

Residential Smart PV Solution



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Content

01 LB0 

02 MAP0 

03 Smart Guard 

04 Smart Assistant 

05 Luna 2000 S1 



Residential One-fits-all PV & ESS Solution 6.0: Leading Home Energy Management



All-round Upgraded Single-phase Inverter with Stronger Experience

Single-phase Inverter



SUN2000-3/3.68/4/4.6/5/6K-LB0

New

Current Boost, Safety upgrade

12A

2 MPPT
16A

100V

Startup
50V

80M

AFCI detection
distance
200M

9.6 kb/s

Transmission rate
115.2 kb/s

Battery Ready, Scale Smoothly



Adapts to all Huawei
residential ESS products

Power backup throughout the house, worry-free power consumption



Application Scenarios

Scenario	Optimizer	ESS	Networking Controller	Maximal Inverter Cascade Number	Backup
PV-only on-grid	SUN2000-450W-P SUN2000-600W-P		Dongle/ EMMA	3	
PV + ESS on-grid		S0 or S1	Dongle/ EMMA	3	
PV + ESS on-grid/ off-grid		S0 or S1	EMMA	1	SmartGuard S0

Application Principles:

- LB0 CAN cascade with other HUAWEI single-phase inverters (L1 or LC0)
- LB0 support S0/S1 (5kWh and 7kWh), each inverter max. 2 stacks (max. 6 battery packs);
- SUN2000 series support full- or non-optimizer configuration; SUN5000 series only support full-optimizer configuration
- LB0 series is not compatible with BackupBox



All-round Upgraded Three-phase Inverter with Stronger Experience

Three-phase Asymmetric Inverter



New

SUN2000-5/6/8/10/12K-MAP0

Higher MPPT Capability

16 A, 2 MPPT

**Asymmetric
Output**

Supported

**ESS Awake
By Grid**

Supported

Superb Off-grid Adaptability

100~110%
overload

Continuous working

150%
overload

5min*

200%
overload

10s

Note: For detailed information, please refer to product datasheet

Battery Ready, Scale Smoothly



max. 2 LUNA S0

30 kWh

OR



max. 2 LUNA S1

42 kWh For S1

Three-phase Asymmetric for Higher self-consumption Rate

Conventional Three-phase Inverter

- **Not supported with** three-phase unbalanced output
- Each phase outputs 1kW at max.



Result: Still need purchase 3kw from Grid, causing bill lose

Split-phase Operation

- **Maximum output of 6 kW per phase**, with three-phase unbalance supported



Result: **Improving 50%+** self-sufficiency rate of PV+ESS system



Overview of Application Scenarios for MAP0

Scenario	Optimizer	ESS	Networking Controller	Maximal Inverter Cascade Number	Backup
PV-only on-grid	SUN2000-450W-P2 or SUN2000-600W-P		Dongle/ EMMA	3	
PV + ESS on-grid			Dongle/ EMMA	3	
PV + ESS on-grid/ off-grid		S0 or S1	EMMA	3	SmartGuard T0

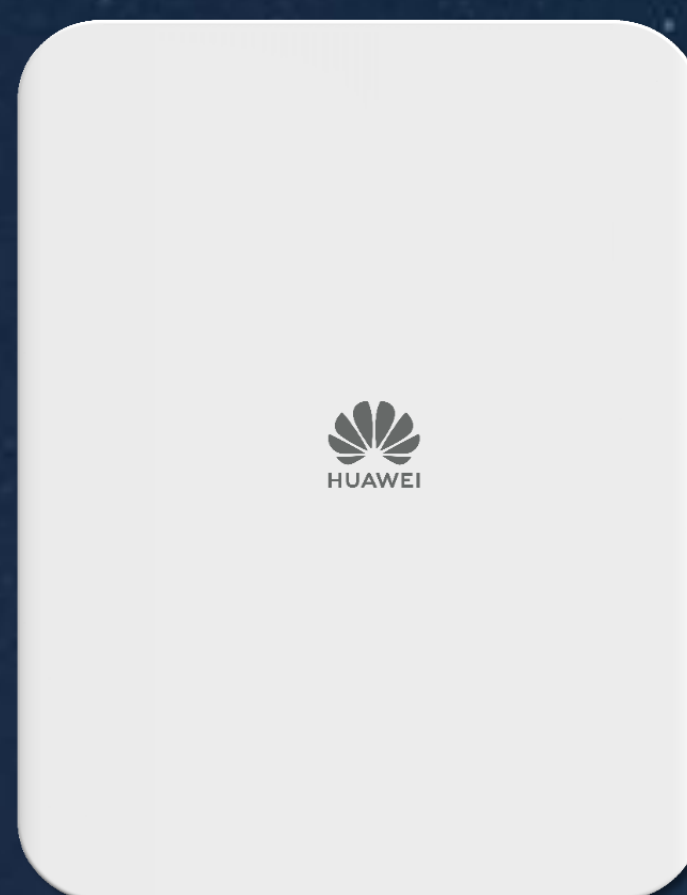
Application Principles:

- MAP0 CANNOT cascade with other inverters (3-phase 4-wire vs. 3P3W), maximal 3 MAP0s cascade
- MAP0 support S0/S1, each inverter max. 2 stacks (max. 6 battery packs);
- MAP0 series is not compatible with BackupBox, but with Smartguard



Reshape the Power Backup Experience

Whole Home Backup



New

SmartGuard-63A-S0
SmartGuard-63A-T0

Integrates following functions:

- Power backup
- Intelligent energy management
- Networking capability
- Metering

Partial
power backup



**Whole home
power backup**



**Easy to install,
without circuit modification**

Seamless

< 20 ms

Ultra-fast switchover to
power backup mode

Reliable

Bypass Mode

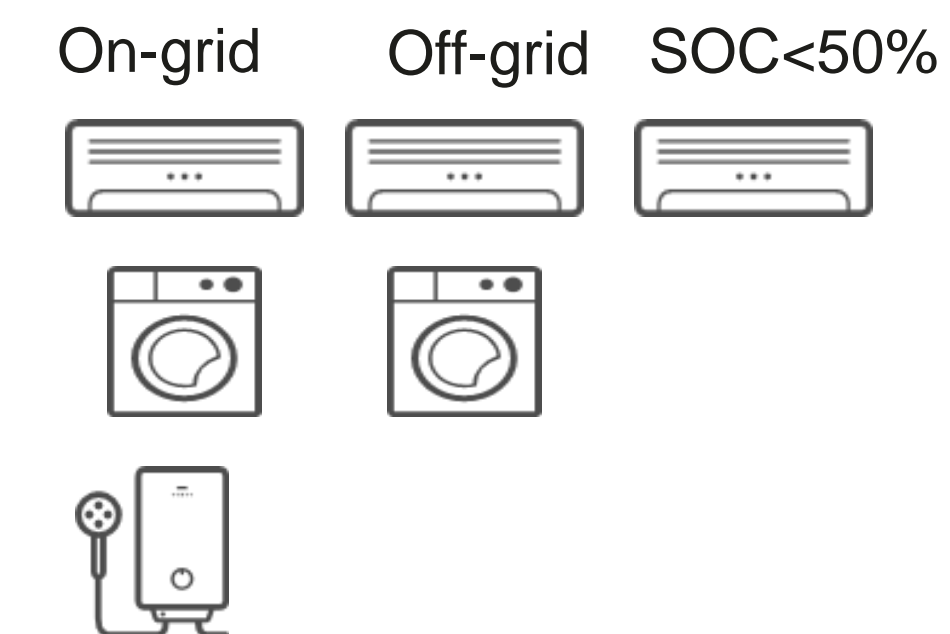
Manual bypass is available
on unexpected failure

