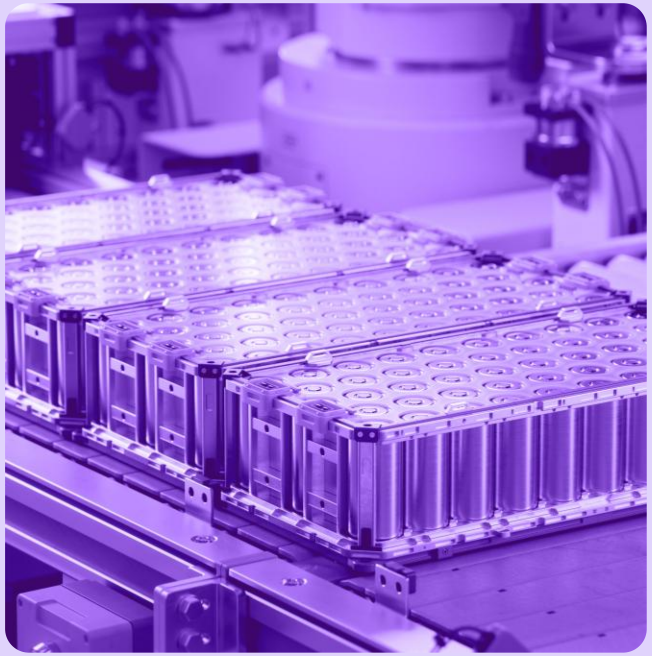
LET'S FLEX

SOLARPOWER SUMMIT 2025

WELCOME TO THE SOLAR FLEX ERA

LET'S FLEX EUROPE'S BUILDINGS TO SUPPORT THE GRID



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THIS IS THE TITLE OF THE KEYNOTE

MICHAEL SCHMELA

Executive Advisor and Director of Market Intelligence, SolarPower Europe

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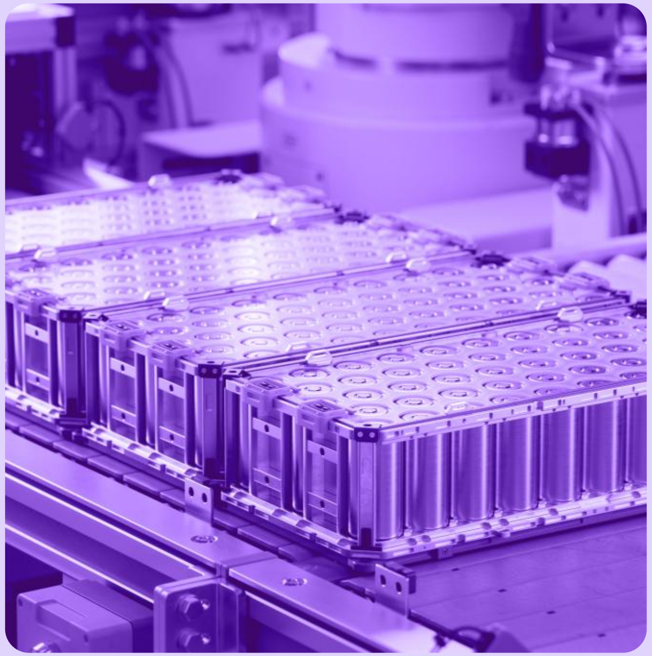
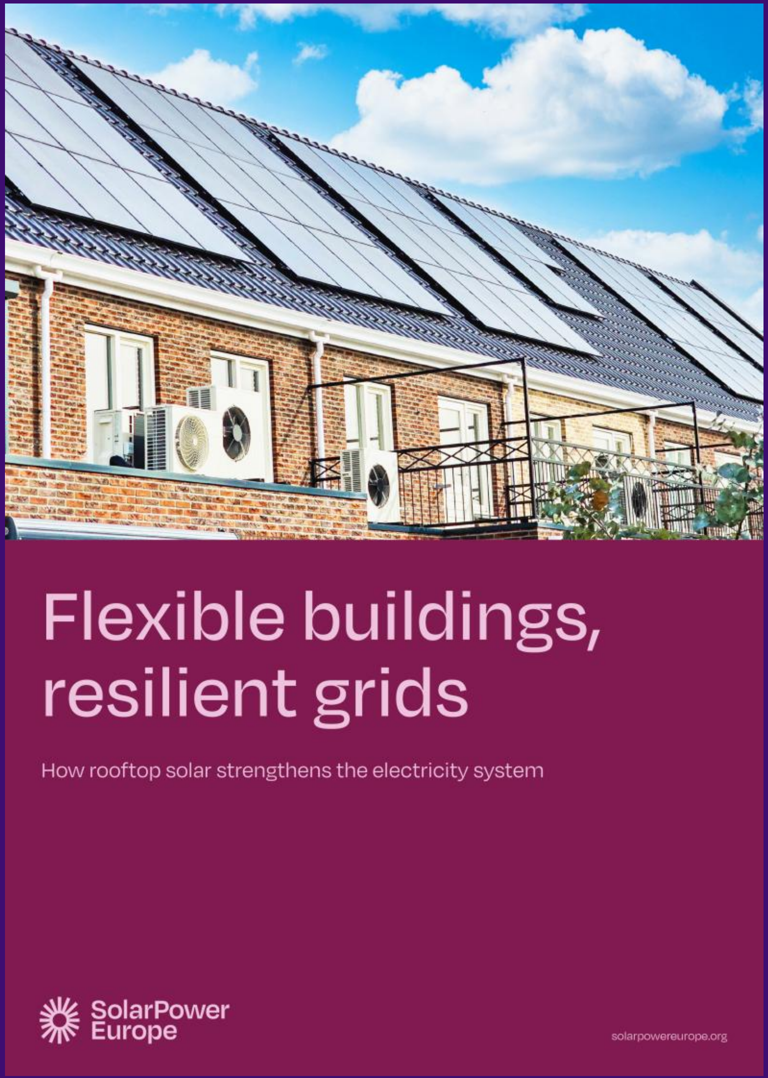
WELCOME TO THE SOLAR FLEX ERA

