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ETP SmartGrids

Active integrated grids accommodating seamlessly energy efficient buildings

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www.smartgrids.eu

Technology is really changing the scene …

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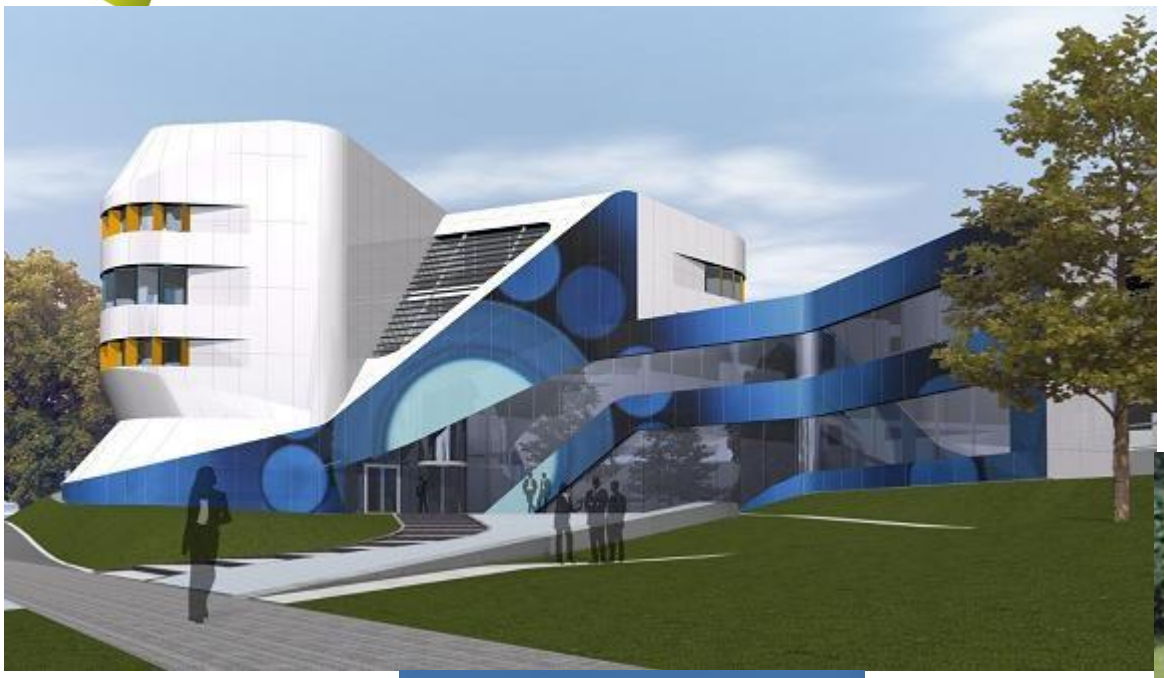