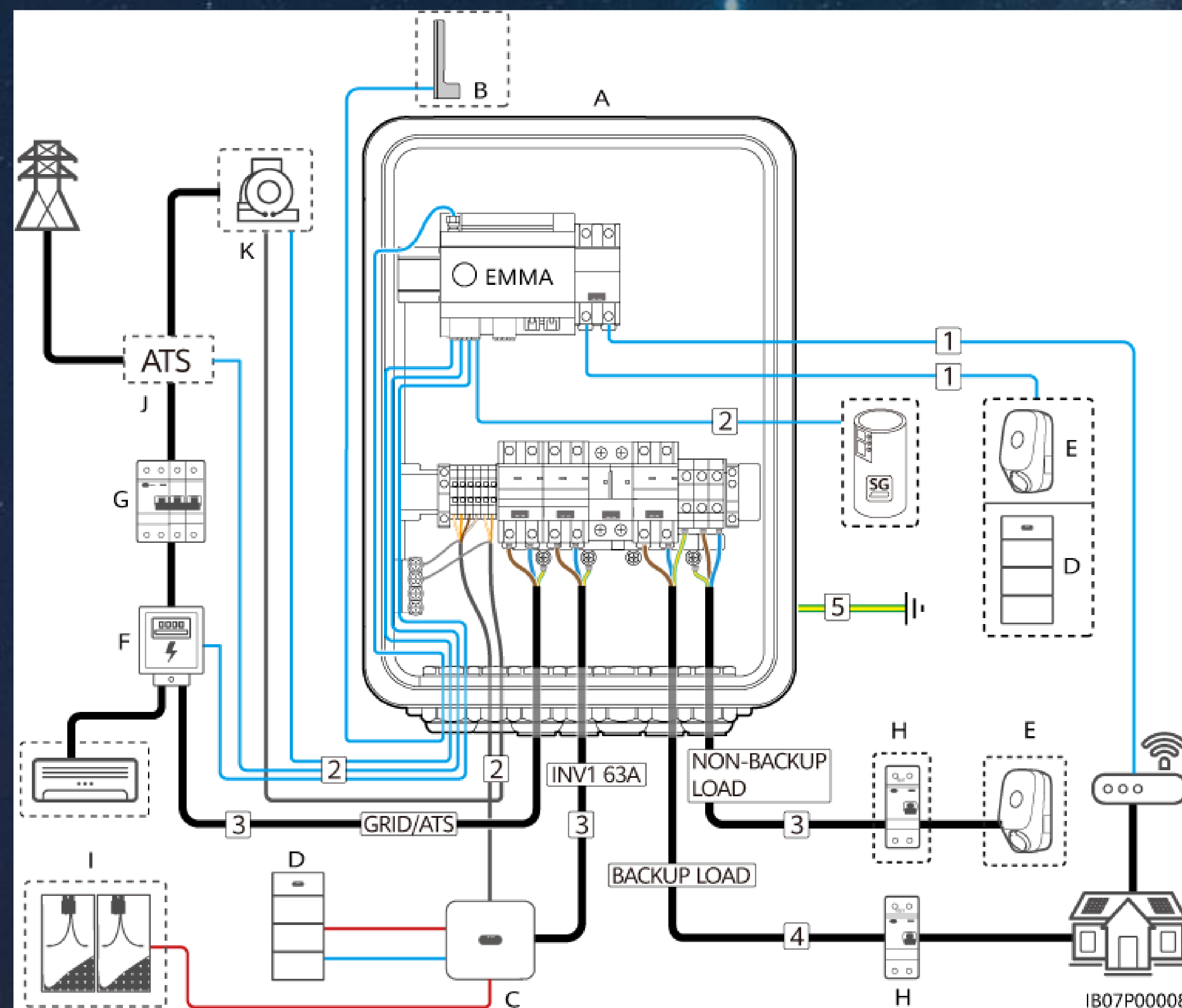
Powerful Backup Capacity

Higher power inverter and
more energy ESS

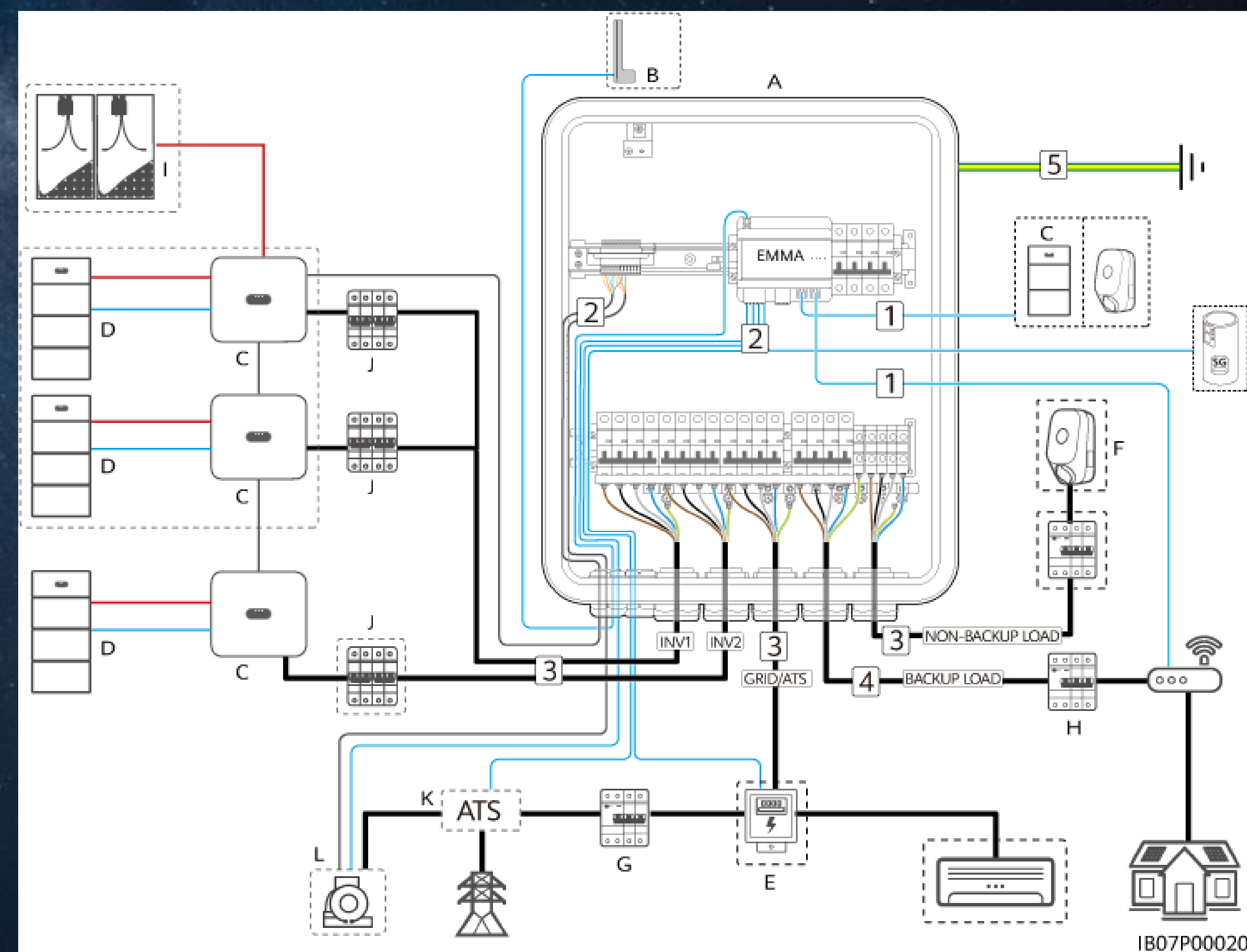


Hierarchical shutdown
for longer backup time



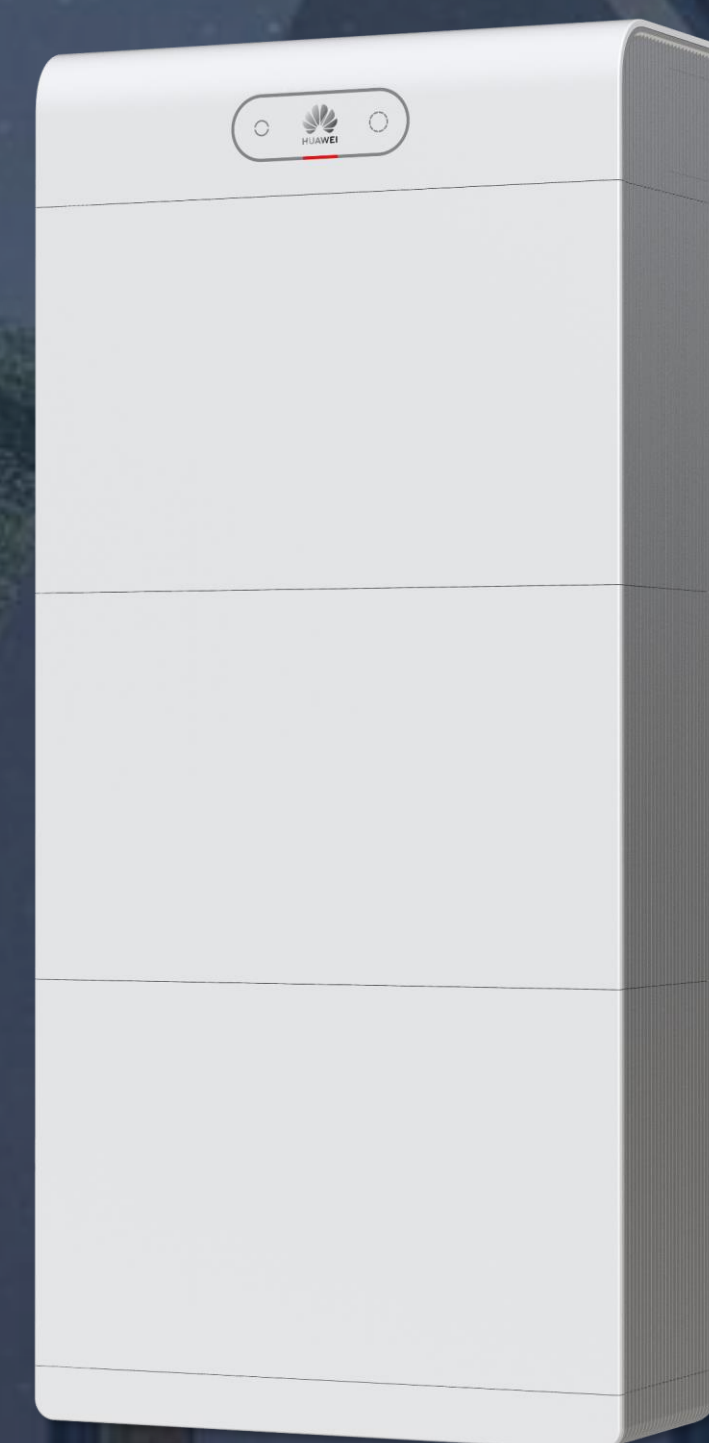


SmartGuard-63A-S0



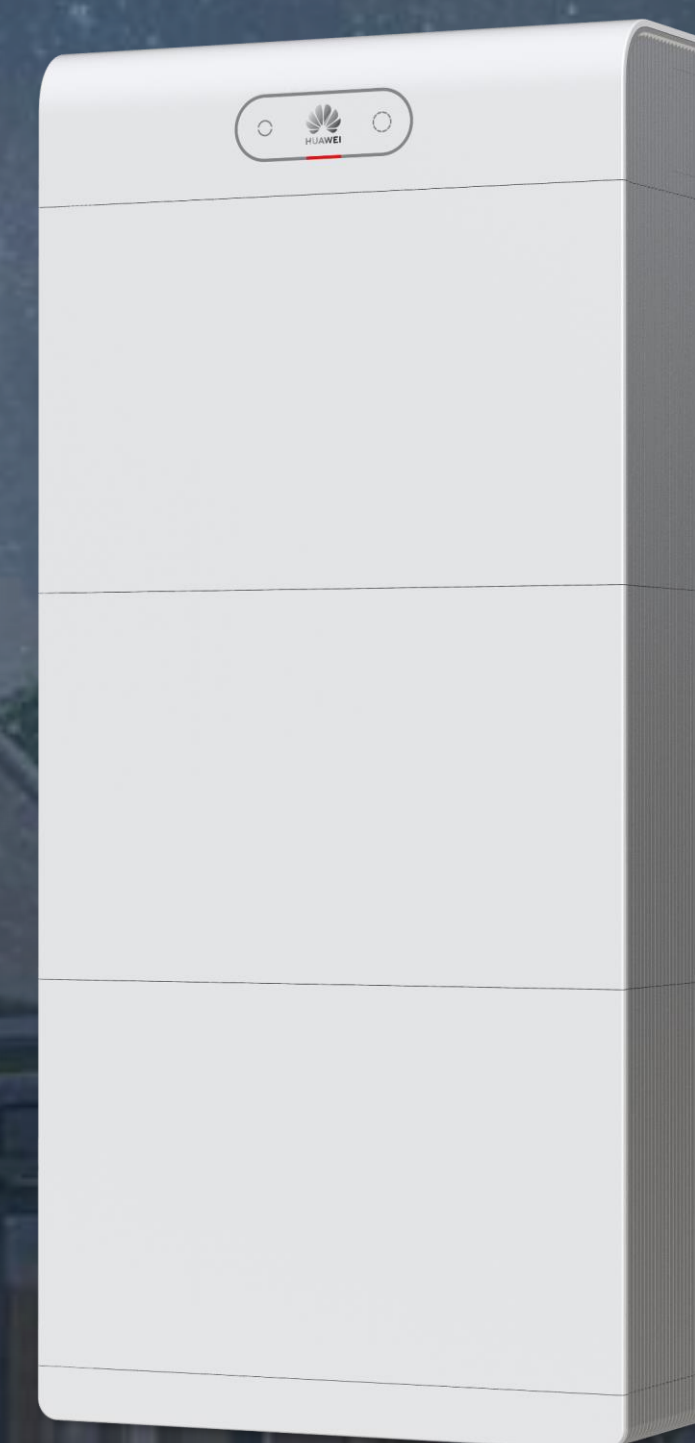
SmartGuard-63A-T0

On-demand choices, Flexible expansion with LUNA S1



LUNA S1-7kWh

- › **15-year limited warranty***
- › 4.2MWh for each kWh throughput, **40%+ more usable energy**
- › 7/14/21kWh
- › Cable-free installation
- › IP66, -20°C~55 °C
- › 5-layer Safety Protection



New

LUNA S1-5kWh

- › **15-year limited warranty***
- › 4.2+ MWh for each kWh throughput **40%+ more usable energy**
- › **On-demand expansion with 5/7kWh: 5/7/10/12/14/15/17/19/21kWh**
- › Cable-free installation
- › IP66, -20°C~55 °C
- › 5-layer Safety Protection

*15-year limited warranty is available with SmartPVMS connection (5 years otherwise), please see warranty statement for details.



New Benchmark for Residential Energy Storage System

40%+ higher throughput for **each kWh**,
within 15-year limited warranty *

4.2+ MWh

LUNA S1-5/7kWh

VS

3.3 MWh

LUNA S0

