Bundesministerium
für Wirtschaft
und Energie

Stromspeicher

Was sie mit Eis und Bier verbindet
Netzintegration PV mit BESS

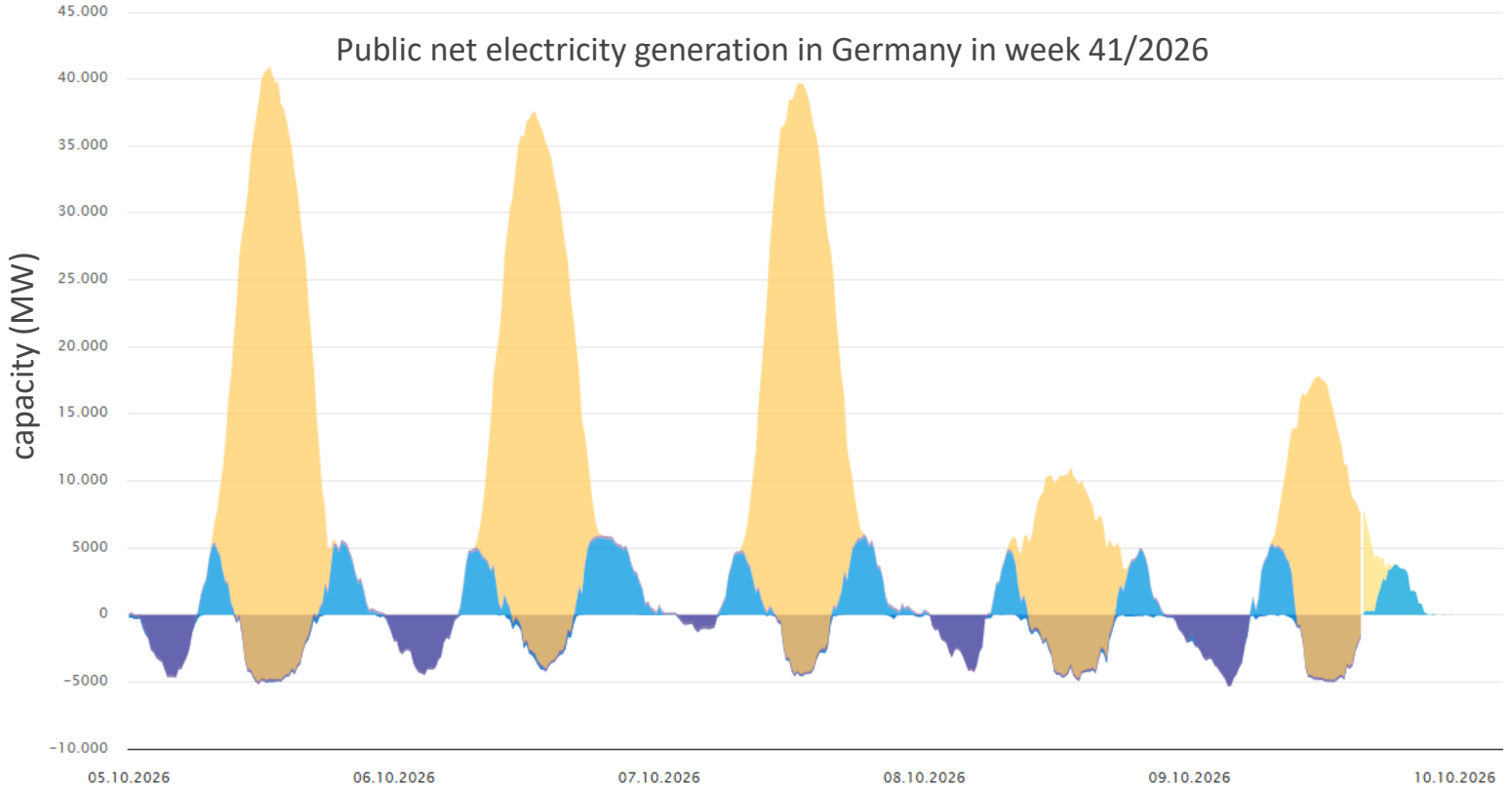
Système de stockage d'électricité

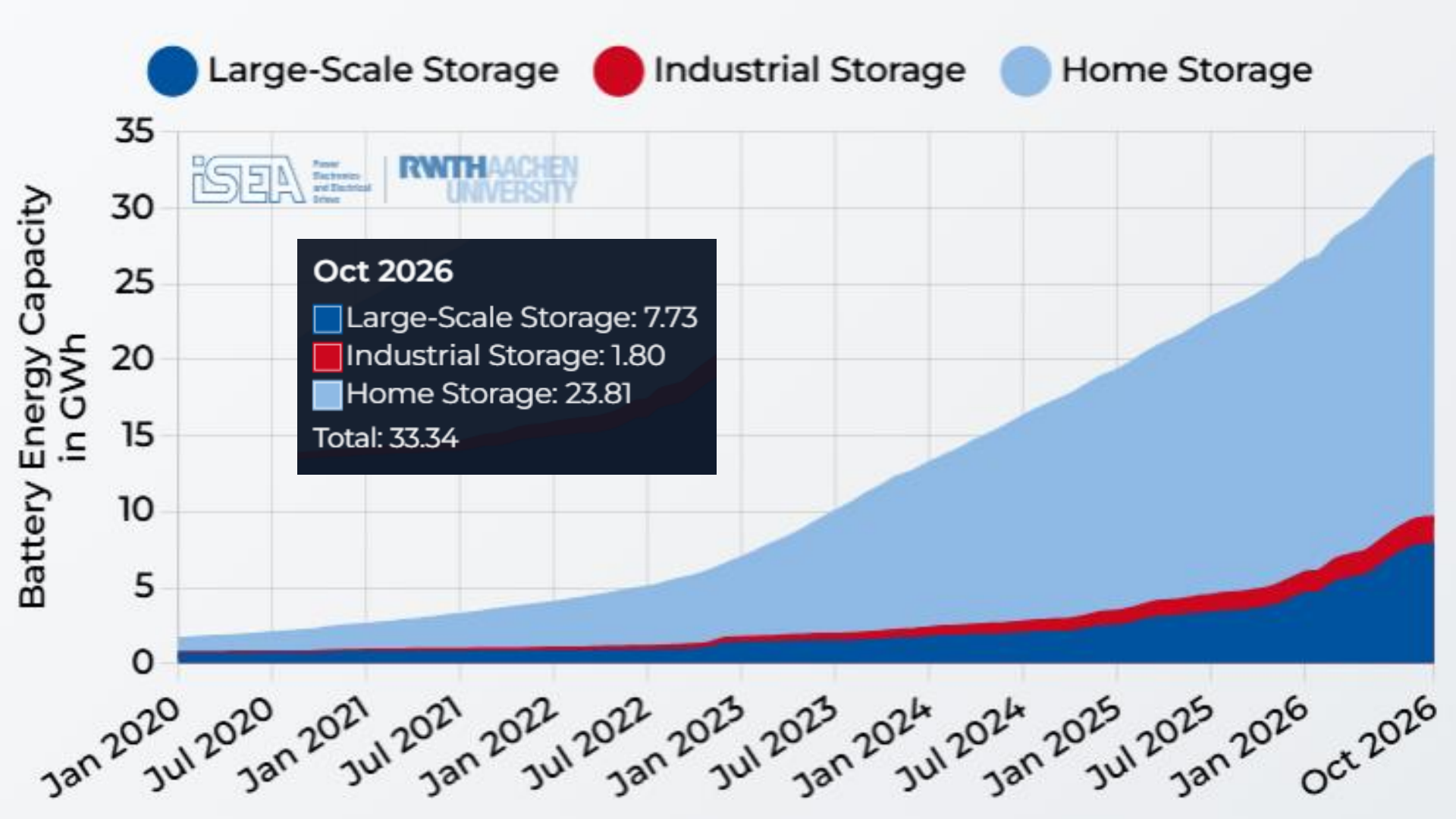
Ce qui les relie à la glace et à la bière
Intégration PV-batterie-réseau



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What electricity storage systems do




Large-Scale Storage
Industrial Storage
Home Storage
Battery Energy Capacity in GWh
35
30
25
20
15
10
5
0
iSEA
RWTH AACHEN UNIVERSITY
Oct 2026
Large-Scale Storage: 7.73
Industrial Storage: 1.80
Home Storage: 23.81
Total: 33.34
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Jul 2022
Jan 2023
Jul 2023
Jan 2024
Jul 2024
Jan 2025
Jul 2025
Jan 2026
Oct 2026

