



# A Smart Metering Provider's Perspective

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# Landis+Gyr: Expertise, technology and solutions to manage energy better

## ... a century of experience and expertise in metering

- with over 300 million installed meters the market leader in electricity metering
- more than 25 years experience in Smart Metering with over 100 AMI Solutions installed globally

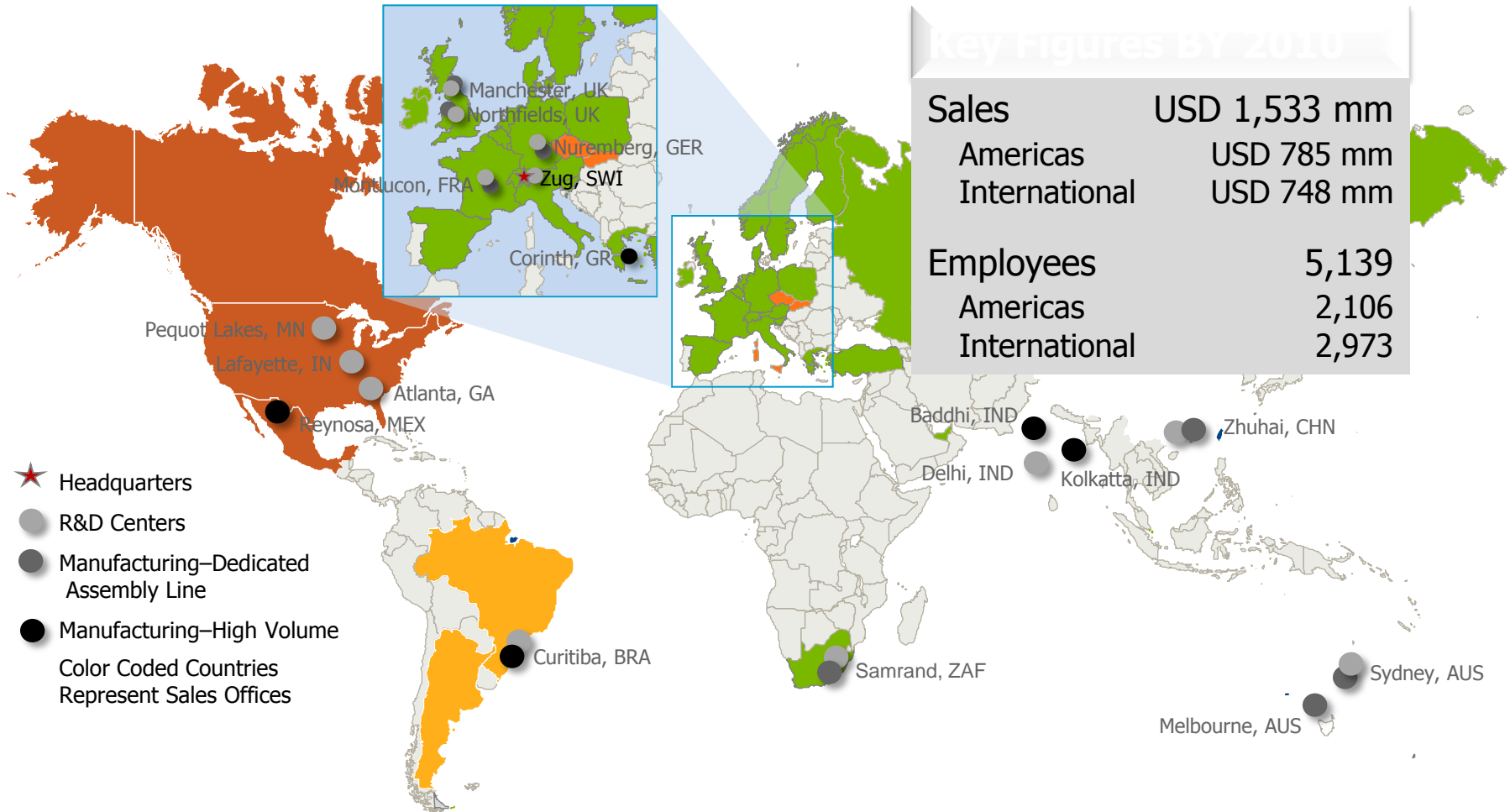
## ... leading technology for changing needs

