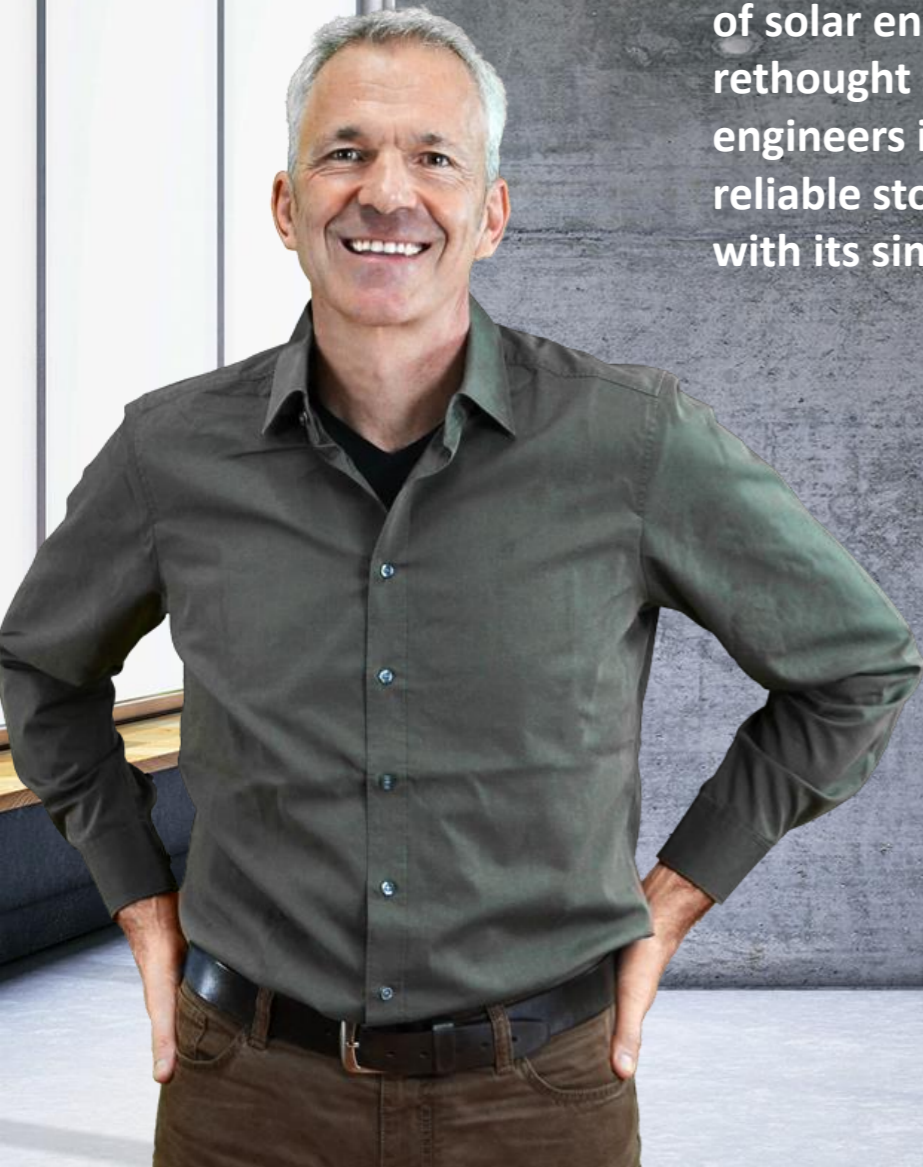




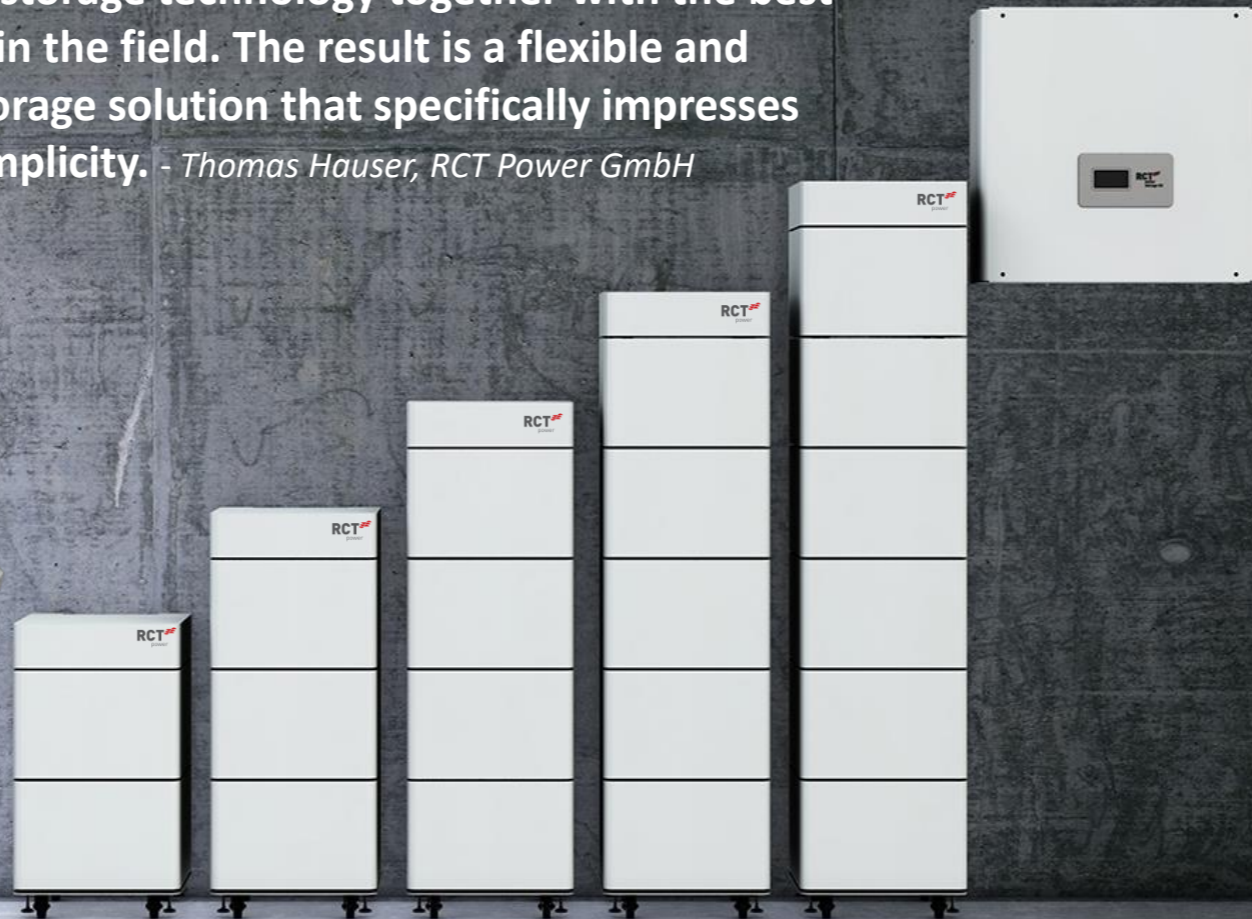
# Webinar „Storage Systems rethought“

powered by SEGENSOLAR GmbH





“ Here at RCT Power we believe in the sustainability of solar energy. This is why we have reviewed and rethought storage technology together with the best engineers in the field. The result is a flexible and reliable storage solution that specifically impresses with its simplicity. - Thomas Hauser, RCT Power GmbH



Simple



Flexible



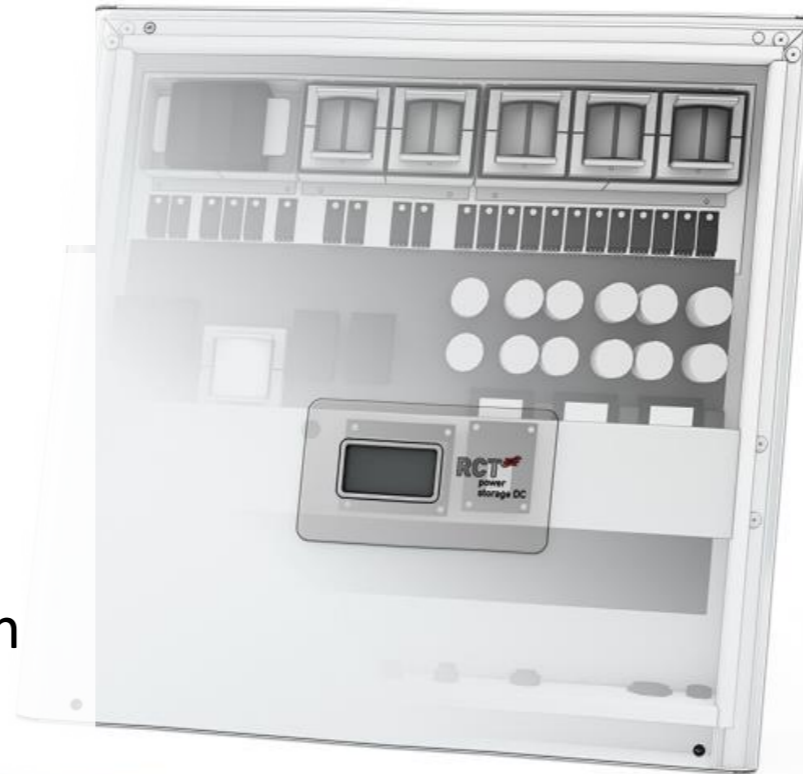
Efficient

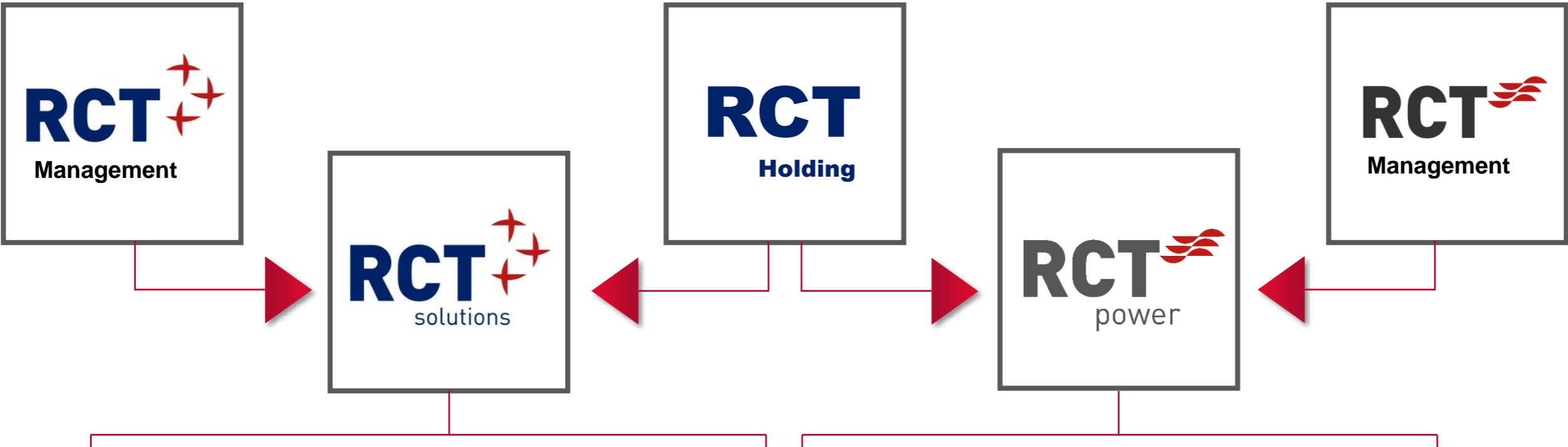


Sustainable

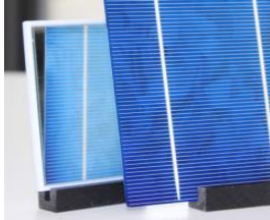
# RCT Power GmbH

- Manufacturer of inverters and stationary DC and AC storage systems with headquarter in Constance, Germany
- An experienced team of experts in the field of power electronics
- Close cooperation with research institutions such as Fraunhofer ISE in Freiburg and KIT in Karlsruhe
- Cooperation with German and Chinese contract manufacturers





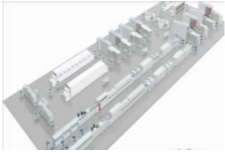
### Cell technology



### Equipment



### Projects



Solar Cell Modules Industry

### Solar Inverter



### Storage Inverter



### Batteries



# RCT POWER IN CONSTANCE



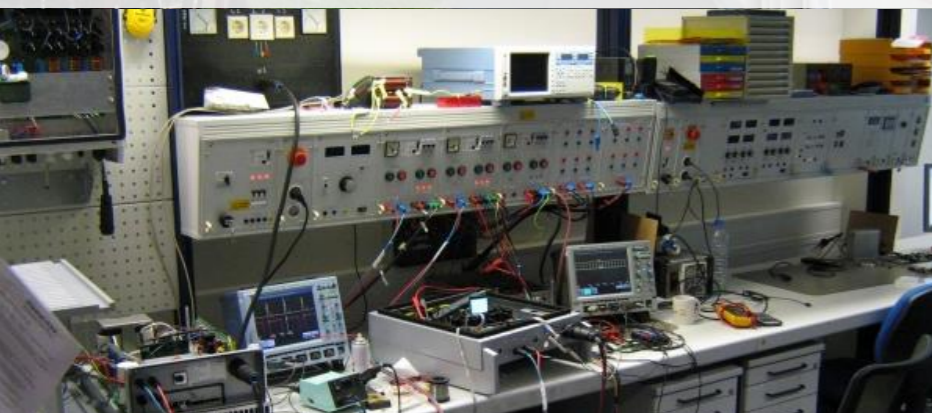
Office & Laboratory



Laboratory - Development & Testing



Laboratory - DC Test Power Supply & PV Distribution



Laboratory – Testing Equipment



PV Installation - 9 kWp



PV Installation - South-East

# RCT POWER Inverter Production at REFU-Drive



Qualität „Made in Germany“  
Über 50 Jahre Erfahrung in  
der Leistungselektronik