Electricity storage systems are all-rounders



Time decoupling of generation and consumption

Grid congestion management

Spot market trading

Reactive power

Positive and negative balancing energy

Black-start capability

Integration renewable energies

Provision of capacity

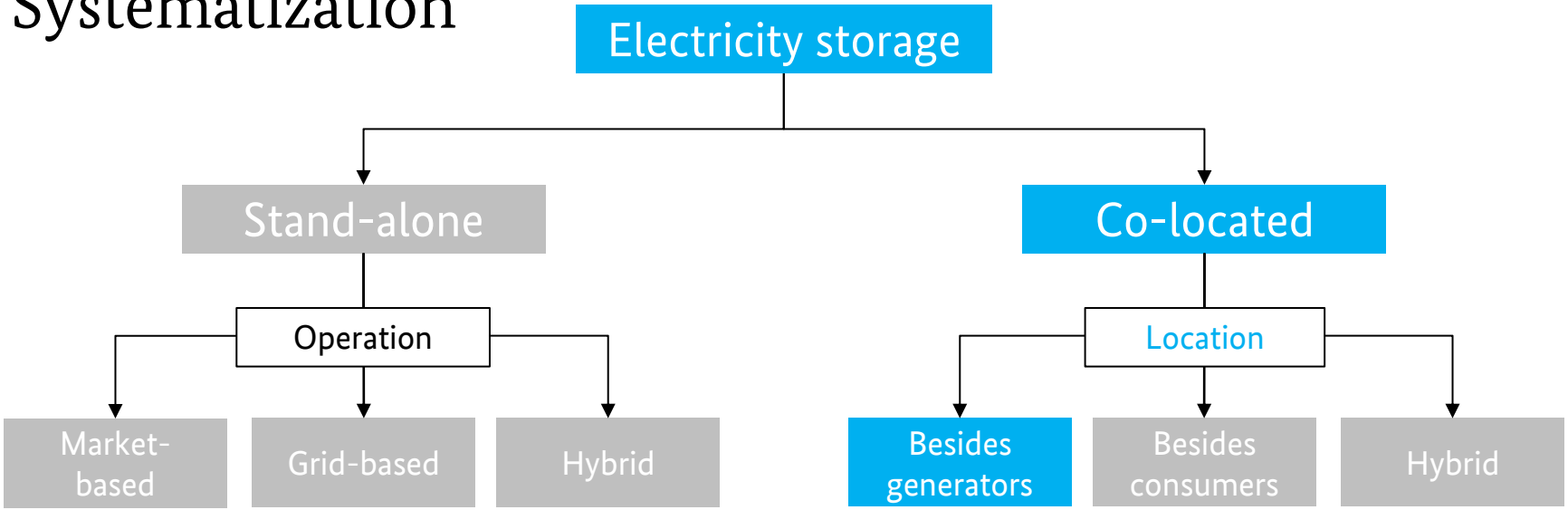
Avoidance of generation peaks

Peak shaving of peak loads

