



Grid interactive smart building of the future

Turn Buildings into a source of energy

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What is a Grid interactive smart building?

Grid interactive smart buildings

- Reduce overall consumption from fossil energy source
- Provide load shifting, storage and grid-stabilization capacity
- Enable revenue from selling curtailable load or generated power

Grid interactive smart buildings



- Need an optimized digital and physical infrastructure to enable interoperability
- Manage own energy flow (for consumption, storage or generation)
- Store self-generated renewable energy on-site (E-cars, Batteries, thermal elements)
- Act as prosumer to the grid (Sell or buy capacity to/from the energy market - depending on the tariff structure)
- Monitor and supervise internal load management (including HVAC systems, lighting or dynamic windows)
- Complement grid control system (Full workflow from forecasting to financial view)

Grid interactive smart building – Conclusion

Digitalization

- Is the prerequisites to ensure interoperability of complex and heterogeneous systems to achieve an “all-electrical world”
- Use standard software which meet existing IT requirements adaptable according to the specific customer requirements
- Provides support in answering strategic questions using simulation and forecast functionalities

Decarbonization

- Political framework conditions allow measures to modernize technical facilities without upfront investment
- Achieve improvements in primary energy efficiency of 20-30%

Democratization

- Resiliency and reliability of the energy system will increase to a higher degree
- General political and social consensus of the “Green Deal” actions providing the tailwind