

Global Deployments of Utility Meters & Smart Grid Developments

Report & Database Edition 1, 2011

Market Intelligence

Utility Meter deployment has seen a great increase in momentum and 2010 has seen continuous deployment of smart meters and advanced metering systems and a general advancement of technology. Whilst there may not be as many new deployments in electricity meters as there are in gas and water; electricity is still the largest growth sector with the most advanced smart meter deployment. As energy prices continue to rise and consumers and utilities are trying to be more conscious, public acceptance of smart meters has become widespread, with many utilities now replacing existing meters with smart-meters and using new technologies as the default for new deployments. Not only is this taking place in the western world, but developing nations, too are seeing a great increase in smart meter deployment.

In recent years the smart grid has gained a lot of column inches as the panacea for problems with the current electric grid system. A grid system designed for the one-way flow of information and electricity from power plants to consumers. Where consumers are billed for electricity usage based on estimates of consumption regardless that actual usage and according to time of day.

This grid is not designed for the integration of large scale intermittent renewable capacity, or for small-scale distributed renewable capacity such as rooftop solar panels and small scale wind turbines. It also does not penalise electricity usage at peak demand times, which would reduce the need for new build 'peaking' power plants. Therefore there is a demand for a new grid system to meet the demands of the 21st century.

Smart grid deployment has focused on the use of smart meters and associated communications network in most countries with the notable exception of China. Leading players such as Landis+Gyr (now owned by Toshiba), Elster and Sensus have formed strategic agreements with other players in the smart grid, and to some extent, almost all of the major players are connected through strategic agreements. Furthermore many of these leading smart meter manufacturers produce smart meters for water and gas or other smart products as well as smart electric meters. Demand for smart water meters is expected to be high in countries and regions experiencing water stress such as parts of the Middle East, California etc.

Large companies such as GE and Cisco have entered the space, but no company to date has a fully integrated product. In the US no one player appears to have an early dominance on the local market. This is less of the case overseas, for example in China where GE and IBM are earlier runners in the game. But, as with the renewable sector, China is likely to favour local suppliers and manufacturers working in collaboration with local counterparts. Moreover, like with the renewable sector, Korean and Japanese manufacturers are developing local and overseas projects to gain a foothold on the smart grid market, with is estimated to be worth more than USD100 billion by 2020.

Chinese companies must now also be included in the global ranking and they are moving up the metering value chain too although they have still not had a wide international impact. According to the Chinese Institute of Metrology China has a production capacity of 100 million meters. Traditionally a manufacturer of cheap, poor quality meters, recent years have seen China upping its stakes in the world meter market, with some 600 companies involved in the metering industry and producing much improved products.

A major under looked barrier to smart grid deployment is smart grid security. Studies on the smart meters deployed have found that few have encryption software and can easily be corrupted. Creating a large market for companies involved in the cyber security business, notably companies involved in security for the defence sector such as Lockheed Martin and Boeing.

Despite this and other barriers to deployment the installation of smart grids is likely. Not only for the reasons above, but also for the rapid identification of faults in the grid system and rapid repair through the two-way flow of information. Currently power cuts in the grid system take time to repair and are extremely costly for businesses. Therefore, the large costs of implementation of such a system would be outweighed by the long-term cost savings.

The Report

The PDF Report contains:

- A written Summary of Utility Metering Deployments.
- An Introduction to the Smart Grid, together with assessments and detailed sections on Definitions, Strategies, Security, Investment, Cost and Development Issues.
- Energy Storage issues (Battery, Mechanical, coupling, etc)
- Grid Applications and Standardisation.
- By Country Development Strategies for major countries (30+ Countries, including USA, Japan, China, Russia, Brazil, Canada, India, South Korea, UAE, France, UK, Germany, Spain, and many more)
- Detailed Assessments of the global Smart Grid companies.

The Database

The database contains the following:

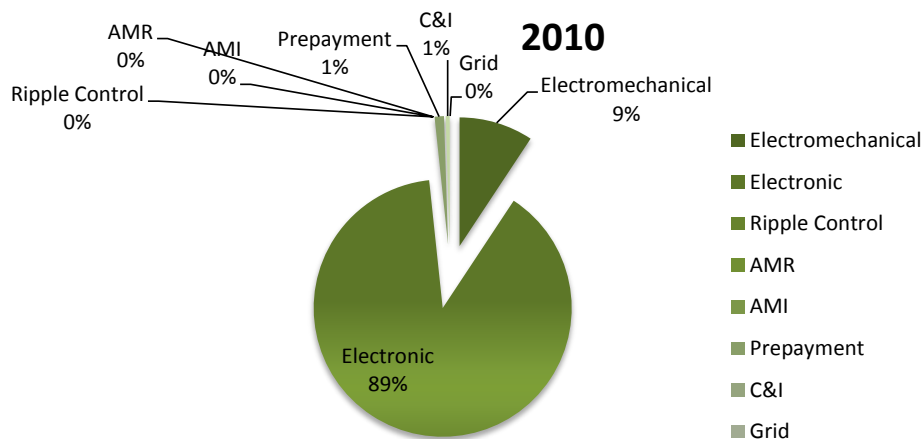
- Total market demand for meters and market values in US Dollars, 2010 Actuals and forecast to 2014.
 - Globally
 - By region
 - For 180 countries
- A further analysis is provided for 49 countries with regards to Electricity meters including
 - A breakdown by type of meter for the total sales figure for 2010
 - Company Market Shares
 - Industry analysis
 - Forecast trend by meter type to 2014 in the following categories
 - Residential electromechanical
 - Residential electronic
 - Ripple control
 - AMR
 - AMI
 - Pre-payment
 - C&I
 - Grid

