

HORIE LAB.

[Creation of Clean and Efficient Energy Supply System]

Energy Storage Engineering

Future Energy Network with Advanced Batteries

Energy-Information-Consolidated Networks Empowered by Advanced Batteries

Advanced battery systems are expected to materialize future power supply networks for clean and energy-efficient systems. Energy and information would be eventually consolidated through an electron platform, which leverages advanced batteries to provide/absorb energy ubiquitously to accommodate stringent constraints at any layer of integrated systems. We would like to propose harmonized energy and information network concepts, which could benefit any conceivable artifacts in the future.

- ◆ Design of future batteries for the society to come
- ◆ Creation of battery information technology
- ◆ Creation of energy and information network systems with distributed nodes of advanced batteries

Fig.1 Integration of information and energy into the synthesized network

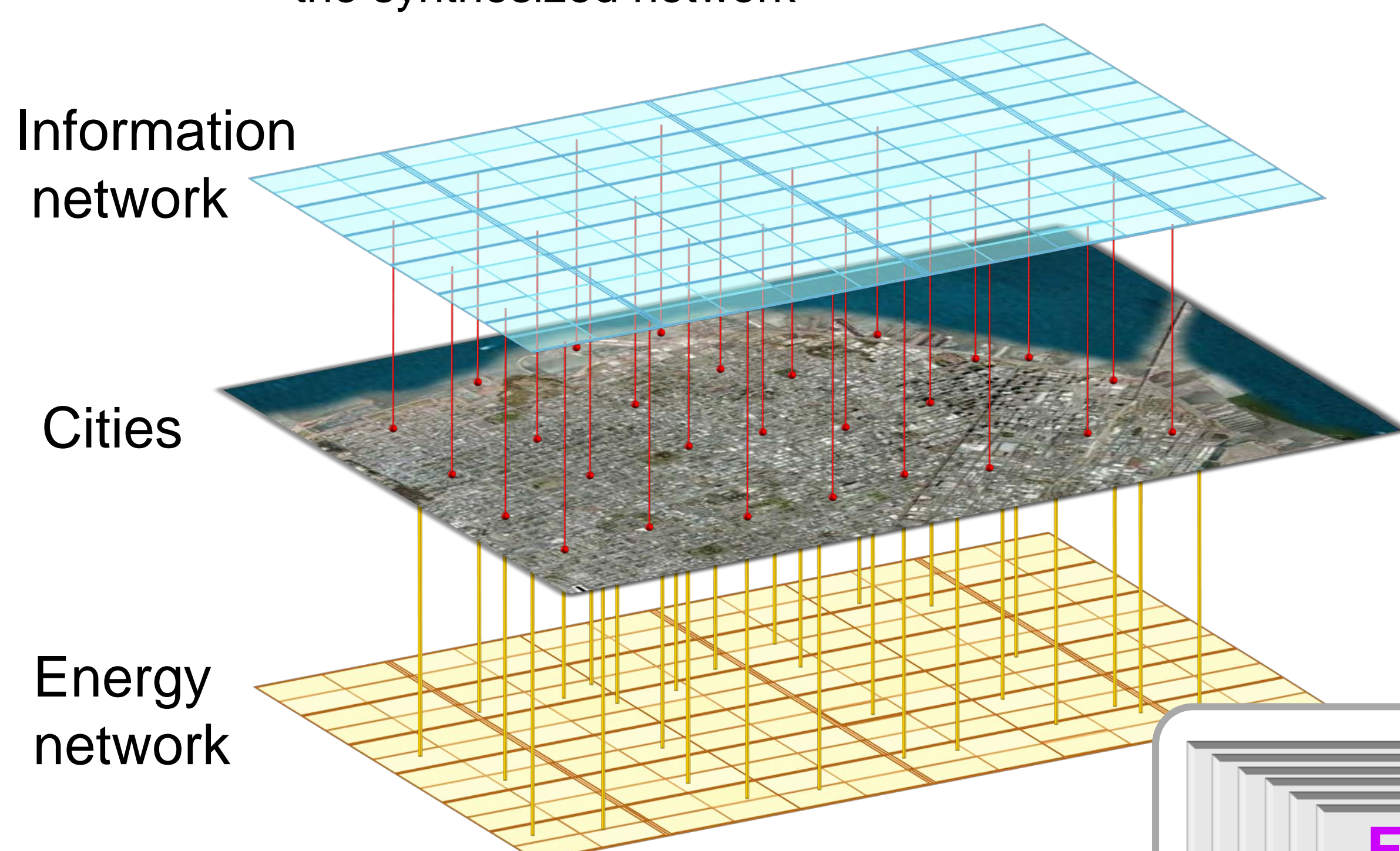


Fig.2 Energy optimization in remote areas by means of advanced secondary batteries

