



International Resources Group

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# ASIA CLEAN ENERGY FORUM

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## The Energy Service Provider of tomorrow

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- ⇒ Recent estimates indicate a 20-25% energy savings potential that could be realized within the next 10 years at 2007 energy price level
- ⇒ This translate into about a 500B/year market, of which 200B/year for electricity alone in economic value of the energy saved and a need for investment of about twice these numbers
- ⇒ Most of this potential business is not serviced
- ⇒ Assuming that only 10% of this business is contestable and accessible to ESPs, this would mean that there is room for 2,000-3000 companies @ \$20-50million/year in sales (service + investment)
- ⇒ According to the latest studies of LNBL and other, less than 200 of them do exist today and their total annual sales are less than 5B/year worldwide for energy efficiency only ( 1% of “technical market”)



## Why is the business so small?

⇒ Reasons are well known and documented:

- World bank 3 country study
- EBRD 2005
- Hundreds of others studies

They are:

- Lack of trust from owners/operators
- Complicated contracts and financing
- Lack of standards and accountability... and more



## New elements that can change this situation:

- ⇒ Higher energy prices
- ⇒ Carbon additionality
- ⇒ New financing schemes
- ⇒ Renewed support from IFIs
- ⇒ Billions available from funds
- ⇒ Standardization efforts ( EVO's IPMVP and IEEFP)

**AND:**

- ⇒ Decreasing service costs, increasing benefits



## Lower costs: some of the sources

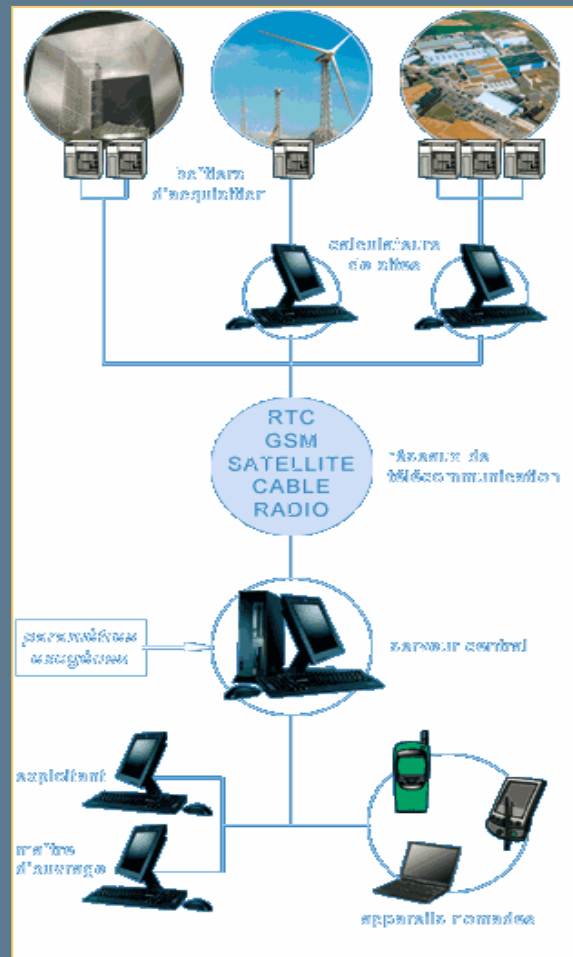
- ⇒ Technology: Web based EIS and advanced communications bring the cost of data acquisition down sharply
- ⇒ Analytical software e.g., DOE 2 for buildings cut analyst time by a factor 10-20
- ⇒ Advances in metering and sub metering with costs falling rapidly , sometimes by a factor 10
- ⇒ Extensive outsourcing of audit and engineering services, e.g., to Indian ESCOs, cut engineer costs in half or more
- ⇒ Commoditization of several links of the value chain e.g., EIS, technology performance analysis bring additional savings



## Role of new technologies: data acquisition and processing for energy audits

### Typical Technical Architecture

- ⇒ Data acquisition boxes convert industrial protocols in real time into reliable digital data
- ⇒ Exogenous parameters e.g., economical, meteorological, calendar or logistical can be correlated with energy data at the central server level



- ⇒ Managers access data from their PC or any other
- ⇒ On site processors (optional) provide security to the global system architecture
- ⇒ The central server aggregates all data and hosts the application software



## **Summary: Towards Commoditization of Energy Efficiency projects and mass delivery of results**

- ⇒ **By combining new EIS technologies and the newly developed international protocols such as IPMVP, it is now possible to:**
  - 1. Establish a reliable baseline both in physical quantities and in financial terms**
  - 2. Monitor, Measure, Evaluate and Validate savings online and in real time for the life of a project and/or its financing**
- ⇒ **These new developments allow for a commonly recognized and accepted framework for energy savings valuations**
- ⇒ **New EIS technologies allow a reliable, cost effective and modern measurement of energy savings**
- ⇒ **As a result of combining these technology developments with increased outsourcing, transaction costs will decrease and risk perception by investors and financiers will improve, leading the way to the commoditization of energy efficiency on a large scale, particularly in the middle market.**