL NEED TO SELECT PARTNERS WITH A CLEAR VISION OF HOW THE FAST-CHANGING TECHNOLOGY LANDSCAPE WILL DEVELOP.**

## **LANDIS+GYR'S CAPABILITIES AND SOLUTIONS**

Landis+Gyr's comprehensive portfolio of scalable Smart Grid products and services helps utilities transform their business models and prepare for a more decentralized and connected future. Covering a wide range of hardware and software solutions, Landis+Gyr provides utilities with measurement, network communications, grid monitoring, resource management and analytics tools, as well as products to meet customers' tailored requirements.

Landis+Gyr's Gridstream® solution harnesses the power of data to effectively respond to current and future challenges, delivering the tools for users to leverage their investments more effectively. Thanks to its flexibility, advanced grid infrastructure, analytics, and software solutions can be gradually integrated within a utility's existing infrastructure or hosted within the cloud and delivered as a stand-alone service.

Gridstream®'s versatile, scalable, and interoperable features offer customer-tailored solutions for Smart Grid operations. These include a modular, intuitive, web-based interface, allowing utilities to optimize grid performance and asset management, while improving customer service and integration. Landis+Gyr's smart solutions also enable utilities to manage DER and battery storage assets more effectively, two developing trends which will be particularly important in the future.

# Case



Salt River Project (SRP) partnered with Landis+Gyr to deploy a communication platform that supports Advanced Metering, adds two-way communication to its legacy prepayment system, implements prepayment functionality at each AMI meter over the air, and supports other Smart Grid applications. Today, more than 150,000 SRP customers in Arizona use the meter-driven prepayment system from Landis+Gyr to monitor, manage, and pay for electricity.

## SALT RIVER PROJECT

SRP is the third-largest public power utility in the US, serving more than 1 million customers in the greater Phoenix metropolitan area.

## PREPAYMENT PIONEER

In the 1990s, SRP launched a highly successful prepayment program to help its customers save both money and energy. The award-winning program quickly grew into the country's largest prepayment program. In order to keep pace with changes in the industry, such as increasing distributed resources and the integration of renewables, and to provide customers new services and more options for energy management, SRP was seeking a solution for modernizing its prepayment infrastructure.

## LANDIS+GYR SOLUTION: FOCUS ON CUSTOMER EXPERIENCE

Landis+Gyr's smart prepayment solution utilizes the Advanced Metering, two-way communication platform as the backbone. Smart Meters that contain edge computing capability and applications provide the logic and communication needed to support the prepayment program. An in-home display terminal offers real-time access to usage, source and cost of power as well as account balance.

Thanks to the multi-purpose connected communication platform, SRP can provide its customers with a growing list of services, such as outage and restoration e-notifications, and flexible billing options that help retail customers save money and match household budget, lifestyle and energy use needs. In addition, SRP is offering a load control program that includes programmable communicating thermostats and load control switches. Some program participants are also using a demand manager application developed by Landis+Gyr that can automate Load Management actions for customers on demand rates. SRP continues to lead with innovative energy management options for its consumers.

## OUTLOOK

# Paving the Way for a Smart Society



LANDIS+GYR'S BEST-IN-CLASS TECHNOLOGY PORTFOLIO, EXTENSIVE EXPERTISE AND LONG-RUNNING RELATIONSHIP WITH UTILITIES AROUND THE WORLD, POSITION THE COMPANY IDEALLY TO HELP UTILITIES MEET THE CHALLENGES OF A RAPIDLY EVOLVING ENVIRONMENT. THROUGH ITS EXTENSIVE RESEARCH AND DEVELOPMENT ACTIVITY, LANDIS+GYR IS BRINGING TO MARKET THE TECHNICAL INNOVATIONS THAT WILL BECOME THE FOUNDATION OF NEXT-GENERATION ENERGY SOLUTIONS.

### LANDIS+GYR

As the global leader in Advanced Metering and Smart Grid services, Landis+Gyr plays a key role in creating a better quality of life for all people by contributing to a thriving, healthy society that manages energy more efficiently while also protecting our environment.

The Company has the technology and intelligence to measure, analyze, manage, and optimize energy supply and demand, enabling the integration of renewables and battery storage solutions, which will play a crucial role in our future energy systems.

For more than a century, Landis+Gyr has helped the world manage energy better, providing utilities with the technology to create the grid of the future. Smart Devices, Smart Buildings, and Smart Cities will create a wealth of new business opportunities across the value chain, while the IoT, real-time data management, and predictive analysis will improve grid reliability and efficiency by including diverse sources of information. An increasingly virtual grid architecture, bi-directional communication, and open standards that enable programmatic marketplaces will be the key elements to meet the changing expectations and evolving needs of consumers in the twenty-first century.



# Case

# TEPCO

In the largest Intelligent Grid project worldwide, TEPCO is deploying Landis+Gyr's Gridstream® solution, building the world's largest IoT utility network. The open-standards approach chosen meets the highest requirements with regard to interoperability, scalability, and security.

## TOKYO ELECTRIC POWER COMPANY (TEPCO)

TEPCO is the largest electric utility in Japan and the fourth-largest in the world. The utility brings electricity to over 27 million service locations in the greater Tokyo area, serving more than 45 million people.

## CONNECTING THE MODEL MEGACITY

One of TEPCO's top priorities is to deliver services that promote efficient energy use by its customers, while transforming itself into a future-oriented infrastructure company that contributes to a safe and comfortable Smart Community. In pursuing this vision, TEPCO aims to establish a new electricity business model in response to Japan's efforts to reform its electricity system. For example, deregulation of the Japanese electricity market requires all meter reads for customers utilizing an alternative retailer to be pushed to a common portal every 30 minutes, allowing the energy retailers near-real-time access to customer data.