FLEXIBLE BUILDINGS, RESILIENT GRIDS



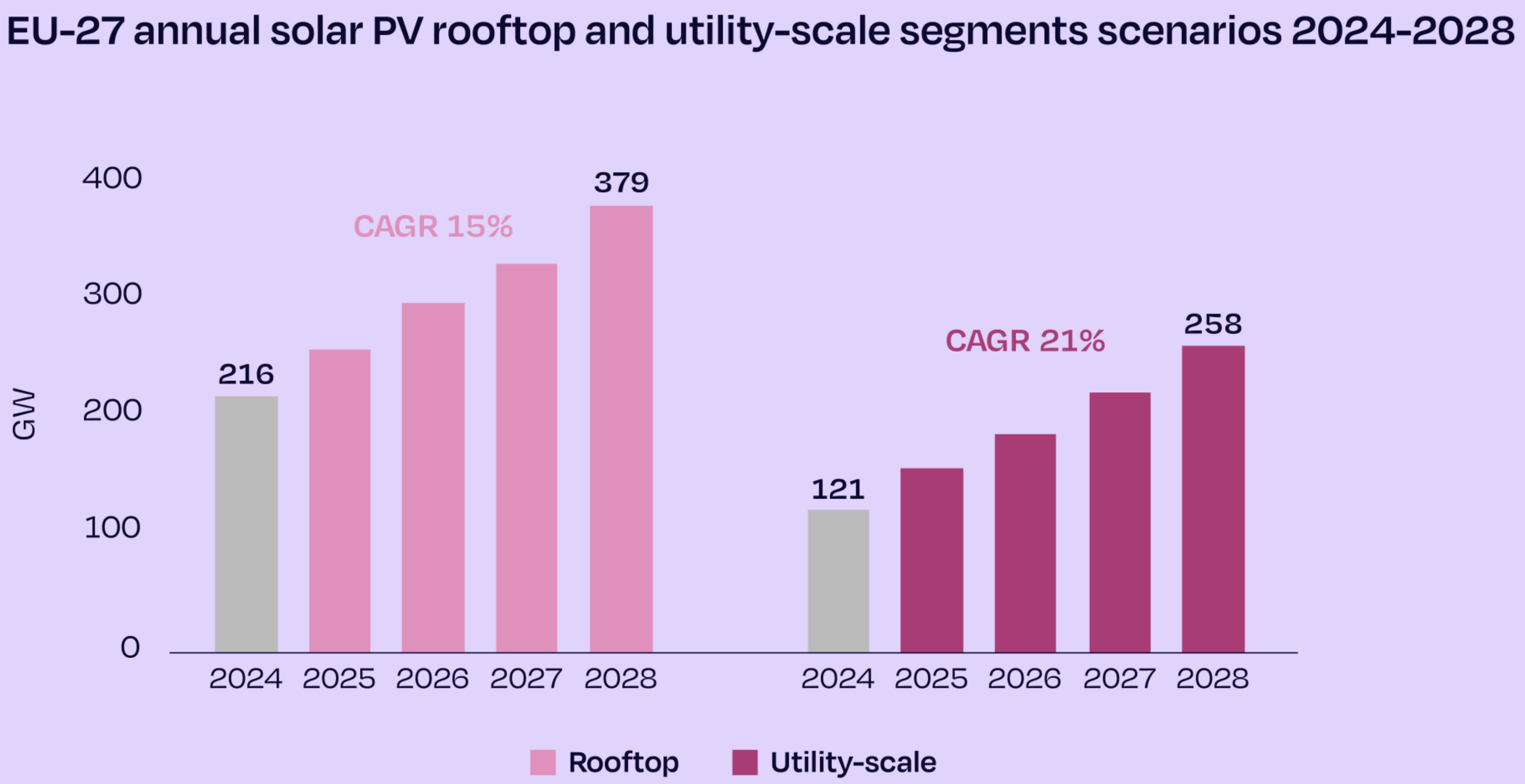

Flexible buildings, resilient grids

How rooftop solar strengthens the electricity system

SolarPower Europe

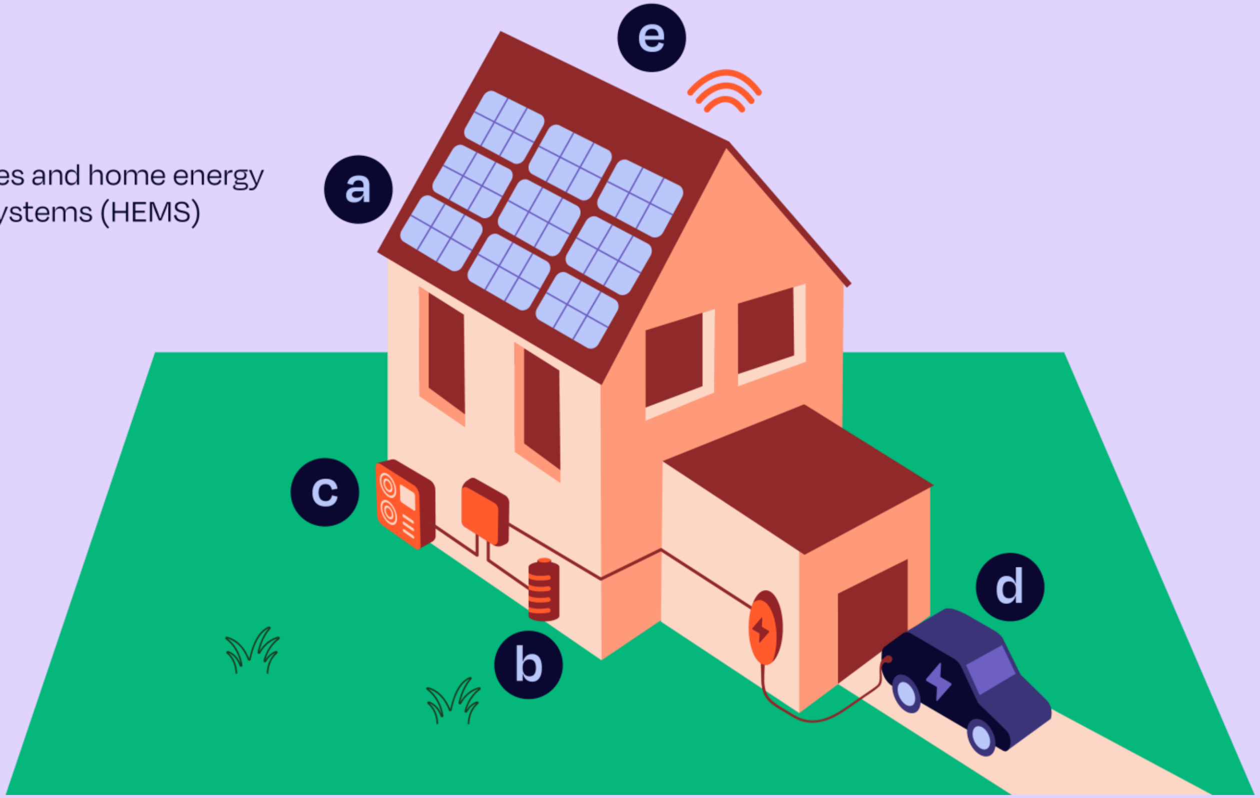
solarpowereurope.org

Rooftops continue dominating EU solar



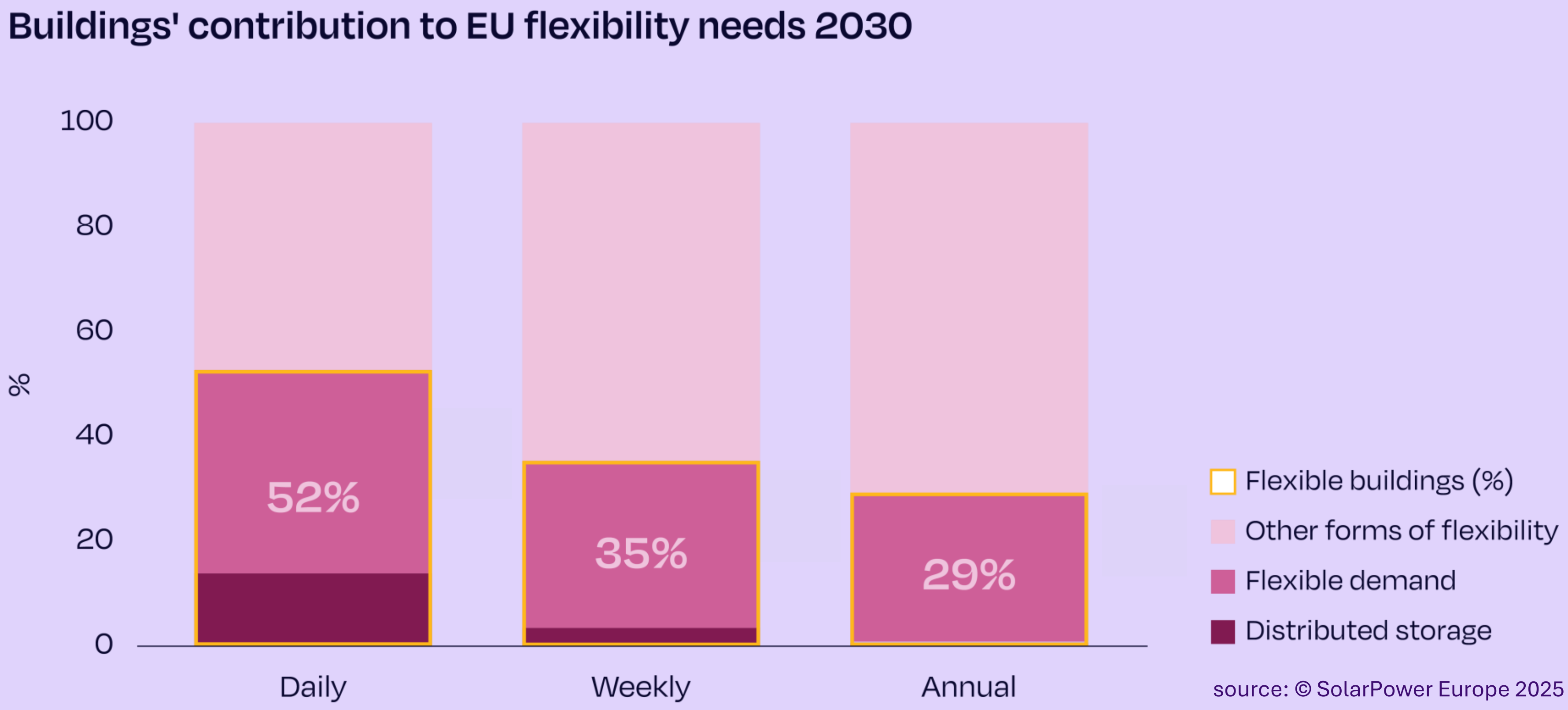
Solar buildings are truly flexible

- a Rooftop solar PV
- b Battery storage
- c Heat pump
- d EV
- e Smart appliances and home energy management systems (HEMS)