3.0 MWh

Vendor B

2.8 MWh

Vendor S

*15-year limited warranty is available with SmartPVMS connection (5 years otherwise), please see warranty statement for details.



Flexible Expansion, Easier Installation, More Tailored for Homes



On-demand expansion

5/7/10/12/14/15/17/19/21kWh



New Heights of One-stop Home Energy Management

Electrical Appliance Ecology

One-stop Energy Management

3rd Partners



EV
Charger



Heat
Pump



Heating
Rod

Self-consumption Rate

90%+



SmartAssistant

Open to VPPs

AI Scheduling

Weather & loads
prediction

Dynamic electricity price

VPP

Electricity
trading

Frequency modulation

3rd platforms

Dynamic electricity market

NORD POOL

epexspot

esios

TGE

50%+

Revenue increase

30+

VPP platform access

2.5s

Quick response

Standardized Protocol

AI Empowered

Optimal Benefits

** All data processing strictly complies with the General Data Protection Regulation (GDPR).*

Fusionsolar

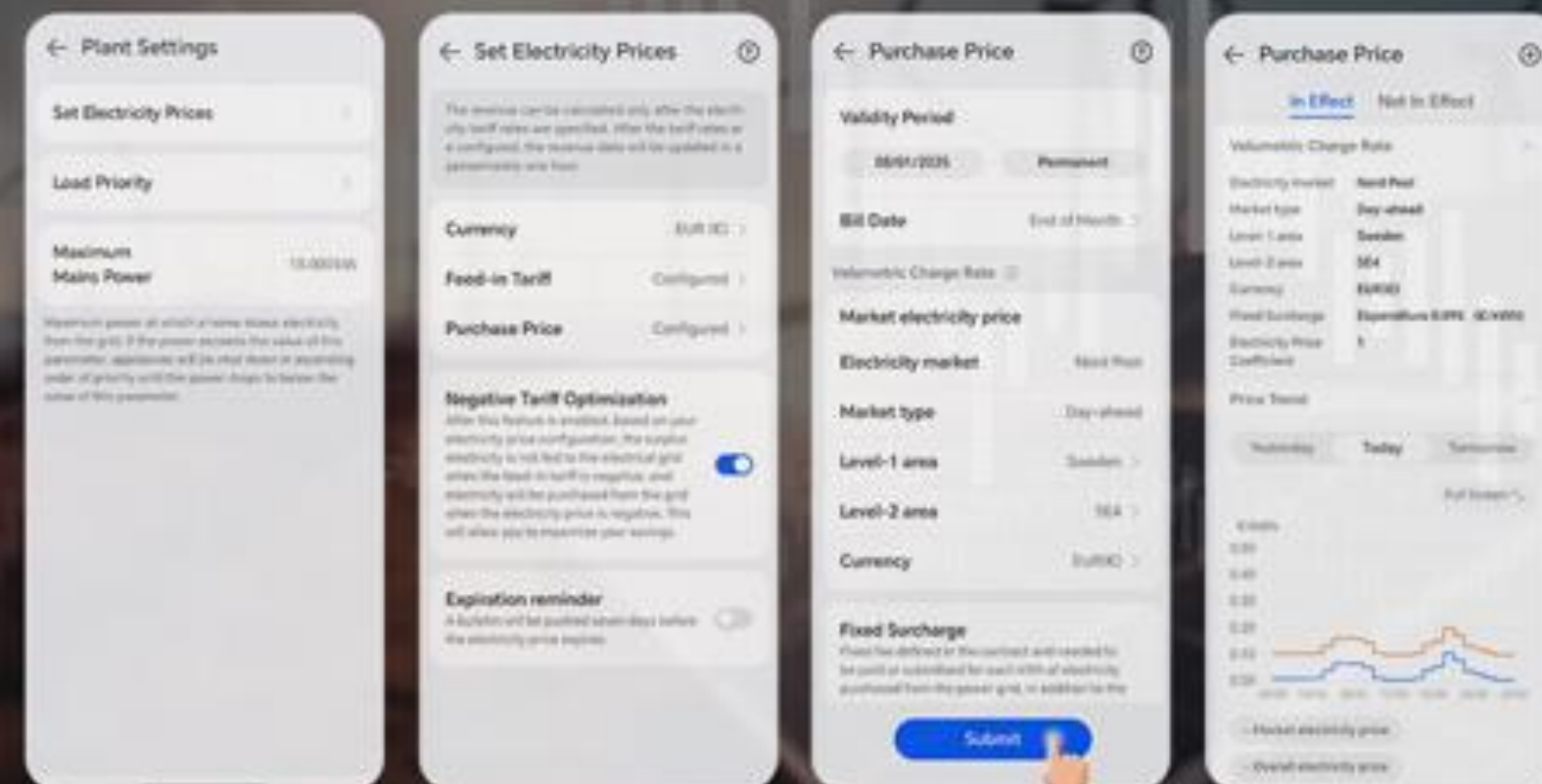
SMARTLY GREEN

Shine on Every Hour

When energy prices swing like a roller coaster—midnight lows, morning peaks, midday dips, evening surges—manual planning is just too much hassle.