## LANDIS+GYR SOLUTION: 1.3 BILLION INTERVAL METER READS PER DAY

Landis+Gyr's communication network and grid management technology supports multiple Smart Grid and Smart City initiatives at TEPCO. Key functionalities include the ability to operate 6.5 million demand response requests per hour to address such issues as surplus electricity countermeasures, night-time demand creation, demand shift, solar energy output control, battery storage as well as incentivized demand response. Driving this connected platform is Landis+Gyr's IPv6 multi-technology network, which connects utility and consumer devices using RF Mesh, G3 PLC and cellular communications, providing Wi-SUN-compliant connectivity to each installation. In April 2017, the milestone project surpassed 10 million advanced meters and devices installed. Upon completion expected for 2020, or even earlier, the TEPCO deployment will include more than 27 million devices transmitting 1.3 billion interval data packages daily, all processed by Landis+Gyr's Head-End System (HES) and Meter Data Management Solution (MDMS).



## OUR EMPLOYEES – SMART PARTNERS OF UTILITIES



«At Landis+Gyr we are strongly committed to supporting utilities of all sizes and geographies with continued investments in innovative products and services.»

**Michael Staudinger**  
Sales Director Switzerland, Zug



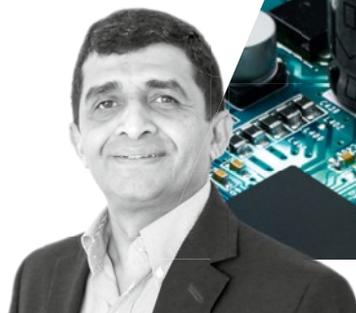
«At Landis+Gyr, we offer our employees an exciting environment where inspiring people collaborate to develop and realize tomorrow's smart energy solutions.»

**Andrea Johnson**  
Director Human Resources, Alpharetta



«Our powerful analytics tools help distribution system operators translate data into valuable, actionable business information. This is essential to determine the right course of action and make timely decisions.»

**Soorya Kuloor**  
Director Engineering, Morrisville





«When we talk about “smart” at Landis+Gyr, we mean flexible, scalable, customizable, data-driven, connected and interoperable, and based on first-class components.»

**Ugo Venni**  
Vice President, Head of Central Procurement, Zug



«We are proud of our smart technology and smart solutions, which are all dedicated to help our customers manage energy better.»

**Heather McNay**  
Group IP Counsel, Alpharetta



«Our proximity to customers combined with our technological expertise and innovative spirit helps us to support our customers on their transitional journey.»

**Simon Egan**  
Business Development Director Ireland, Dublin

## OUR PRODUCTS AND CAPABILITIES

THE ENERGY INDUSTRY IS CHANGING RAPIDLY. NEW TECHNOLOGIES ALLOW COLLECTING AND ANALYZING 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 TECHNOLOGY. IN SUPPORT, WE HEAVILY INVEST IN OUR OFFERING TO HELP OUR CUSTOMERS MASTER THE CHALLENGES 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 industry-leading 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 multi-energy 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 >|

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



## MONITOR

### AMI SYSTEM PERFORMANCE >|

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

### CONSUMER PORTALS >|

- Secure web portal
- Mobile applications

### GRID SENSORS AND TOOLS >|

- Sensors and sensing solutions
- Integrators and solutions for mv/lv network monitoring and supervision

### 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

## ACT

### SUPPLY SIDE MANAGEMENT >|

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

## CONTROL

## AUTOMATE

## OPERATE

### DATA CENTER HOSTING >|

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

### MANAGED SERVICES >|

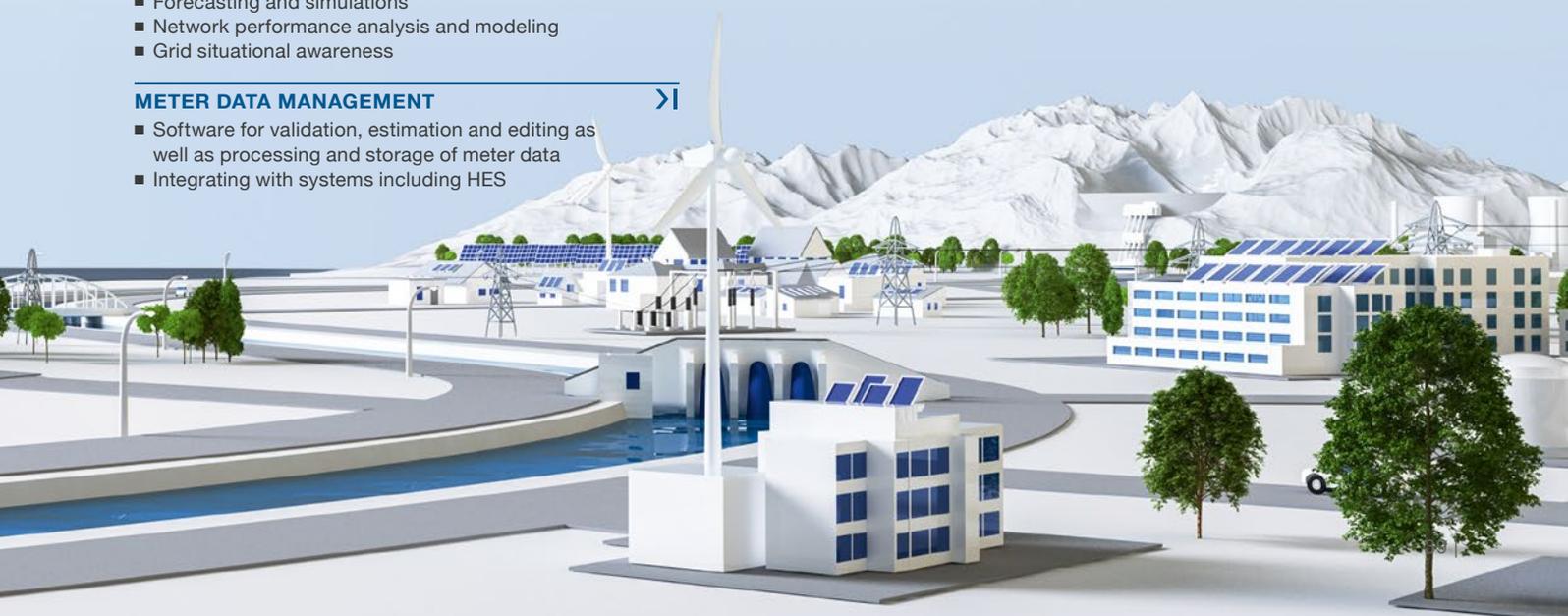
- Meter reading from one provider, across the entire utility's customer base
- Installation management and logistics, meter maintenance and disaster recovery services
- Configurable system and individual ownership models