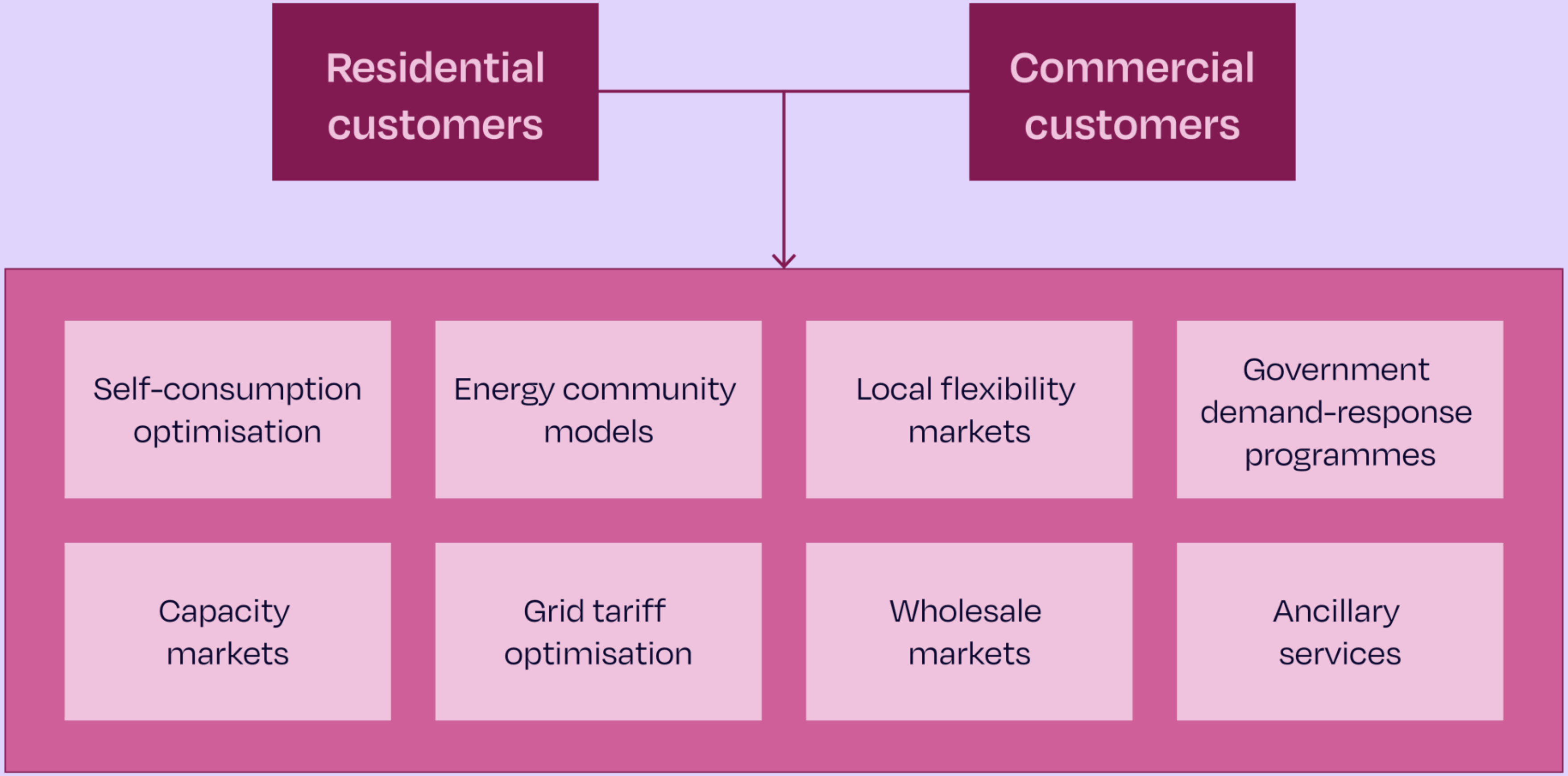
Benefits of flexible buildings

- Buildings can provide essential flexibility solutions
- Potential to meet 52% of daily, 35% of weekly, and 29% of annual flexibility needs
- Significant benefits to the energy system
- Direct economic benefits to consumers



source: © SolarPower Europe 2025

Value streams for demand-side flexibility



source: © SolarPower Europe 2025

Policy recommendations

1. **Set price signals that incentivise flexible behaviour and efficient grid use**

   - Grid tariffs must provide clear time-of-use signals
   - Cost-reflective grid tariffs for users engaged in energy-sharing and energy communities
   - Flexibility services, such as participating in balancing markets, local flexibility markets, or providing ancillary services, should not be subject to grid tariffs
   - The EU should harmonise grid tariff methodologies

2. **Complement smart meters with flexibility measurement devices**

3. **Tailor technology support schemes to maximise flexibility from buildings**

4. **Develop standards for interoperability to facilitate plug-and-play energy systems**

5. **Allow flexibility from buildings to access balancing markets**

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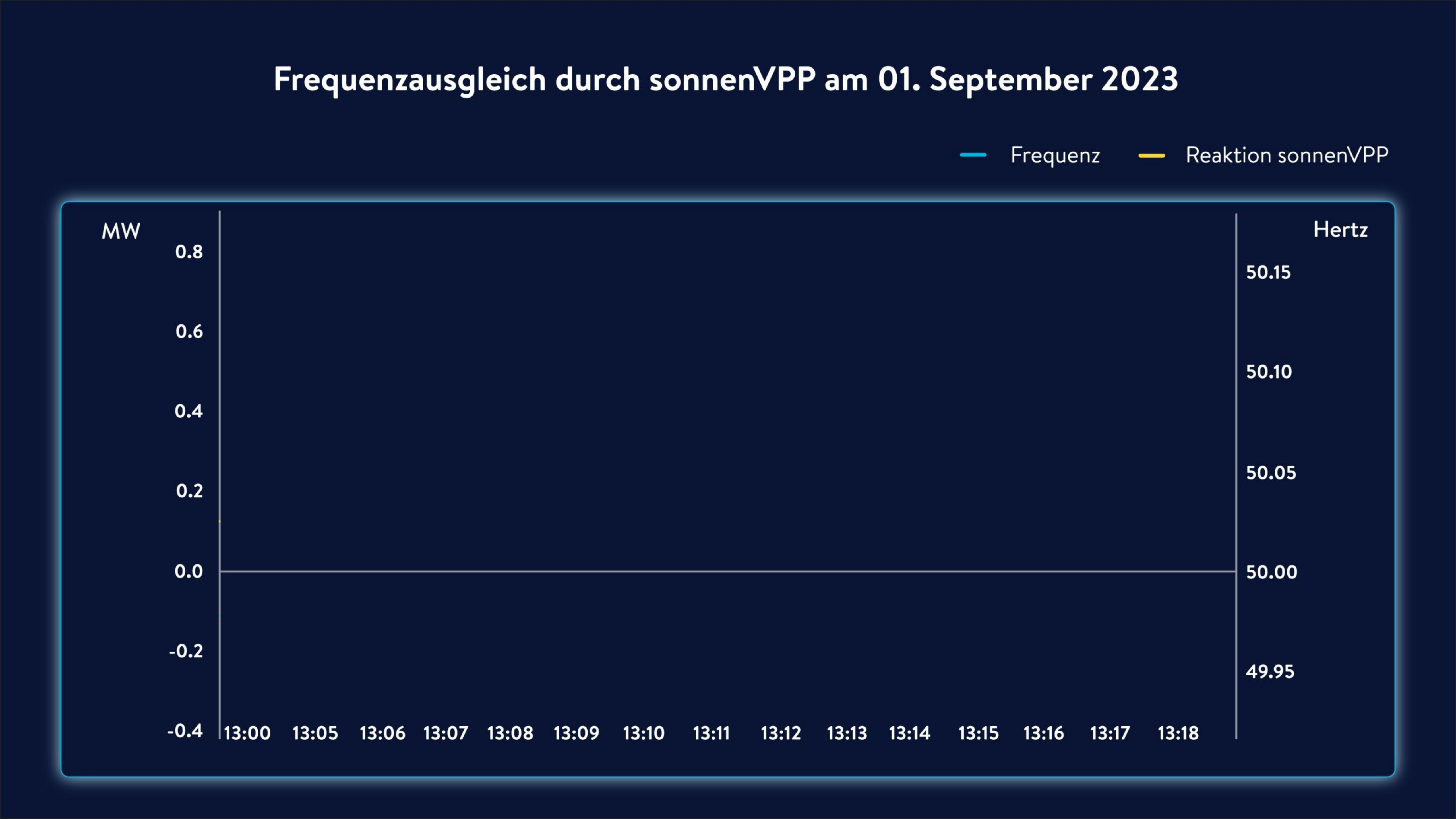
MARIE GARSTECKI

Regulatory & Policy Manager,
Sonnen


Frequenzausgleich durch sonnenVPP am 01. September 2023
Frequenz
Reaktion sonnenVPP
MW
Hertz
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
50.15
50.10
50.05
50.00
49.95
13:00
13:05
13:06
13:07
13:08
13:09
13:10
13:11
13:12
13:13
13:14
13:15
13:16
13:17
13:18

Policy Asks:

1. More Market (Access)

2. More Europe

3. More cost-reflective Network Tariffs

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DRIES BOLS

CEO,
LIFEPOWR

Case Study: Residential optimization based on system needs in Belgium

#energyflexibility #gridbalancing #EnergyServiceProvider #energymanagement #VirtualPowerPlant #demandresponse

www.lifepowr.io

dries@lifepowr.io

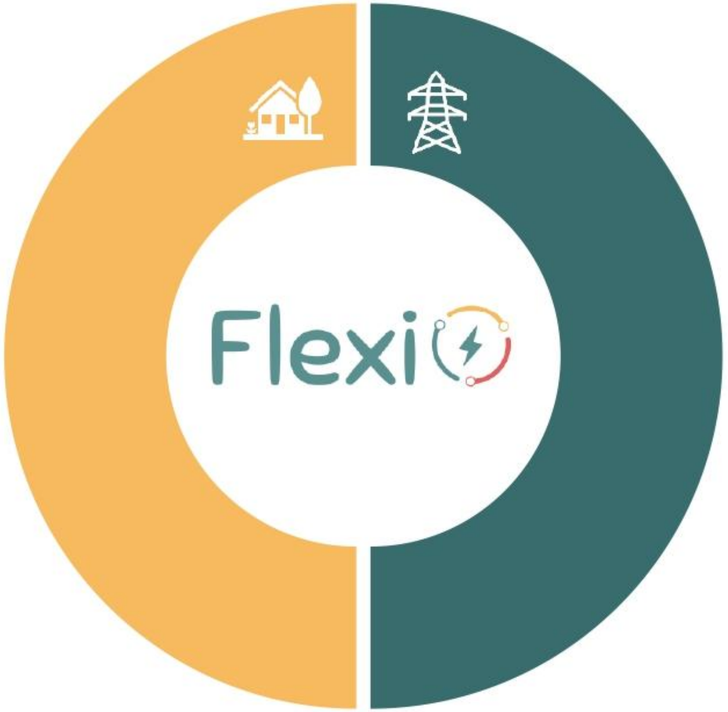
The POWR to unlock, orchestrate and valorize Energy Flexibility

“Holy Grail” in Flex:
Stacking Value Streams to find their global optimum

"Holy Grail" in Flex:
Stacking **Value Streams** to find their global optimum

Energy Bill Savings

"Behind-the-meter"