Production  
Cooperation with  
REFU-Drives

Pfullingen, Germany

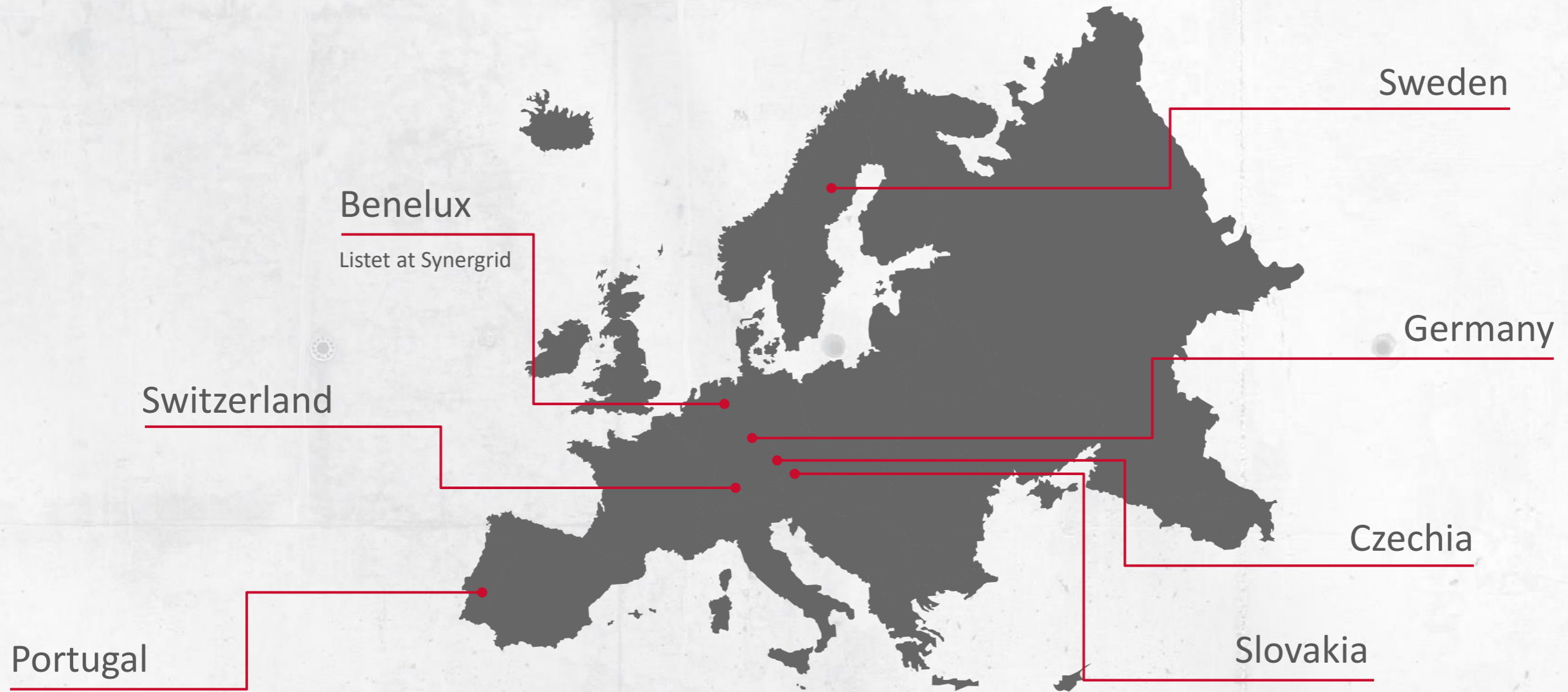


# RCT POWER IN SUZHOU



Battery Production at JIANGSU RCT Power

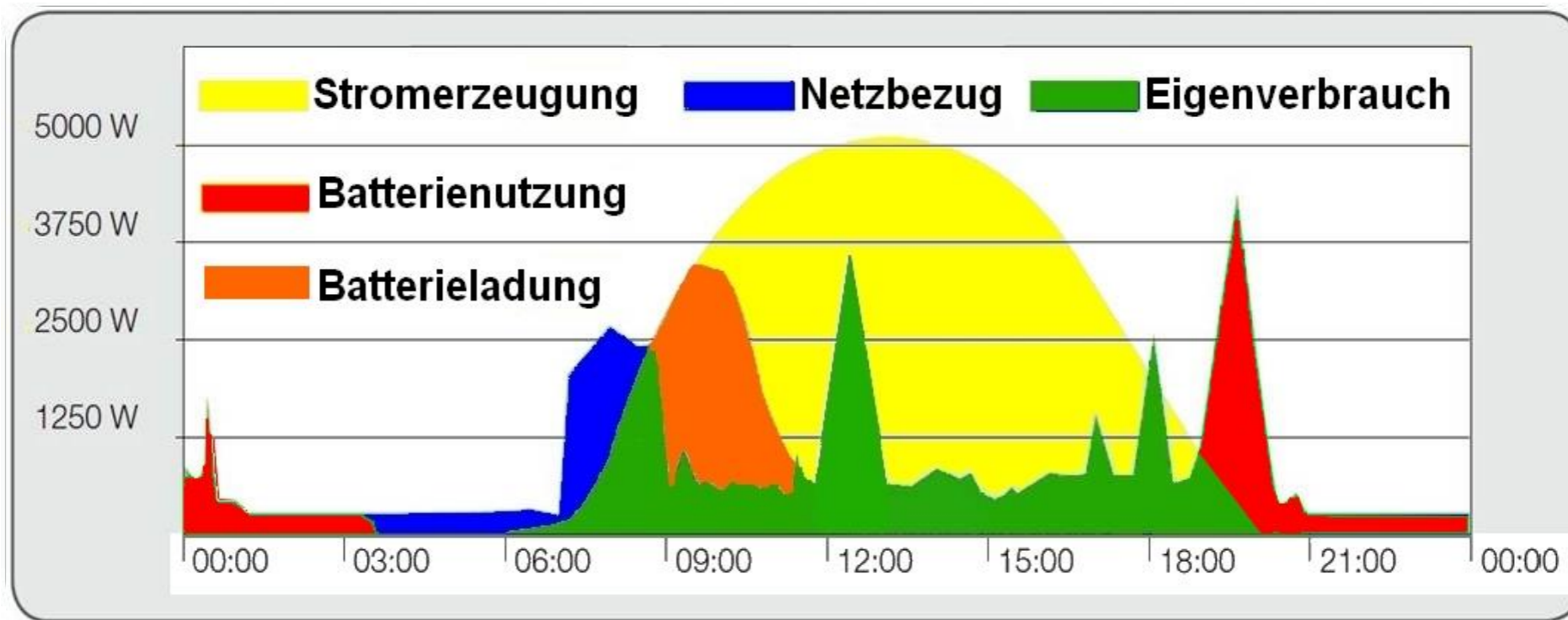
# RCT POWER REPRESENTATIVES IN EUROPE



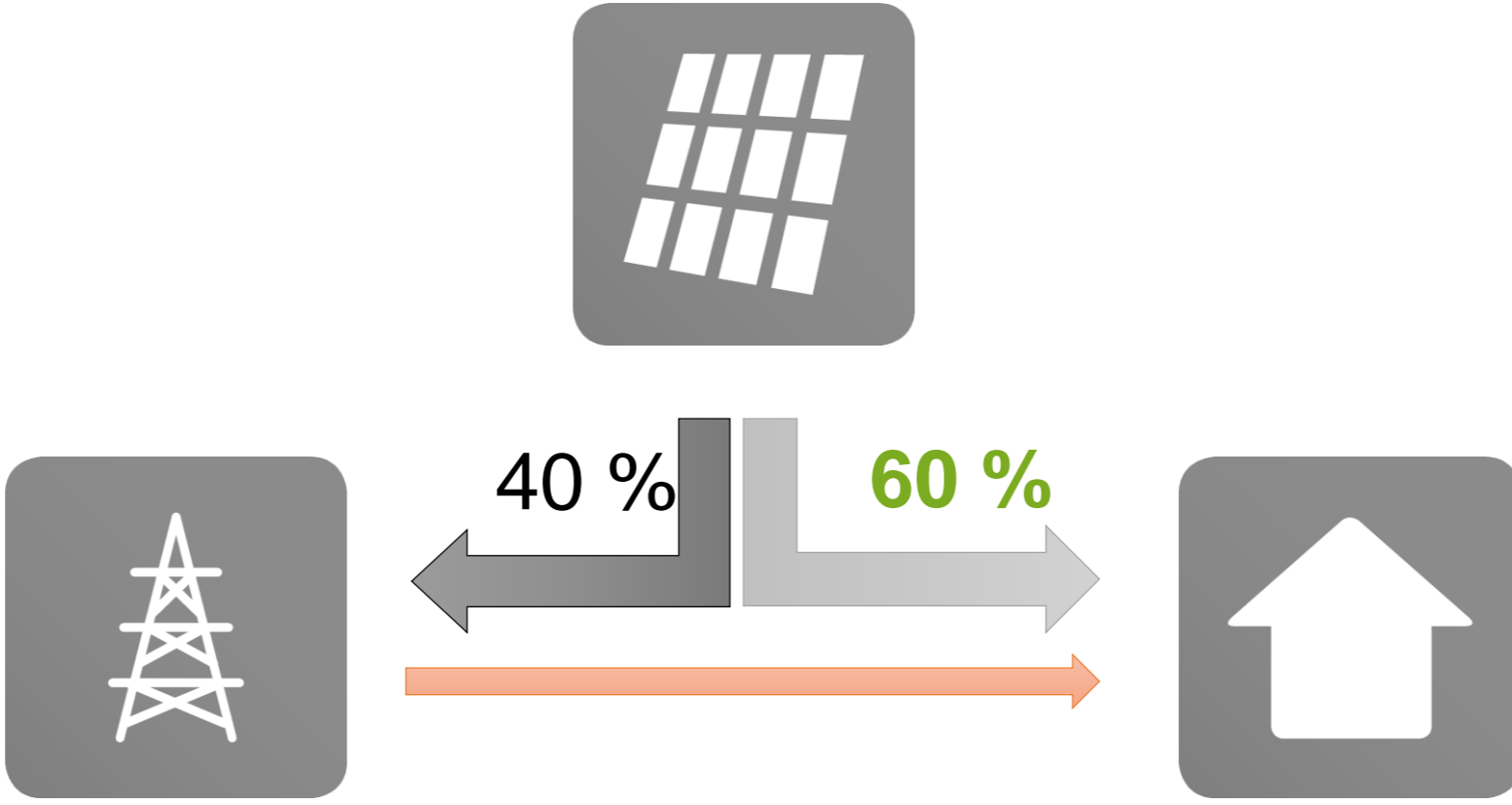


# RCT POWER **PRODUCT RANGE**

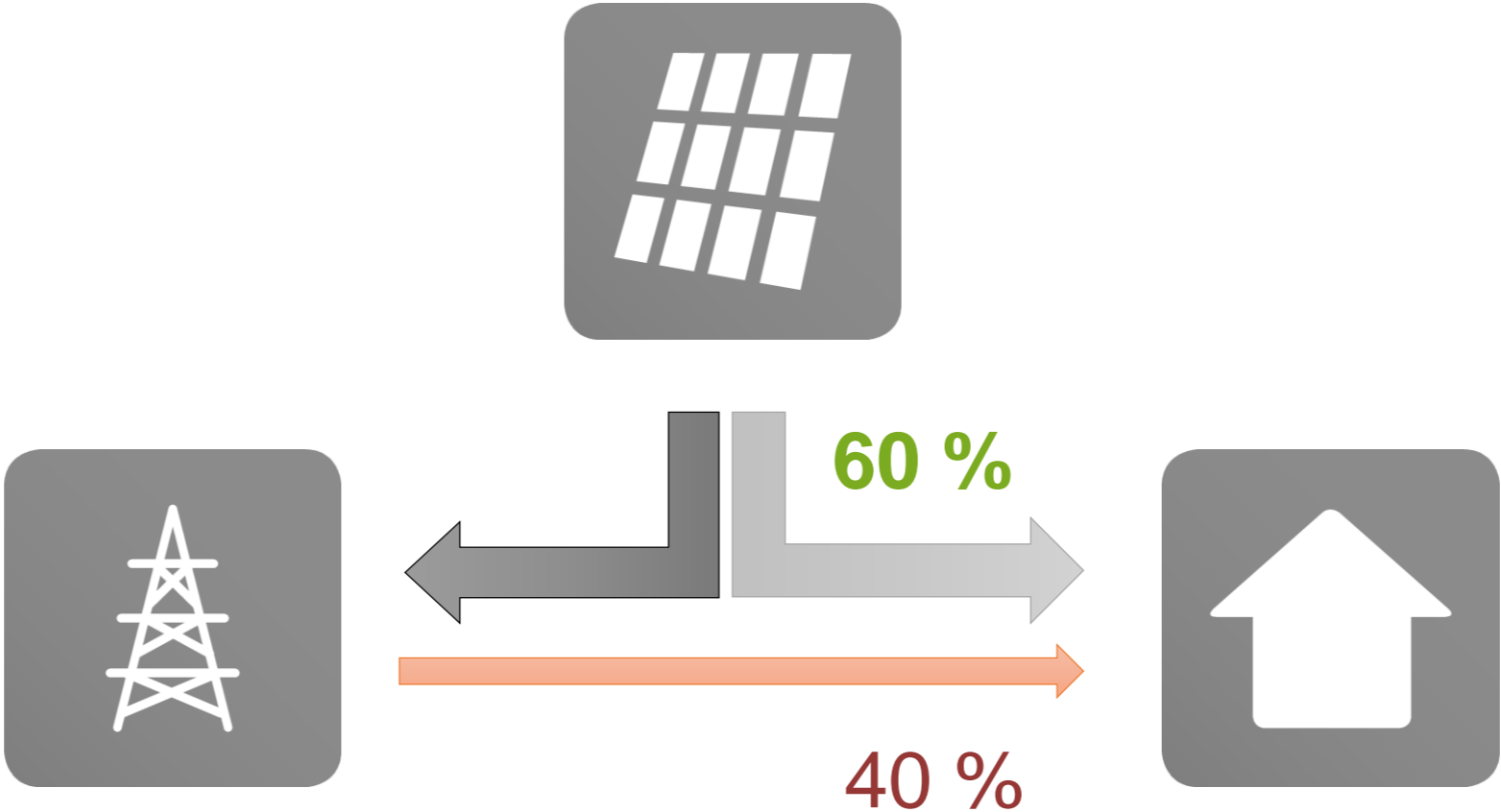




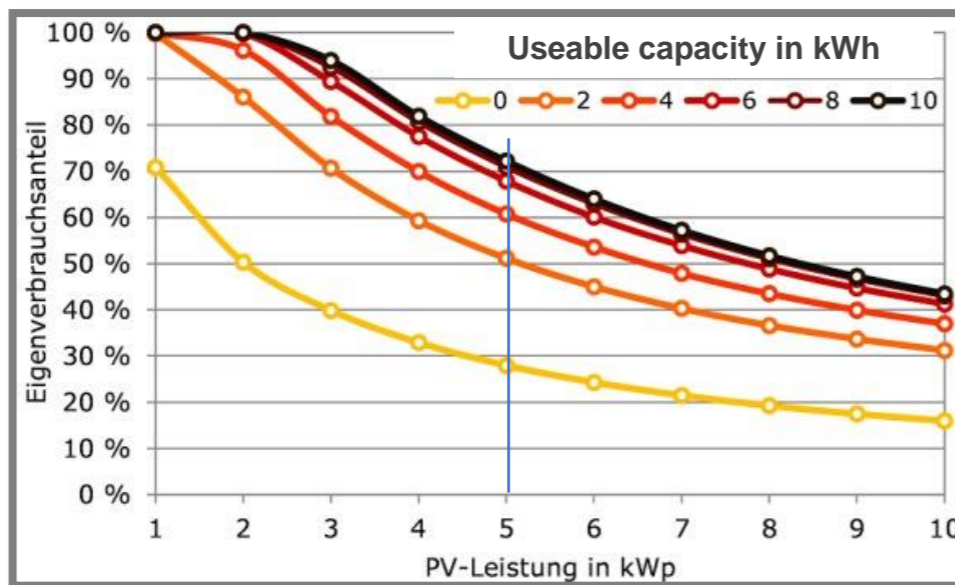
# SELFCONSUMPTION RATE



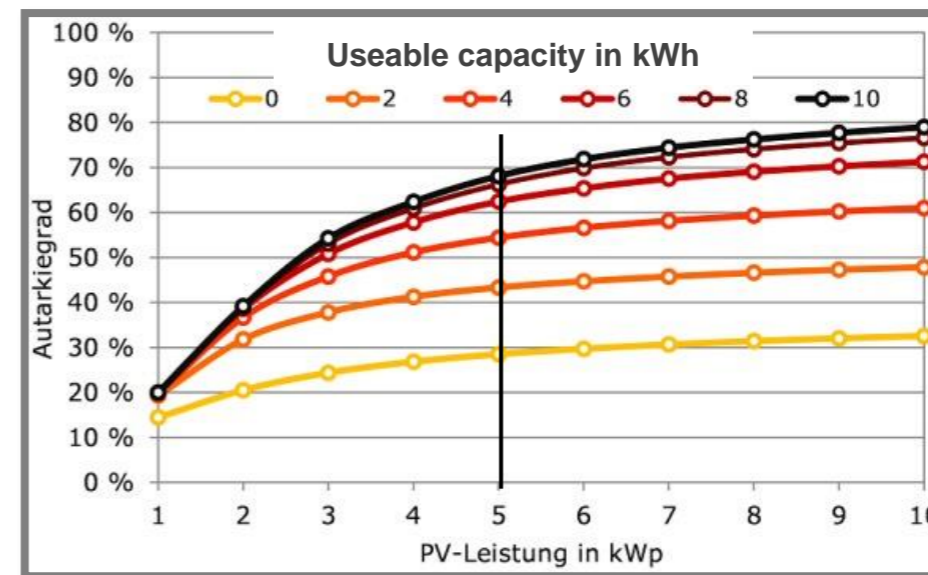
# DEGREE OF SELF-SUFFICIENCY



# SELF-CONSUMPTION/SELF-SUFFICIENCY



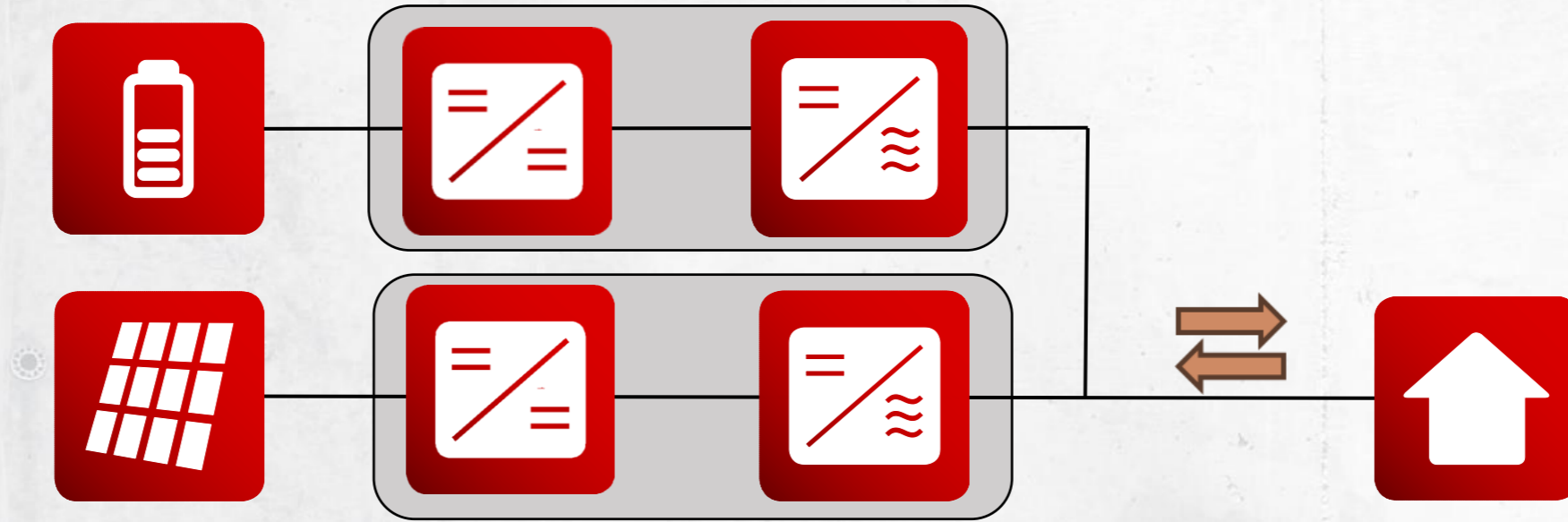
Self-consumption as a function of battery capacity and PV power ( 4 persons ; 4750 kWh/a)



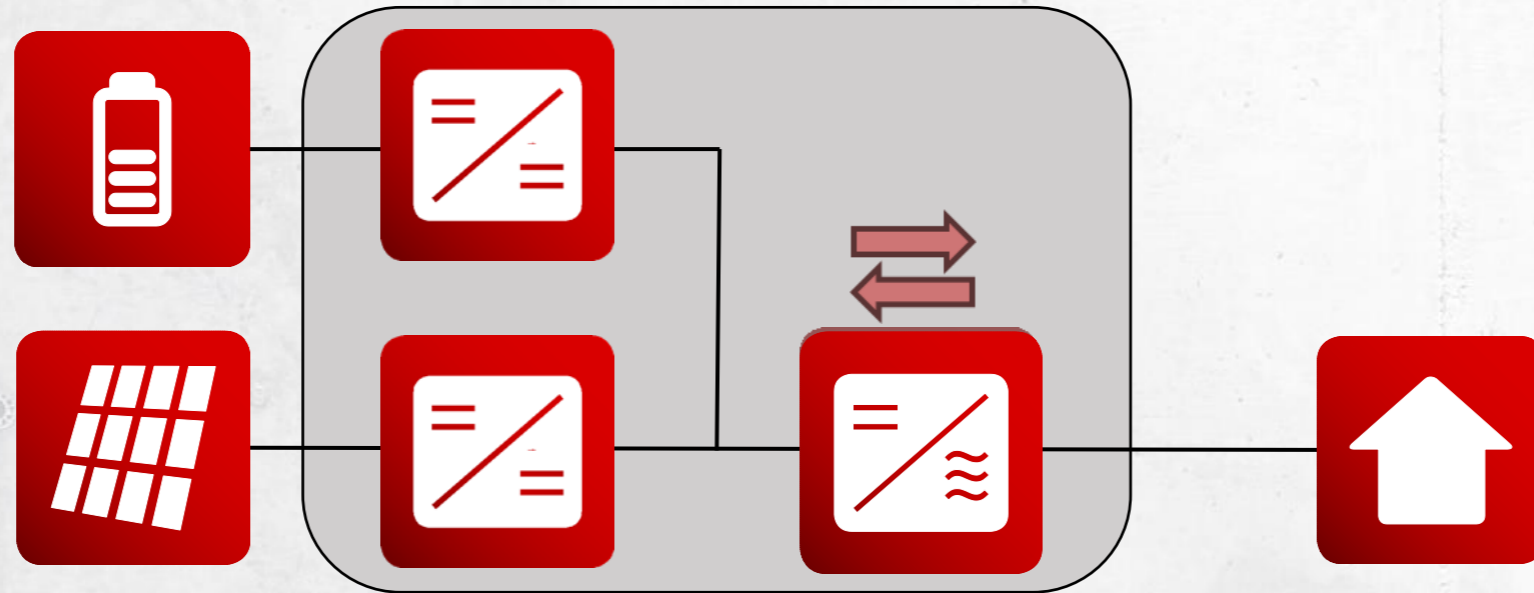
Self-sufficiency as a function of battery capacity and PV power (4 persons; 4750 kWh/a)

Quelle: Prof. Dr. Volker Quaschnig

# AC-COUPLED SYSTEMS – POWER STORAGE AC



# DC-COUPLED SYSTEMS – POWER STORAGE DC

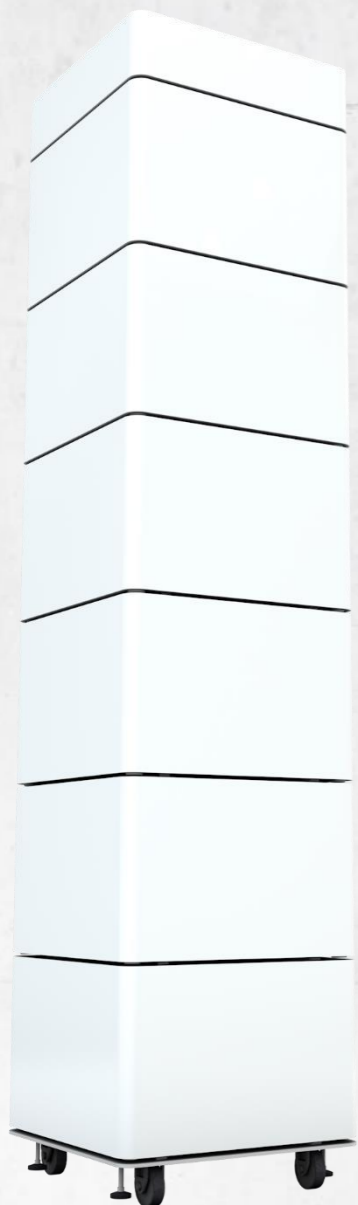


Power Battery 11.5

## 5 kW **Best-in-class**

- 92,6 % System Performance Index
- 0,4 Seconds Reaction Time
- 6 W Stand-by Power

Power Storage DC 6.0





# PRODUCT RANGE

## POWER INVERTER



Solar Input 2 x MPP  
3-phase Output  
4 kW  
6 kW