### 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





## 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 high-consumption 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**

- Forecasting and load shedding
- Demand supply balancing
- Virtual Peak Plant and other types of storage
- Infrastructure monitoring and management
- Capacity response and supply response
- Billing

**10 PLUG-IN ELECTRIC VEHICLES (PEVS)**

- Distributed Load Control (charging and feed-in cycle)
- Billing

**11 RESIDENTIAL ENERGY CONSUMERS**

- Electricity, heat and gas meters for Time-of-Use/dynamic pricing
- Demand response/load shedding
- Management and control of microgeneration
- Personal Energy Management tools
- Smart Home applications
- 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



## OUR EMPLOYEES – SMART PARTNERS OF UTILITIES



«Smart solutions enable utilities to manage their assets better and allow for a new dimension of interaction with their customers, the end consumers of energy.»

**Shelley Moister**  
Director Solutions Product Marketing, Alpharetta



«For the second consecutive year, Landis+Gyr has been designated as a leader in Gartner, Inc.'s Magic Quadrant for Meter Data Management (MDM) products. This recognition confirms our readiness to meet the current and future needs of our customers.»

**Dave Connaker**  
General Manager, Data Management and Grid Analytics, Bloomington



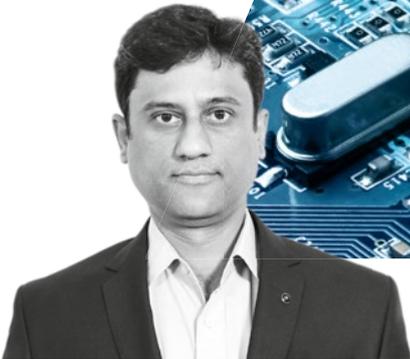
«We are keen to offer state-of-the-art solutions for leveraging Smart Grid investments and proactively planning the grid of the future.»

**Kevin Fennell**  
Senior Director Business Development, Pequot Lakes



«At Landis+Gyr, smart solutions are the result of global teams working intelligently together in interdisciplinary and multinational teams.»

**Tarun Uttamchandani**  
Director Software, Noida



«Distributed energy resources and the Internet of Things are the centerpiece of a revolutionary Smart City vision. And our solutions help to put this vision into practice.»

**Monique Spanbrook**  
Marketing and Communications Asia Pacific, Sydney



LANDIS+GYR HELPS PEOPLE, ORGANIZATIONS AND COMMUNITIES AROUND THE GLOBE MANAGE ENERGY BETTER. IN THE PURSUIT OF THIS MISSION, LANDIS+GYR ASSUMES RESPONSIBILITY AS A CORPORATE CITIZEN BY FULFILLING THE HIGHEST STANDARDS IN ENVIRONMENTAL AWARENESS AS WELL AS BUSINESS ETHICS ACROSS THE ENTIRE VALUE CHAIN OF THE GROUP'S PRODUCTS AND SERVICES.

# Corporate Social Responsibility

## 2016/17 ENVIRONMENTAL KEY FIGURES



### WATER

+0.2 %

Consumption stabilized thanks to use of alternative water sources



### LANDFILL

-26.6 %

As a result of recycling efforts



### CHEMICALS

-14.3 %

As a result of replacement of chemicals identified as hazardous



### CO<sub>2</sub>E

-2.2 %

Overall CO<sub>2</sub> emissions decreased by another 2.2 %. Since the program's inception in 2007 the reduction amounts to 20.1 %.

## Anticipating Tomorrow's Energy Challenges

Hans Sonder, Group Environmental Officer

In the financial year 2016/17, Landis+Gyr continued its extensive efforts to mitigate the Group's environmental impact. The execution of existing programs and new initiatives aimed to increase sustainability throughout the entire design and production process resulted in a further reduction in greenhouse gas emissions and resource consumption. By developing and delivering market-leading, environmentally sound solutions anticipating tomorrow's energy challenges, Landis+Gyr is making an important contribution to creating a sustainable future.

**Responsible Partner.** Landis+Gyr operates in full compliance with the laws, rules and regulations of the countries in which it is active. The Company has implemented a strong set of internal and external control measures and stipulates zero tolerance of corruption and violations of the principles of fair competition and human rights. To ensure socially balanced, healthy and safe working conditions, Landis+Gyr has established a set of stringent standards within the Group's operations and its supply chain. Its suppliers comply with and provide evidence of their compliance with Landis+Gyr's Quality, Environmental, Health and Safety Policy, and Code of Business Conduct and Ethics. These include declarations of compliance, self-assessment and third-party assessment and auditing. In addition to ISO 9001, 14001 and 18001 certification throughout the Company and at all its key suppliers, Landis+Gyr requires its tier one suppliers to acknowledge and implement the EICC (Electronics Industry Citizenship Coalition) Code of Conduct.

