



# Electricity Meter Report



**Ed 8- 2010**

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# **The World Electricity Meter Report & Database Ed 8 2010 & The Meter Manufacturers Directory Ed 5 2010**

## **Introduction**

The world is adopting advanced metering. So far 32 countries have decided to proceed and the global metering market will increase 56% in five years, with more to follow. However, it is not all good news. Amidst these exciting developments there are traps for the unwary. There are immediate hurdles to be jumped and long term pitfalls to be avoided. Not every deployment will offer the same opportunities to the international meter manufacturers. Some of the largest schemes are in markets which are not accessible to the international vendors. To optimise the opportunity the good planner will direct resources to the countries where the chances are best and the report offers guidance on this. Long term the problem is that the dynamics of the market will be totally changed, in two ways. After the initial deployments in the next five to ten years two things will happen. There will be an immediate lull in demand. On current plans for AMI, the European market alone will decline by almost 60% as large swathes of the meter fleet will have been completely renewed and will need no replacement. Another ripple to this comes with privatisation in Eastern Europe as old electromechanical meters are being replaced by basic electronic meters, creating another category of new meter fleets. At some point after that replacement will recommence, and it will be based on a shorter meter life than in the traditional electromechanical meter installations, so demand will increase. These issues are starting and as yet are not completely mapped because full plans are not yet known. They are discussed in the report and will be addressed in increasing detail in future issues of the report. They are crucial for meter company planners.

The ABS Electricity Meters Report Ed 8 2010 has measured the largest expansion of metering, already under way and about to escalate significantly, both quantitative and qualitative. The report is redesigned and greatly expanded in scope compared with previous editions of this report. The changes and expansions have been designed to meet the need of the metering industry for information at their specific request. The metering companies have given strong support and have been generous in time and provision of information. We would like to acknowledge their generous support.

## **Report Scope**

The report contains the following

- Total market demand for meters and market values in dollars and euros 2009 forecast to 2013.
  - Global
  - By region
  - Country (184 covered)
- Export analysis
- It contains marketing analysis of 50 countries covering the following
- Analysis by user segment, residential versus C&I, penetration of meters and market demand
- Analysis of each market by 8 meter types/technologies:
  - Residential electromechanical
  - Residential electronic
  - Ripple control
  - AMR
  - AMI



- Pre-payment
- C&I
- Grid
- Market shares for the 50 countries
- Future trends are analysed

In 2007 to 2009 and continuing in 2010 there have been many decisions to re-configure metering with advanced 2-way fixed network AMI. The report identifies 32 national AMI roll-outs (to date with more to follow) covering 416 million electricity end points in the next 5 to 12 years, as the world moves to advanced metering systems. These do not include smaller utility installations, but are the large national deployments which will completely change the way the world measures and manages electricity and gas consumption. The bulk of these deployments are spread over Europe, Asia and North America. They range from the largest (the 170 million roll-out for electricity in China), the smallest but most comprehensive (43,000 national deployment in Greenland for electricity, gas, water and heat) to the most advanced (22 million Homenet deployment in Korea with electricity management only as one element of comprehensive household data and management services). It is one thing to measure a market expansion, another to find an accessible market offering potential for the metering companies. The report examines opportunities within existing decisions/plans, and quantifies where the next wave of potential for AMI deployments will come. The report examines the accessibility of the markets and identifies those which are probable and accessible and those which are not in the international mainstream and to all intents and purposes not available as markets. The metering companies are examined and we have continued our policy of identifying the most interesting national and regional companies in a new section 'Big Players and Rising Stars'.

#### **Meter market size**

- Demand for electricity meters for every country
- Demand forecasts from 2008 to 2013

#### **Market analysis and meter types**

- Analysis of the installed base of electromechanical and electronic meters by country
- Future trends of electromechanical/solid state deployment in major markets, with country analysis
- Development of new electronic meter production, identifying important new producing countries

#### **Market shares**

- Company mergers and consolidations
- Global shares of top 23 meter companies
- Major new players identified, "the dark horses"
- Company shares in EU
- Company shares in each of the major EU countries
- Market leaders identified in major non-EU markets ;USA, Canada, Mexico, Brazil, Argentina, China, Japan, India, Russia
- Report on prepayment meters in the UK

#### **AMR (Automatic Meter Reading) and AIM (Advanced Infrastructure Management)**

- The report outlines the transition from one-way to two-way communications and the convergence of AMR towards AMI technology and capability
- Survey of global AMR and deployment, analysis by utility sector (electricity, gas, water)
- Future trends and deployment projections for AMI and AMR
- Major AMR/AMI suppliers identified with market share for leader

**Detailed surveys of the 29 largest electricity meter markets, 82% of the market (expanded from 15 market profiles in previous reports), countries covered:**

*Europe - Bulgaria, Czech Republic, France, Germany, Hungary, Italy, Netherlands, Poland, Romania, Russia, Spain, Sweden, Turkey, United Kingdom*  
*Americas - Argentina, Brazil, Canada, Mexico, United States*



