

# COMMON BROKERAGE EVENT

15 – 16 October 2009

Brussels

Energy Efficiency

N.Lehner

# Energy Efficiency

## “Grand Challenges”

At the recent MASP meeting in Vienna, the team agreed to keep the two originally proposed Grand Challenges:

- CO<sub>2</sub> – reduction
- Smart energy grid

All relevant technical topics can be described under those two headlines.

Both Grand Challenges have high relevance for most of the “Overarching Themes”

# Energy Efficiency - Thematic Areas

- Energy Generation
  - Energy harvesting. (UNI Bo, Philips)
  - (Micro) Fuel Cell
  - Solar (concentrated) Photovoltaic (UNI Bo, ST)
  - Wind energy
- Network/Storage
  - Transmission and distribution (DC, very high voltage, power quality)
  - Batteries (Li-Ion, Thin Film)
  - Smart grid (backbone and local) (ask Philips and/or Siemens)
- Power Conversion (AC/DC/AC) -> “platform” for everything (IFX)
- Electronic Control for Appliances
  - Lighting (LED) (Philips, Osram ?)
  - Motors
  - Home applications

# Energy Efficiency

| #  | Name                | Subject   | <u>Prime</u> ,<br>Partners   | Contact                  |
|----|---------------------|---|--|--------------------------|
| 1. | Solar Photo-voltaic | Energy Generation: Provide next generation, photovoltaic systems using crystalline silicon and based on light spectral splitting and optical energy concentration | <u>ST.</u> UNI Bo, Numonyx; NXP, RWTH, BUT, ECN, Uni Sheffield, Philips, Tyndall | Salvatore.rinaudo@st.com |
| 2. | Wind energy         | Energy Generation: Wind energy  | Follow up by University of Cantabria   | Evillar@teisa.unican.es  |

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|----|------|---|--|---------|
| 3. |      | <b>Network/Storage:<br/>Transmission and<br/>distribution (DC, very<br/>high voltage, power<br/>quality; Smart grid<br/>backbone)</b> | <b>No prime yet -<br/>(Siemens to be<br/>contacted by<br/>H.Roedig)<br/>Philips, ST, DS2</b> |         |
| 4. |      | <b>Network/Storage:<br/>Batteries (Li-Ion, Thin<br/>Film) (see<br/>Automotive)</b>  | <b><u>ATMEL</u></b>  |         |

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|----|------|---|---|---|
| 5. |      | <b>Network/Storage:</b><br><b>Local Smart grid;</b><br><b>provide complete home energy integration</b><br><b>creating private grids</b><br><b>integrating intermittent renewable energy sources and optimizing performances</b> | <b><u>ST</u>, Uni Bo,</b><br><b>(Philips),</b><br><b>(OnSemi),</b><br><b>(Siemens to be contacted by H.Roedig), U</b><br><b>Ups, FhG,</b><br><b>DS2; BUT, VTT</b> | <b>Salvatore.rinaudo</b><br><b>@st.com</b>    |
| 6. |      | <b>Smart, networked and controlled home appliances for improving energy efficiency of daily live electronics</b>  | <b><u>IFX</u>, ST-</b><br><b>Ericsson, FhG;</b><br><b>BUT,</b><br><b>NXP,OnSemi,</b><br><b>Sintef, ATMEL,</b><br><b>VTT,Numonyx,</b><br><b>U Ups</b>              | <b>Herbert.Roedig</b><br><b>@infineon.com</b> |

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| #  | Name                          | Subject   | <u>Prime,</u><br>Partners   | Contact                        |
|----|-------------------------------|---|---|--------------------------------|
| 7. | LIFE<br>(Lighting the Future) | <b>Lighting Controls: Providing intelligence to lighting systems, including advanced sensors for presence detection, and easily-commissionable and installable lighting systems with WSN and energy scavenging. (LED)</b> | <b><u>Philips,</u> Osram, IFX, ST, FhG, VTT, U Ups, ATMEL, BUT, NXP, Tyndall, (RWTH), (TU Eindhoven), ART</b> | <b>Paul.merkus@philips.com</b> |

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| #  | Name | Subject  | <u>Prime</u> ,<br>Partners              | Contact                                 |
|----|------|--|---|---|
| 8. |      | <b>Power Conversion<br/>(AC/DC/AC) -&gt; “platform”<br/>for everything</b> | <b><u>IFX</u>, Philips<br/>ST, U Bo</b> | <b>Herbert.Roedig<br/>@infineon.com</b> |