The efficiency challenge …

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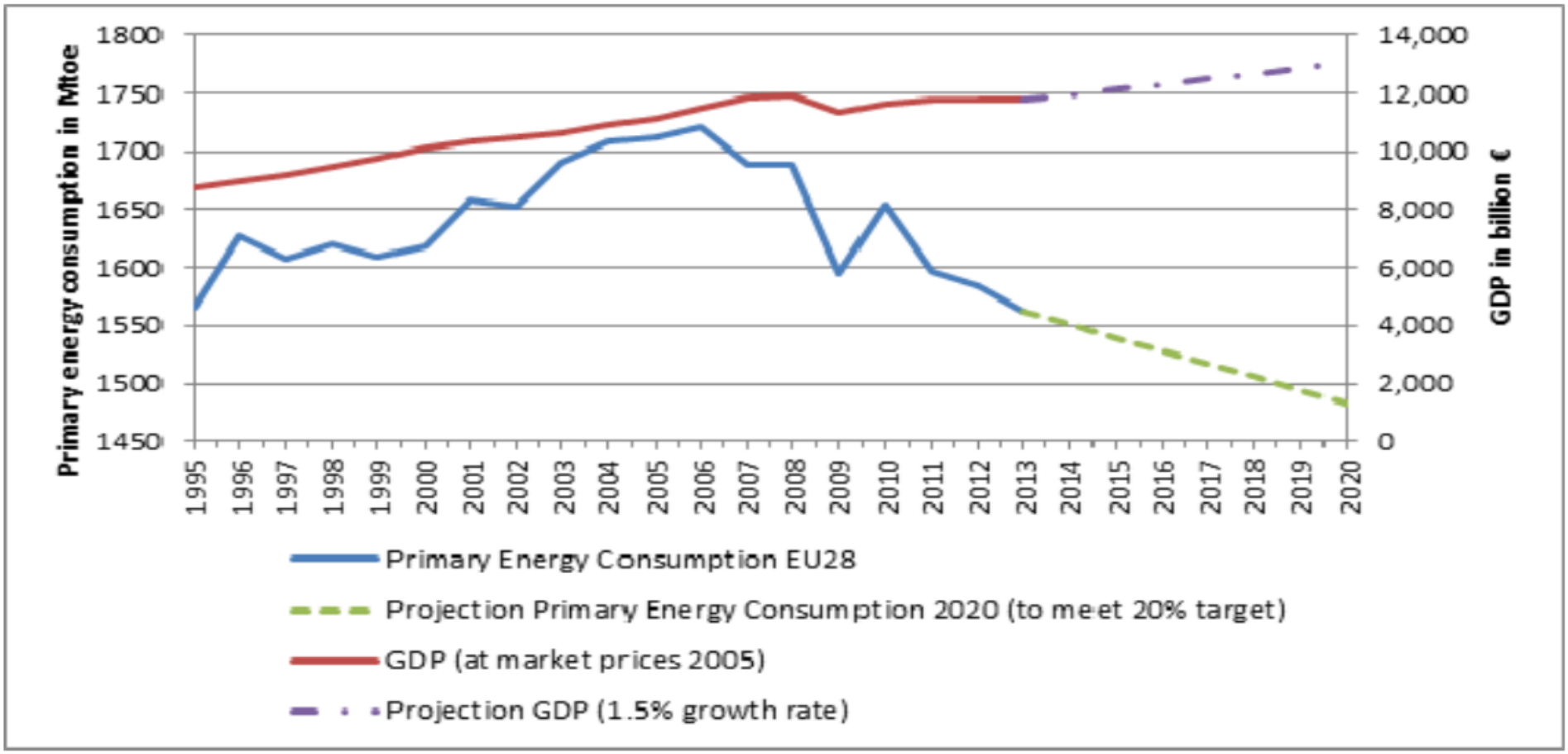

Source: Commission services based on EUROSTAT data

The Zero Energy Building challenge …

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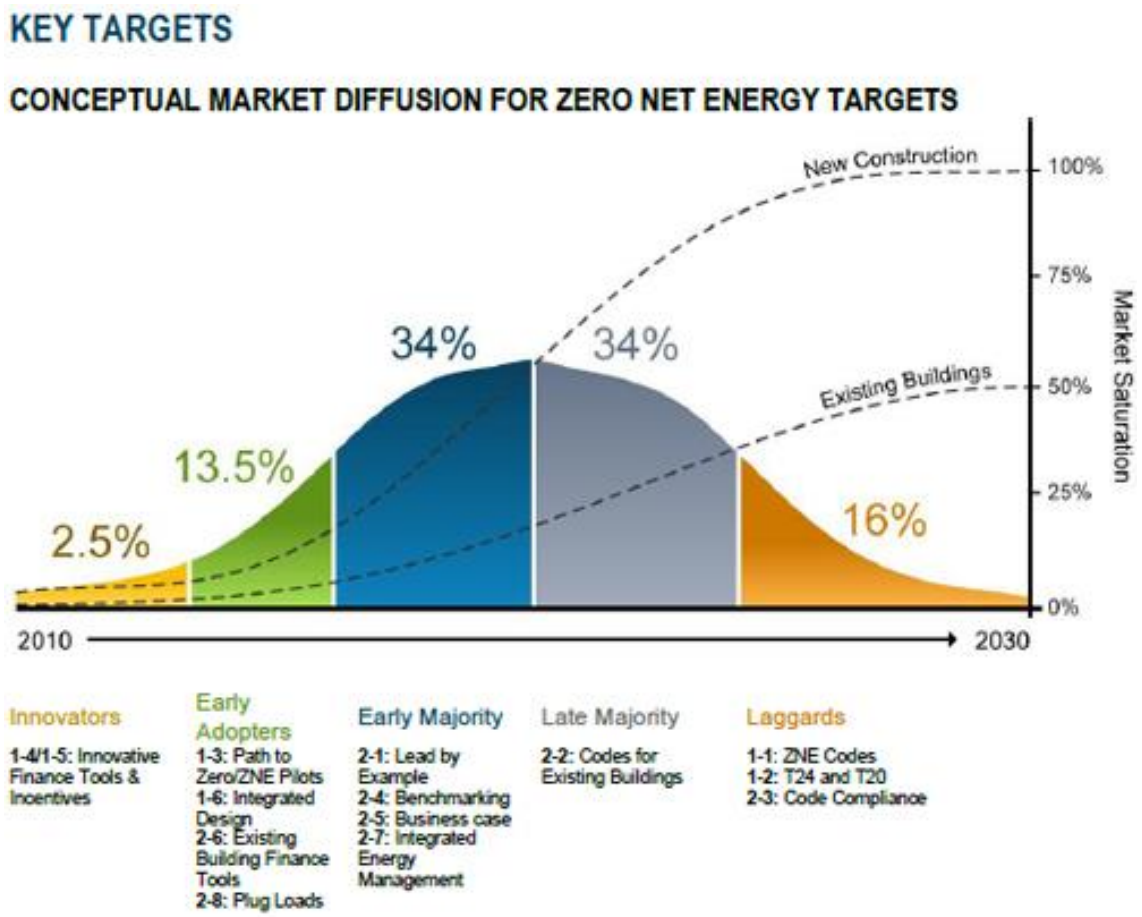