Live Dynamic Price Market

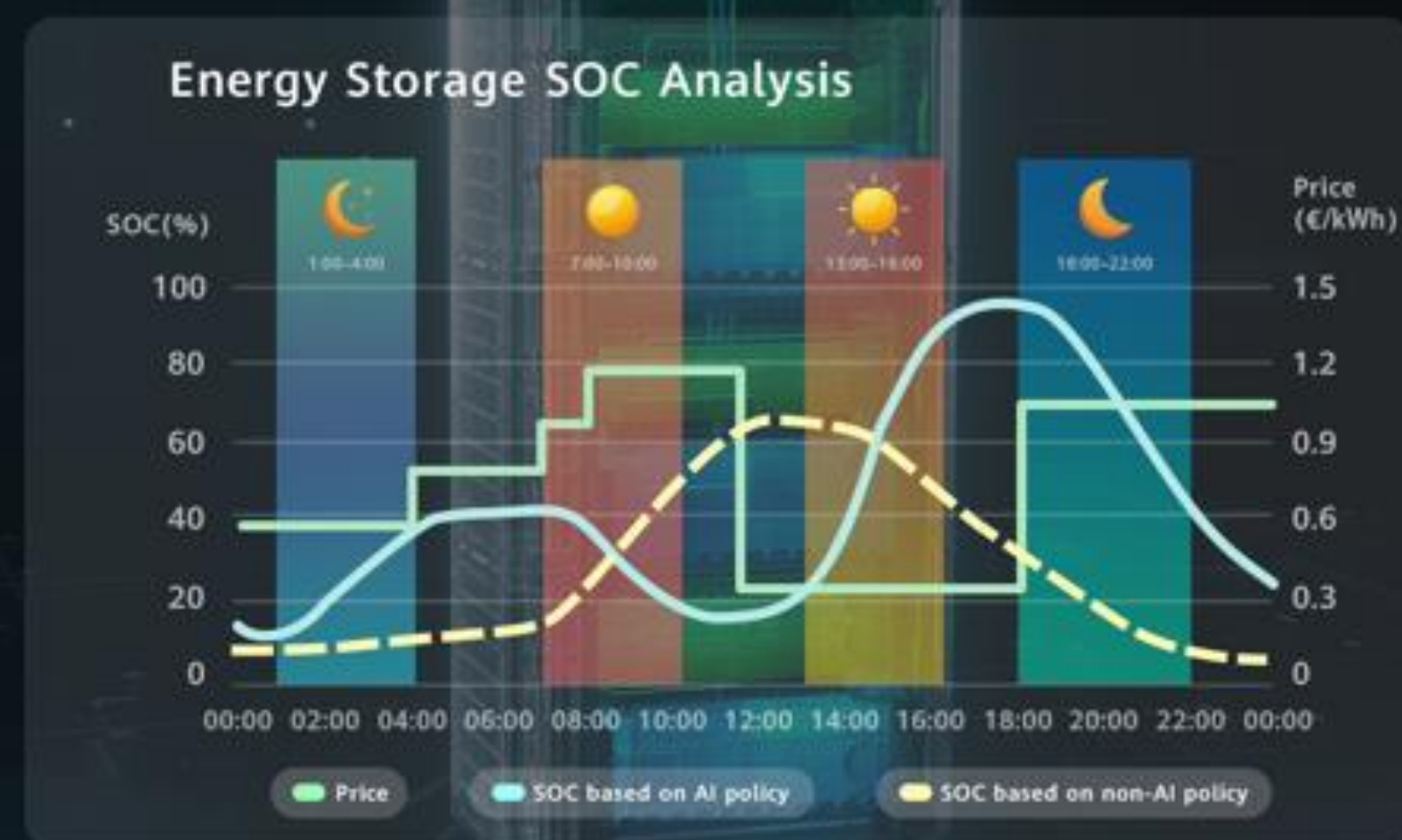
Syncs with Nord Pool*, ESIOS, EPEX Spot, and TGE, covering 10+ European countries



* Supports 15-minute data update with Nord Pool.

AI-powered strategy

Integrates 24-hour price trends, weather, PV, and household demand for the best charging & consumption planning



A day with AI




The assistant masters price swings and your daily rhythm, making every kilowatt smarter and every saving greater.

Dynamic Electricity Price Market & Related Countries

ELECTRICITY MARKET	RELATED COUNTRIES
ESIOS	Spain
TGE	Poland
EPEX Spot	Germany, Austria, France, Belgium, United Kingdom
Nord Pool	Sweden, Denmark, Finland, Norway, Lithuania, Estonia, Latvia, Netherlands, Germany, Belgium, Poland, Luxembourg

Higher Profit with Optimal Battery Discharge Strategy by AI scheduling

Case Configuration

 Munich, Germany

- SUN2000-12K-MAPO
- LUNA2000-21-S1
- SmartGuard-63A-T0

Key Appliances: Heat pump, EV Charger

**High-power Loads
Consumption Behavior**

Precise Detect, Optimal Discharge

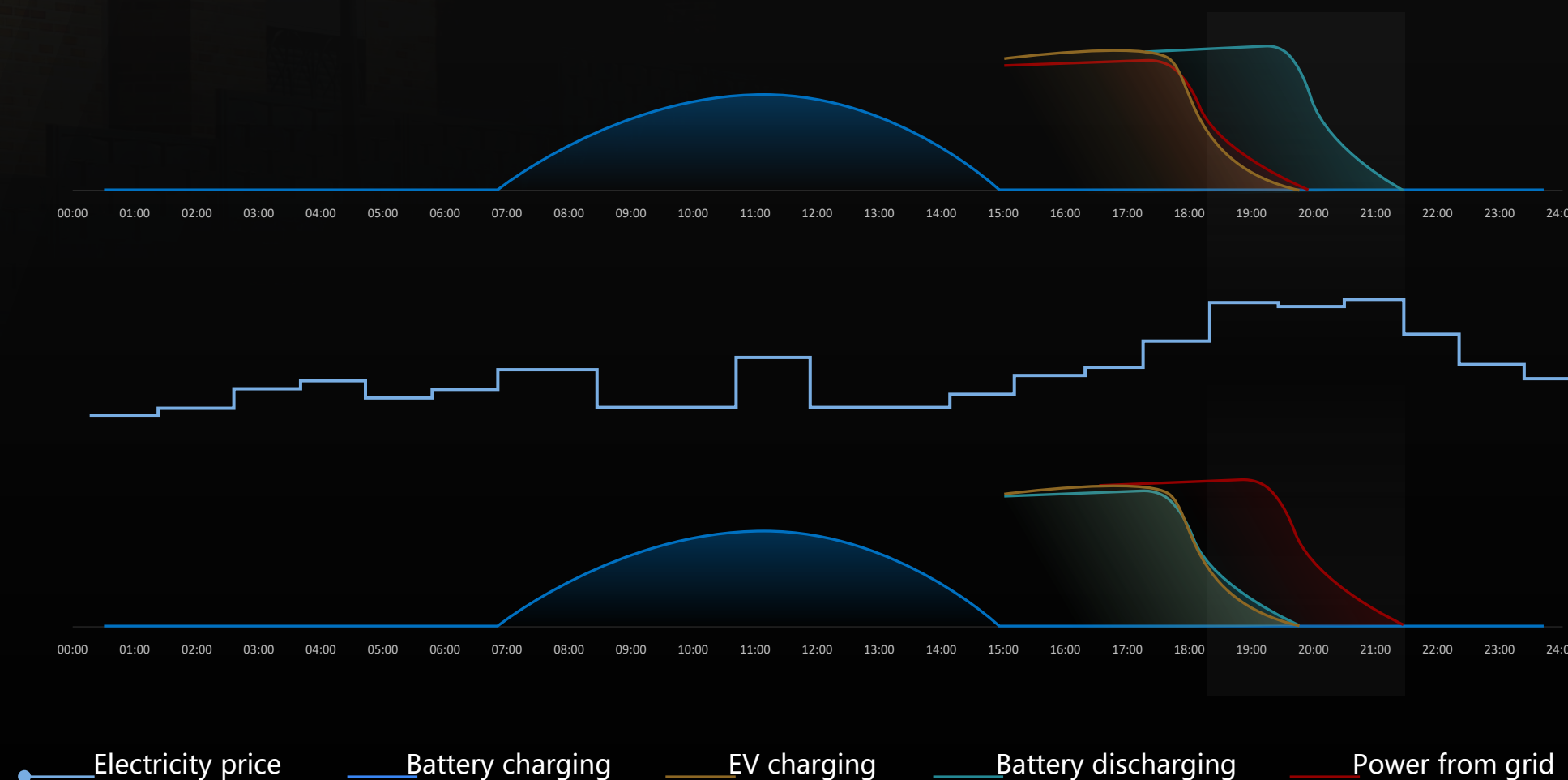
Detect high-power device consumption behavior precisely

Provide optimal battery discharge strategy in real time

Huawei AI Enabled

VS

Industry Without AI



Expected Benefits

€ 200

Annual bill savings

50 times EV charge annually

15 kWh Electricity consume each time

€ 0.3 dynamic price difference

* Fully open this function in July 10th 2025

* All data processing strictly complies with the General Data Protection Regulation (GDPR).