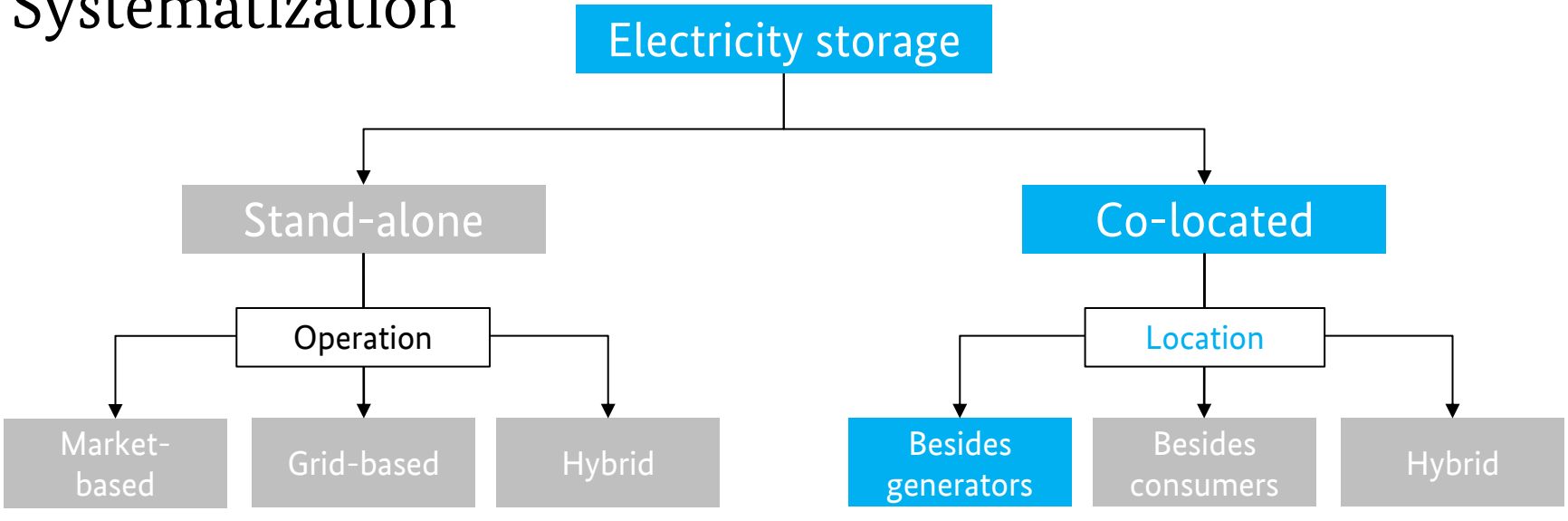
Value optimization of generation plants and grids

Compensate for forecast errors

Systematization

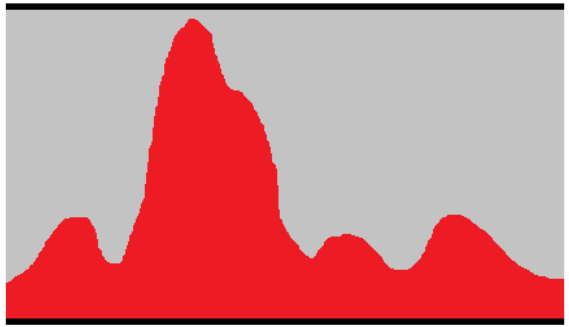


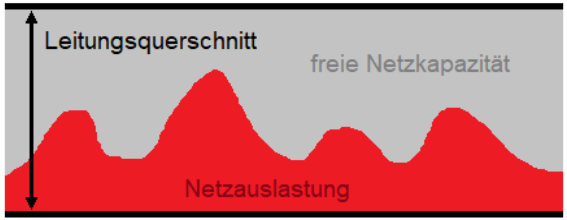
Systematization



→ Expert Group on Co-located Storage

Goal: reduce costs

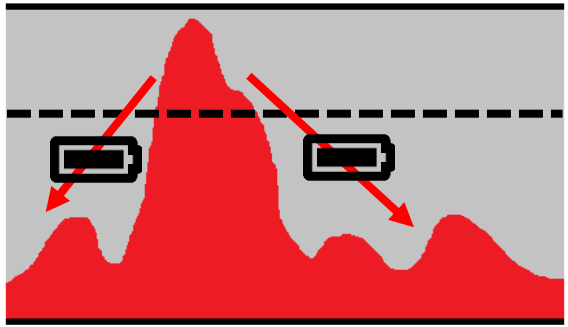


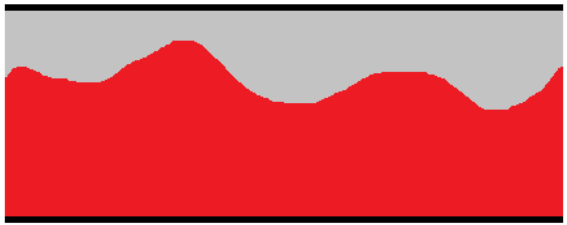


Previous paradigm:

Design grid based on peak load

Goal: reduce costs





Previous paradigm:
Design grid based on peak load

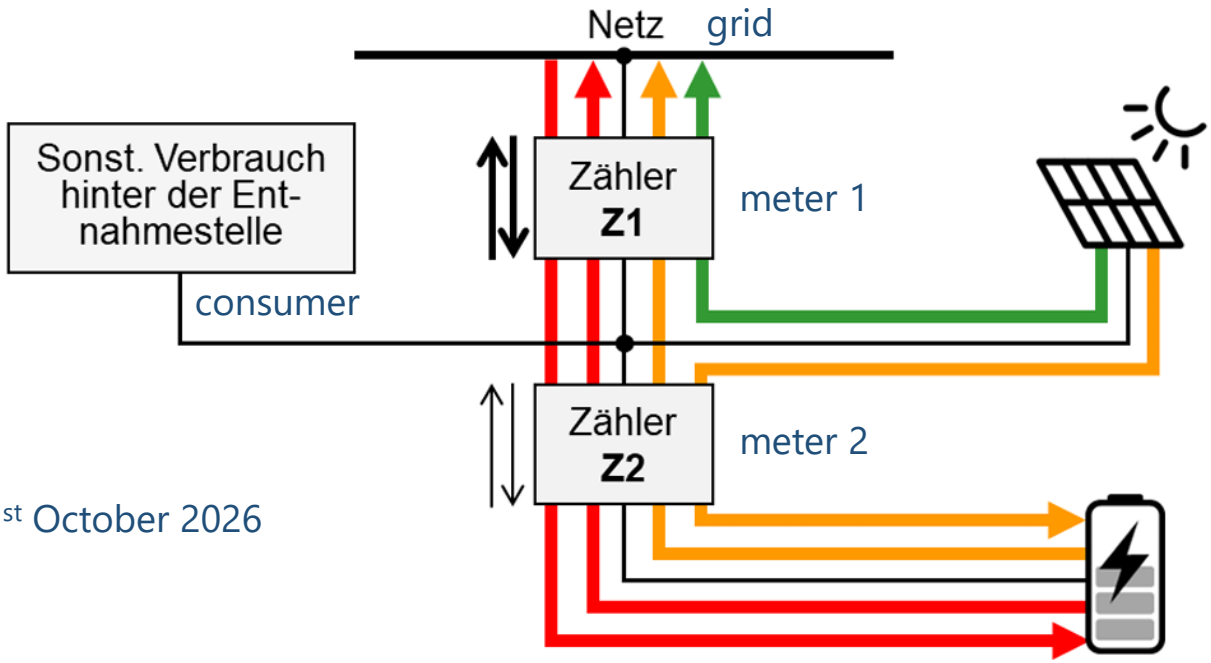
New paradigm:
Increase grid utilization

Method:
Use of electricity storage

Effect:
Revenue base is broader ↑
Grid expansion is reduced ↓

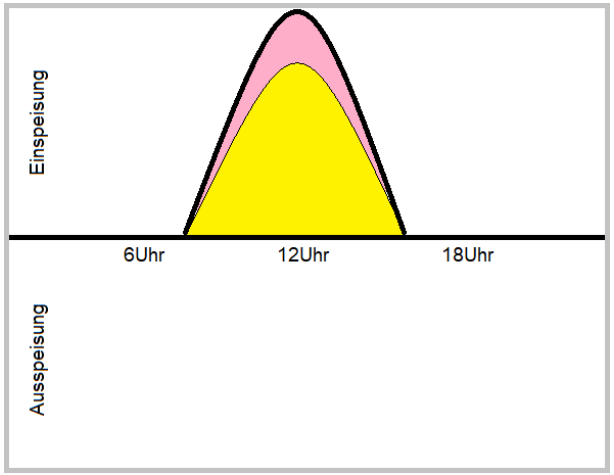
Consequence:
Grid costs and charges decrease ↓

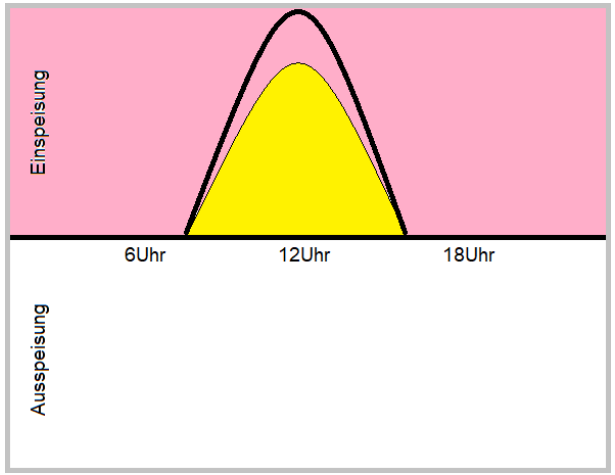
Regulation „Integration of storage and charging points”