## POWER STORAGE AC



HV Battery Input  
3-phase Output  
4 kW  
6 kW



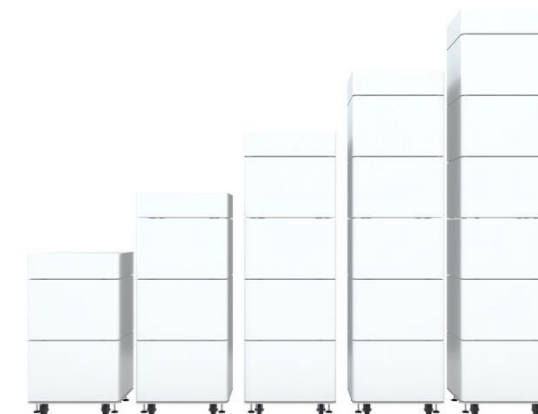
## POWER STORAGE DC



Battery + Solar Input  
3-phase Output  
4kW  
6kW  
8kW (09-2020)  
10 kW (09-2020)



## POWER BATTERY



High Voltage Battery, LiFePo4  
3,8 kWh  
5.7 kWh  
7.6 kWh  
9.6 kWh  
11.5 kWh



# VIEW TO THE CONNECTION AREA



# POWERSTORGE DC 10.0 – CONNECTING AREA



# POWER STORAGE SYSTEM - INSTALLATIONS



6.4 kWp – 5.7 kWh  
Power Storage DC 6.0



Power Storage AC 6.0  
41,6 kWh  
100 kWp



Power Storage DC 6.0 and  
Inverter 4.0  
12 kWp – 11.4 kWh  
EV charger for BMW i3



9 kWp – 11.5 kWh  
Storage DC 6.0 and Power  
Switch

# POWER STORAGE SYSTEMS > 20 KW<sub>p</sub>



# PRODUCT RANGE

## POWER SENSOR



3 phase - current transformer clips

3 x 50A

3 x 100A



## POWER SWITCH



Switch box for emergency power supply

3 x 63A



## RCT POWER APP



Power App for system commissioning  
and monitoring

Android

iOS (Monitoring)



# RCT POWER STORAGE

- Compatible with all existing PV installations between 3.8 kWh and 23 kWh (DC 8.0 | DC 10.0)
- Noiseless operation, no fan required
- 3-phase feed with phase symmetrising
- Emergency power function in case of power failure
- Predictive load management