Ensure Zero Grid Feed-in During Negative Pricing with AI Scheduling

Case Configuration

Amsterdam,
the Netherlands

- SUN2000-10K-LCO
- LUNA2000-10-S0
- SmartGuard-63A-S0

In 2024
~500 hours
of negative electricity prices

Zero Grid Feed-in Without Cost Loss

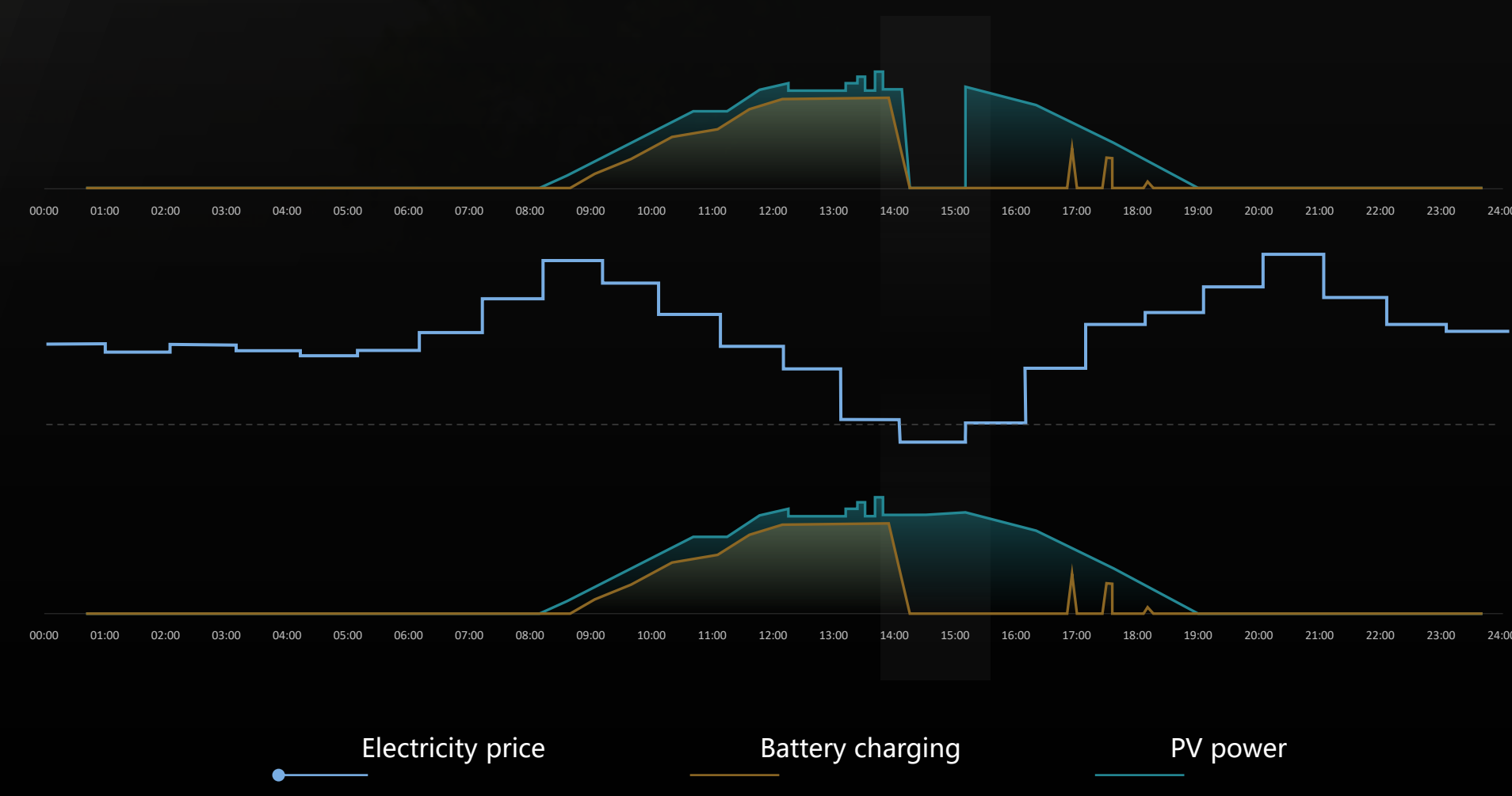
Precise power Generation prediction

Mandatory zero grid Feed-in when negative pricing

Huawei
AI Enabled

VS

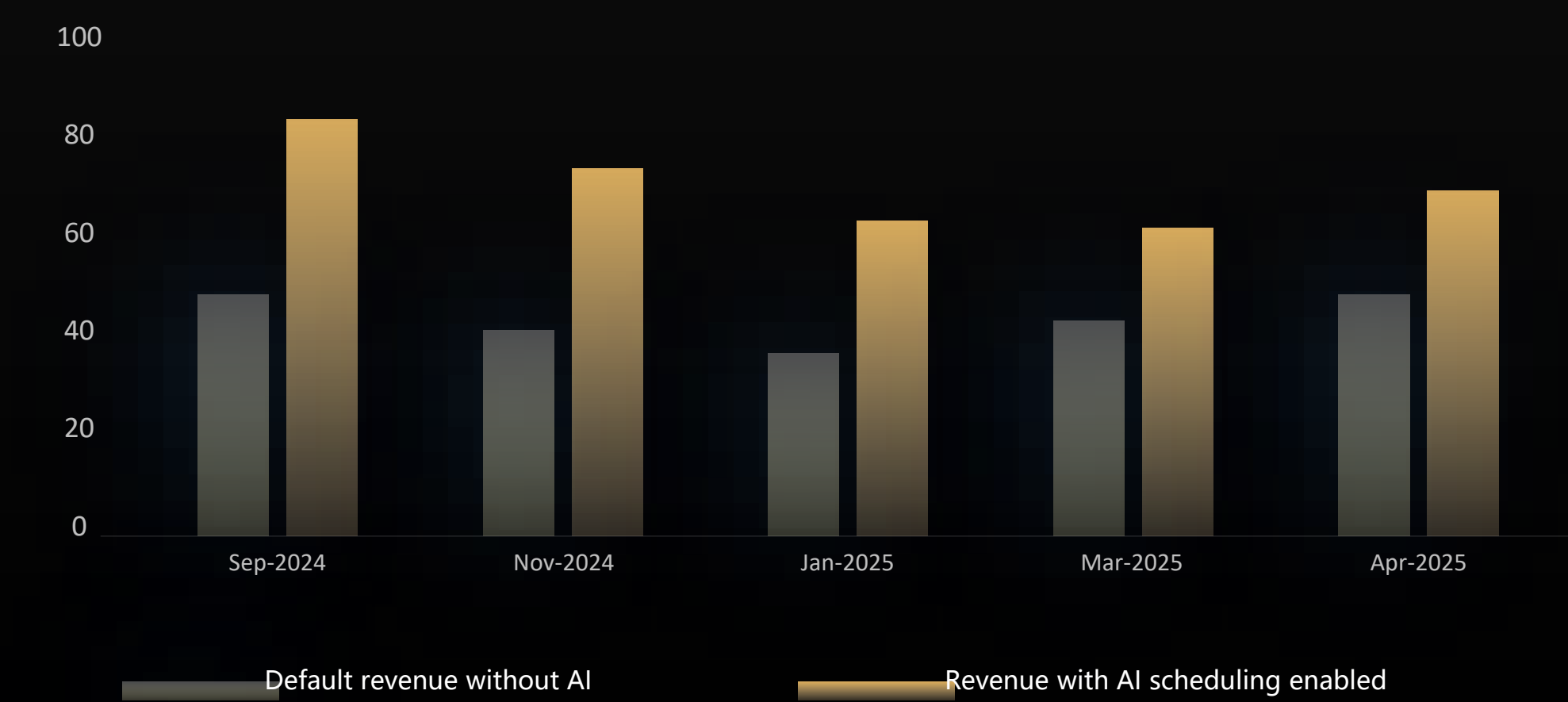
Industry
Without AI



Actual Benefits

€ 330

8 months, electricity bill savings



* All data processing strictly complies with the General Data Protection Regulation (GDPR).