**Further Reduction of Environmental Impact.** In 2016/17, Landis+Gyr continued to promote its activities aimed at reducing its environmental impact. Resources were devoted to measuring its environmental impact and training its employees. Landis+Gyr routinely monitors the performance of its waste treatment and emission control systems in order to ensure their effectiveness and to identify potential for improvement. Lifecycle and recycling aspects are an integral factor of design and production processes in the entire value chain of the Group's products and services.

**Water: Focus on Resource Efficiency.** Landis+Gyr continued several initiatives aimed at reducing water consumption during the reporting period. In 2016/17, water consumption within the Landis+Gyr Group marginally increased by 0.2 % to 116,520 m<sup>3</sup> from 116,340 m<sup>3</sup> in the prior year and despite a significant sales growth of 5.45 %. 63.6 % (2015/16: 68.4 %) of total water consumption was attributed to level-1 sites and 29.9 % to level-2 sites (2015/16: 24.6 %). Level-3 sites accounted for 6.5 % of the total amount (2015/16: 7.0 %).

The use of alternative water sources and resource efficiency are high priorities at all operations of Landis+Gyr. Therefore, Landis+Gyr is committed to expanding its capacity for collecting rain water as well as for recycling and reusing water.

**Waste: Significant Landfill Reduction.** To curb the harmful effects of waste, Landis+Gyr aims to achieve constant operational improvements that reduce or prevent waste through design and in-process modifications, reuse and recycling. Waste management also includes the final treatment and disposal of waste at landfills and incineration facilities.

The total produced waste in 2016/17 slightly decreased by 1.9 % to 3,874 metric tons from 3,949 metric tons in the prior year. 80.8 % of total waste came from level-1 (2015/16: 78.9 %) and 19.2 % from level-2 sites (2015/16: 21.1 %). The reduction is primarily a result of improved waste sorting and recycling at its manufacturing sites. One of Landis+Gyr's key targets is to reduce landfill waste. The actions taken during the past year focused on the Company's main landfill generators and produced the desired results. Overall landfill volumes were reduced significantly in all regions by a total of 26.6 % compared to the previous year.

**Chemicals: Use Halved in Five Years.** The sound management of chemicals throughout the entire value chain and the entire lifecycle of Landis+Gyr's products and services is an essential target of the Group. Therefore, Landis+Gyr is promoting chemical management projects to phase out the use of chemicals defined as hazardous and to minimize corresponding emissions. In 2016/17, the total use of chemicals decreased by another 14.3 % to 11.7 metric tons from 13.6 metric tons in the prior year. Level-1 sites accounted for most of the chemicals impact, whereas use of chemicals at level-2 and level-3 sites was negligible. Since 2012/13, the overall use of chemicals has dropped by almost half.

### Carbon Footprint

**Ten Years of Carbon Footprint Records.** Since 2007, Landis+Gyr has recorded its carbon footprint. The carbon footprint is calculated by converting all GHG emissions to metric tons expressed in CO<sub>2</sub> equivalents (CO<sub>2</sub>e), using appropriate GWP (Global Warming Potential) factors as published by the Intergovernmental Panel on Climate Change (IPCC). Total CO<sub>2</sub> emissions within the Landis+Gyr Group amounted to 31,594 metric tons CO<sub>2</sub>e in 2016/17, down by 2.2 % compared to 32,296 metric tons CO<sub>2</sub>e in 2015/16.

**2016/17 by Scope.** In accordance with accepted global standards, the carbon footprint has also been documented in scopes. The decrease in overall emissions can mainly be attributed to Scope 1 (direct emissions, down by 12.1 % to 3,092 metric tons CO<sub>2</sub>e, accounting for 9.8 % of the total) and was mainly related to reduced gasoline consumption in emergency power generators and Company vehicles. Scope 2 (indirect emissions associated with the generation of purchased electricity or district heating) showed a slight improvement of 2.9 % to 21,816 metric tons CO<sub>2</sub>e, amounting to 69.1 % of the total. The improvement is attributed to reductions in electricity and district heating consumption in Asia Pacific, North and South America. Business air travel, as part of Scope 3 (indirect emissions from sources neither owned nor controlled by the Company) contributed 6,686 metric tons CO<sub>2</sub>e, up 6.0 % and amounting to 21.1 % of Landis+Gyr's total carbon footprint. The increase was mainly due to increased air travel in the Asia Pacific region related to supplier contracts.

Between 2007 and 2016/17, Landis+Gyr has achieved significant reductions in emissions related to its R&D and manufacturing processes. Since 2007, Scope-1 emissions decreased by 56.7 %, whereas Scope-2 emissions dropped by 21.4 %. However, during the same period Scope-3 emissions were up by 21.1 % due to increased travel activity. Over the period of ten years since the start of recording, total carbon emissions decreased by 21.8 %.

**2016/17 by Economic Intensity Ratios.** Ratio indicators provide information on performance relative to a business type. The indicators chosen to express GHG intensities are: emissions per product, employee, per 10 m<sup>2</sup> of floor area and per USD 100 turnover. In 2016/17, the average Group emissions amounted to 1.1 kg per product, 4.2 metric tons per employee, 1.4 metric tons per 10 m<sup>2</sup> of floor area and 1.5 kg per USD 100 of turnover. The charts also display the values for the previous years.