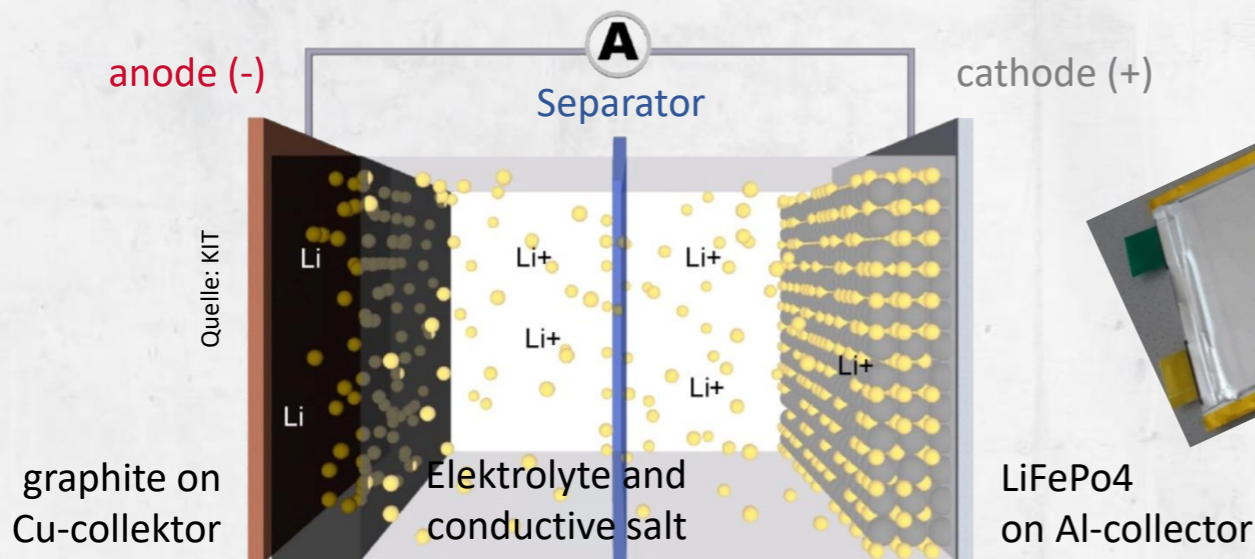


## RCT POWER BATTERY

- The high battery voltage makes charging/discharging highly efficient
- Very short charging and discharging time at 11.5kW
- Installation is simple and quick - plug and play
- Battery modules with 20kg weight allow for one-man-assembly
- Flexibly scalable between 3.5kWh to 20.8 kWh of usable capacity
- Expandable when storage requirements increase



# BATTERY TECHNOLOGY LiFePo4



Cu  
Graphite  
separator  
LiFePo4  
Al



Cellpack (coated Al foil)

- Is considered a safe Li-Ion battery technology, especially in combination with a ceramic separator
- The ceramic separator extends battery service life in terms of calendar and charging cycles

## TECHNICAL DATA BATTERY CELL:

Nominal voltage	3,2 V
Nominal capacity	25Ah / 80Wh
Energy density	151 Wh/kg
Weight	0,53 kg
Dimensions	240 x 104 x 8 mm
Separator	ceramic layer on polymer substrate

# DISTINGUISHING CHARACTERISTIC OF DIFFERENT CATHOD MATERIAL



## RCT POWER SENSOR

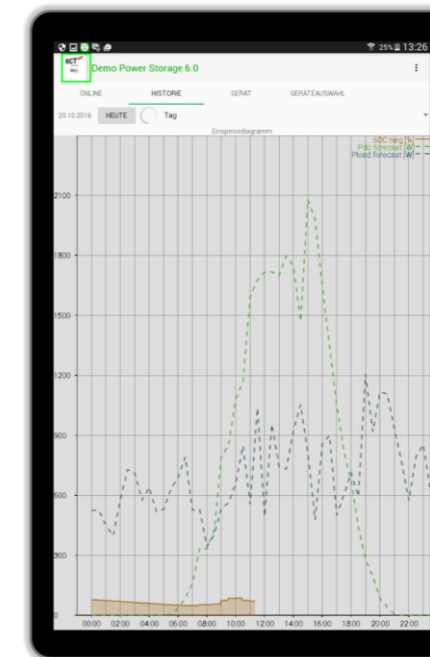
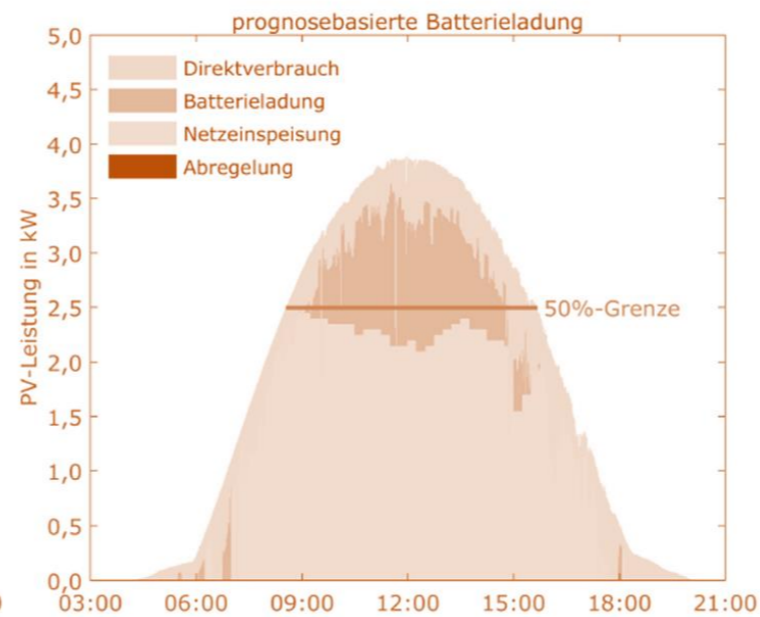
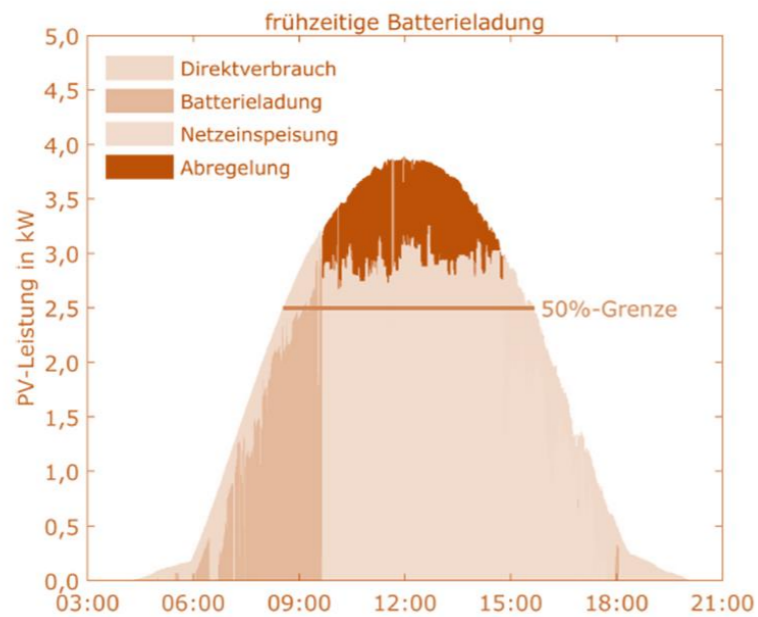
- Three-phase current sensor at house connection point
- Current transformer clips for easy assembly
- Inverter automatically adjusts direction and phase of the sensors



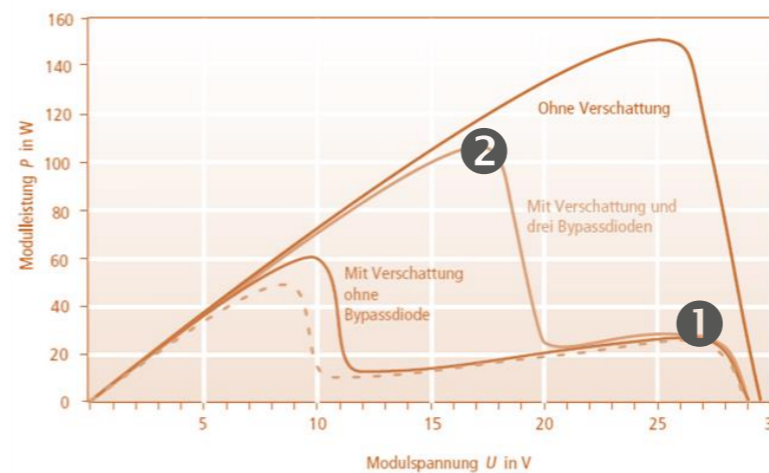
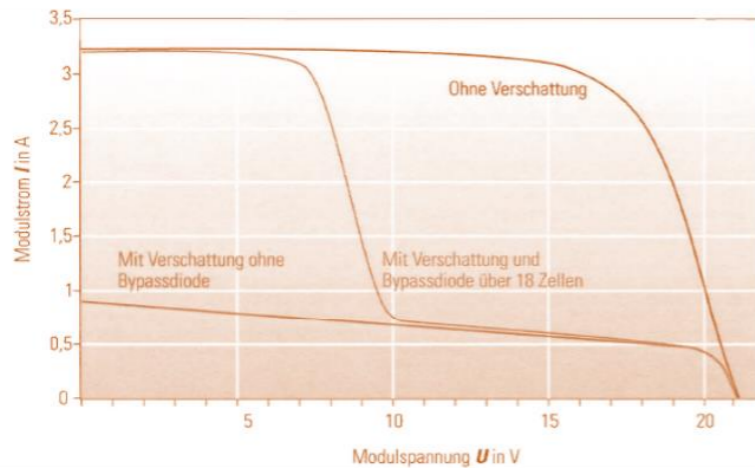
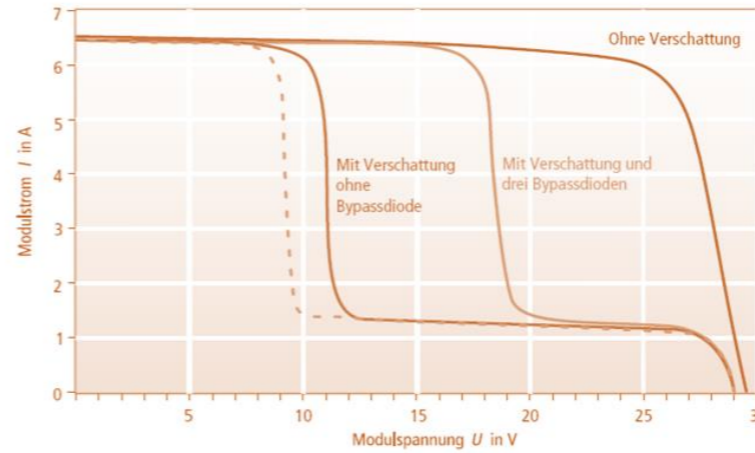
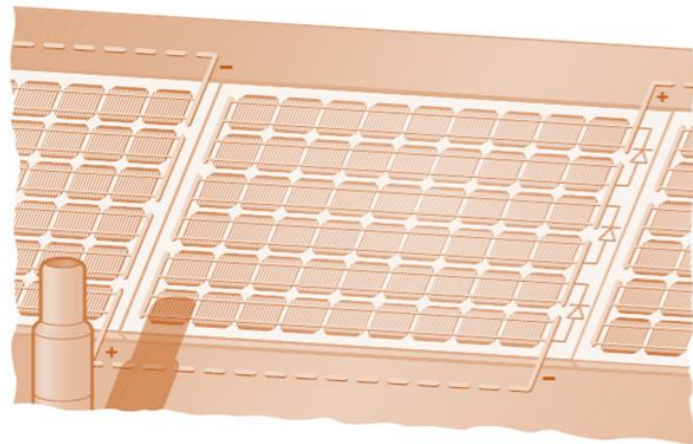
# RCT POWER USP'S



# FORCAST BASED BATTERY MANAGEMENT



# MAX POWER CONTROL



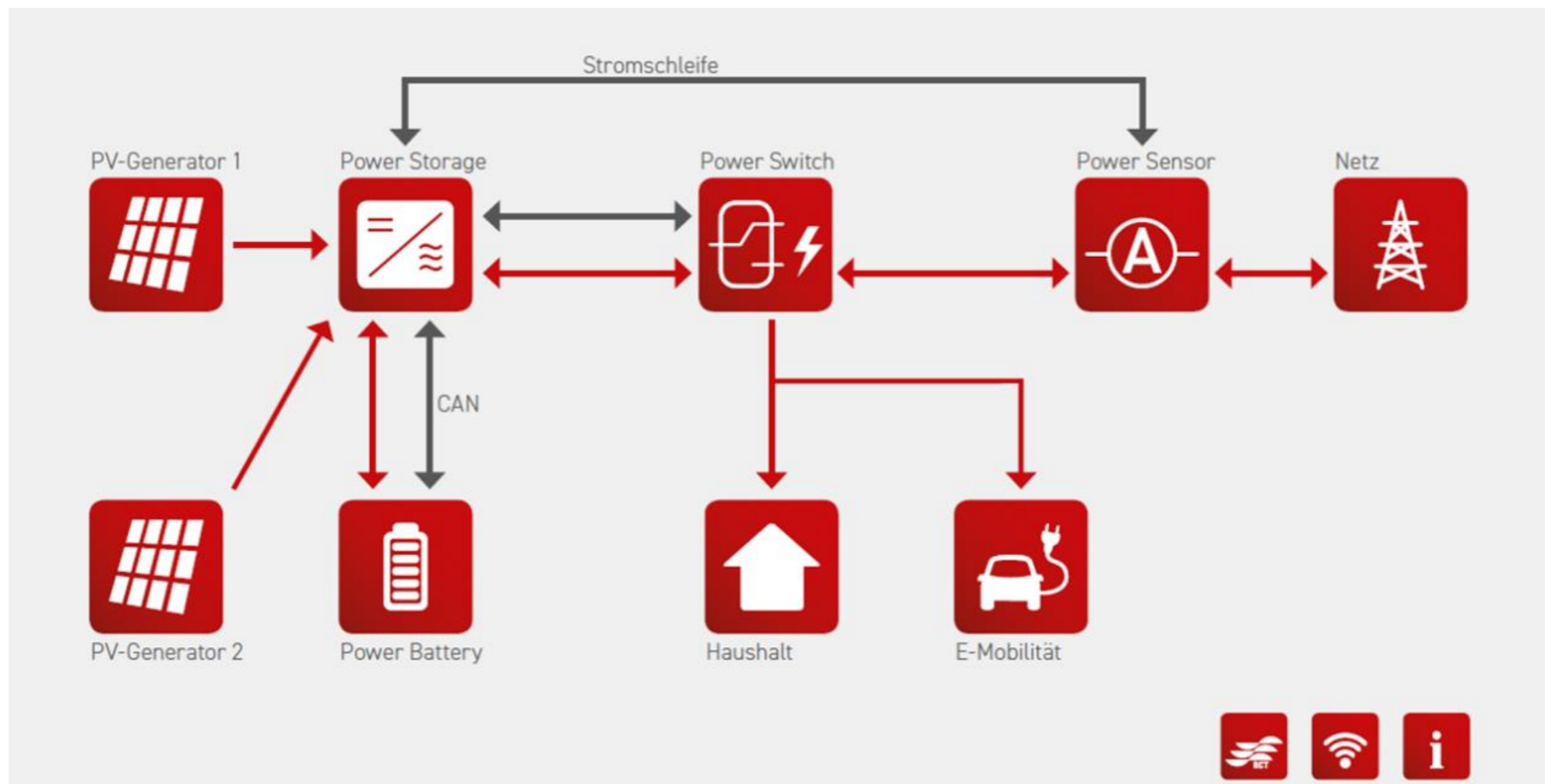
- ① Local MPP maximum
- ② Global MPP maximum

