

bmp TC Worldwide Broadband PLC Atlas 2013 (vol VI)
a compact analysis

&

worldwide snapshot of PLC activities
by leading international strategy consultants

involved in numerous Powerline Projects since 1996 and Broadband Access since 1993

Powerline Communications (known as PLC, BPL- Broadband Powerline or CPL-Courant Porteur en Ligne), technology using energy distribution network, is lately being deployed in an increasing number of projects. Nowadays, more and more actors, as utilities, major industrialists or telecom players show a growing interest for the technology which meets the needs for Smart Grid applications deployment. Its versatility and technology maturity have settled Powerline as a platform meeting various demands from the energy or the telecoms world. Thus new markets segments have emerged: inbuilding Powerline for energy efficiency, excess capacities for internet in emerging markets, platform for utility centric applications and smart grid applications, platform for setting up a smart city concept.

As well major players have tested, or integrated Powerline in their strategy roadmap, also because the performance of the technology has increased dramatically for some specific use cases.

bmp TC is offering a compact information resource with international analysis and market data. The **bmp TC Worldwide Broadband PLC Atlas 2013** provides an updated and detailed, yet compact overview of the worldwide Powerline activities and players. Accordingly the reader is able to quickly assess the technological roadmap, the potential supply sources and the worldwide scope of Powerline activities. International deployments are highlighted with key information such as location, utility and strategic partners, source of hardware, number of users and passed households.

The **bmp TC Worldwide Broadband PLC Atlas 2013** is pointing out the major trends of each significant outdoor segment: the use of PLC as an outdoor or an inbuilding platform, the possible associations with other broadband technologies to bridge the digital divide, the benefits for utilities in terms of smart metering deployments and smart grid projects (smart cities...) and a comparative analysis of Narrowband PLC technologies. All these aspects will enable to get an appraisal of the Powerline strategic value.

The bmp TC Broadband PLC Atlas incorporates feedback from the PLC investors and players, further a history enabling a straightforward comparison with previous years. In that way, an analysis of the evolution of the industry is enabled.

Benefits:

- Contains 20+ pages analysis regarding technology, business model, supplier side...
- Statistical evolution 2004-2013
- Detailed market data (regional overviews, detailed project descriptions including utility, location, coverage & subscribers, technology and strategic partners...) with eight figures.
- Track down projects by country or by manufacturer and identify potential suppliers
- Analysis of about 300 PLC projects from the last 5 years, providing a clear insight about the evolution of the current market
- Quick assessment of the scope of worldwide / regional / national activities, the size of the market and the involved players

A worldwide study covering more than 60 ongoing Powerline –Internet Access and Smart Grid – projects on the 5 continents.

Sample project details

Senegal

City	Dakar		
Utility	Senelec	Start of Project	2008
Project Type	Trial	Target for passed households	
Operator / ISP		Target for users	
Strategic Partners		Households passed	0
		Users	
<u>Integrators</u>			
DEFIDEV			
Topology-Backhaul			
Services-Others			
<u>Comments</u>	Extension of 250 substations with BPL for 2013. All the city has been covered.		