Between 2007 and 2016/17, Landis+Gyr has achieved significant reductions in emissions. A comparison on a per-unit-of-production reveals emissions more than halved from 2.3 kg per product in 2007 to 1.1 kg in 2016/17. Similarly, average emissions per employee decreased by 35 % to 4.2 metric tons in 2016/17 from 6.5 metric tons in 2007 and emissions per 10 m<sup>2</sup> of floor area decreased by 22 % compared to 2007 and stabilized in 2016/17 at 1.4 metric tons. On a per-turnover basis, emissions decreased from 2.8 kg per USD 100 turnover in 2007 to 1.5 kg in 2016/17, which is equivalent to a reduction of 46 %.

## ENVIRONMENTAL IMPACT



## CO<sub>2</sub>

### PER SCOPE

	SCOPE 1	SCOPE 2	SCOPE 3	TOTAL
2007	7,143 t	27,762 t	5,521 t	40,426 t
2008	8,178 t	24,698 t	6,637 t	39,513 t
2009	7,058 t	23,770 t	4,633 t	35,461 t
2010	6,680 t	23,976 t	4,582 t	35,238 t
2011	5,690 t	24,133 t	5,237 t	35,060 t
2012/13	5,585 t	22,869 t	5,467 t	33,921 t
2013/14	5,911 t	22,487 t	6,225 t	34,623 t
2014/15	4,809 t	22,774 t	6,421 t	34,005 t
2015/16	3,516 t	22,470 t	6,311 t	32,296 t
2016/17	3,092 t	21,816 t	6,686 t	31,594 t

Scope 1: all direct GHG emissions  
 Scope 2: indirect GHG emissions from consumption of purchased electricity, heat or gas  
 Scope 3: other indirect emissions

## CO<sub>2</sub>

### BY ECONOMIC INTENSITY RATIOS

#### KG CO<sub>2</sub> PER PRODUCT



#### METRIC T CO<sub>2</sub> PER EMPLOYEE



#### METRIC T CO<sub>2</sub> PER 10 M<sup>2</sup> FLOOR AREA



#### KG CO<sub>2</sub> PER USD 100 TURNOVER



## OUR EMPLOYEES – SMART PARTNERS OF UTILITIES



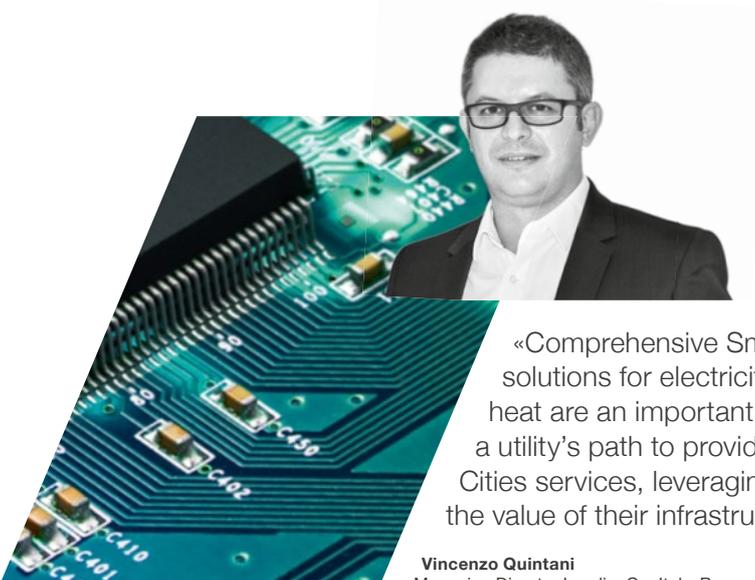
«Landis+Gyr is proud to be a forerunner in technological development and to provide utilities with state-of-the-art heat metering solutions based on superior ultrasonic technology.»

**Herbert Brunner**  
Vice President Heat Metering, Nuremberg



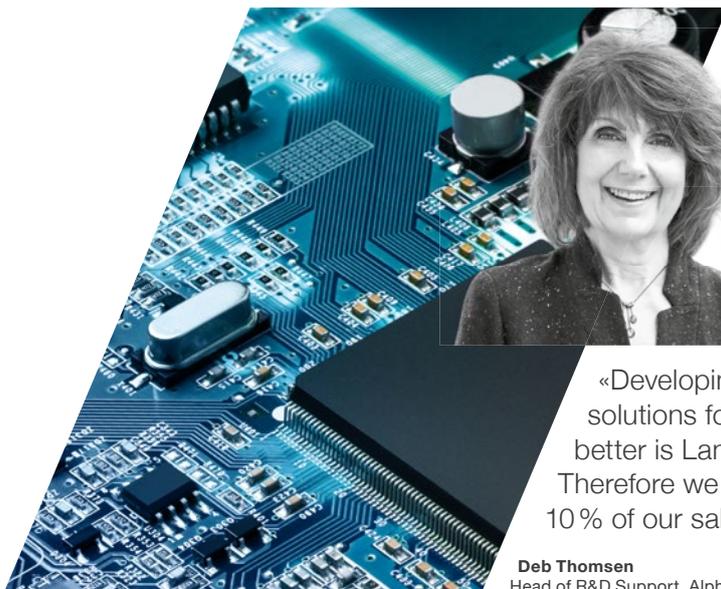
«After the accreditation of intelliHUB by the Australian Energy Market Operator, Landis+Gyr can now offer Australian customers flexible end-to-end solutions through multiple service models.»

**Rodney Chaplin**  
General Manager, Sales & Delivery ANZ, Sydney



«Comprehensive Smart Metering solutions for electricity, gas and heat are an important step on a utility's path to provide Smart Cities services, leveraging also the value of their infrastructure.»