- Shading effects
- Bypass diodes

# EMERGENCY POWER SUPPLY

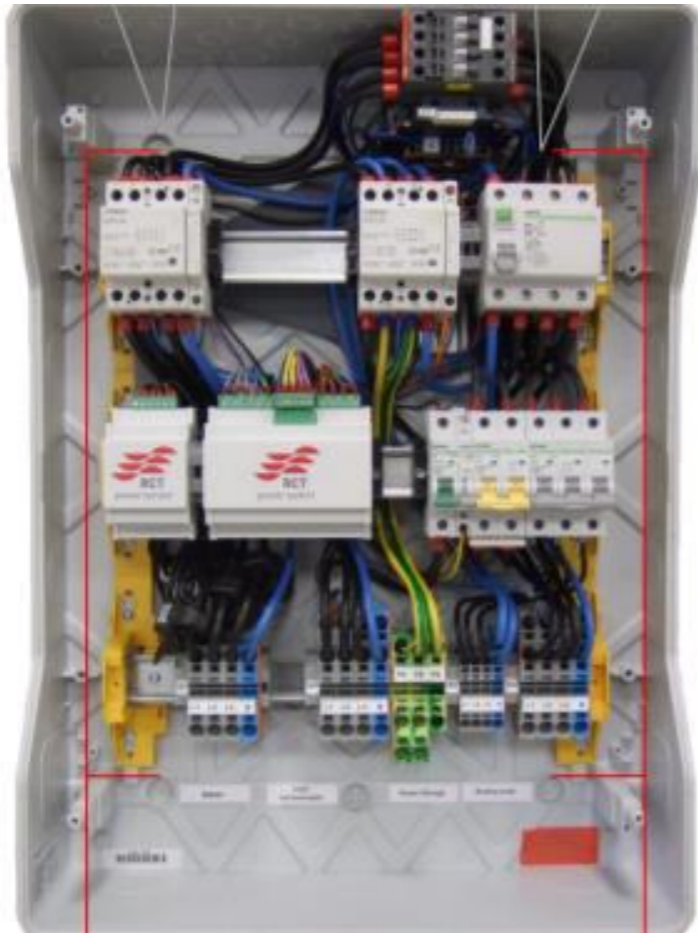


# RCT POWER SWITCH





# POWER SWITCH BOX UPTIL 10KW ; 1/3PH



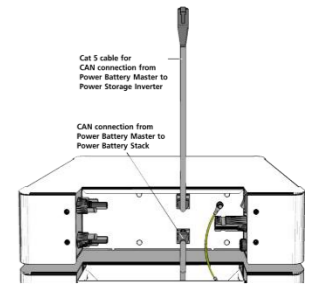
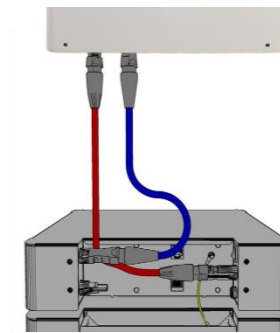
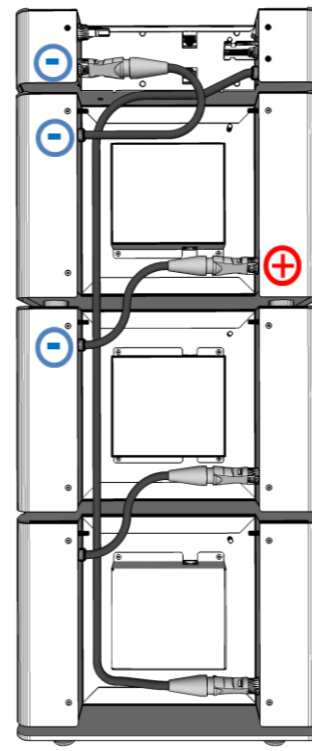
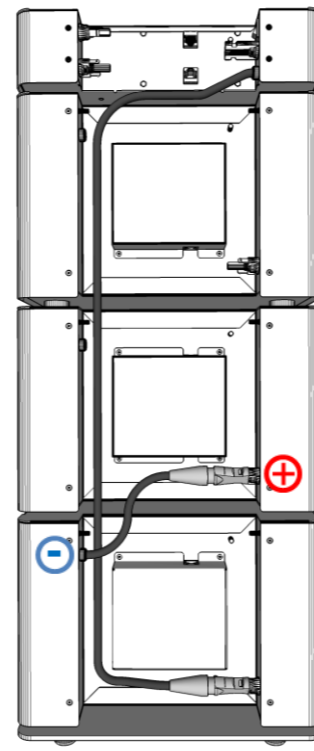
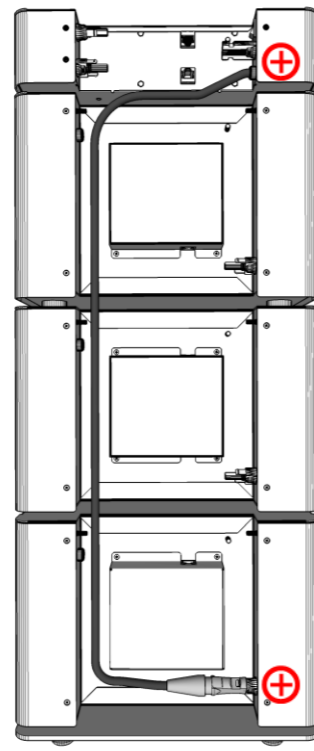
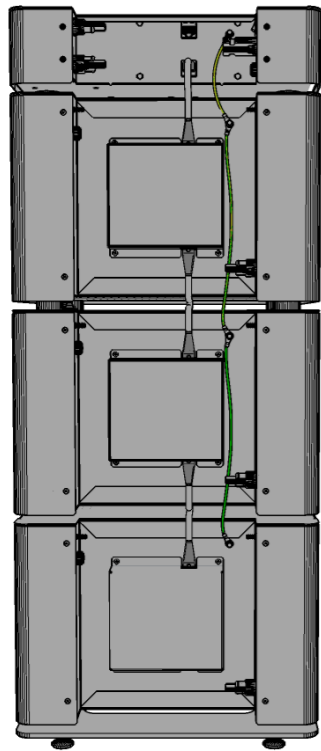
EASY TO INSTALL?



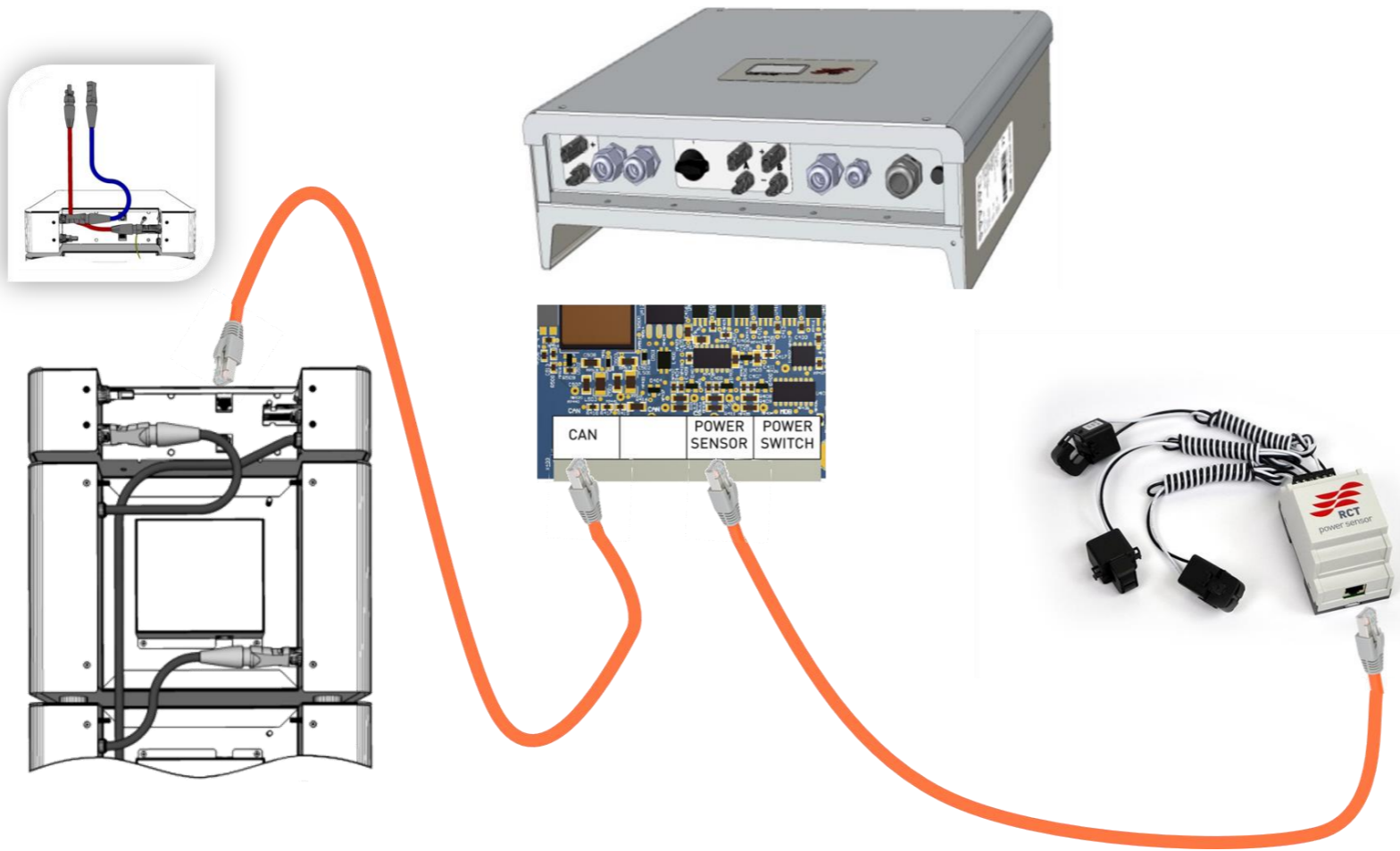
# EASY TO INSTALL!



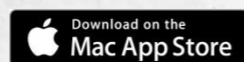
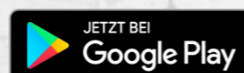
# EASY TO INSTALL !



# EASY TO INSTALL!

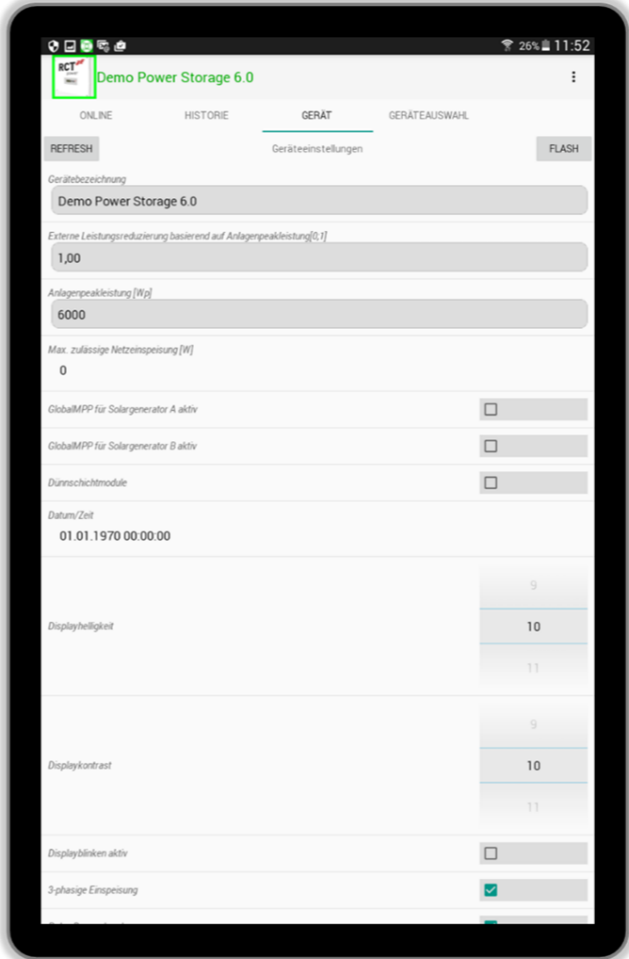
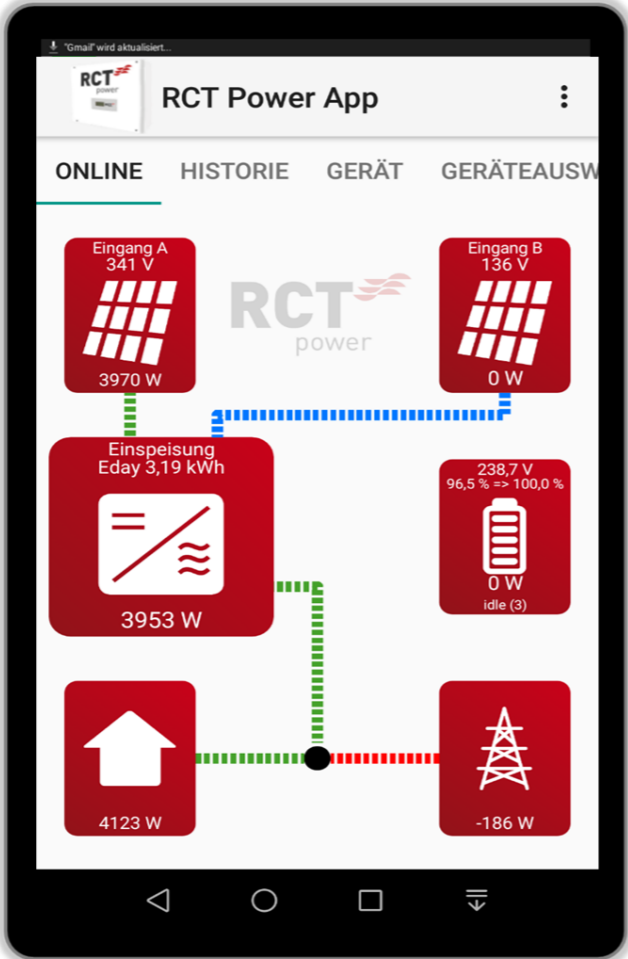