Fusionsolar

SMARTLY GREEN

Warmth, Right on Time

Prepare your home's temperature in advance whether it's hot water or space heating



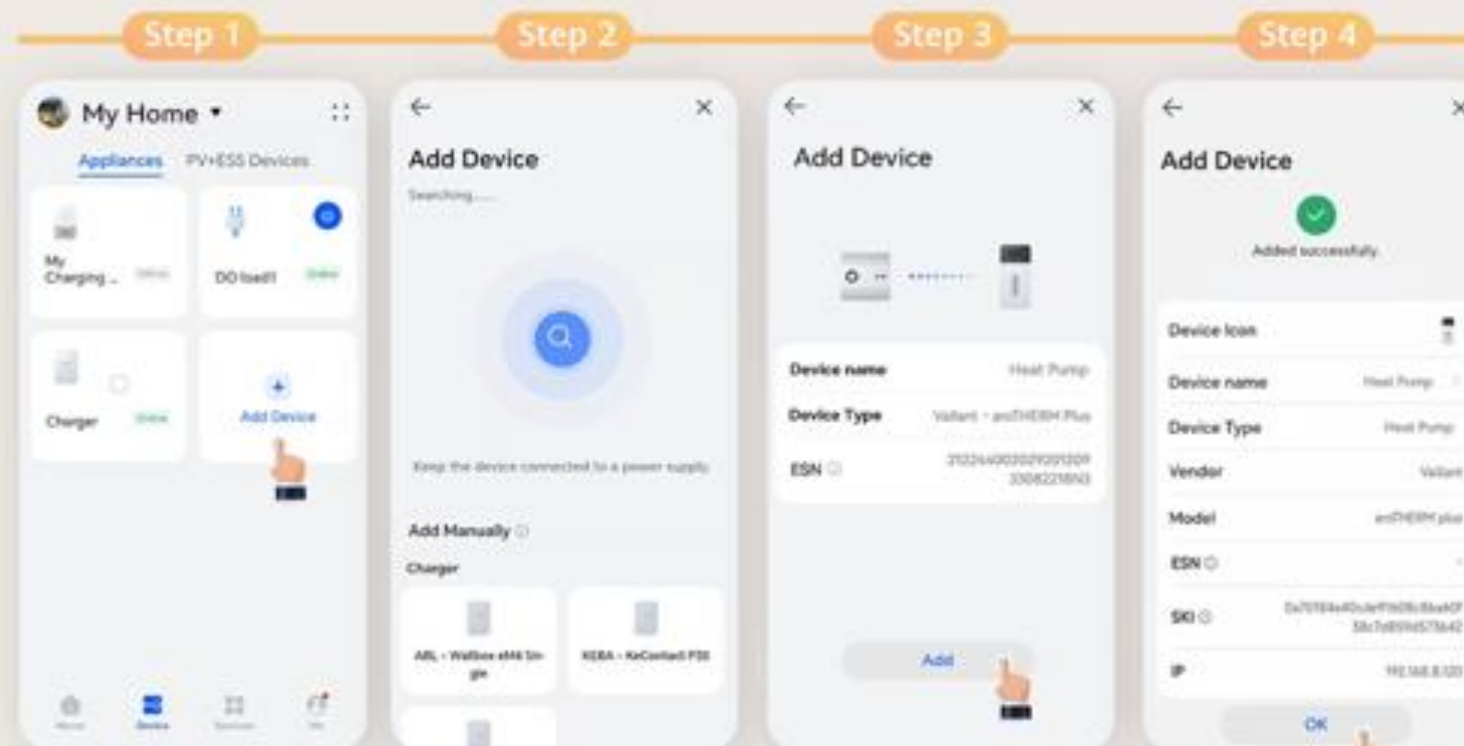
Easy Setup

- 1 Connect your heat pump or heating rod to Wi-Fi with SmartAssistant

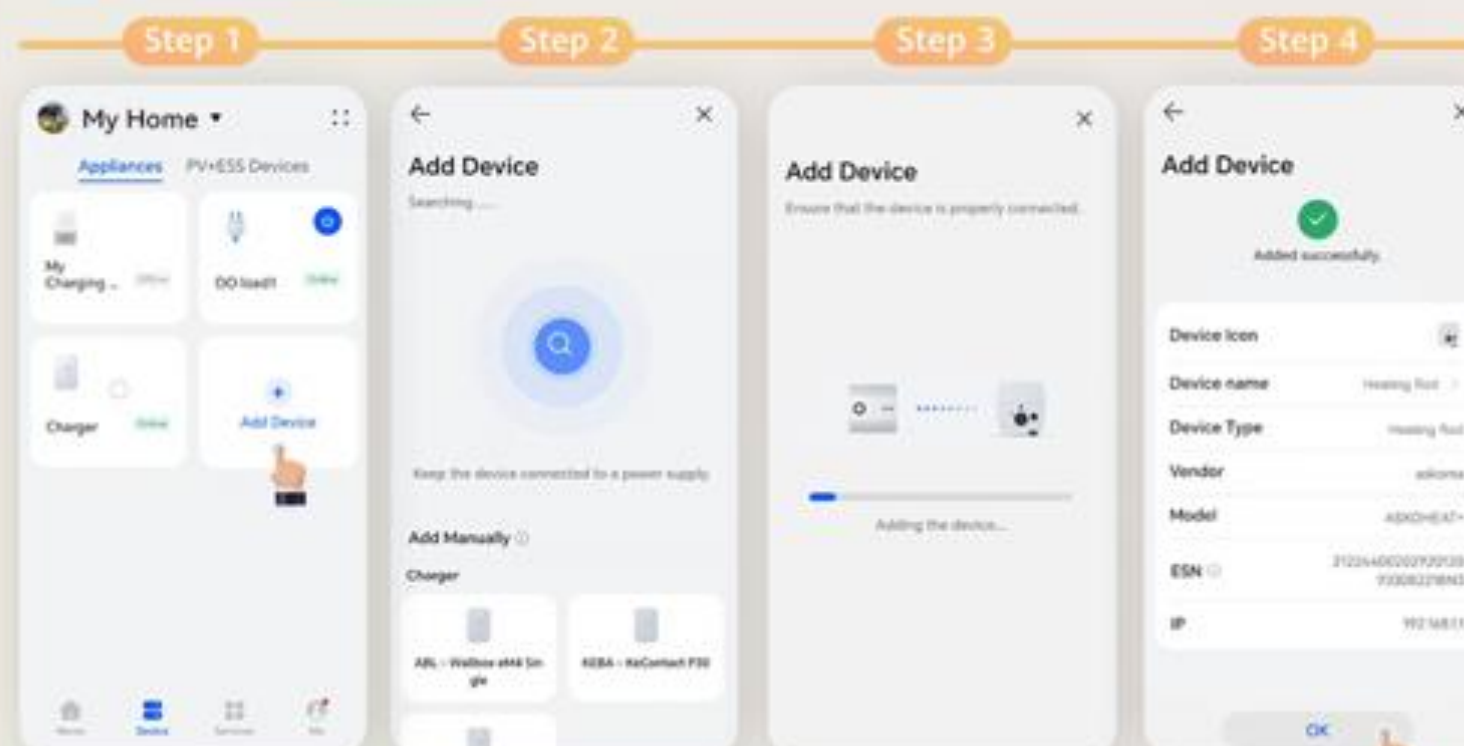


- 2 Open FusionSolar App and scan to add

Heat Pump



Heating Rod



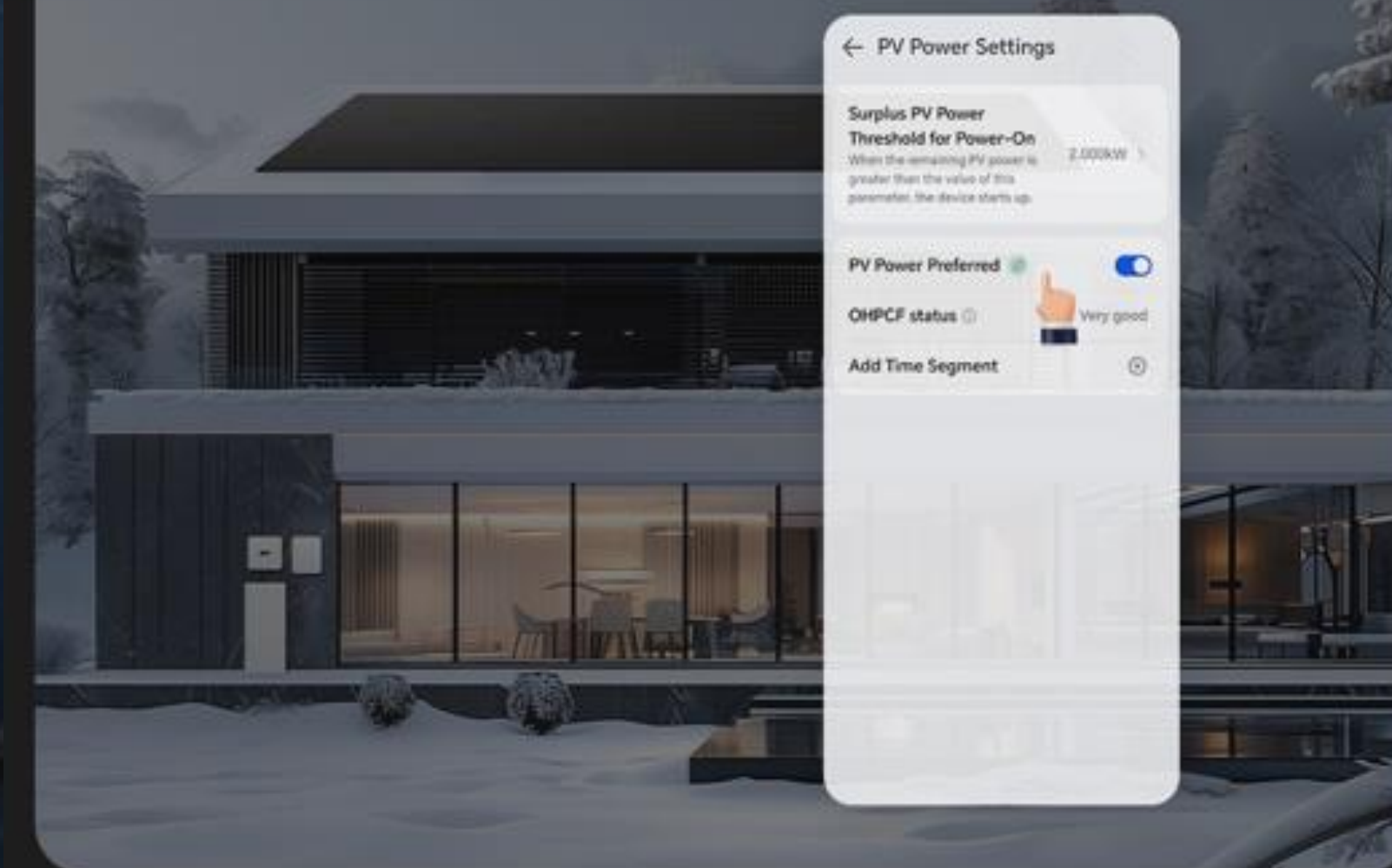
Smart Control

Adjust water or room temperature in the App
See real-time power and temperature at a glance



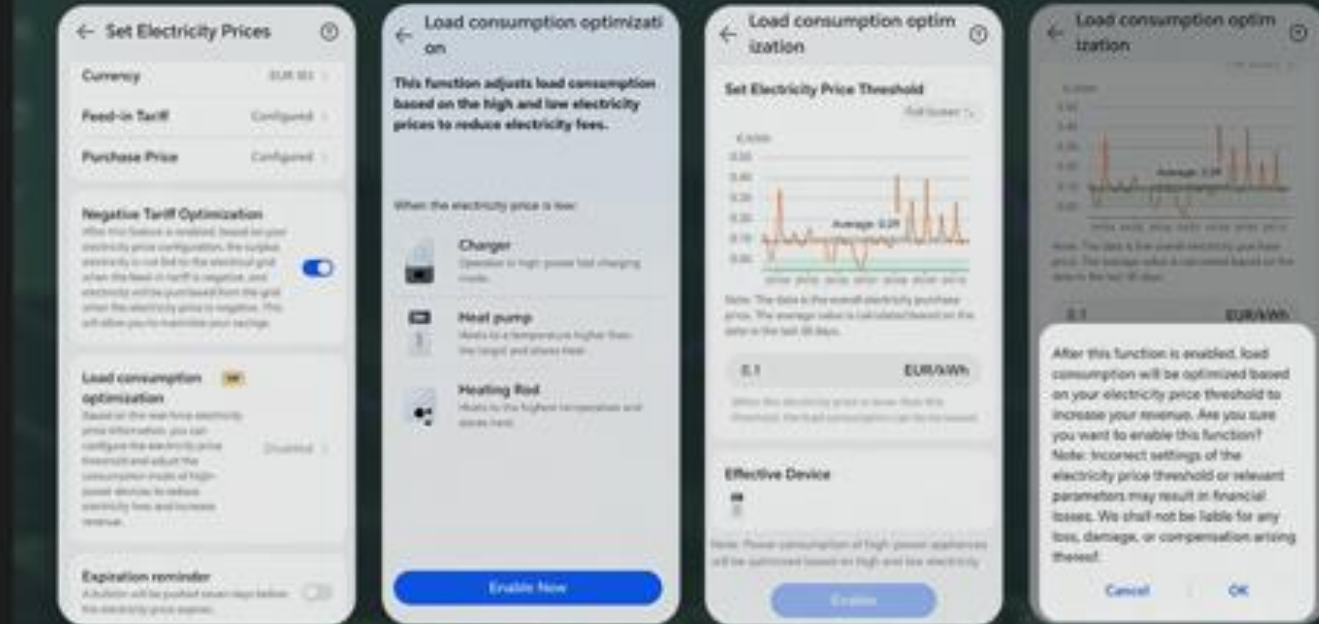
PV Power Preferred

Surplus solar automatically boosts heating, every bit of green energy fully used



Dynamic Pricing Mode

If you choose dynamic pricing, during the scheduled period, if the price drops below your limit, it will automatically boost heating
More low-cost energy, more savings



More than saving energy
—it's about living well

No more waiting, warmth arrives right on time

Compatible Devices

DEVICES	PROTOCOL	VENDOR	MODEL	NUMBER OF DEVICES
Heat Pump	EEBUS	Vaillant	aroTHERM plus (Vaillant Communication Gateway VR 940F version 1.24.2 or later)	≤1
Heater	Modbus-TCP	ASKOMA	ASKOHEAT+ AHIR-BI-plus 5.2 (version 4.8.4 or later)	≤1

- Wolf
- Sanier Duval
- Stiebel Eltron
- Midea
- Tongyi



Fusionsolar

SMARTLY GREEN

Shine on
Every Departure

Heading out last minute and need a quick full charge?
Weekend trip ahead—need the car ready in advance?
Hoping every ray of sunshine is put to use?