- **We know it is possible but it is easier to say than to implement!**
- **Each Member Country has to go through a detailed plan to identify its own realistic road map in line with the targets set.**
- **The grid requires the smartness and flexibility to optimally respond to this paradigm change.**
- **Investments are sustainable but they need challenging remuneration and responsive policy pull.**

The flexibility challenge …

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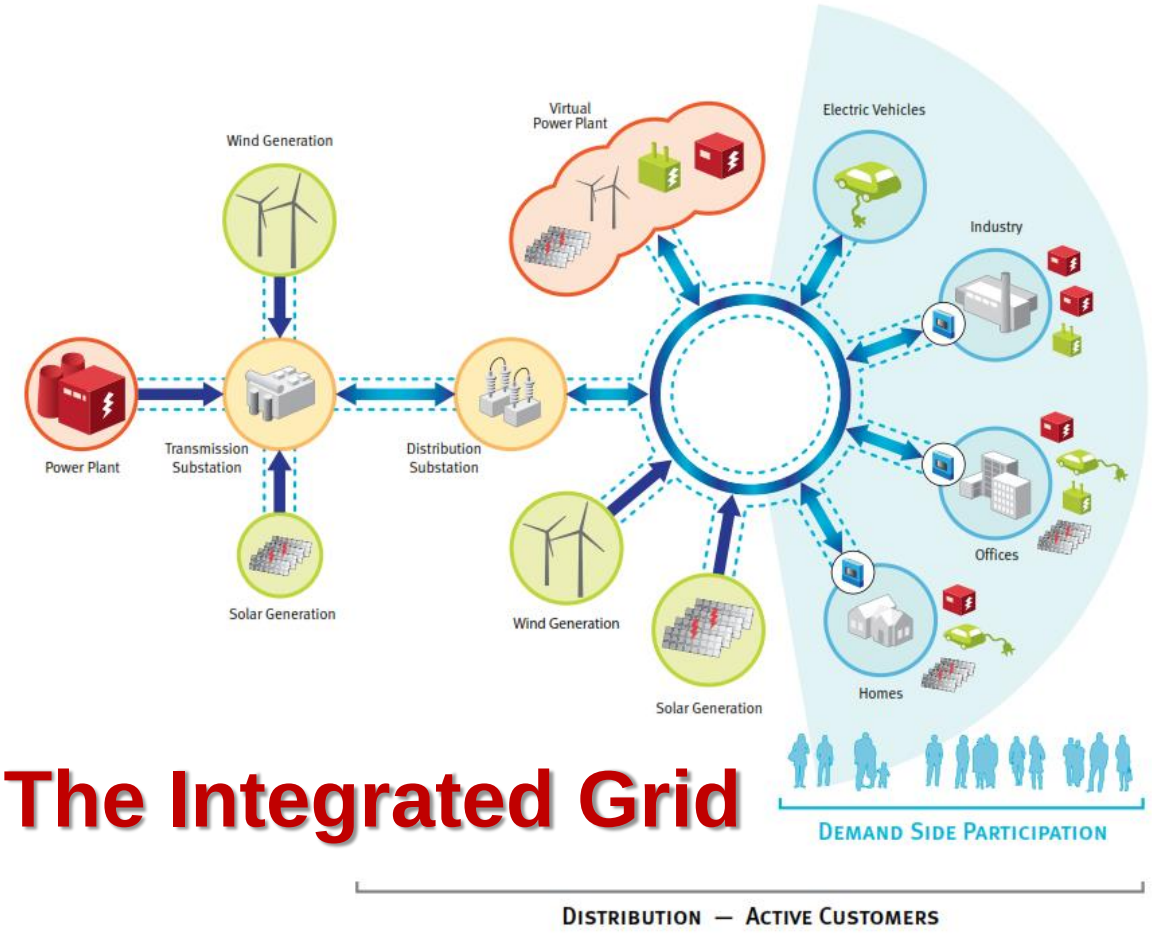

The Integrated Grid

Requiring the evolution of Smart Grids to facilitate:

- Optimal synthesis of all active elements connected to the grid,
- Observability to all involved stakeholders to optimally maximise their role,
- Effective Demand Side Management for active citizens,
- Smart distributed control allowing self correction where needed.

