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EPRI Smart Grid Demonstration PREMIO June 11, 2010

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WATTECO in few words...

Leading World-Wide French based company providing Smart Energy Hardware & Software solutions for Smart Grid deployment.




>Ultra Low Power Line Communication (PLC) modem solutions dedicated to the Smart Home Control and Energy Efficiency emerging markets with **WPC™ Technology**



> Smart Energy software with **enPowerMe™** solution

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WPC™ Technology

LOW POWER

- One-hundredth the real power requirements of alternative PLC and other solutions.
- <10mW power consumption enables mass technology deployment across a wide range of products.

SMALL SIZE


- Less than 2,5 cm² on a 2-layer PCB.
- Future single-chip devices will accelerate mass market deployment.

LOW COST


- One-third the Bill of Materials (BOM) costs of alternative solutions.
- Low integration costs thanks to reduced development efforts with implemented 802.15.4, 6LoWPAN and RPL stacks.

SMART GRID COMPATIBILITY

- LR WPAN standards compatibility -Low Rate Wireless Personal Area Networks- and easy integration in any IPv6 networks for a reduced Time to Market.




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WATTECO partner of PREMIO project

- **Watteco develops two Distributed Resources in PREMIO :**
 - Load shedding box for houses and apartments (PULSSI)
 - Dimming of LED based public lighting (ECLAIRAGE PUBLIC)
- **PREMIO requirements** was to use existing products. Pulssi, an existing proprietary low rate PLC technology, was available at that time and it was decided to use it. Pulssi allows local load management through saving scenarios but cannot accept remote connections.
- **To connect the Pulssi system to the Premio Control Unit** it was then necessary to use a local gateway (Linux platform based) ensuring GPRS connection and translation from SNMP order to WPC protocol.





```

graph LR
    Powerline --- USB
    USB --- Gateway
    Gateway --- GPRS_Modem[GPRS Modem]
    GPRS_Modem --- SNMP
  
```

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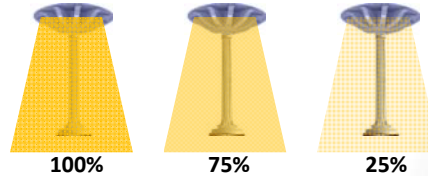


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PUBLIC LIGHTING : Dimming LEDs for public lighting

- Street lights (non-road applications) are equipped with command modules switching both on and off and permitting variations to lighting levels.

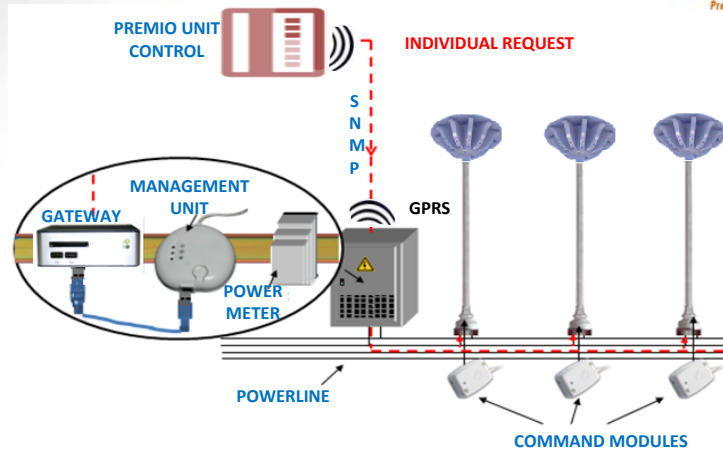


- Bulbs and globe-style lights (20) are replaced by LED modules which include a dedicated system to focus light emission downwards. Changing old bulbs for LED lamps actually improves energy efficiency.



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PUBLIC LIGHTING





Thank you for your attention