**Vincenzo Quintani**  
Managing Director Landis+Gyr Italy, Rome



«Developing safe and innovative solutions for managing energy better is Landis+Gyr's mission. Therefore we invest almost 10% of our sales in R&D.»

**Deb Thomsen**  
Head of R&D Support, Alpharetta



«Landis+Gyr's versatile and flexible solutions have been developed to help our customers transform their business. They offer new options for outage response, system maintenance as well as for a new dimension of customer services.»

**Tim Weidenbach**  
Senior Vice President Sales & Customer Operations, Alpharetta



«Our customers' requirements are complex, and so is our business. That requires a close cooperation of specialists allowing us to help our customers manage energy better.»

**Katharina Mange**  
Head of Group Tax, Zug

## EXECUTIVE MANAGEMENT

LANDIS+GYR IS BACKED BY SOME 6,000 EMPLOYEES DEDICATED TO HELP SOCIETY MANAGE ENERGY BETTER. IN COMBINATION WITH OUR CORPORATE VALUES CUSTOMER FOCUS, INNOVATIVE SPIRIT, TRUSTED PARTNER AND COMMITTED TO QUALITY, THEIR DEDICATION BUILDS OUR FORMULA FOR SUCCESS, ENABLING US TO SUPPORT OUR CUSTOMERS IN THEIR TRANSFORMATIONAL JOURNEY TOWARD A SMARTER SOCIETY.

### 1 Andreas Umbach

Chairman

- Appointed in 2017; Swiss and German
- Previously Chief Executive Officer
- Master's degree in Mechanical Engineering, TU Berlin; MBA University of Texas, Austin

### 2 Richard Mora

Chief Executive Officer

- Appointed in 2017; American
- Previously Chief Operating Officer
- BA in Economics, Stanford University

### 3 Jonathan Elmer

Executive Vice President and Chief Financial Officer

- Appointed in 2012; British
- Formerly CFO of Landis+Gyr EMEA and CEO of AMPY Metering
- Degree in Economics and Politics, University of Exeter; Member of the Institute of Chartered Accountants in England and Wales

### 4 Prasanna Venkatesan

Executive Vice President Americas

- Appointed in 2014; American
- Previously Senior Vice President & General Manager for Landis+Gyr North America and various senior management positions within Cellnet and Schlumberger
- Master of Science in Industrial Engineering from University of Oklahoma, Norman

### 5 Oliver Ittisberger

Executive Vice President EMEA

- Appointed in 2014; German
- Most recently Executive Vice President Asia Pacific and various management positions within Landis+Gyr and Siemens
- Joint Master's degree in Mechanical Engineering and Business Administration, TU Darmstadt

### 6 Ellie Doyle

Executive Vice President Asia Pacific

- Appointed in 2014; American
- Most recently Senior Vice President for Strategy and Growth Landis+Gyr Americas, following 15 years of various management positions within Landis+Gyr and Siemens
- JD from University of Virginia School of Law

### 7 Roger Amhof

Executive Vice President and Chief Strategy Officer

- Appointed in 2014; Swiss
- Formerly Senior Partner of Ernst & Young (EY) Switzerland and Global Client Service Partner for selected major key accounts of EY Global
- Master in Economics, University of Fribourg, Switzerland

### 8 Dieter Hecht

Executive Vice President and Chief Procurement Officer

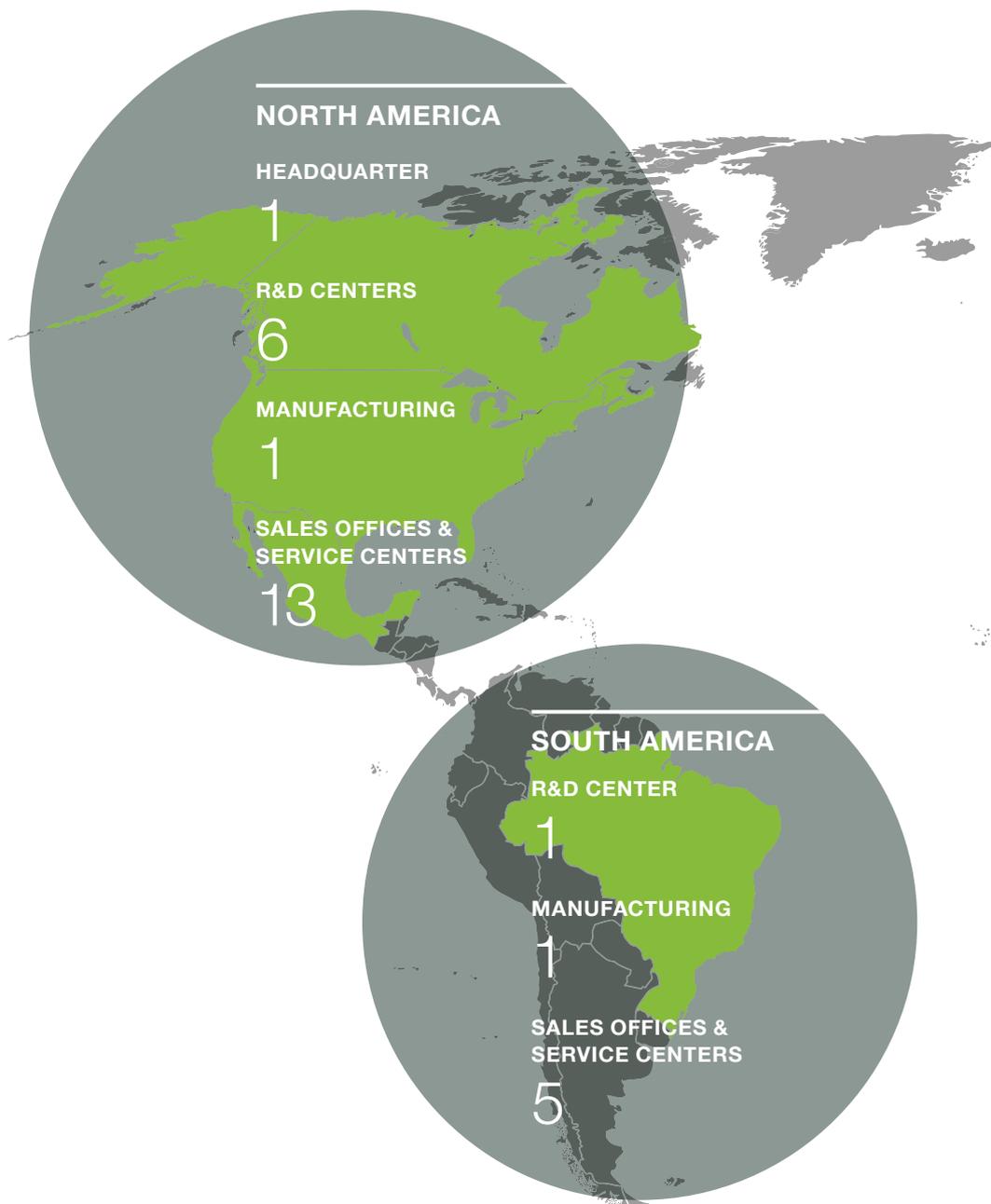
- Appointed in 2003; Swiss and German
- Former Executive Board Member E.ON (Sales, Power Trade) and GE ITS Europe
- Degree in Marketing and HR, University of Applied Sciences Munich; Executive Program at GE University