**Asia Pacific** - Australia, China, India, Indonesia, Japan, Malaysia, Taiwan, Thailand, Vietnam

**Middle East** - Iran

- Installed base meters by country
- Annual meter demand
- Analysis of meter type - electromechanical/solid state, with forecasts of solid state penetration by 2012
- Market trend
- AMR and AMI development and deployment
- Type approval and certification, together with significant changes which are driving market development
- Market participants
- Utility background and market characteristics

**Tables and spreadsheets containing:**

- Market size, analysis and forecasts for every market, for each of 184 countries
- Annual meter demand
- Market analysis by production, imports, exports and demand, for every country
- Market size and forecast for each year from 2008 to 2013 for every country, units and \$ value
- Historical export data from 1997 to 2007
- Analysis of exports from all countries to all destinations, for 2003, 2004, 2005, 2006 and beyond

**Meter Manufacturing Companies**

- Major meter companies outlined, with consolidations and mergers
- Significant new meter companies identified from Central & Eastern Europe and developing world
- Directory of 1,000 meter manufacturers, including 570 electricity meter companies

**Metrology**

- Outline of global metrology institutions and standards, procedures for type approval and meter verification
- Regional details and cooperation arrangements
- Methodology changes which are driving meter market developments

## Methodology

The methodology of the study has been reviewed comprehensively by the ABS Intelligence Unit and new metrics have been introduced to reflect market evolution.

Each of the three main drivers was assessed separately (new building, replacement and refurbishment of meters, and up-grading of meters) and relevant metrics were considered, introduced or rejected. This is a more complex exercise than it at first appears and some obvious candidates were rejected after piloting calculations showed them to be false discriminators.

The dynamics of the market are changing and issues such as the conversion from electromechanical to solid state meters and the effect on replacement rates in the C&I and residential sectors have been reviewed. The growth of new housing, the demographic trends of household size, and electrification ratios have been researched and their implications assessed.

The most critical of all determinants at present is the move to advanced metering. This lies outside the traditional pattern of drivers based on metrics and single decisions or government legislation are decisive.



## The Database

- The tables from the report
- Current demand in units and value
- Forecasts annually to 2013 in units and value
- Export analysis annually from 1997 to 2008/9 in units, total \$ value and unit price
- Spreadsheet of exports by country of origin and importing country from 2003 to 2008/9

## The Directory

A directory of meter manufacturers with (where available) the address, tel, fax and generic email.

Price of report - £1,995
Price of Directory - £630
Price of report & excel database - £2,295
Price of report & excel database and directory - £2,495
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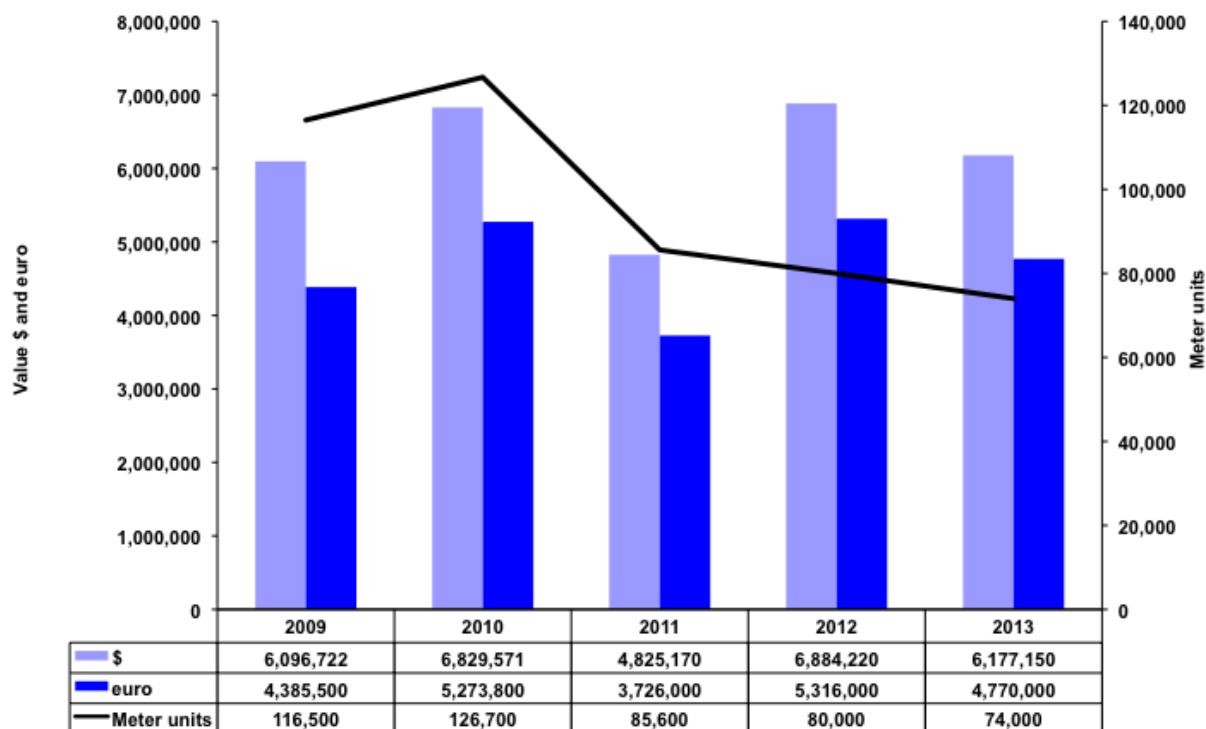
### 6.1.15 Lithuania