Growing need for flexibility

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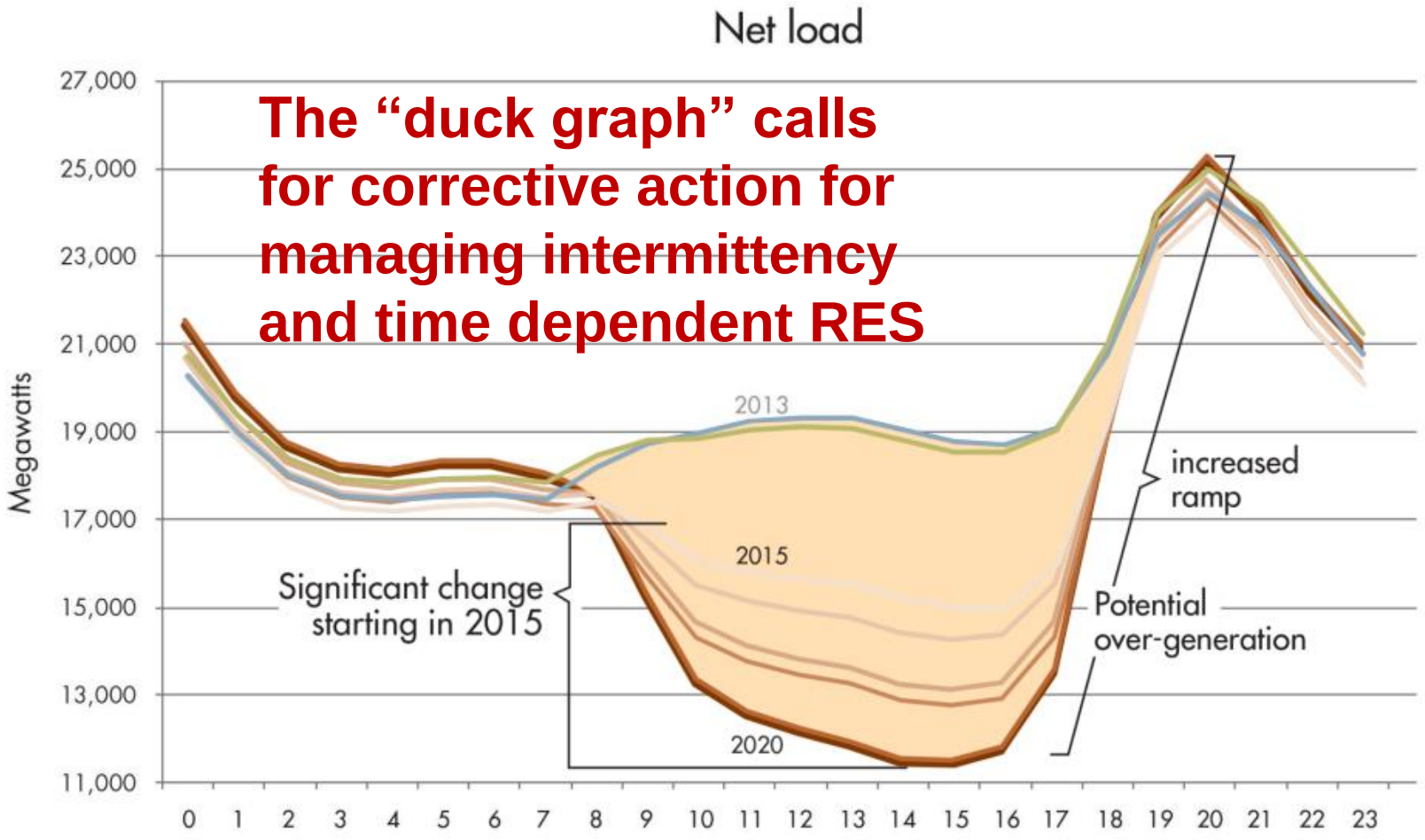