## GROUP COMPANIES

## GROUP HEADQUARTERS

Zug, Switzerland



### NORTH AMERICA

#### Regional HQ

Alpharetta (USA)

#### R&D Centers

- Alpharetta (USA)
- Bloomington (USA)
- Lafayette (USA)
- Minneapolis (USA)
- Pequot Lakes (USA)
- Raleigh (USA)

#### Manufacturing

- Reynosa (MEX)

#### Sales Offices & Service Centers

##### Canada:

- Montréal

##### USA:

- Alpharetta
- Austin
- Bethlehem
- Colorado Springs
- Indianapolis
- Jacksonville
- Kirkland
- Lenexa (Network Operation Center)
- Morrisville
- Orange
- Roseville
- Waukesha

### SOUTH AMERICA

#### R&D Center

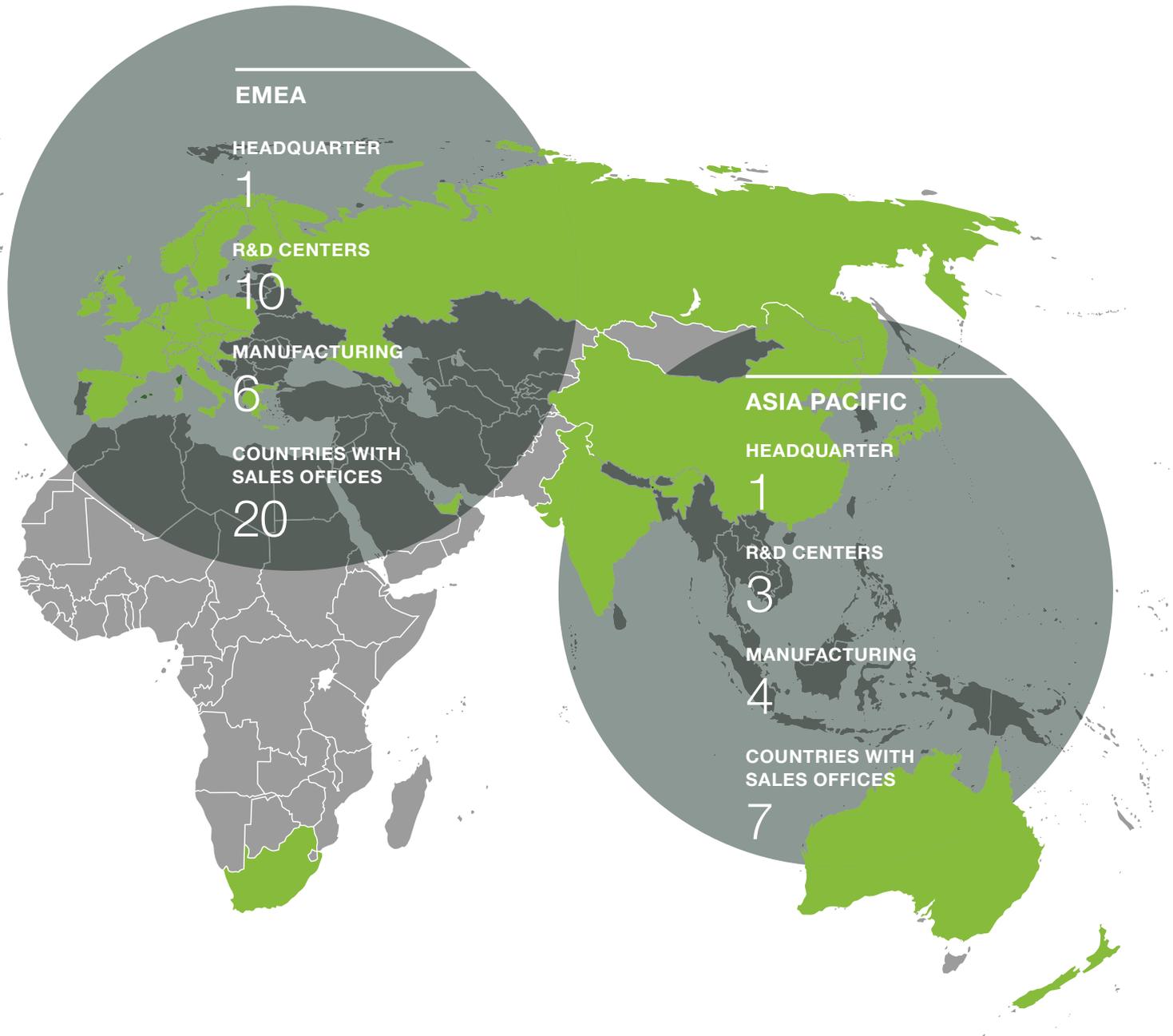
- Curitiba (BRA)