## RCT POWER APP

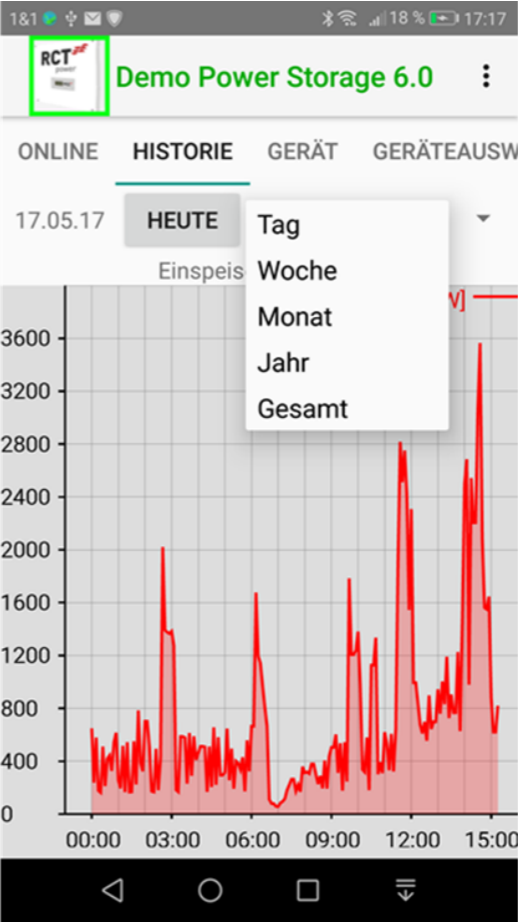
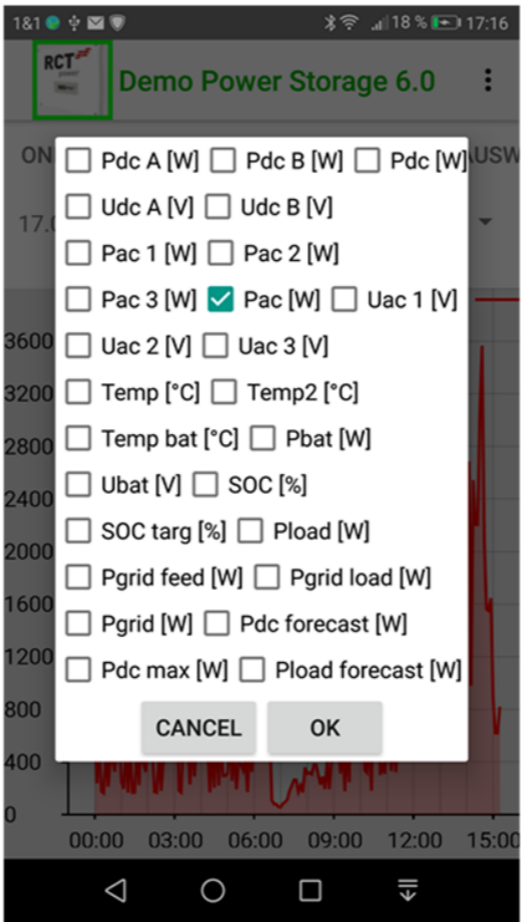


- RCT Power App enables time-saving commissioning
- Install available system updates with a simple click
- Monitor your solar storage system's performance with the RCT Power App

# POWER APP MONITORING

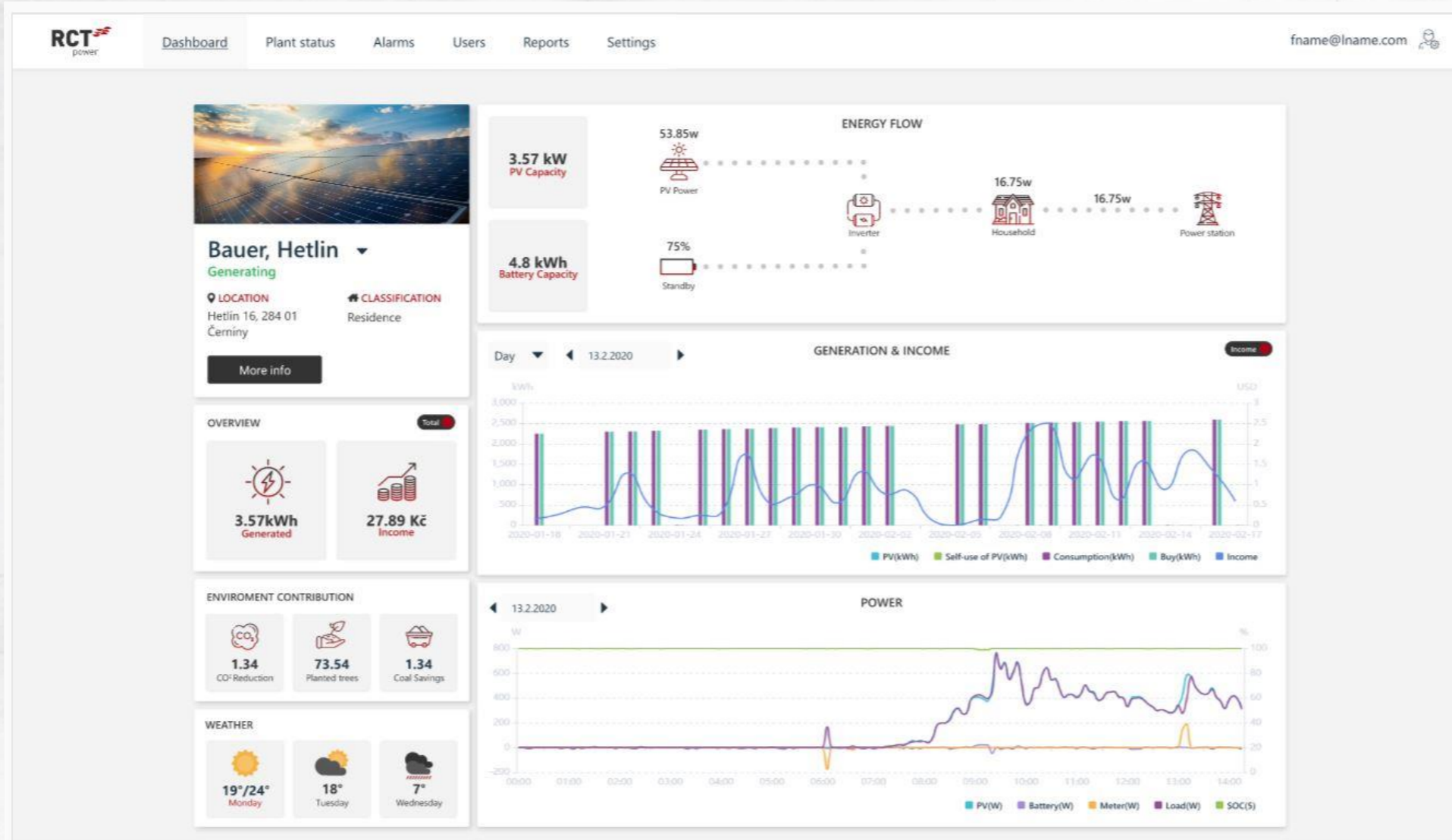


# POWER APP MONITORING





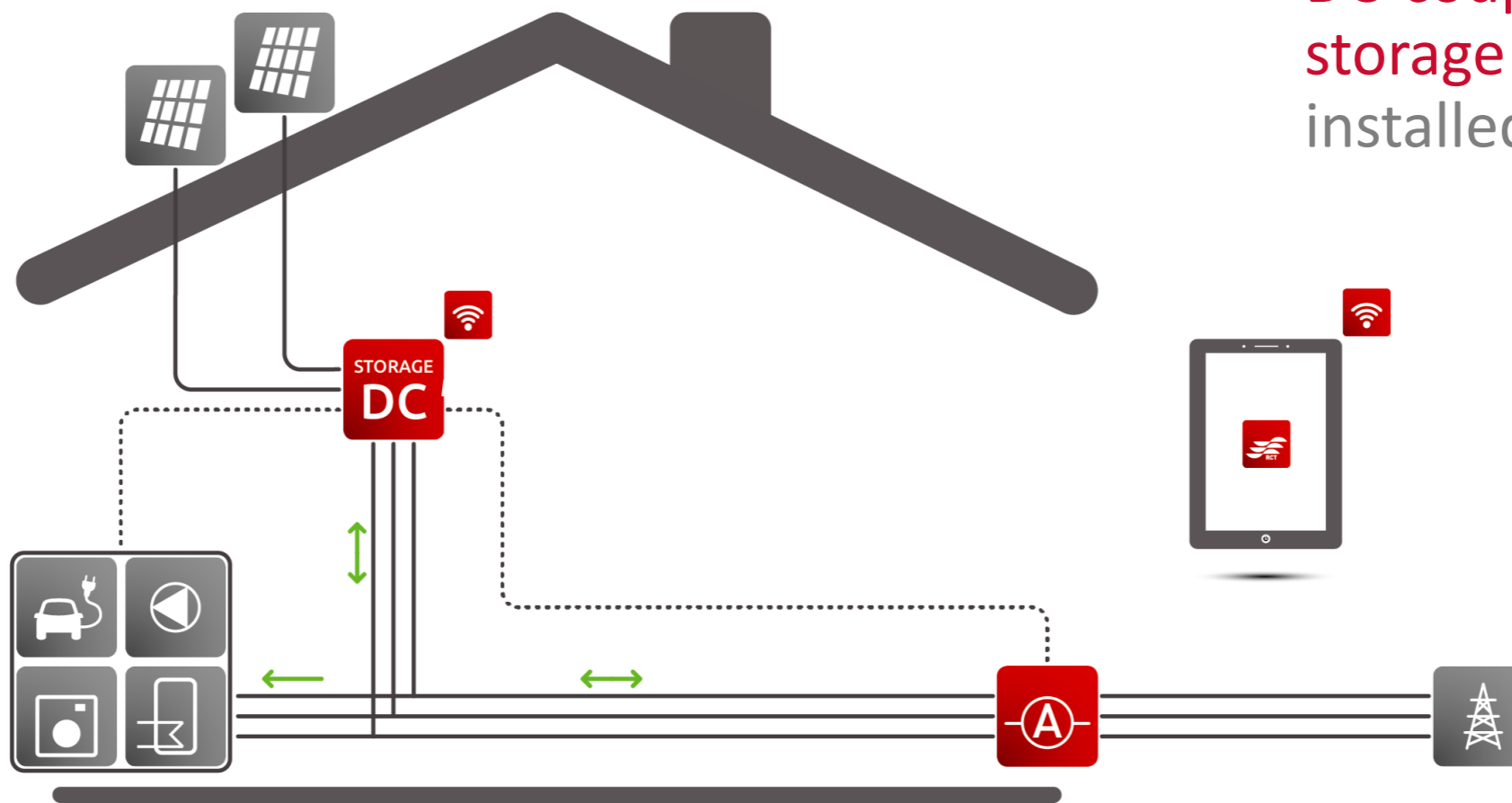
# RCT PORTAL – COMING SOON



## **RCT POWER STORAGE SYSTEMS**

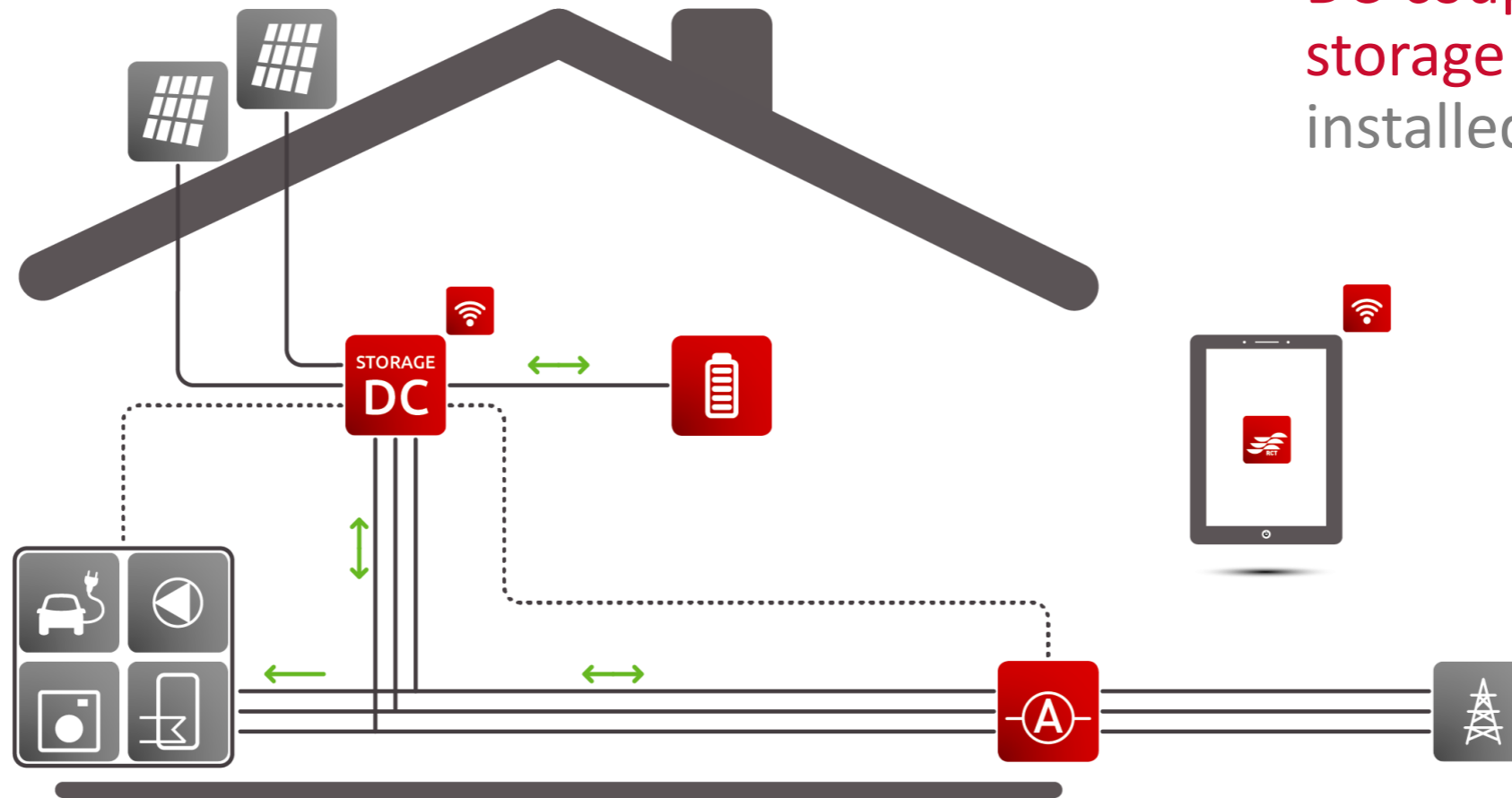
New installations and retrofitting of PV-systems