The bi-directional nature of storage offers a wealth of flexibility …

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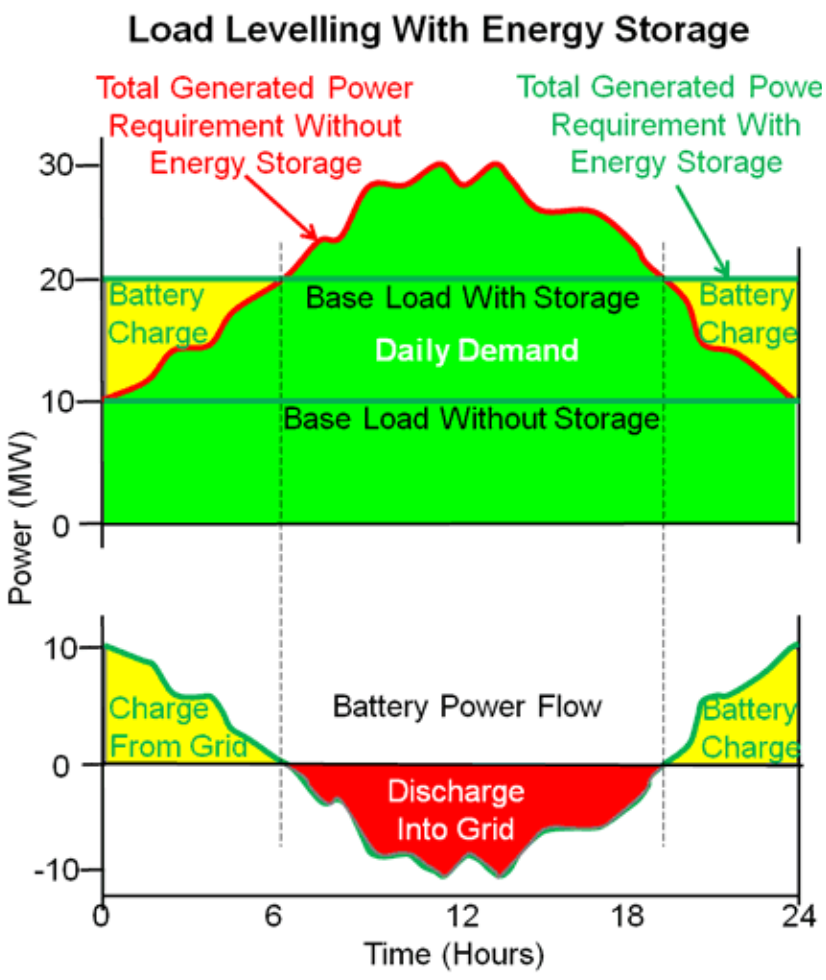

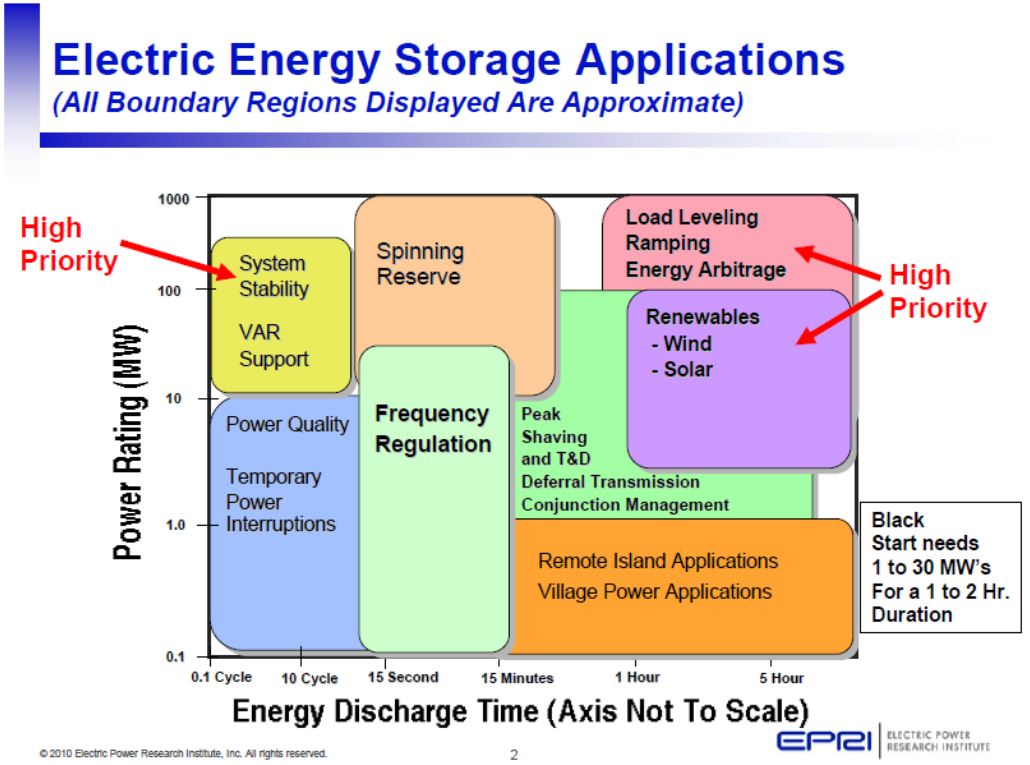

Complex to regulate due to its multi-use capability – But offers much needed flexibility !