Energy markets

Ancillary services

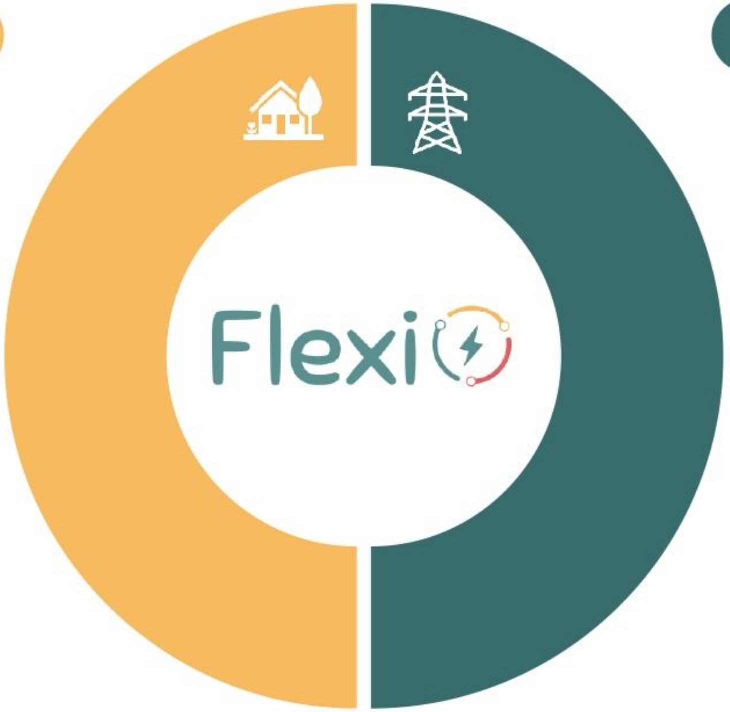
Congestion markets

Case study 1: Stacking Savings with Ancillary Service payouts in 2024

Savings on Energy Bill 1

Optimizing energy flows:

Self-Consumption	Taxes & grid tariffs
Peak-shaving	Peak-based grid tariffs
Dynamic Tariff Arbitrage	Energy tariffs



2 Payouts from grid balancing*

Ancillary services

FCR

for system operator elia

*based on the individual contribution

Case study 1: Stacking Local Value Streams with Flexibility markets (2024)

By end of year
3000 active participants
Avg. portfolio dimensioning:
4.3kVA of symmetric power
12kWh of storage

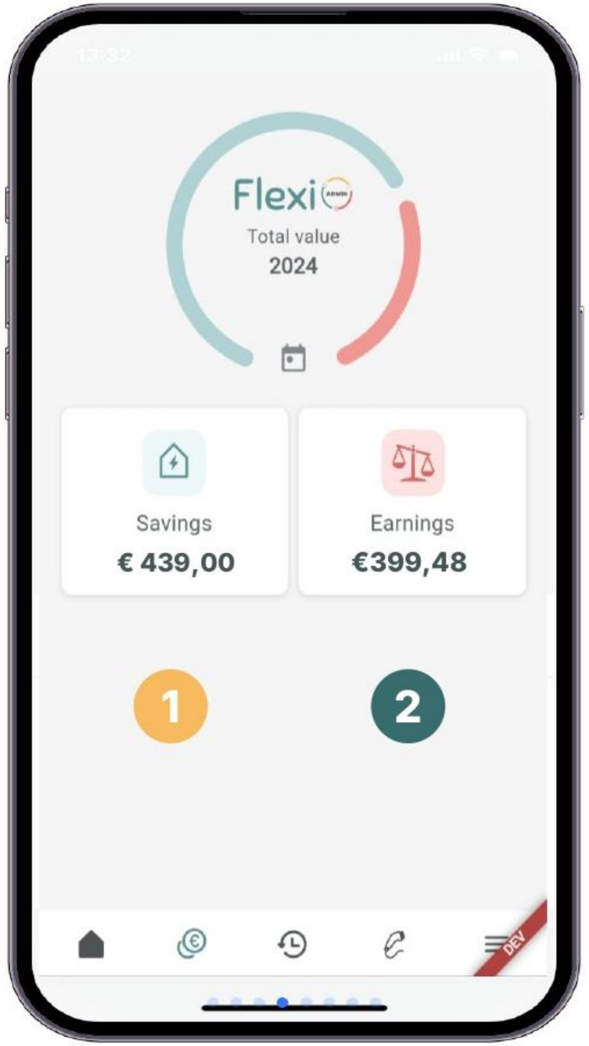
Results

Savings (1)

Consumer pays less thanks to the optimized 'behind-the-meter' strategy, taking into account consumption behavior and pricing.

Average household savings per year

€ 439



(2) Payouts

Consumer receives a **reward payout** from participating to grid balancing.

Average household earnings per year

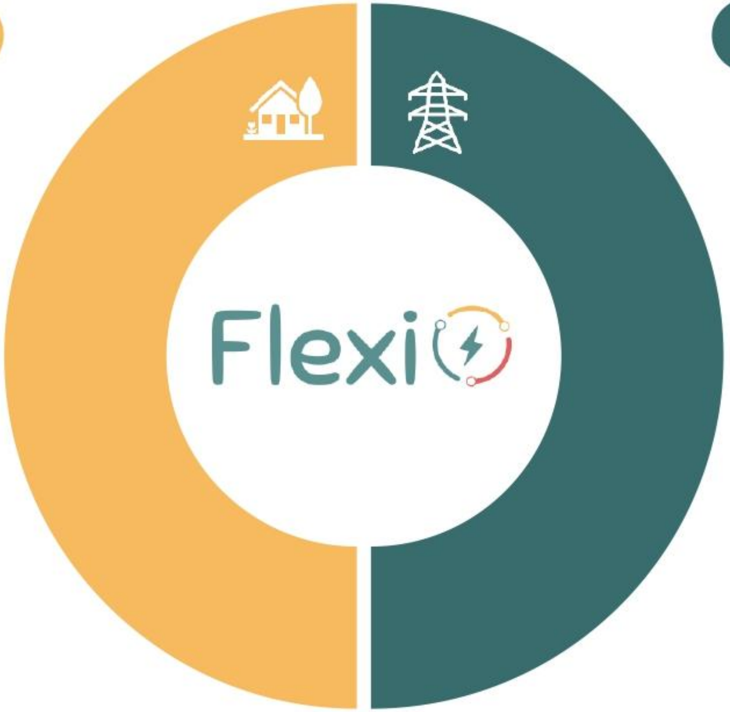
€ 399

Case study 2: Stacking Savings with Energy Market Flex

Savings on Energy Bill 1

Optimizing energy flows for

Self-Consumption	Taxes & grid tariffs
Peak-shaving	Peak-based grid tariffs



2 Payouts from grid balancing*

Energy markets

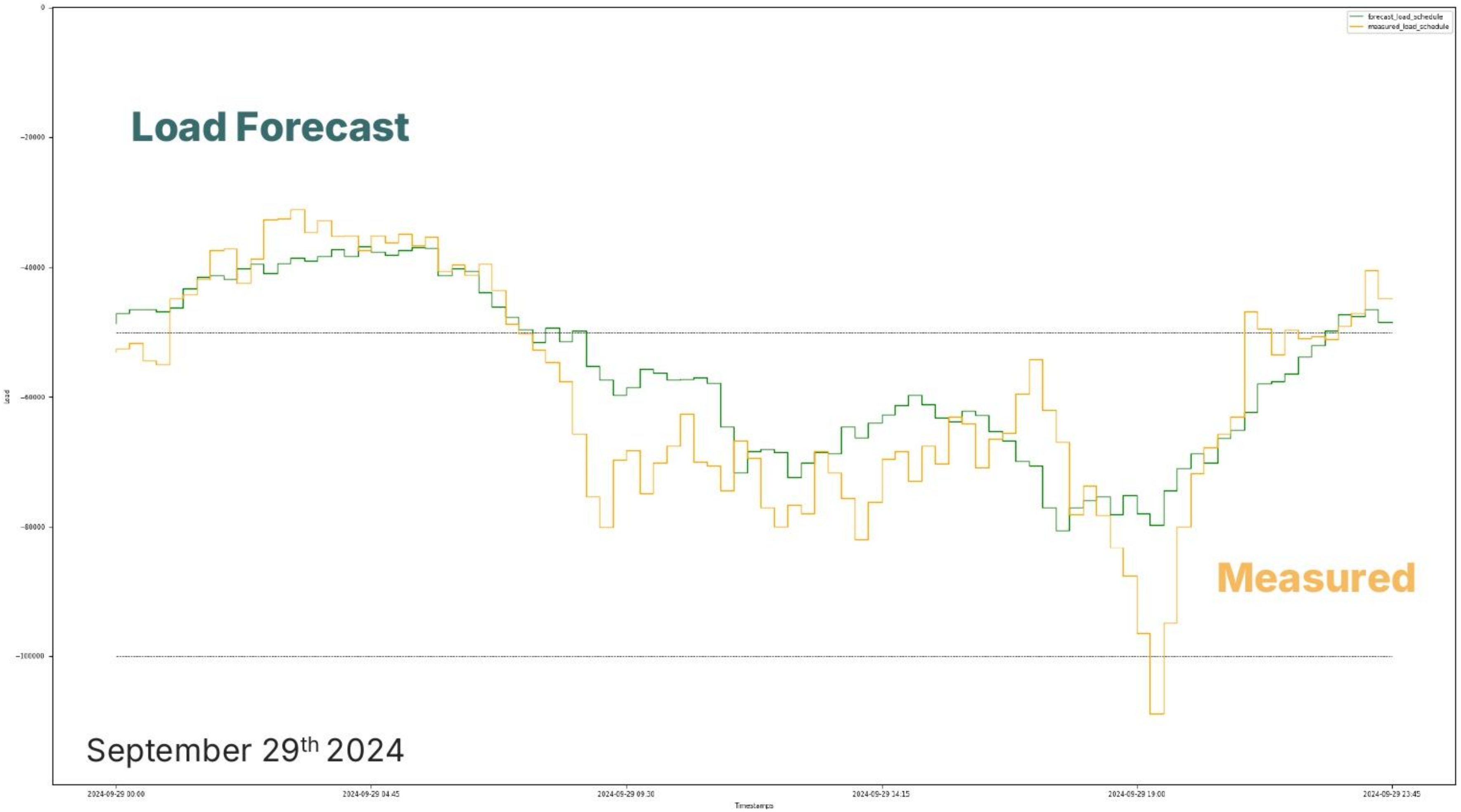
- Nomination of Day Ahead Positions
- Hedging against Real-Time Imbalance

for Energy Supplier & BRP portfolio's

&

Pilots with leading utilities
80 & 400 active participants
Avg. portfolio dimensioning:
4.3kVA of symmetric power
12kWh of storage