# STEP 1- PV INSTALLATION WITH POWER STORAGE DC

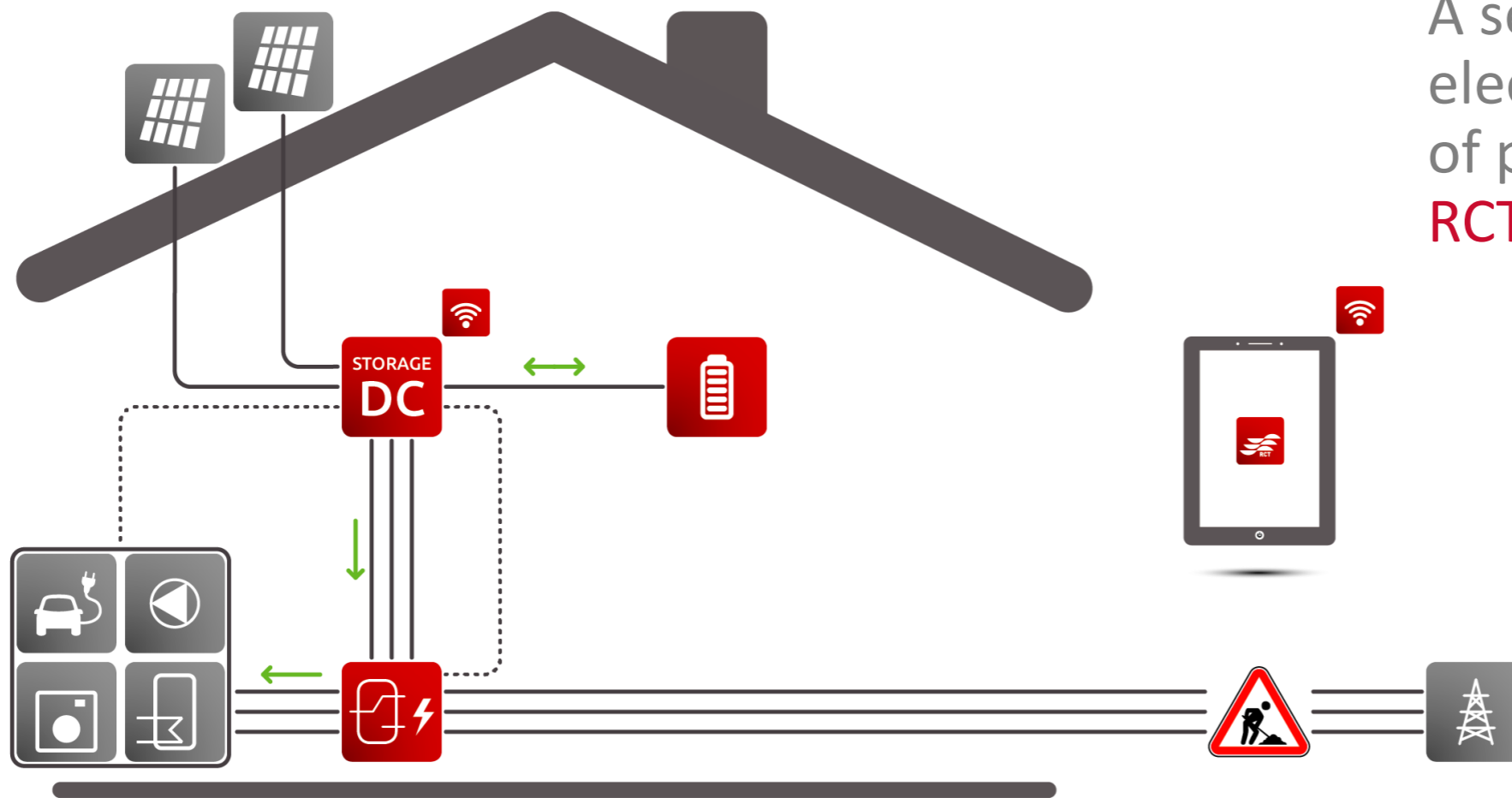


DC-coupled RCT Power storage system for newly installed PV-systems

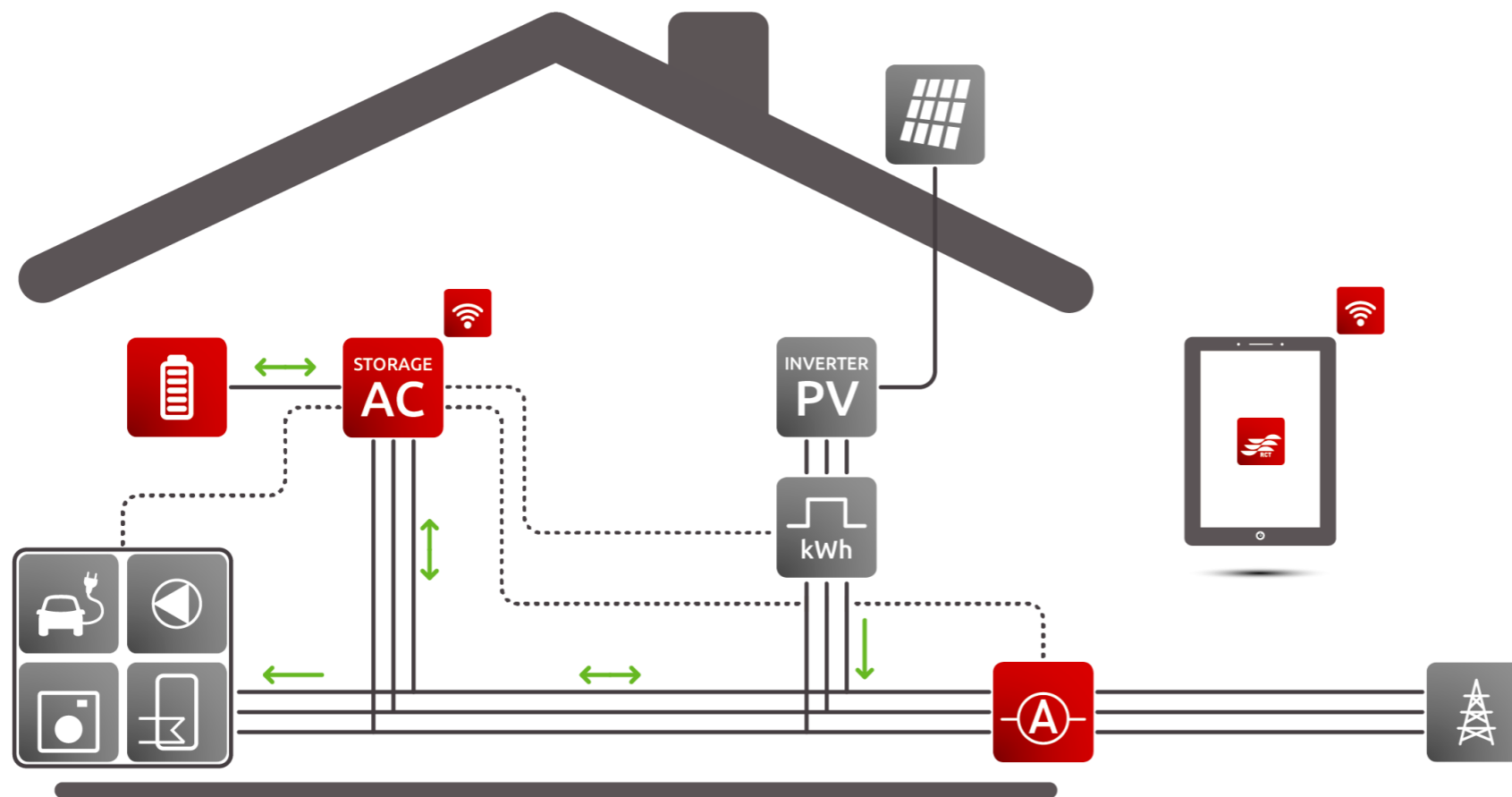
# STEP 2 – ADD A RCT POWER BATTERY



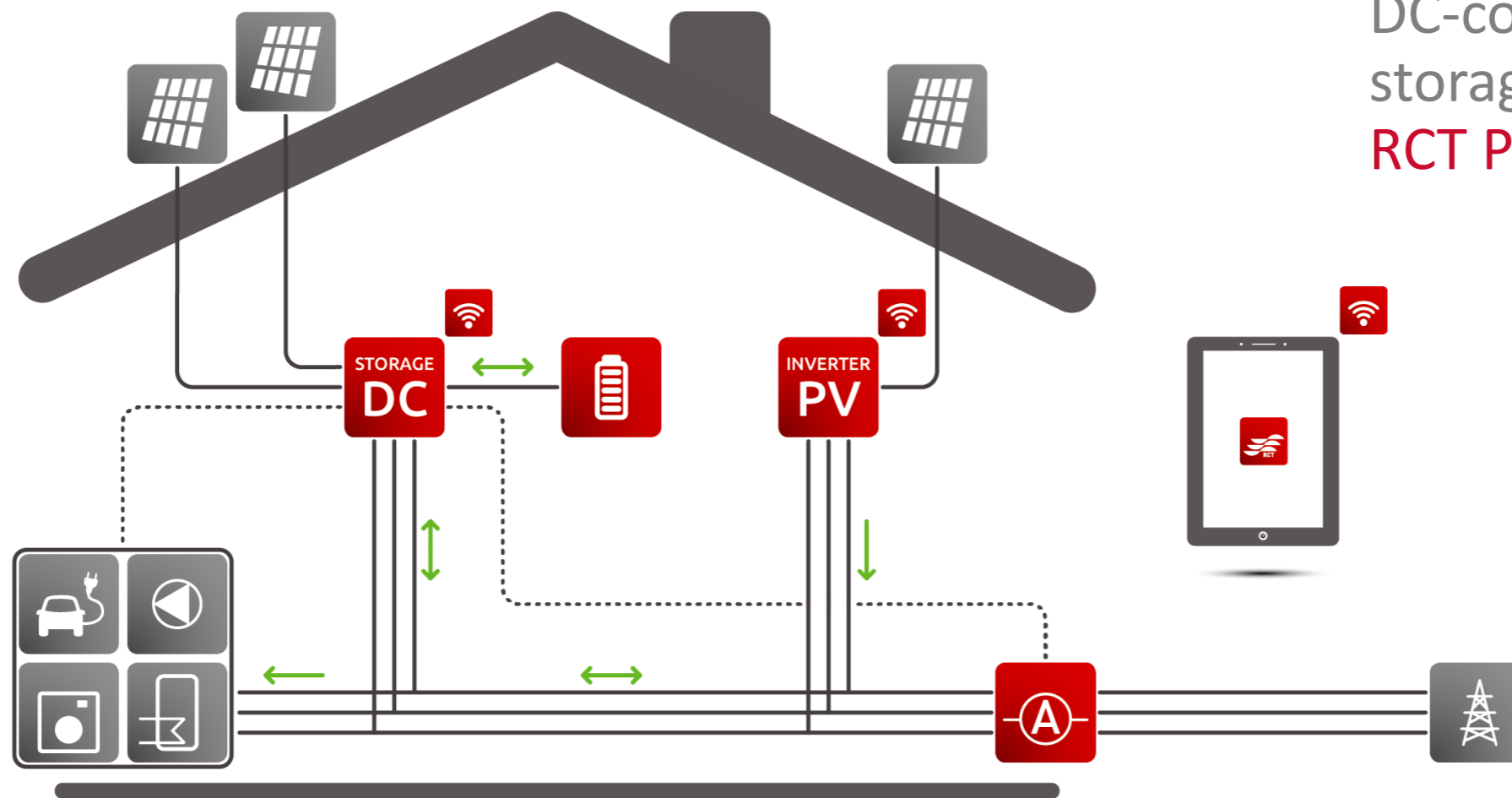
DC-coupled RCT Power storage system for newly installed PV-systems



A secure supply of domestic electrical consumers in case of power failure with **RCT Power Switch**