All the required technologies for seamless integration of DG is already being tried out …

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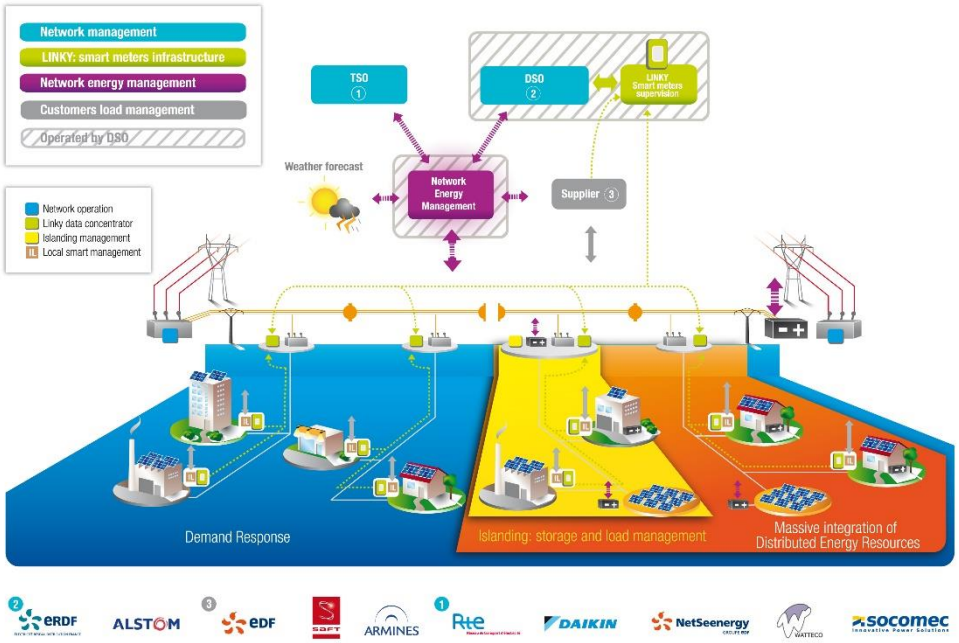
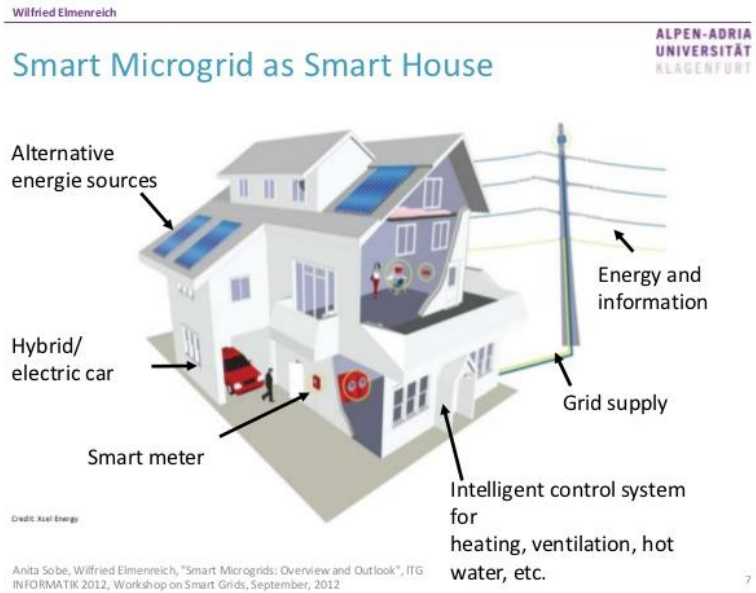
EU - GRID4EU Project