Zooming in on the performance



&

Pilots with leading utilities

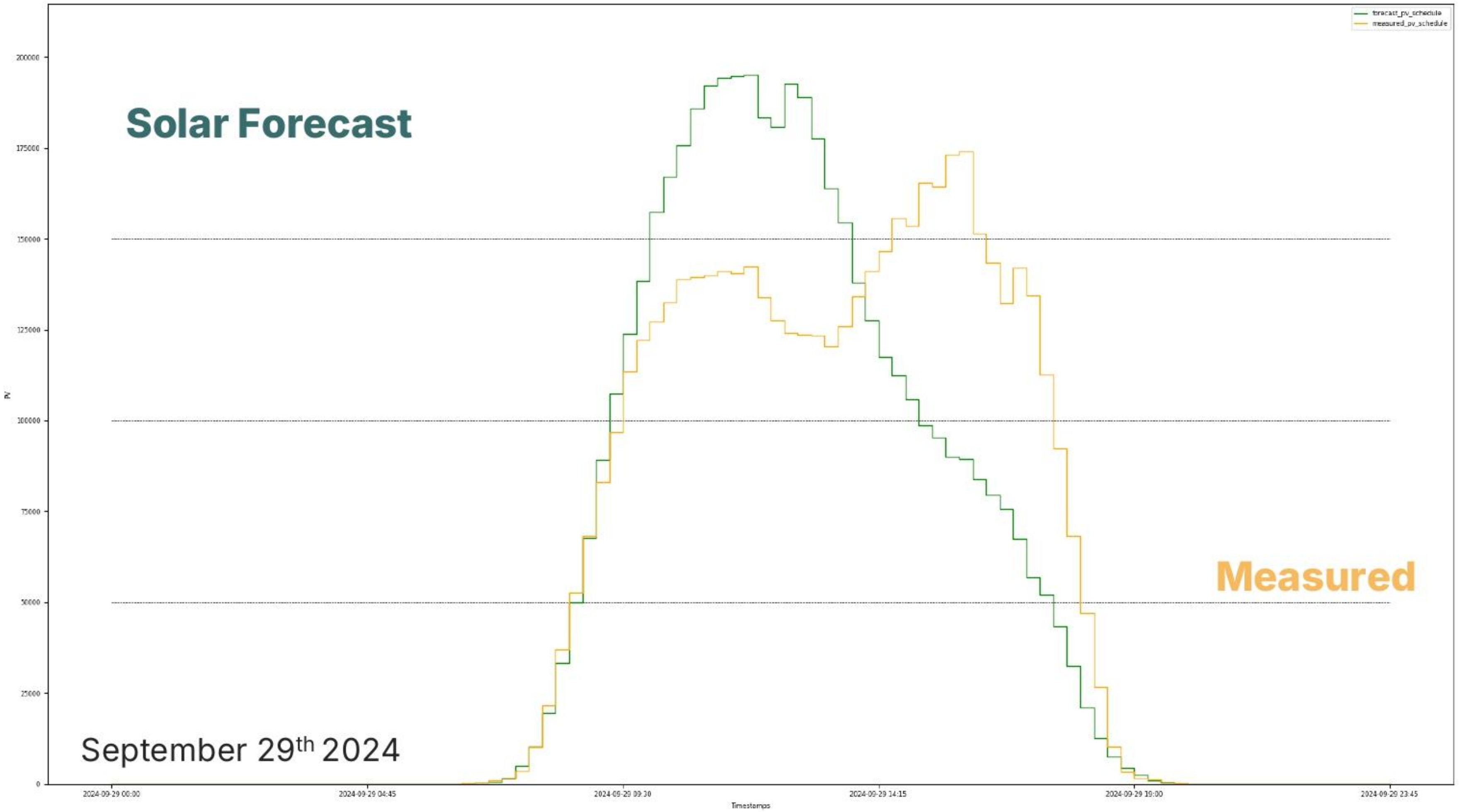
80 & 400 active participants

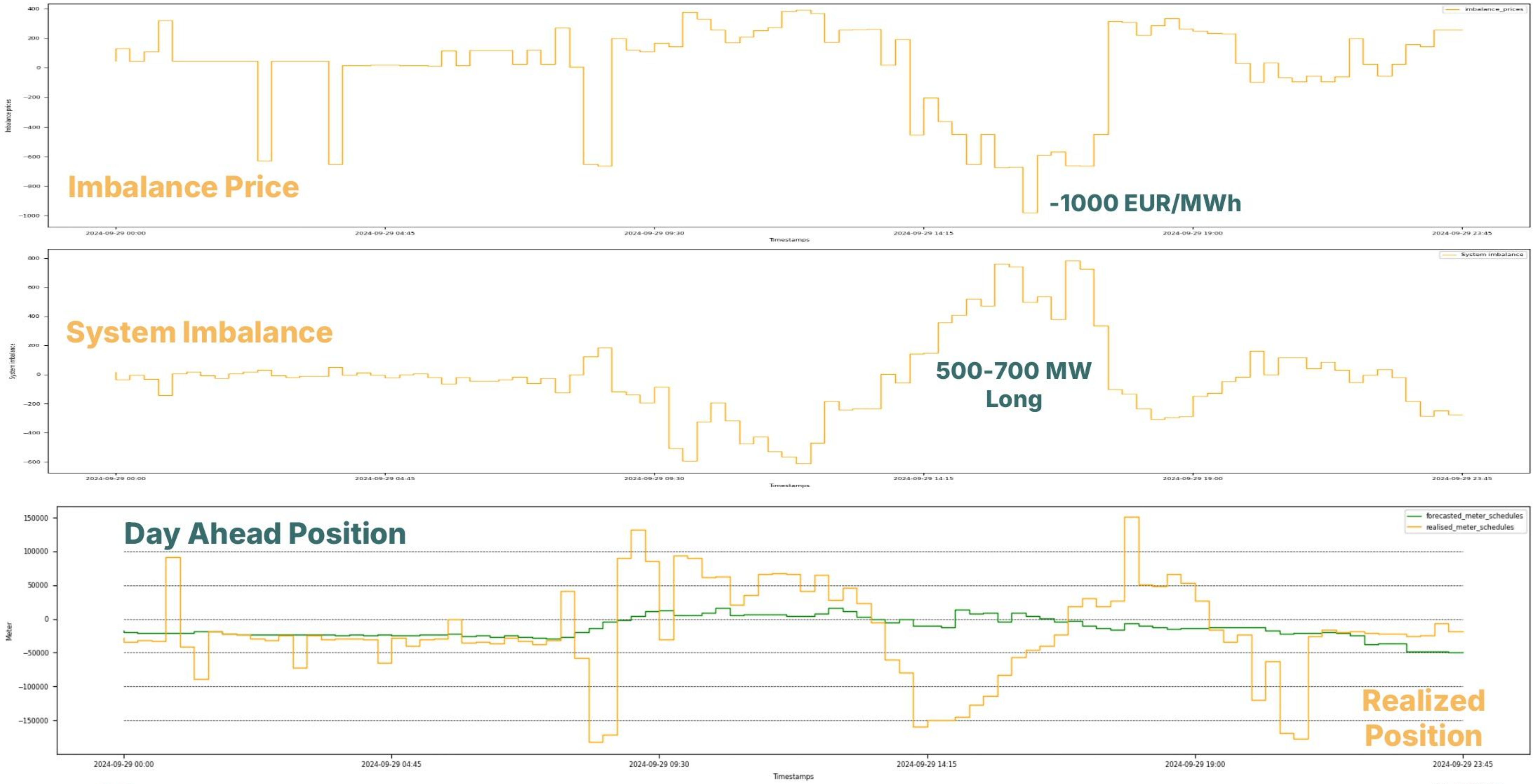
Avg. portfolio dimensioning:

4.3kVA of symmetric power

12kWh of storage

Zooming in on the performance





Imbalance Price
-1000 EUR/MWh
imbalance_prices
Imbalance prices
Timestamps
System Imbalance
500-700 MW
Long
System imbalance
Day Ahead Position
forecasted_meter_schedules
realised_meter_schedules
Meter
Realized
Position
2024-09-29 00:00
2024-09-29 04:45
2024-09-29 09:30
2024-09-29 14:15
2024-09-29 19:00
2024-09-29 23:45

LIFEPOWR


Imbalance Price
imbalance_prices
-1000 EUR/MWh
System Imbalance
System imbalance
500-700 MW
Long
Day Ahead Position
forecasted_meter_schedules
realised_meter_schedules
Realized
Position
Timestamps
Meter
2024-09-29 00:00
2024-09-29 04:45
2024-09-29 09:30
2024-09-29 14:15
2024-09-29 19:00
2024-09-29 23:45