Table of contents*

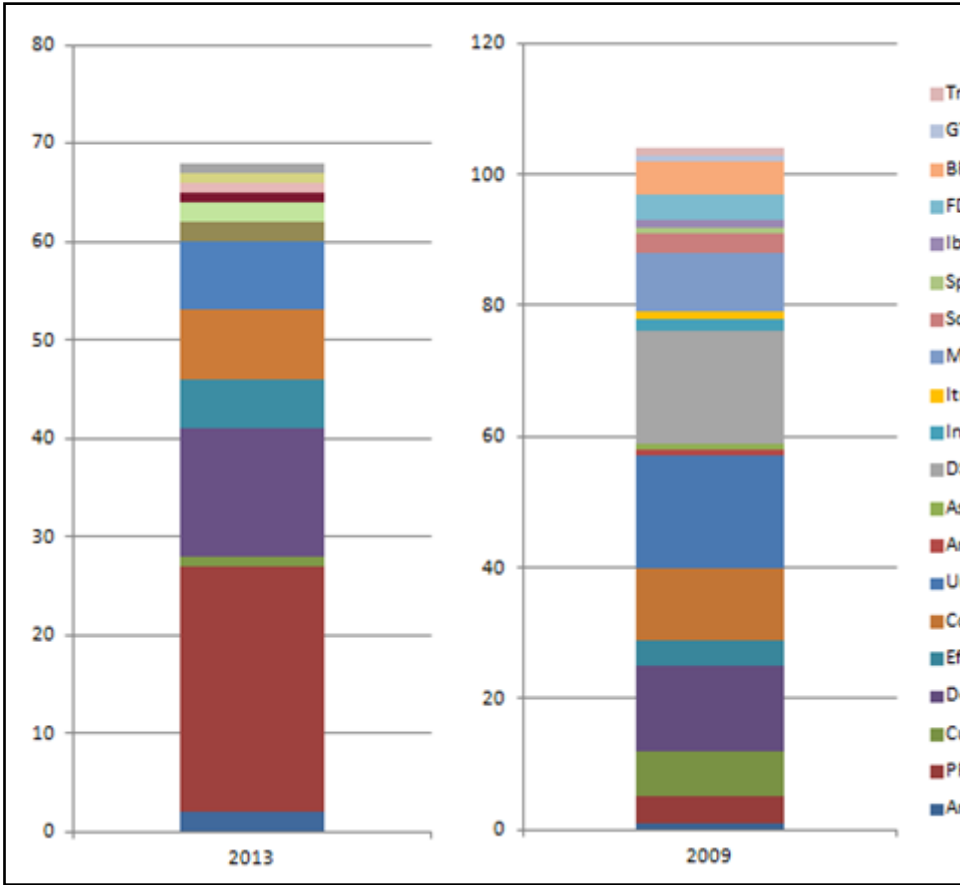
<i>Table of Figures</i>	5
<i>Introductory words by Nadine Berezak-Lazarus, Managing Director, bmp TC</i>	6
1. Brief Technology and Market Introduction	11
2. Standardization and norms overview	18
2.1. The IEEE 1901 standard and its evolution	18
2.2. Industrial norms included in the IEEE1901 standard	20
2.3. The G.hn standard and its evolution	22
3. Regulation	24
4. Suppliers' Market	28
5. Market trends and structure - and business model issues	36
5.1. Services enabled among Smart Grid	37
5.2. Broadband and Telecoms value chain and the role of the BPL utility	41
5.3. Cost and business plan	44
6. Market evolution and regional analysis	46
6.1. Africa / Middle East	52
6.2. Asia	55
6.3. Europe	60
6.4. North America	66
6.5. South America	69
7. Detailed Project overview	71
7.1. Asia	71
7.2. Africa / Middle East	77
7.3. Europe	81
7.4. North America	101
7.5. South America	103
8. BPL Integrators	104

*subject to modification

Table of figures*

FIGURE 1: CURRENT PERFORMANCE OF BPL 6
 FIGURE 2: OVERVIEW OF BPL PROJECTS ON THE AFRICAN CONTINENT 8
 FIGURE 3: BPL KEY AREAS 11
 FIGURE 4: BPL – OFDM MODULATION 12
 FIGURE 5: BPL TOPOLOGY 13
 FIGURE 6: BANDWIDTH AND LATENCY PERFORMANCE AMONG BPL 14
 FIGURE 7: OPERATORS WITH INHOME BPL (EXAMPLES) 16
 FIGURE 8: OVERVIEW OF BPL STANDARDS AND NORMS 18
 FIGURE 9: OVERVIEW OF HOMEPLUG NORMS 21
 FIGURE 10: OVERVIEW OF MAJOR CORE TECHNOLOGY PROVIDERS 29
 FIGURE 11: MAJORS ACTORS WITHIN THE SMART GRID MARKET 30
 FIGURE 12: OVERVIEW OF ACCESS POWERLINE INTEGRATORS 32
 FIGURE 13: ACTIVE PROJECTS PER MANUFACTURERS (2009-2013) *ESTIMATION BMP TC 33
 FIGURE 14: ACTIVE PROJECTS BY CORE TECHNOLOGY (2013) 34
 FIGURE 15: SMART GRID APPLICATIONS DOMAIN 38
 FIGURE 16: BPL PERFORMANCES TESTING BY CEZ 40

Example of statistical outputs



ORDER FORM

bmp TC Worldwide Broadband PLC Atlas 2013-to be published in June 2013-

At a price of 1199 € excl. VAT outside of Germany–
1426,81€ incl. VAT (19%) inside of Germany

Delivered in a pdf version

English version solely

Multi-user-copy within the purchasing company

DELIVERY ADDRESS

Surname:.....

First Name:.....

Position:.....

Organisation or company:.....

Address:.....

Country:.....

Tel.:.....

Fax:.....

Email:.....

International VAT number

PAYMENT

Enclosed the sum ofEUR

By bank transfer – bmp TC account:

Commerzbank AG
Account 10 30 188, Bank Code 10040000
Swift Code COBADEBB
IBAN DE68 1004 0000 0103 0188 00

By cheque payable to bmp TC

ORDER NOW

Fax or mail this page to bmp TC

- By fax: +49 (0) 7621 68 60 57- 9
- By mail: bmp TC
Schusterinsel 7
79576 Weil am Rhein – Germany

Do not hesitate to contact us for further information

- Web: www.bmp-tc.com
- E-mail: info@bmp-tc.com
- Phone: +49 (0) 7621 68 60 57- 0

Date, signature, stamp (required)

TERMS OF SALE

- 1- I agree not to make any copies of the ordered document(s)
- 2- The document(s) is/are strictly for use within the purchasing organisation