NICE GRID
A SMART SOLAR DISTRICT





The emerging active integrated grid goes hand in hand with the ZEB

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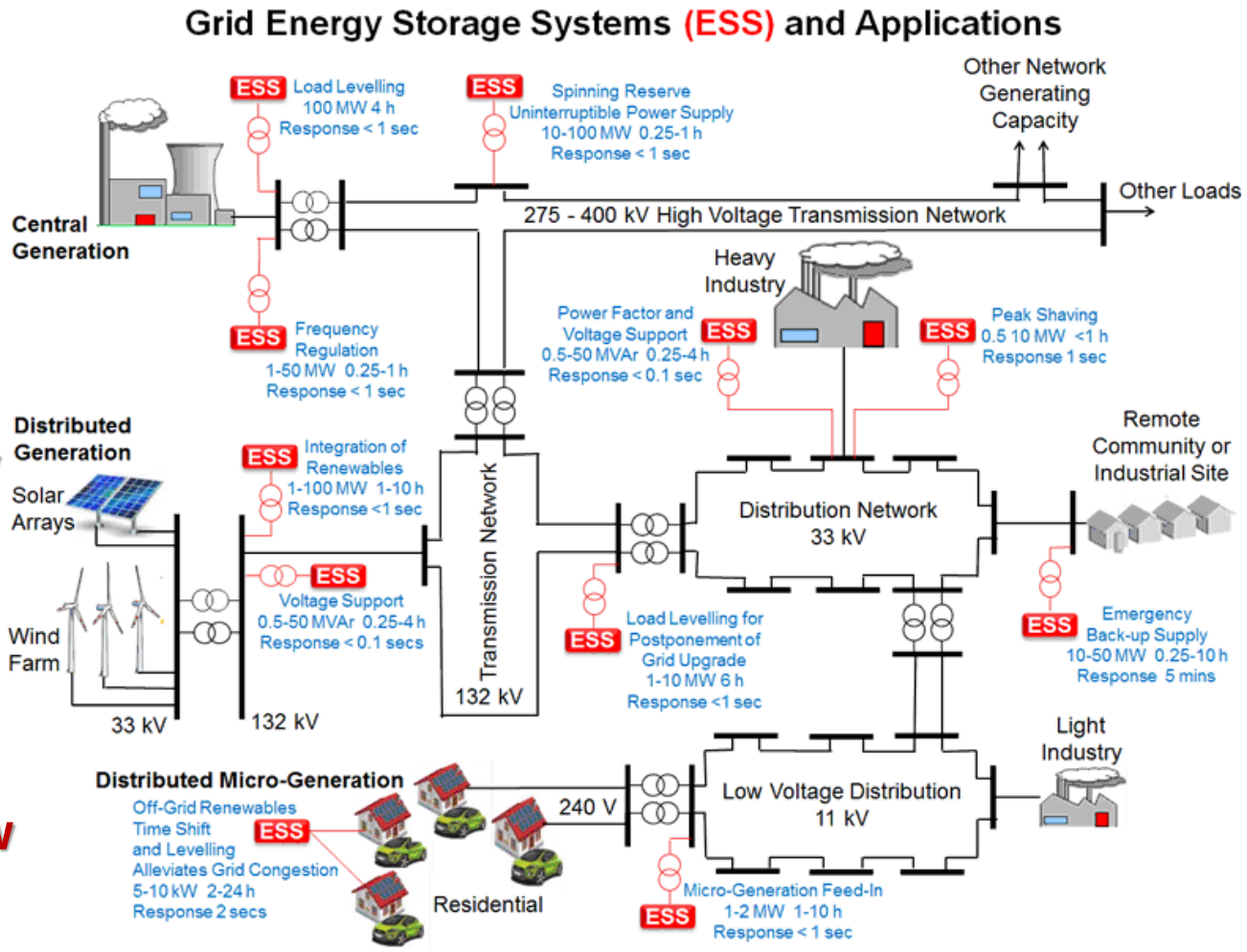
The required grid functionalities are up and running on real systems merging the future with the well proven infrastructure that has served the economy so effectively up until today.
The evolution into the SG realm is steadily growing, maturing into the new norm that can optimally serve the new mix of technologies !!!