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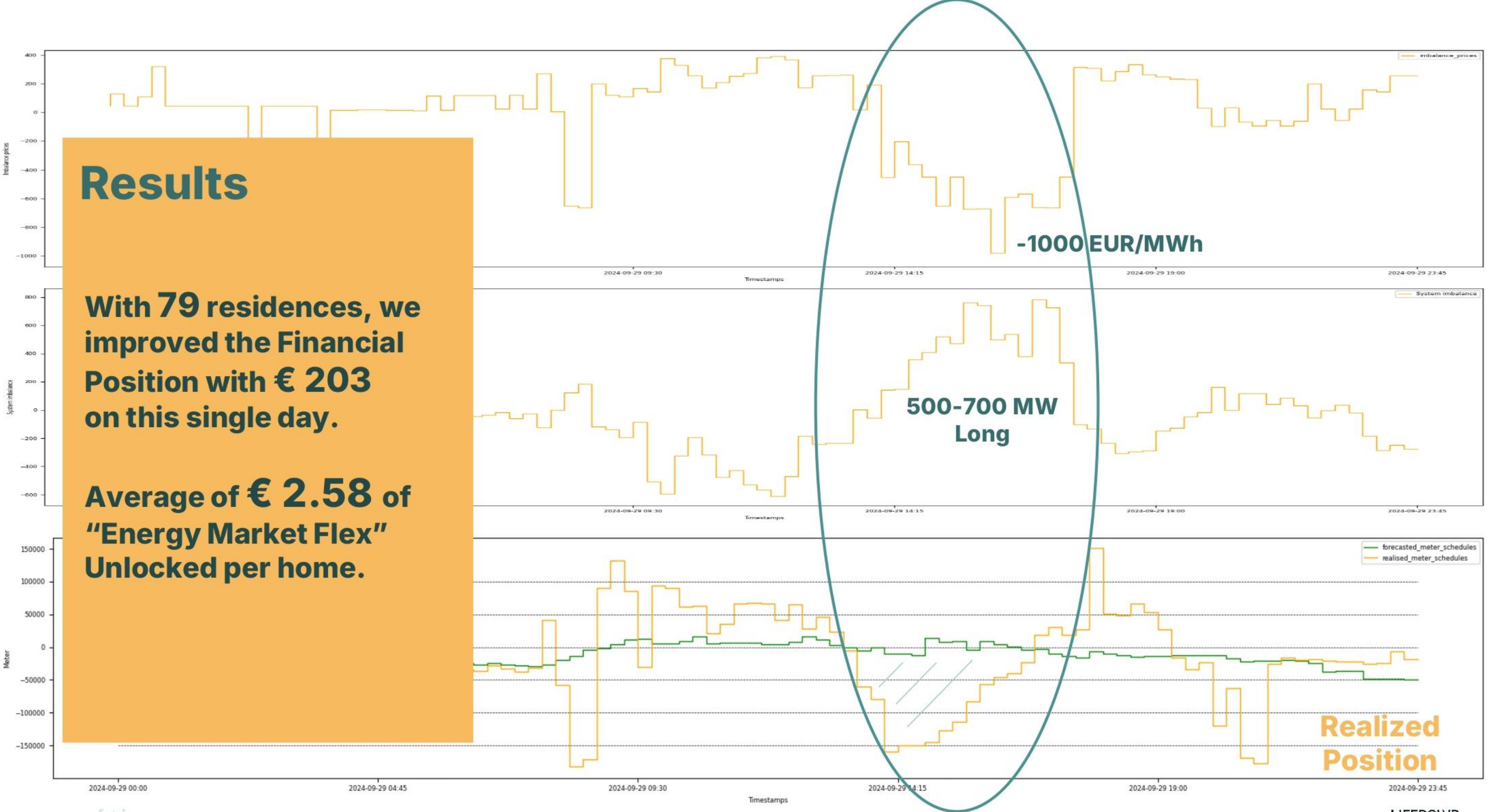
Results

With 79 residences, we improved the Financial Position with € 203 on this single day.

Average of € 2.58 of "Energy Market Flex" Unlocked per home.



LIFEPOWR

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THANK YOU & LET'S FLEX!

#energyflexibility #gridbalancing #EnergyServiceProvider #energymanagement #VirtualPowerPlant #demandresponse

www.lifepowr.io

DRIES BOLS @ LinkedIn
dries@lifepowr.io

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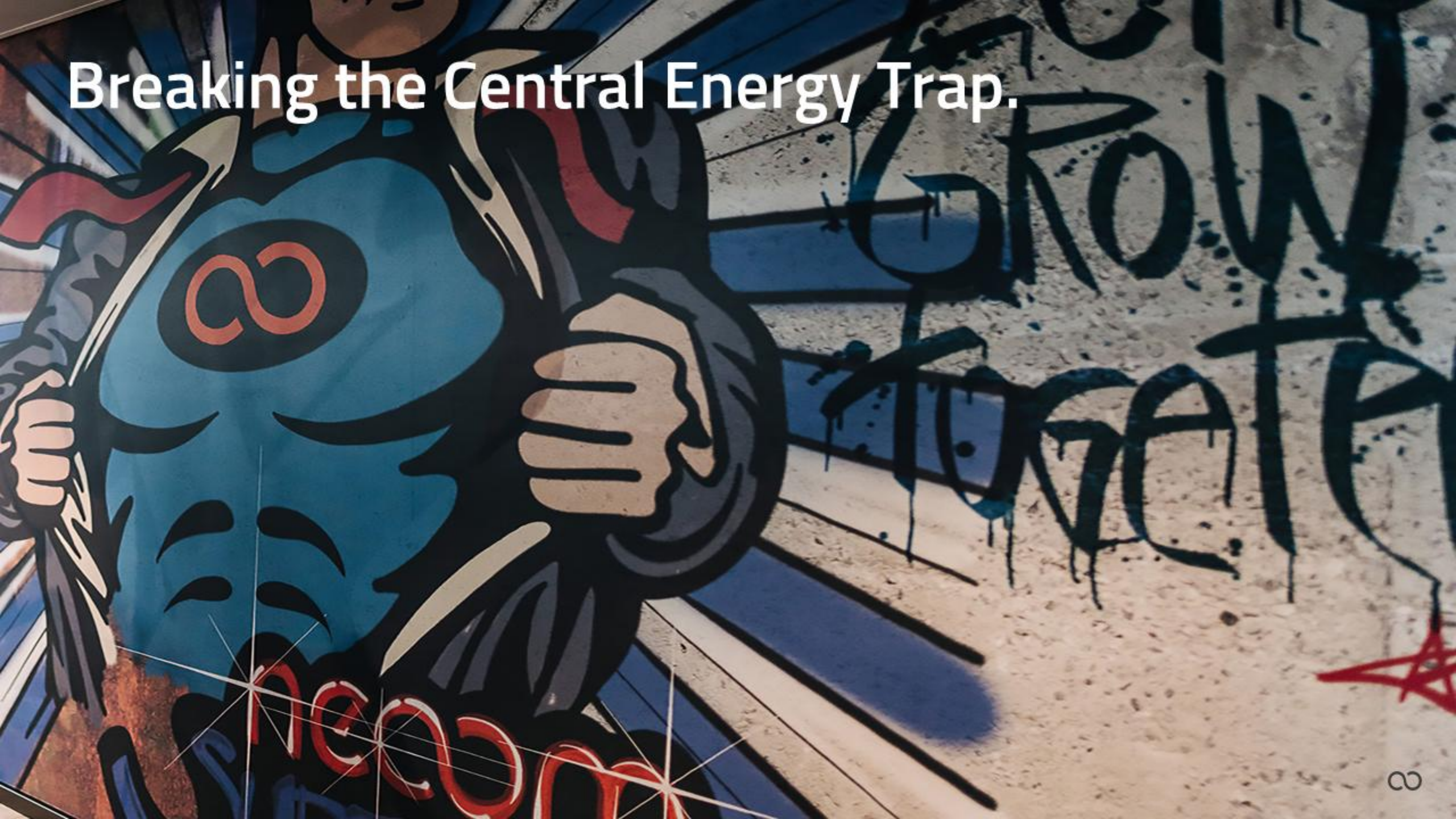
WALTER KREISEL

CEO,
NEOOM

Breaking the Central Energy Trap.



