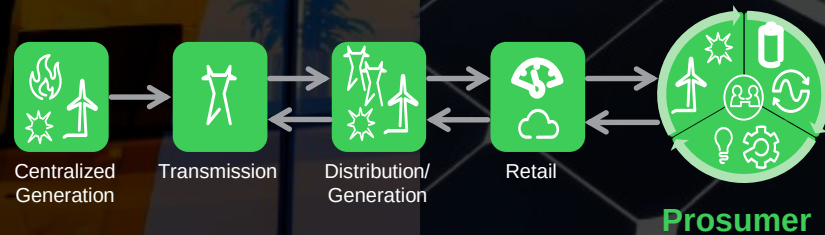


The new decentralized Energy Landscape

Historical Energy Value Chain

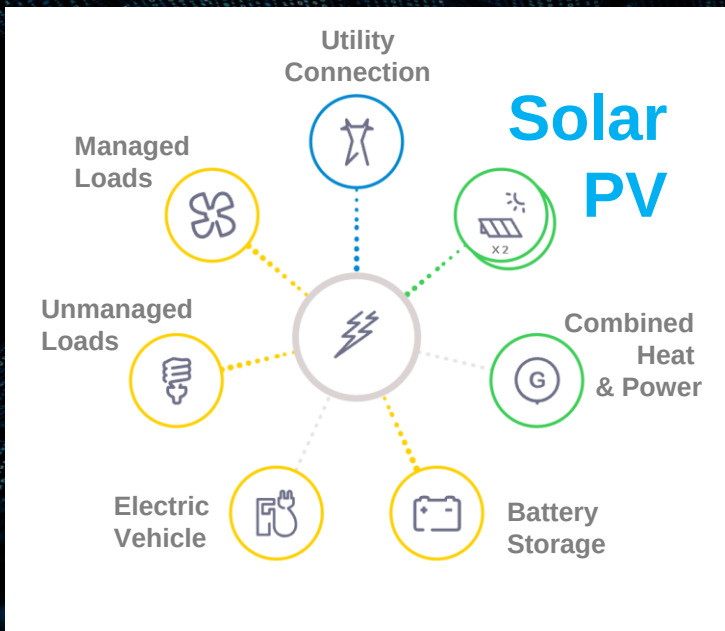


New Energy Landscape



Renewable integration

Policies should cover all dimensions



Cost

- Lower / More Predictable Energy Costs
- Energy / Fuel Source Arbitrage
- Flexibility drives savings / incremental revenue



Sustainability

- Reduced carbon footprint
- Improved brand image
- Attract / Service carbon sensitive customers



Citizen acceptance

- Energy awareness / Energy sharing
- Inclusivity in cities, associated jobs



Resilience

- Serve loads during times of grid instability
- Oasis for employees / customers – shelter in place
- Protect critical assets from poor power quality

The New Electric World is already here

The Lidl Case

Customer needs

Solar Energy
Microgrid
Storage
Heat Management
Power Management



A building that uses 100% renewable with solar panels

CO₂ Reduction goal: 40%
Energy efficiency: 30%

Active demand response management