- involved in the most advanced Smart Metering projects in North America, South America, Europe and Australia
- helping utilities and their customers to exploit advantages of smart technology

## ... committed to contribute building the Smart Grid

- providing sustainable solutions to manage energy better

# The Global Leader in Smart Metering with 5,000 Employees in over Countries



**>24 million smart grid-enabled endpoints deployed or contracted**

Largest installed base globally, with more than 300 million devices

# Offers Reflecting Actual Consumption Patterns

## Interface with the Home

### General Observations / Remarks

- + Any Analysis or Implementation of Smart Metering Infrastructure should by all means include demand response capabilities in order to gain the most benefit (for consumers, network operators and society) for the investment made.
- + Information and Control at the point of consumption will become increasingly important for smart grid functionalities.
  - Many of the tasks of the smart grid will require congestion management at the Distribution level: Information and Control at the point of consumption.
- + CEER paper may be too focussed on prices as the sole driver/variable for demand response.
  - System stability comes up too short – particularly when discussing micro-generators / DSOs

# Offers based on consumption / Interface to the Home

## Consumers

- + Should be provided with information through various channels:
  - At least one of those channels should be real-time, direct feedback.
  - Preferably through an In-House Display (IHD)
    - IHD's combined with variable tariffs have shown to provide the greatest and most sustainable energy savings gains.
    - Websites and billing information do not have the same immediacy and reinforcing effects.



# Consumers and the Interface to the Home

- + An interface to the home is essential to realize the full-benefits of a smart meter deployment, but how the consumer has access to the information and how the information is presented is very important.
- + In order to adjust consumption, consumers need more than metering values, they need information that is easy to understand and relevant.



# Microgenerators

- + Microgenerators can contribute to demand response by regulating consumption and injection.
- + Microgeneration can be more efficiently utilized and distributed with Demand Response.
- + But, price signals are not the only important factor
  - Information on network stability may be more important
- + In addition to information through the gateway, automation may be required.

# Metering Operators

## + Functionalities:

- Point of Departure should be the functionalities listed in the M/441 Smart Meter Coordination Group's Reports
- Hourly reading may not be granular enough: ½ hour or 15 minute profiling may be required.

## + «Interoperable Communications Standards» can be misleading

- Standards ≠ Interoperability
- Standards are a necessary precondition for interoperability, but standards alone are insufficient
- Specifications (and Testing) within open standards are needed to insure interoperability
  - iDiS (Interoperable Device Interface Specifications)
    - Develops and promotes publicly available specifications
    - Interoperability testing



# Metering Operators – Interface to the Home

- + The interface to the Home certainly makes the Meter Operator's role in respect to Demand Response more efficient
  
- + «Open Standards for interfaces which enable interoperability two-way communications, so that **any** stakeholder wanting to connect to a device should not be hindered»
  - Interoperability between which devices / systems?
  - «Any stakeholder» is a somewhat broad term.
  
- + Fair third party access is essential

What is needed:

1. Open Standards
2. Fair Third Party Access

# Distribution System Operator

«DSO has no role in the matter unless responsible for metering»

- + Ignores the role of system stability for the DSO
- + The DSO would have an interest in Demand Response and using the gateway to the home for local stability measures.
- + Increased importance of congestion management in a smart grid environment.
- + DSO should be able to regulate the feed-in of microgeneration to maintain system stability, and be able to process data beyond simply consumption, such as outage alerts, voltage data and power quality.

## ESCO's

- + In making offers based on actual consumption patterns, the ESCO would benefit from realtime, i.e. at the meter, access to «relevant metering data» to enable Demand Response programs.
  
- + Interfaces which enable interoperability
  - Interoperability of what?
  
  - Interoperability between the metering infrastructure and home automation? Can the meter communicate with the household appliances?
  
  - The interface to the home is essential to realize the full potential of demand response. Automated response brings forth the greatest results.

# Thank you

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