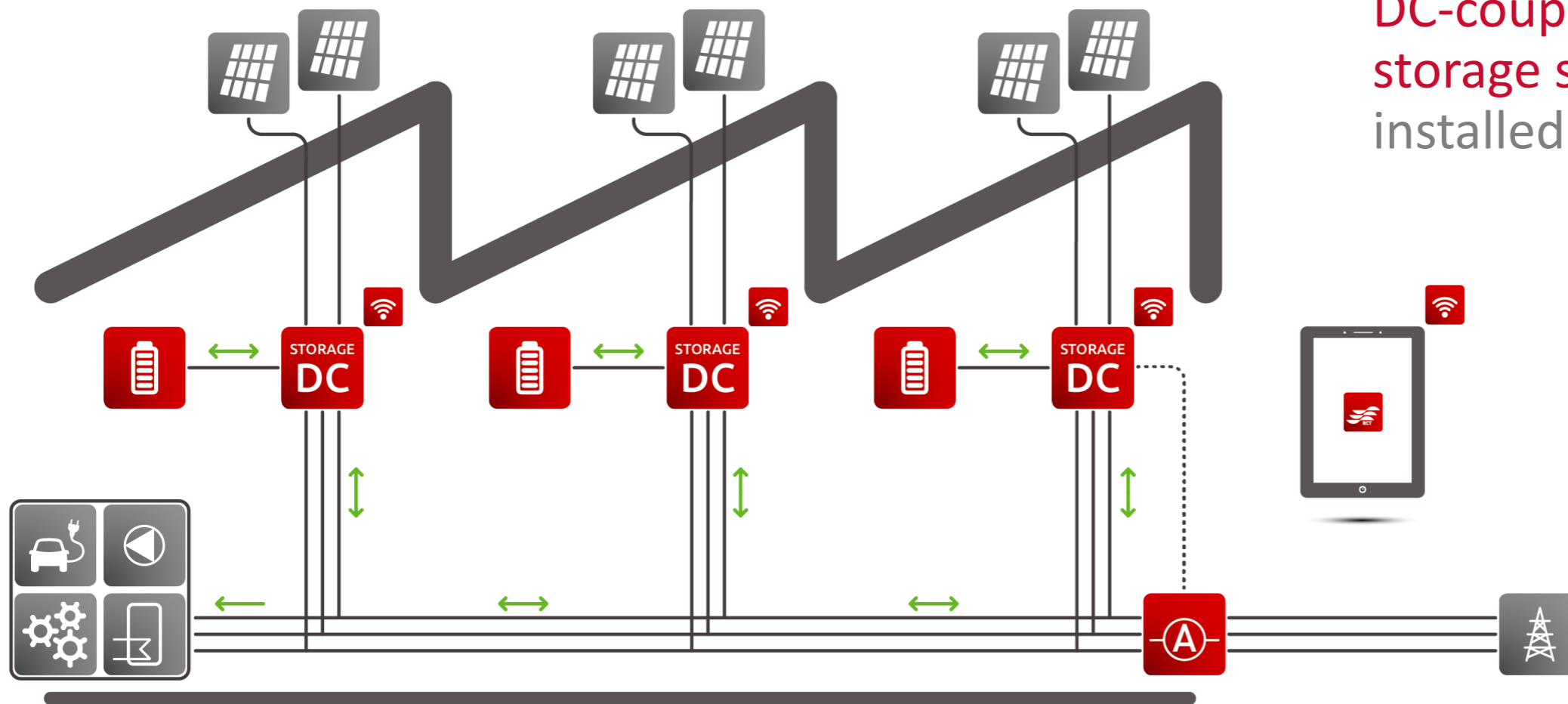


**AC-coupled RCT Power storage system** for the extension of existing PV-systems

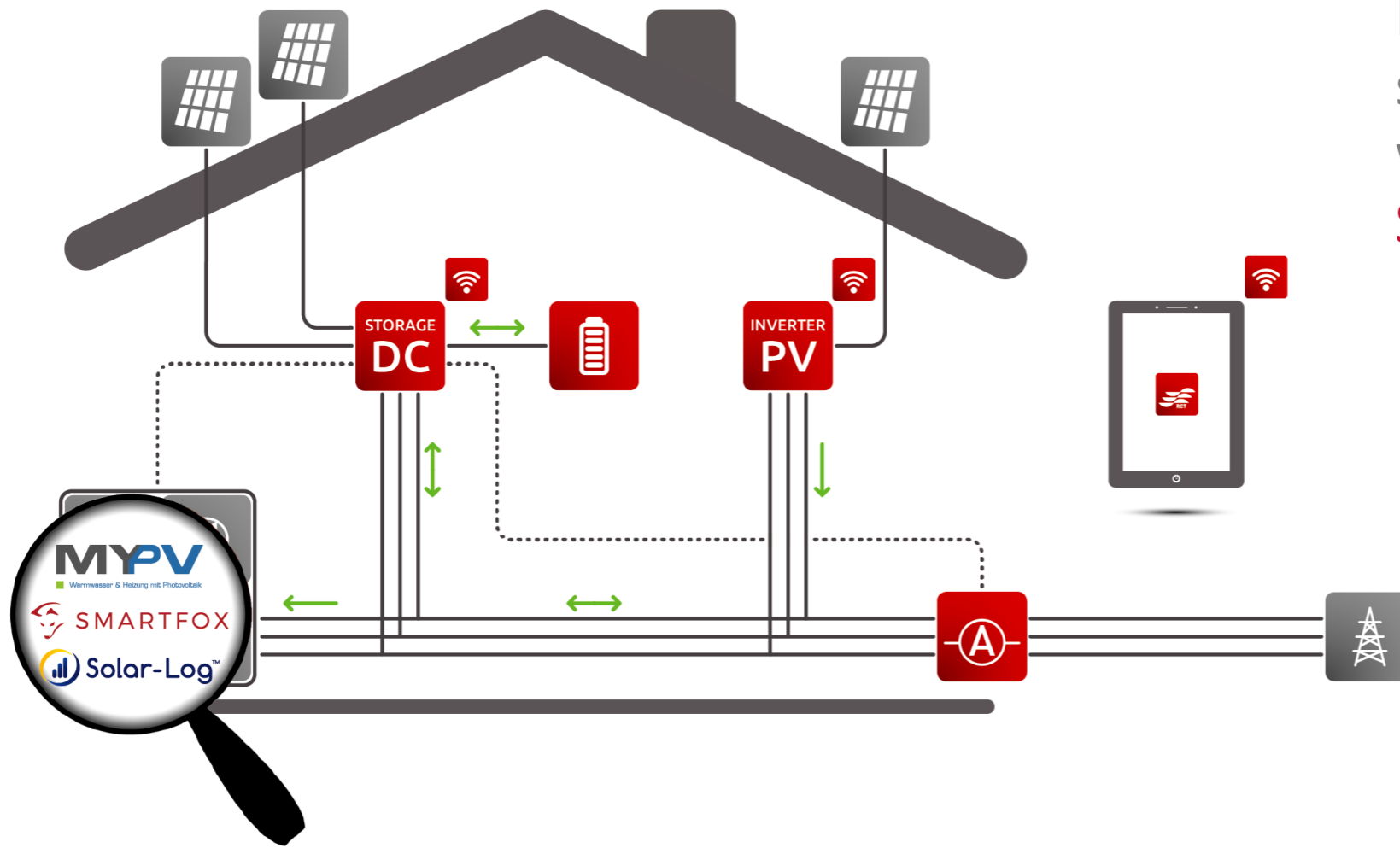


DC-coupled RCT Power  
storage system with  
**RCT Power Inverter**

DC-coupled RCT Power storage system for newly installed PV-systems

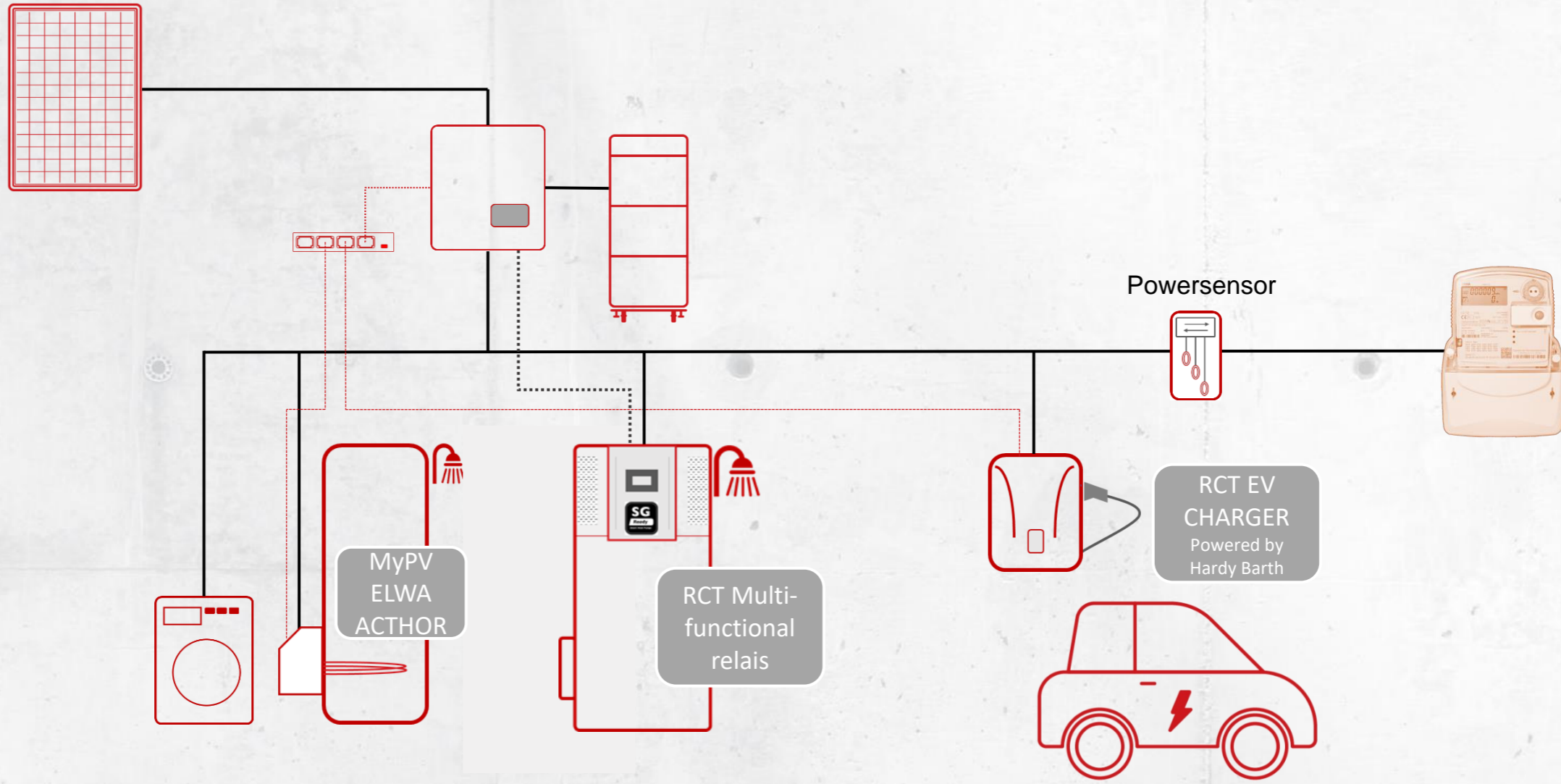






DC-coupled RCT Power storage system compatible with control systems of **Smart Energy Applications**

# POWER TO X SOLUTIONS 2020



# ROADMAP 2020

## POWER STORAGE DC 8.0 | 10.0



Battery + Solar Input  
3-phase Output  
10 kW



## RCT Portal



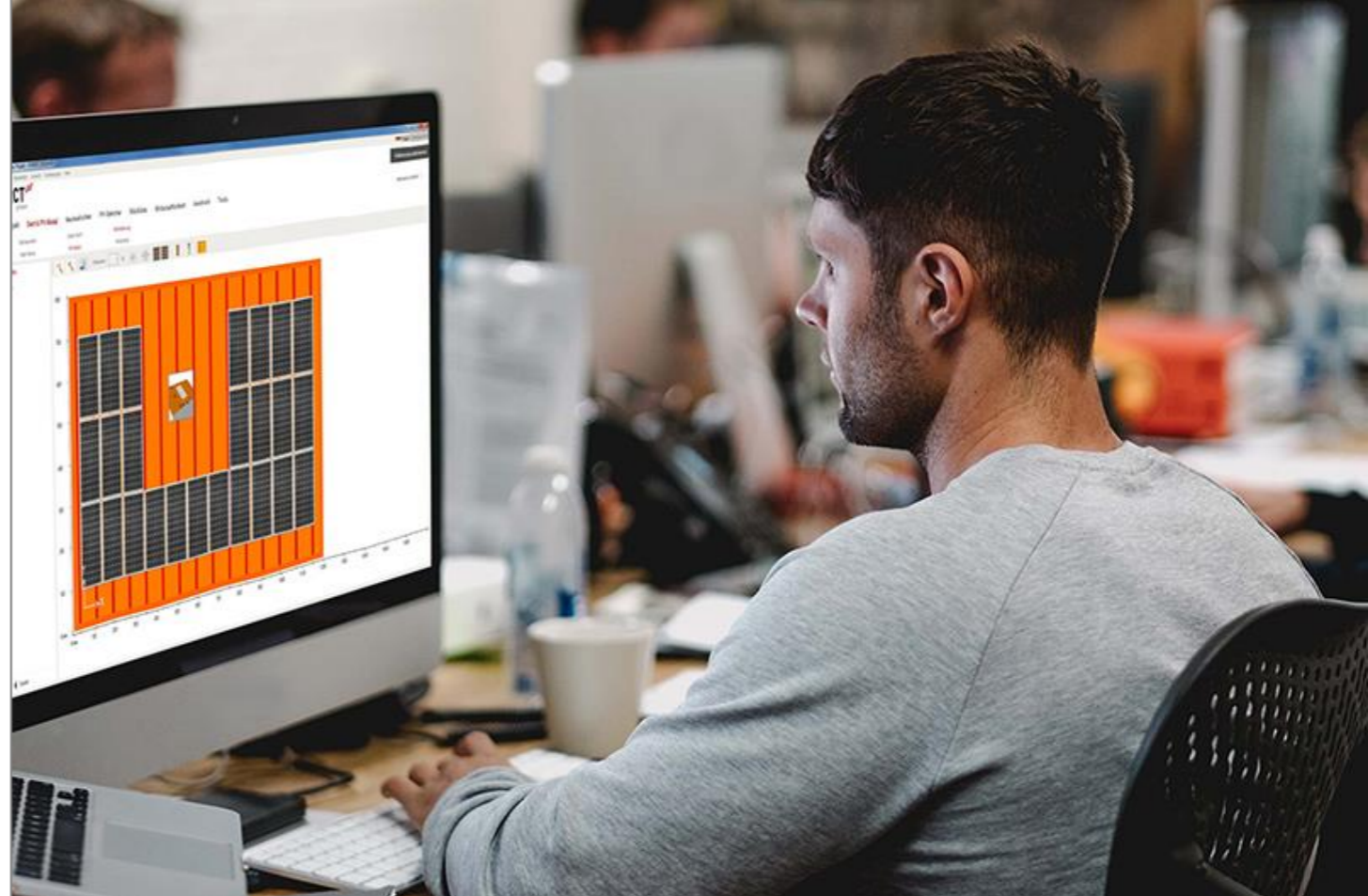
Data Transfer to Cloud Server  
Option of Customized Portal Design

## RCT EV Charger



Intelligent charging  
11 kW | 22 kW

# RCT POWER DESIGNER



**POWER DESIGNER**

Version 1.0



# STORAGE SYSTEMS RETHOUGHT



- Efficient one-stop solution
- AC and DC
- Retrofit and upgradable
- 3-phase, modular & flexible
- Environmentally friendly
- LiFePO4 battery
- Intelligent load management
- Emergency power function
- Offline capable & independent
- Durable & secure
- Easy installation & monitoring

# ONE-STOP SERVICE



- RCT Power Academy

[www.rct-power.com/en/rct-academy](http://www.rct-power.com/en/rct-academy)

- RCT Power Partner Newsletter

[www.rct-power.com/en/partner](http://www.rct-power.com/en/partner)

- Second Level Support:

Tel: +49 7531 99677 333  
[service@rct-power.com](mailto:service@rct-power.com)  
[www.rct-power.com/faq](http://www.rct-power.com/faq)

- Third Level Support for advanced troubleshooting
- Replacement and Repair Service
- Exchange Equipment Pool at our Premium Partners

# THANK YOU

- Dipl. Ing. (FH) Klaus Richter
- Technical marketing manager
- Klaus.Richter@rct-power.com