#### Manufacturing

- Curitiba (BRA)

#### Sales Offices & Service Centers

- Belém (BRA)
- Curitiba (BRA)
- Rio de Janeiro (BRA)
- São João de Meriti (BRA)
- São Paulo (BRA)



**EMEA**

**Regional HQ**  
 Zug (SUI)

**R&D Centers**

- Dunfermline (GBR)
- Gauteng (RSA)
- Jyskä (FIN)
- Manchester (GBR)
- Montluçon (FRA)
- Northfields (GBR)
- Nuremberg (GER)
- Prague (CZE)
- Stockport (GBR)
- Zug (SUI)

**Manufacturing**

- Corinth (GRE)
- Gauteng (RSA)
- Montluçon (FRA)
- Northfields (GBR)
- Nuremberg (GER)
- Stockport (GBR)

**Sales Offices**

- Austria
- Belgium
- Czech Republic
- Denmark
- Finland
- France
- Germany
- Greece
- Italy
- Netherlands
- Poland
- Russia
- Slovakia
- Slovenia
- South Africa
- Spain
- Sweden
- Switzerland
- United Arab Emirates
- United Kingdom

**ASIA PACIFIC**

**Regional HQ**  
 Sydney (AUS)

**R&D Centers**

- Noida (IND)
- Sydney (AUS)
- Tokyo (JPN)

**Manufacturing**

- Baddi (IND)
- Joka (IND)
- Leverton (AUS)
- Zhuhai (CHN)

**Sales Offices**

- Australia
- China
- Hong Kong
- India
- Japan
- New Zealand
- Singapore

## ADDRESSES

### GROUP HEADQUARTERS

#### Landis+Gyr AG

Theilerstrasse 1  
P.O. Box 260  
CH-6301 Zug  
Switzerland

### GROUP COMPANIES

#### Landis & Gyr Pty Ltd.

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Mascot NSW  
Australia 2020

#### Landis+Gyr GmbH

Altmannsdorfer Str. 76  
AT-1120 Vienna  
Austria

#### Landis+Gyr NV

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BE-1654 Huizingen  
Belgium

#### Landis+Gyr Equipamentos de Medição Ltda.

Rua Hasdrubal Bellegard, 400  
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## GLOSSARY

ABBREVIATION	DEFINITION/DESCRIPTION
<b>AEMO</b>	Australian Energy Market Operator
<b>AGA</b>	Advance Grid Analytics
<b>AMI</b>	Advanced Metering Infrastructure
<b>ANSI</b>	American National Standards Institute
<b>BESS</b>	Battery energy storage solution
<b>Boxbuild</b>	A complete solution including mechanic assembly and software installation supplied by contract manufacturers
<b>BS</b>	British Standard
<b>CCSP</b>	Calibration and Certification, Customization, Sealing and Packaging and shipping
<b>Connected Intelligent Devices</b>	Common information model includes Smart Meters, electric/gas/water AMI, Network
<b>DA</b>	Distribution Automation
<b>DIN</b>	German Institute for Standardization
<b>DSO</b>	Distribution System Operator
<b>DVM</b>	Dynamic voltage management
<b>ERP</b>	Enterprise Resource Planning program/software
<b>FAN</b>	Field Area Network
<b>GIS</b>	Geographic information system
<b>Gridstream®</b>	Refers to Landis+Gyr's branded solution for its integrated, standards-based Smart Metering and Smart Grid portfolio of products, solutions and services
<b>HAN</b>	Home Area Network
<b>HES</b>	Head-End System
<b>ICG</b>	Industrial, commercial and grid
<b>IDS</b>	Intrusion detection system
<b>IEC</b>	International Electrotechnical Commission
<b>IoT</b>	Internet of Things
<b>IOU</b>	Investor owned utilities
<b>IPS</b>	Intrusion prevention system
<b>ISO</b>	International Standards Organization
<b>ITIL</b>	Information technology management system (a set of detailed practices for IT service management (ITSM) that focuses on aligning IT services with the needs of business)
<b>LTE-M</b>	Simplified industry term for the LTE-MTC low-power wide-area (LPWA) technology standard
<b>MDMS</b>	Meter Data Management System
<b>MW</b>	Megawatts
<b>OHSAS</b>	Occupational Health and Safety Advisory Services
<b>OT</b>	Operational technology
<b>PCBA</b>	Printed-circuit board assembly
<b>PLC</b>	Power-line communication
<b>pp</b>	Public power represents government bodies (i.e., municipalities, etc.)
<b>RF</b>	Radiofrequency
<b>SaaS</b>	Software as a Service
<b>SDLC</b>	Systems development lifecycle
<b>SSAE</b>	Statement on Standards for Attestation Engagements
<b>WAN</b>	Wide Area Network

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