**Table 6.81.** Population, household and meter base - Lithuania

Population	Households	Installed electricity meter base
2010	2010	2010
3,555,179	1,350,246	1,390,081

#### Annual demand for all meters

Annual demand was 115,500 meters (units) in 2009 falling to 74,000 in 2013. The value will fluctuate in this period between €4.3 million (\$6.0 million) and €5.3 million (\$6.8 million).



**Figure 6.15.** Annual demand for Electricity Meters - Lithuania

**Table 6.82.** Annual penetration by segment from 2009 to 2013, IGC and residential, volume and value €- Lithuania

		2009	2010	2011	2012	2013
Residential	Units	96%	97%	95%	95%	95%
	€	86%	89%	85%	90%	89%
Industrial, grid, commercial	Units	4%	3%	5%	5%	5%
	€	14%	11%	15%	10%	11%

**Table 6.83.** Market size by segment forecast from 2009 to 2013 by segment, IGC and residential, volume and value (€ and \$ - Lithuania

		2009	2010	2011	2012	2013
Residential	Units	112,000	122,500	81,400	76,000	70,000
	Euro	3,760,000	4,690,000	3,180,000	4,796,000	4,250,000
	\$	5,227,152	6,073,550	4,118,100	6,210,820	5,503,750
Industrial, grid, commercial	Units	4,500	4,200	4,200	4,000	4,000
	Euro	625,500	583,800	546,000	520,000	520,000
	\$	869,570	756,021	707,070	673,400	673,400
Total meters	Units	116,500	126,700	85,600	80,000	74,000
	Euro	4,385,500	5,273,800	3,726,000	5,316,000	4,770,000
	\$	6,096,722	6,829,571	4,825,170	6,884,220	6,177,150

### **Meter technology**

Lithuania has a mixed base of electromechanical and electronic meters but is converting to electronic. By the end of 2010 all new meters will be electronic. There will be a relatively small AMI installation starting in 2012.

**Table 6.84.** Annual demand for meters by technology, forecast from 2009 to 2013, volume and value €- Lithuania

			2009	2010	2011	2012	2013
Residential	Electromechanical	Units	60,000	20,000			
		Euro	1,680,000	560,000			
	Electronic	Units	52,000	102,000	80,000	40,000	40,000
		Euro	2,080,000	4,080,000	3,040,000	1,520,000	1,520,000
	AMR	Units					
		Euro					
	AMI	Units		500	1,400	36,000	30,000
		Euro		50,000	140,000	3,276,000	2,730,000
	Prepayment	Units					
		Euro					
C&I	C&I AMI	Units	4,500	4,200	4,200	4,000	4,000
		Euro	625,500	583,800	546,000	520,000	520,000
Grid	Grid AMI	Units					
		Euro					

### **Type approval and verification**

The European Measuring Instruments Directive (MID) applies.

### **Utility background**

Lietuvos Energija (Lithuanian Energy), a joint-stock company formed by the reorganisation of the Lithuanian state power system in 1995, is the largest electric power company in Lithuania. The state holds an 86.5% share in the company, with Vattenfall owning an additional 10.1%. Besides transmitting and distributing electricity, Lietuvos Energija also purchases all electricity generated in Lithuania and distributes it to Lithuanian consumers.

Transmission services are undertaken by a single national network company, Lietuvos Energija.

There are two main distribution system operators, Rytu Skirstomieji Tinklai AB and VST AB. These companies are also public suppliers, which mean that they are obliged to supply electricity to all customers requesting supply within their designated territories. In addition to these companies, there are three other businesses active in the supply market including some new entrants. These companies are the largest and retain over 85% of the market.

Privatisation of the distribution companies is expected.

**Table 6.85.** *ESI characteristics - Lithuania*

<p>Largest generator by capacity – 70%          Top 3 producers by capacity – 80%          Three main electricity generators (Ignalina NPP, Lithuanian Thermal PP and Vilnius CHP)</p>
<p>TSO – 1          Lietuvos Energija          Legally unbundled</p>
<p>DNOs – 2 networks, East and West since 2001          Legally unbundled          Rytų Skirstomieji Tinklai AB, VST AB and Visagino Energija VĮ are the main public suppliers, out of 7 licensed. Five supply companies are on the market as independent suppliers for eligible customers, out of 20 licensed.</p>

Source: ABS ESI 2008 Edition 14

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