NEOOM

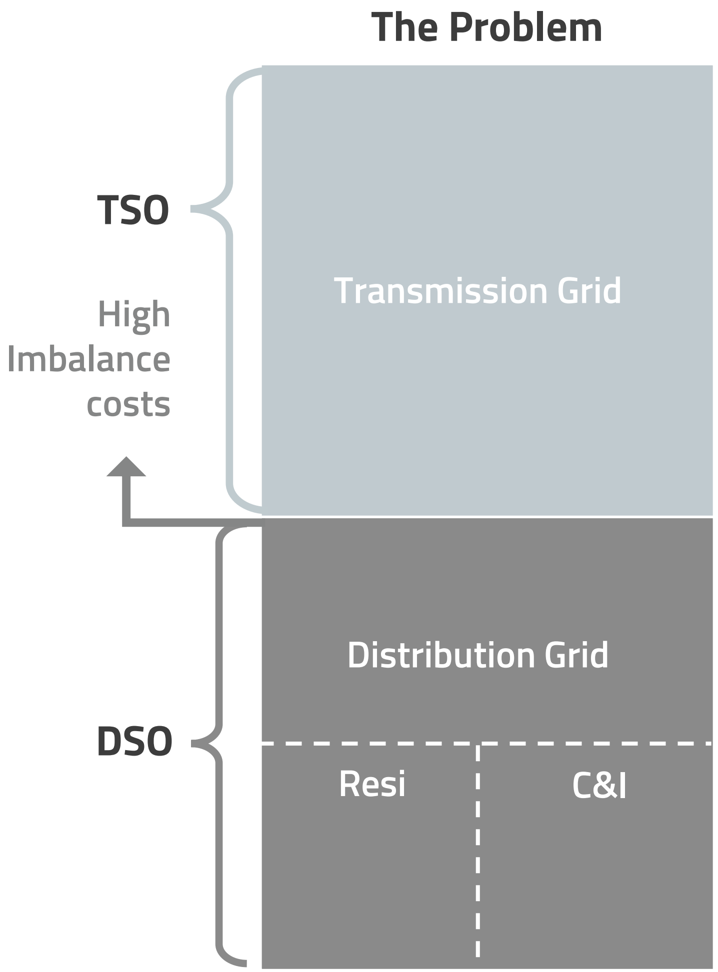
Breaking the Centralized Energy Trap

The Problem: A Challenge for Energy Policy

Slow Grid Expansion

High Costs of Infrastructure and balancing costs

Loss of Competitiveness
.
Centralization Hinders Progress



NEOOM

Breaking the Centralized Energy Trap

The Problem: A Challenge for Energy Policy

Slow Grid Expansion

High Costs of Infrastructure and balancing costs

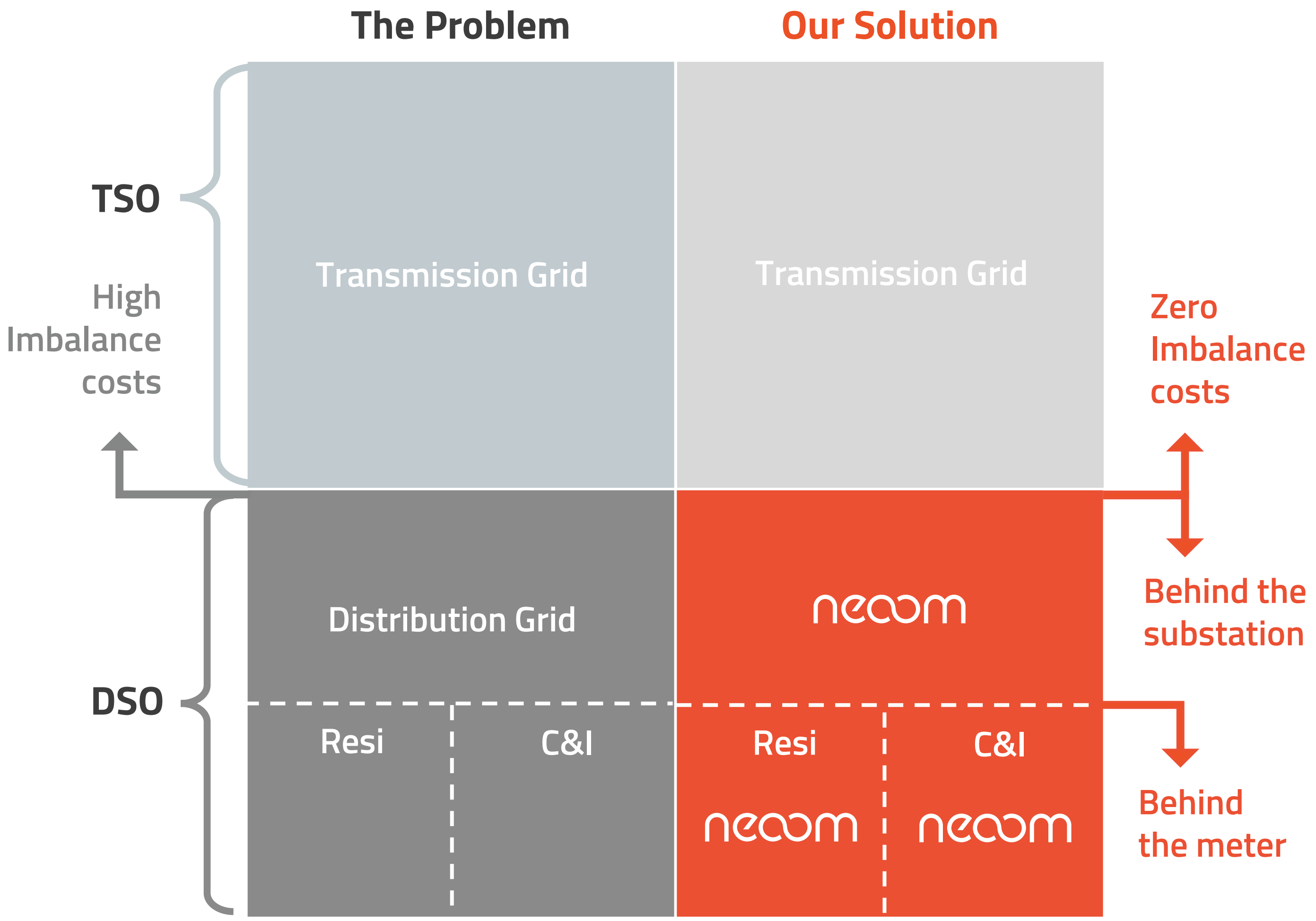
Loss of Competitiveness
.
Centralization Hinders Progress

Our Solution: Empowerment Instead of Competition

Integrated Partnerorientatet Business Model

Multi-use cases around the Energy Market

Shifting grid investments and impalance costs in real Customer Value



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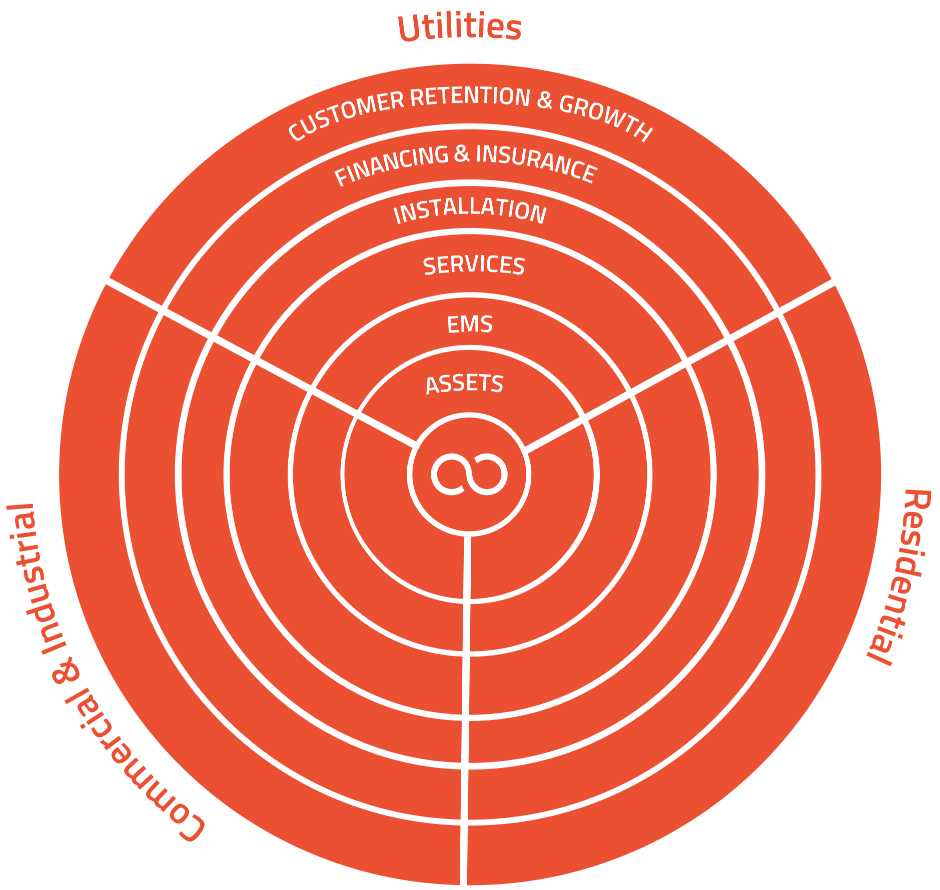
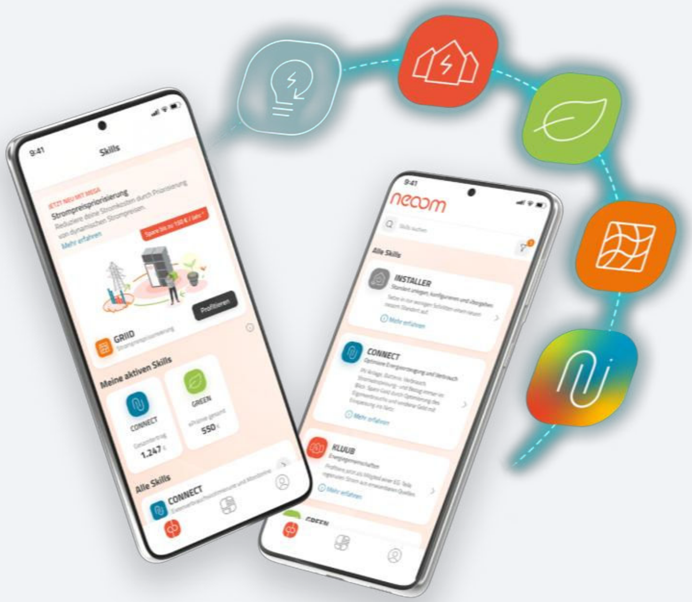
Our Business Model