Data Sample: Argentina

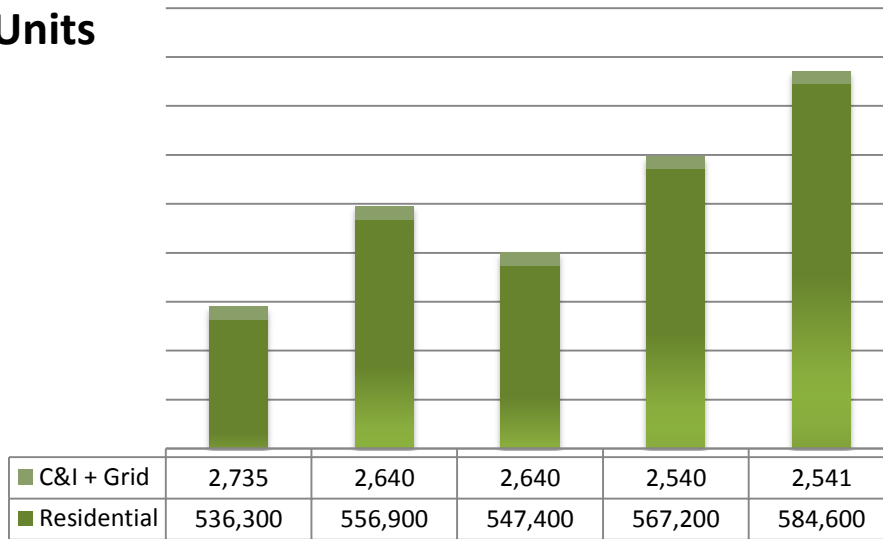
Market Shares by Value 2010

Itron	8%-18%
Elster	60%-70%
Landis+Gyr	2%-12%
Others	10%-20%

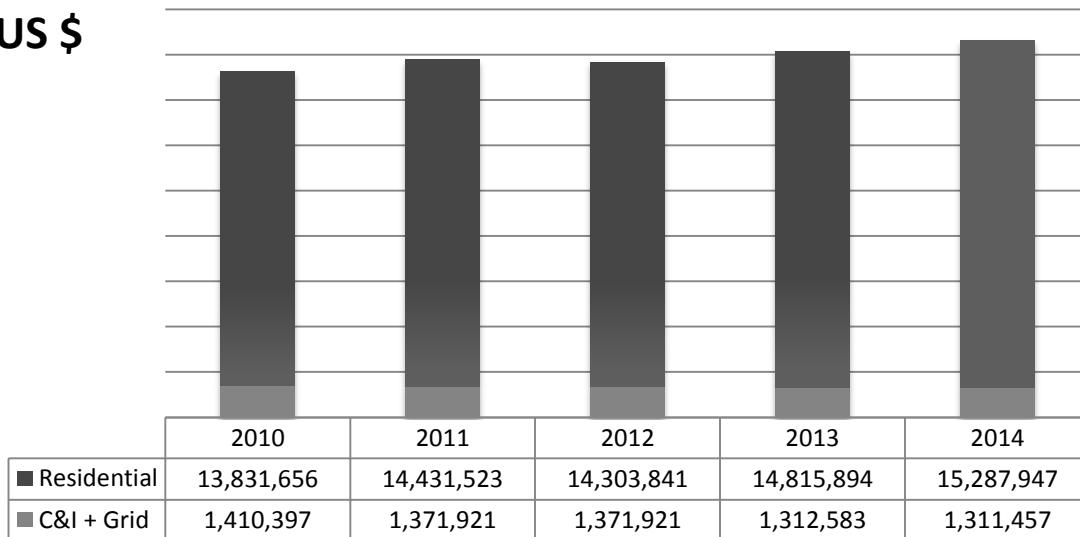
Units	2010	2011	2012	2013	2014
Electromechanical	50,000	40,000	20,000	10,000	7,000
Electronic	480,000	510,000	520,000	550,000	570,000
Ripple Control	-	-	-	-	-
AMR	-	-	-	-	-
AMI	-	-	-	-	-
Prepayment	6,300	6,900	7,400	7,200	7,600
Commercial and Industrial	2,700	2,600	2,600	2,500	2,500
Grid	35	40	40	40	41
Sub-total Residential	536,300	556,900	547,400	567,200	584,600
Sub-total C&I + Grid	2,735	2,640	2,640	2,540	2,541
Total Units	539,035	559,540	550,040	569,740	587,141
US \$	2010	2011	2012	2013	2014
Electromechanical	1,059,603	847,682	423,841	211,921	148,344
Electronic	12,079,470	12,834,437	13,086,093	13,841,060	14,344,371
Ripple Control	-	-	-	-	-
AMR	-	-	-	-	-
AMI	-	-	-	-	-
Prepayment	692,583	749,404	793,907	762,914	795,232
Commercial and Industrial	1,333,907	1,284,503	1,284,503	1,225,166	1,221,854
Grid	76,490	87,417	87,417	87,417	89,603
Sub-total Residential	13,831,656	14,431,523	14,303,841	14,815,894	15,287,947
Sub-total C&I + Grid	1,410,397	1,371,921	1,371,921	1,312,583	1,311,457
Total Units	15,242,053	15,803,444	15,675,762	16,128,477	16,599,404



Units



US \$



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*Please note – Prices are also available in US Dollars and Euros. VAT, where applicable, will be added.

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