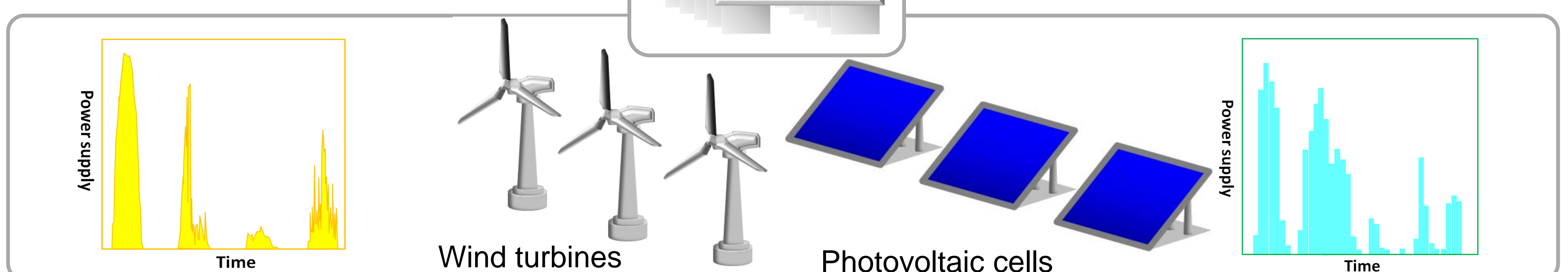
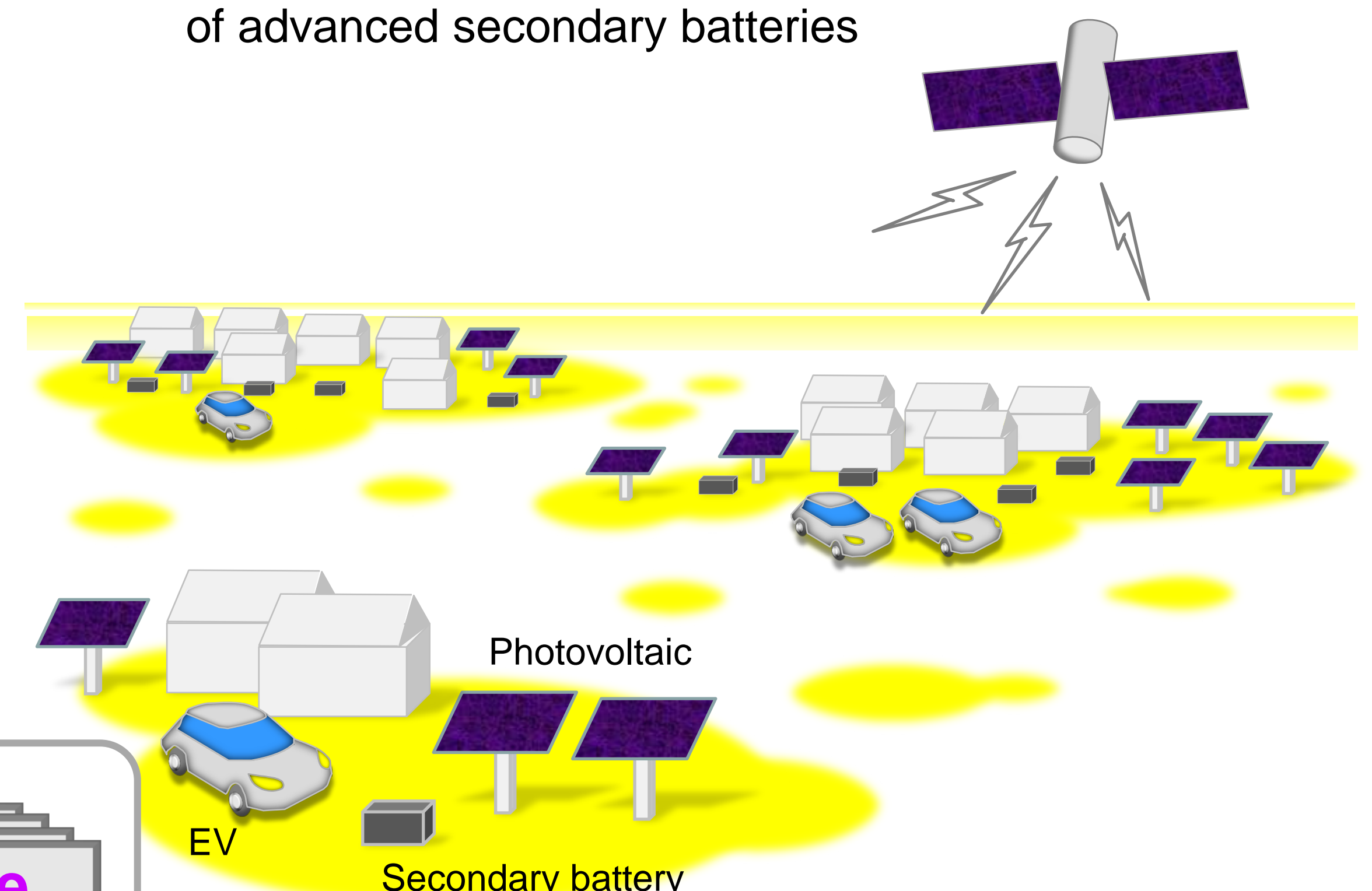


Fig.3 Coupling of advanced secondary batteries with several varieties of renewable energy