NEOOM PLATTFORM

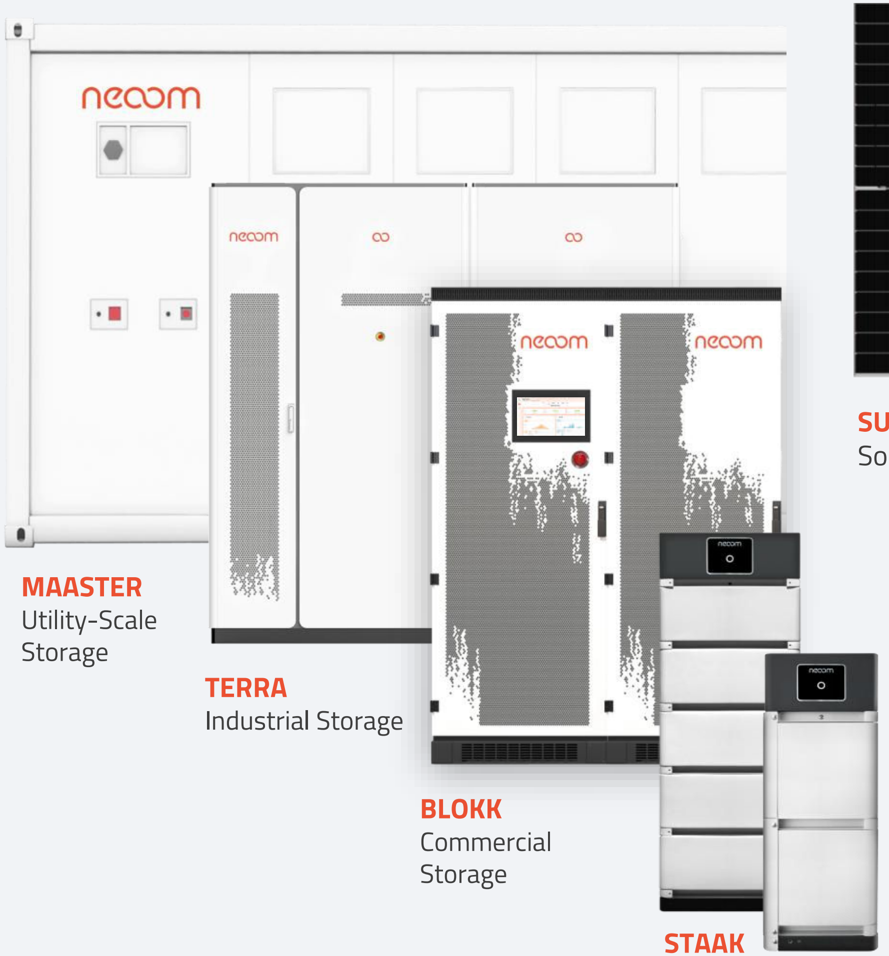
Full Overview of Technologies

Software and Services



APP & SKILLS

Hardware

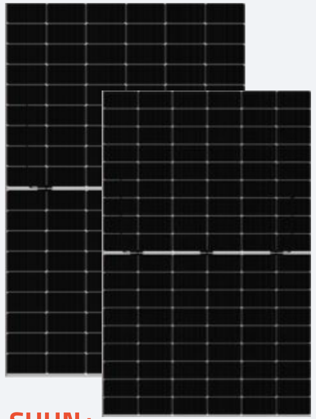


MAASTER
Utility-Scale Storage

TERRA
Industrial Storage

BLOKK
Commercial Storage

STAAK
Residential Storage



SUUN+
Solar modules

NEEO
Solar inverter

Energy Management and Metering

BEAAM
EMS

EXTENSION
EMS Connectivity

SMAART
Smart meter

SOLO
EV Charging

NEOOM PLATTFORM

The digital Skills & Services

End Customer

CONNECT Ai

Connect, manage and optimize all devices for more **valuable datas**

KLUUB

Sharing electricity within a community for **saving money**

GRIID

Benefit from more **flexibility** in the energy market

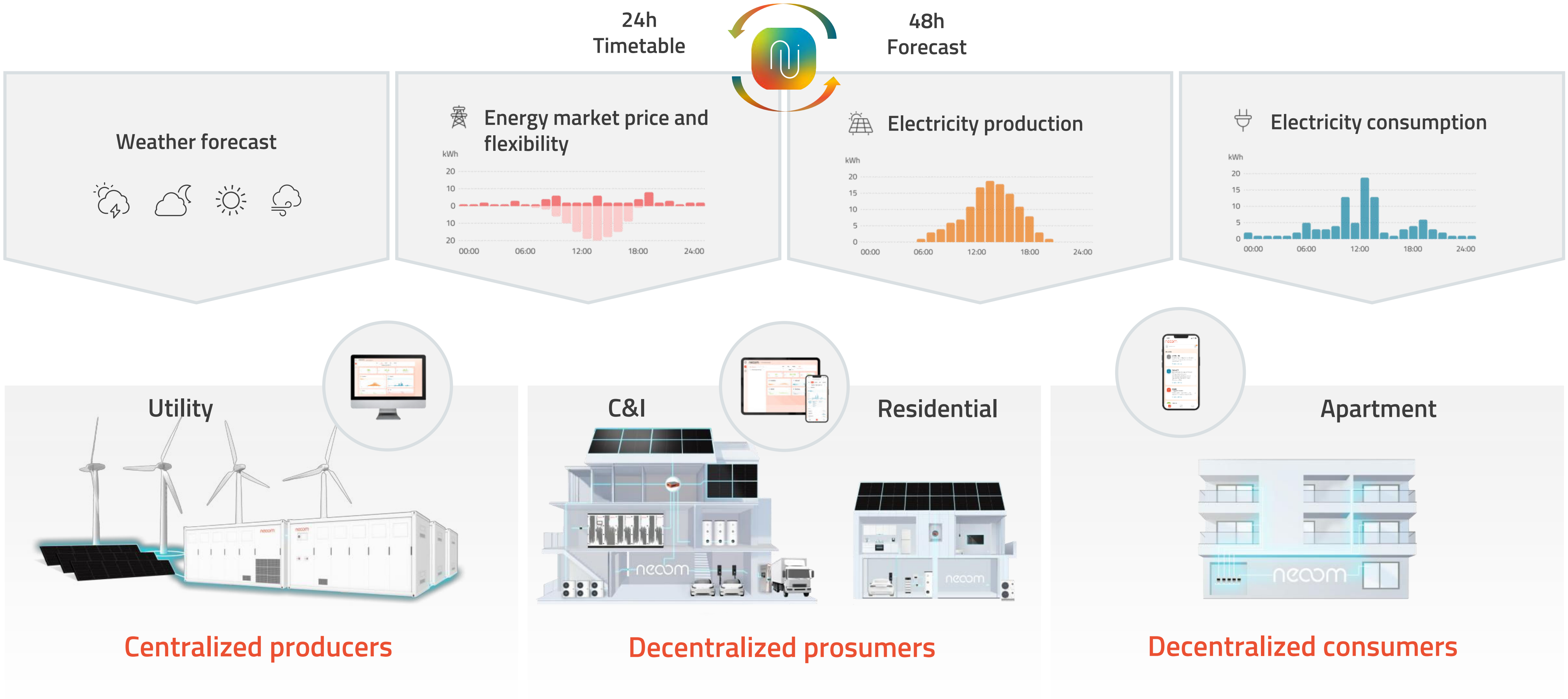
GREEN

Certificate of the CO2 savings of your sell your e-car

SKILLS

NEOOM PLATTFORM

Data driven multi market approach to tap the full behind the substation potential



NEOOM PLATTFORM

Our Ai connected World

61.223
Devices under control

11.446
Activated sites

31.125
Connected Prosumers

100.677
Total App downloads

13GWh
Peer2peer traded energy

Benefits for all stakeholders in the Behind-the-substation market

Products	neoom	Systempartner	Utility	Customer
HARDWARE	- Direct access to devices in the network - Maximize impact through the full system leverage - Cross-selling opportunitys	- Hardware sales enable revenue through software sales	- Attracting more customers through added value - Additional revenue streams	- Independence - Less energy price risk - Less CO2 footprint
CONNECT Ai	- Access to data from all devices on-site - customer needs and context based cross-selling based on data - Additional recurring revenue stream	- Offer faster amortization and higher annual revenue through software. - Revenue participation in a scaling model - Remote maintenance	- Scalable business model participation - Access to data for forecasting and pricing optimization - Attracting more customers through added value	- Simple usage - AI trained per customer that takes many variables and forecasts into account for more efficiency and profit
KLUUB	- Crossselling hardware - Leveraging network affect in user and revenue growth - Additional recurring revenue stream	- Offer faster amortization and higher annual revenue through software. - Revenue participation in a scaling model	- Scalable business model participation - Access to data for forecasting and pricing optimization - Attracting more customers through added value	- Increased independence through decentralized energy trading - Reduced Energy Price risk - Reduced energy costs (grid fees and taxes) and higher feed-in tariff
GRIID	- Attracting commercial and industrial customers - Additional recurring revenue stream	- Offer faster amortization and higher annual revenue through software. - Revenue participation in a scaling model	- Scalable business model participation - Access to data for forecasting and pricing optimization - Increase customer retention through combined intelligent products	- Increased profitability combined with the support to integrate more renewable sources into our energy system
GREEN	- Crossselling hardware - Revenue from Carbon Impact Portfolio - Carbon offset	- Offer faster amortization and higher annual revenue through software. - Revenue participation in a scaling model	- Scalable business model participation - Attracting more customers through added value	- Possibility to donate a share of the payout to carbon reducing projects - Easy way to sell CO2 savings of the e-mobility
REENT	- Assets under management - Attracting new end-customer segments (growth) - Additional recurring revenue stream	- Attract and convert low-budget leads.	- Attracting more customers through added value - Additional revenue streams on equity or loans	- Less initial capital needed - Earnings covers partly/fully system costs - No equity capital required

Thank you.

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SPEAKERS

Thomas Pellerin-Carlin

MEP,

European Parliament

Marie Garstecki

Regulatory & Policy Manager,

Sonnen

Dries Bols

CEO,

LIFEPOWR

Jon Ferris

Head of Flexibility and Storage,

LCP Delta

Walter Kreisel

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