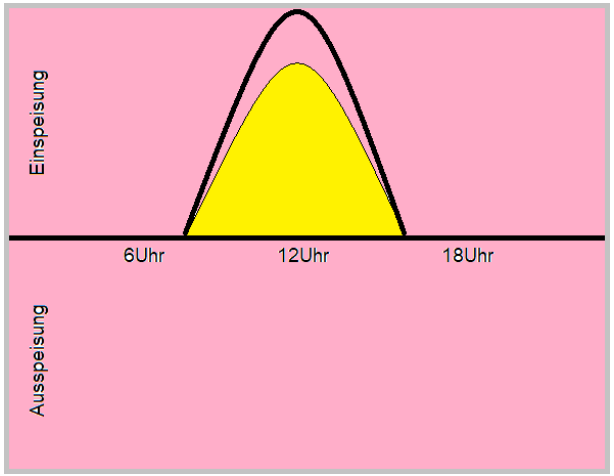


BNetzA 1st October 2026

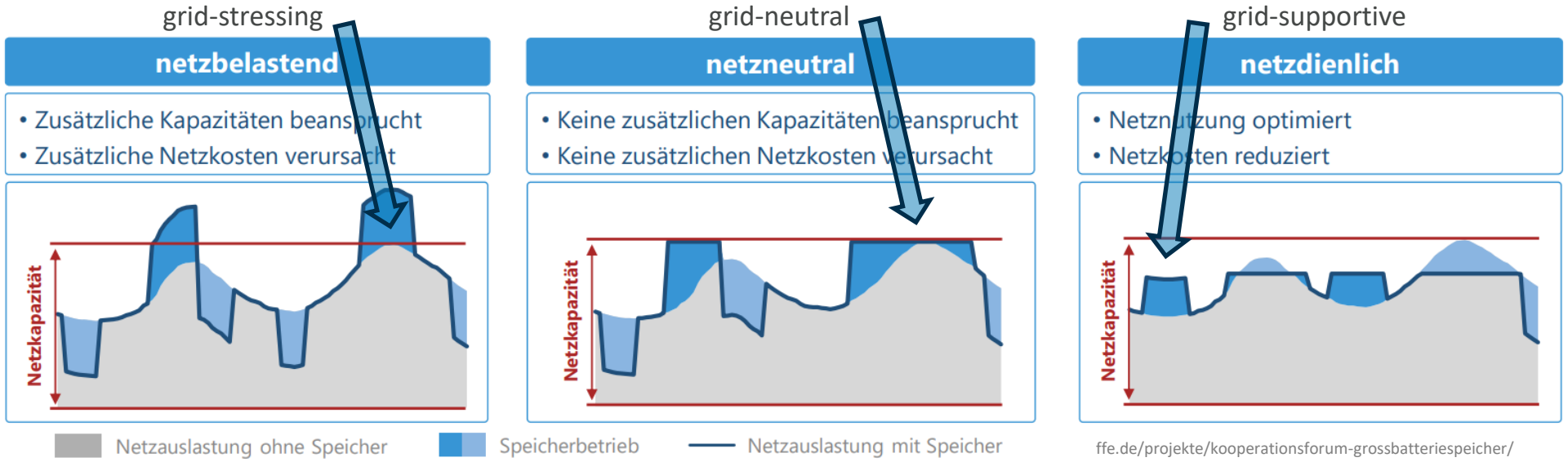
And now PV – stupid vision?







grid effect → flexible connection agreements (FCA)



ffe.de/projekte/kooperationsforum-grossbatteriespeicher/

Storage is like ice cream, pizza, or beer

- Manufacturers store ice cream in cold storage rooms until delivery.
- “Cool” trucks transport it to wholesalers, where it is kept in cold storage.
- Other “cool” trucks distribute it to retailers, where it is displayed in cool fridges.
- Customers buy the ice cream and store it in freezers at home.

→ Cooling is required at every stage. It bridges the time between production and consumption. The same applies to storage.



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