Need for smart incentivized Regulation …

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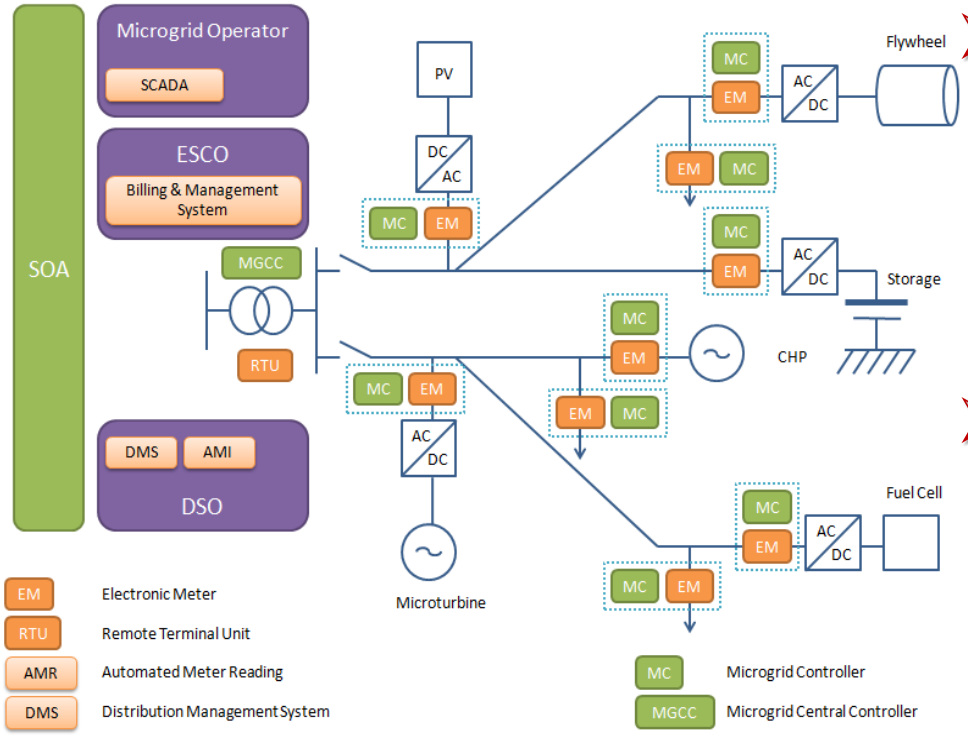

- **Distributed control architecture will prevail seamlessly linking all active elements of the integrated grid**
- **Embedded systems with microgrid capabilities or "web of cell" connectivity will offer quality inclusion of energy efficient buildings**

- **Policy and Regulatory shortcomings need to be addressed for smart investments to prevail and maximize benefits to all active stakeholders !!!**

Need for smart incentivized Regulation …

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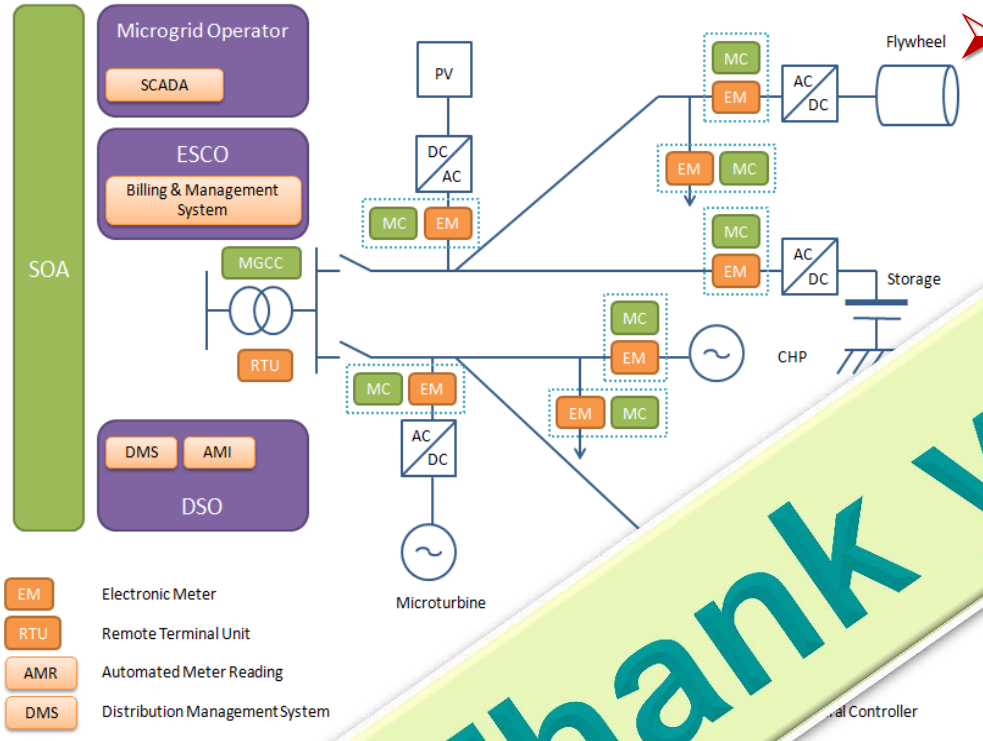

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Thank you !!!