FusionSolar SmartAssistant has it all covered

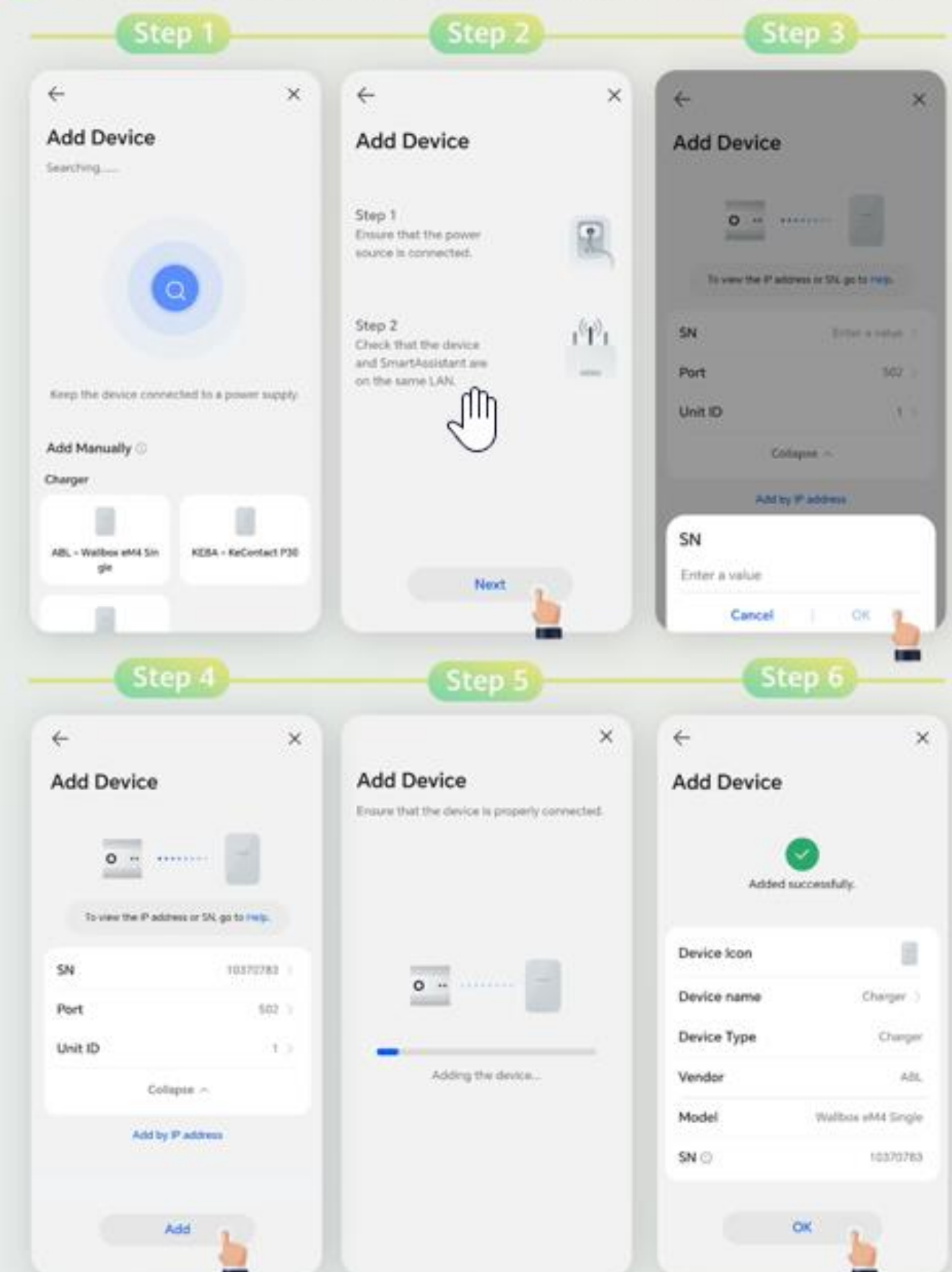


Easy Setup

1 Connect your charger to the same Wi-Fi as SmartAssistant

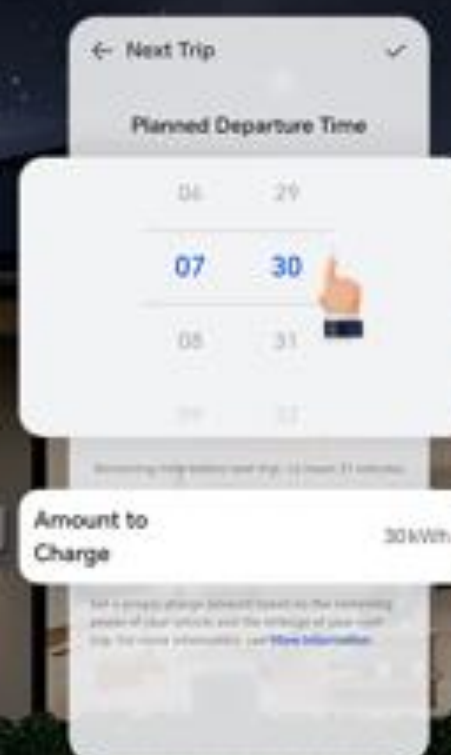


2 Open FusionSolar App, enter device IP or SN and add



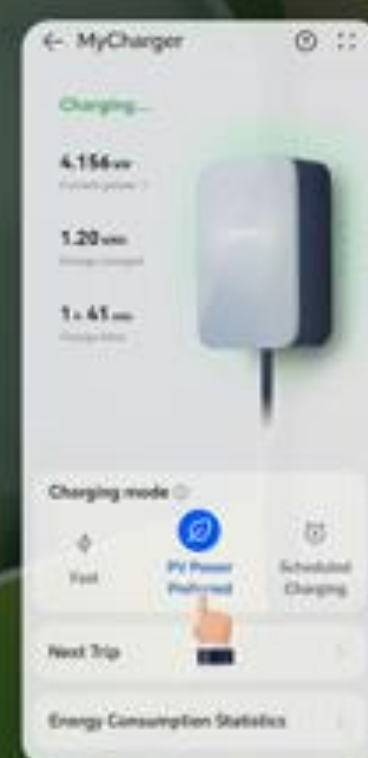
Next-trip Charge

Enter your departure time
and needed power,
system takes care



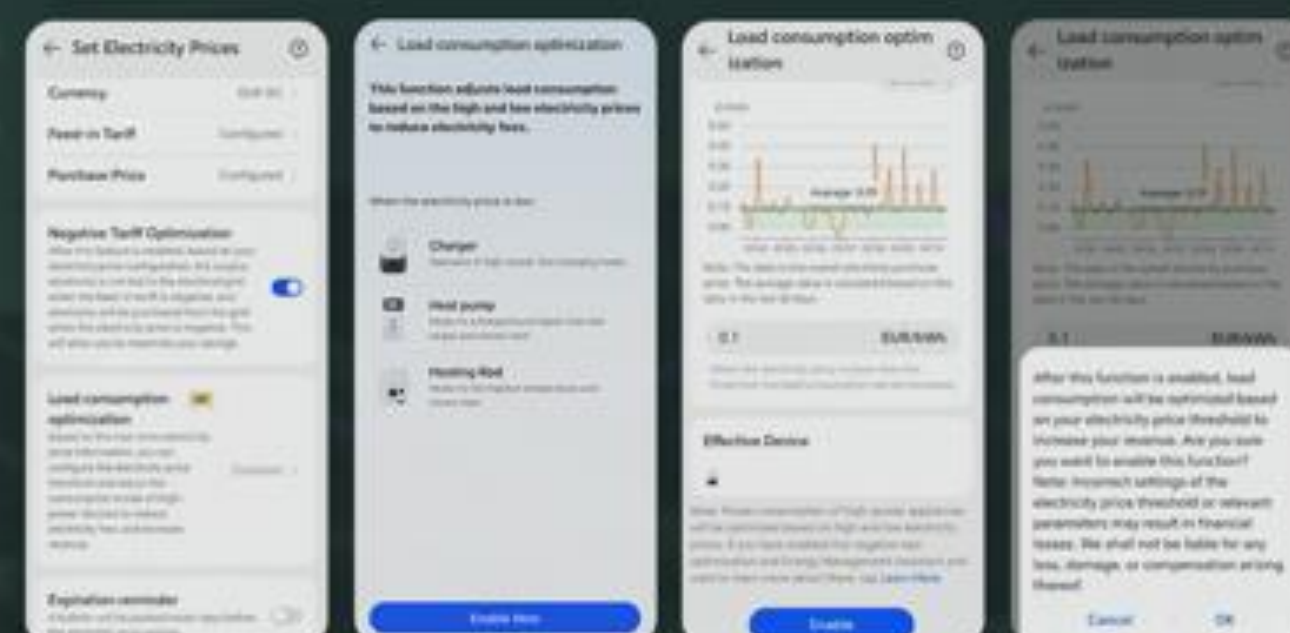
PV Power Preferred

Uses surplus solar,
no green energy wasted



Dynamic Pricing Mode

If you choose dynamic pricing, during the scheduled period,
if the price drops below your set limit,
it will automatically switch to fast charging
More low-cost energy, more savings



Compatible EV Charger Models

PROTOCOL	VENDOR	MODEL	NUMBER OF DEVICES ¹
Modbus-TCP	Huawei FusionSolar	SCharger-7KS-S0/22KT-S0 (FusionCharge V100R023C10SPC120 or later)	≤2
	MENNEKES	AMTRON Professional ² (version 5.22 or later)	≤1
	KEBA	KeContact P30 c-series P30 x-series ² (DPC version 3.10.57 or later)	
	ABL	Wallbox eM4 Single ² (version 2.2 or later)	



Zaptec GO



Wallbox Pulsar Max



AMTRON 4You 500



AUTEL A7



ambiCHARGE Home

Smart Assistant opens new world of customers:



SmartAssistant

ambibox

- **Bi Directional Charger**
- 100% compatible with Smart Assistant
- Ambibox said, from all the Inverters they tested, **Huawei is the best one**



On-demand Expansion, An Excellent New Option for C&I

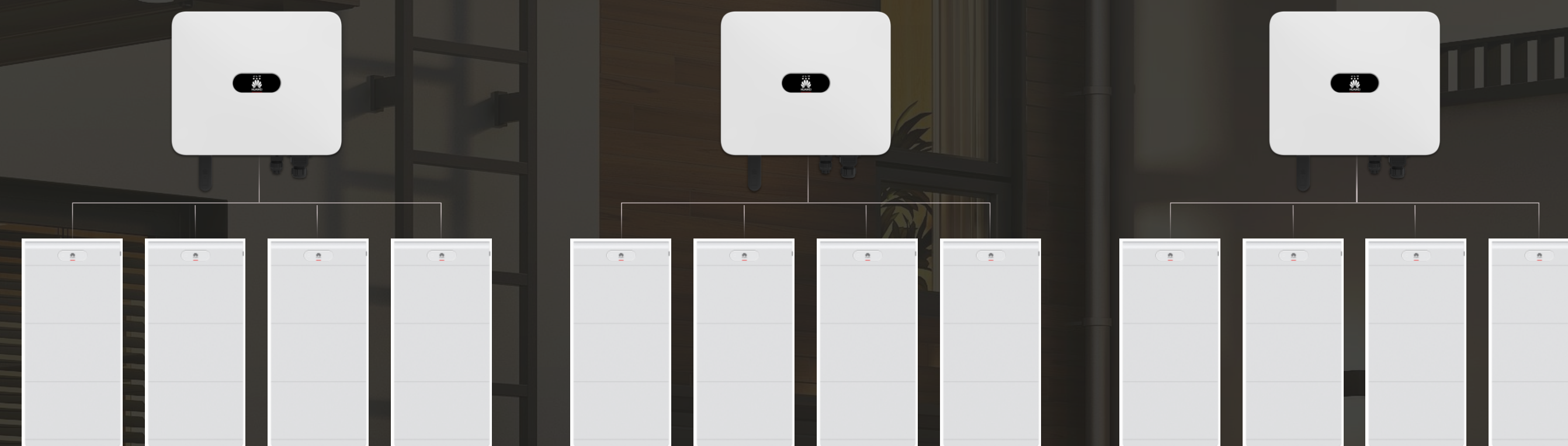
3 inverters max.



New

200 KW
Max.

12 ESSs max.



New

252 KWh
Max.



Fusionsolar

Thank You

A Home that Always Shines