

# Elecnova

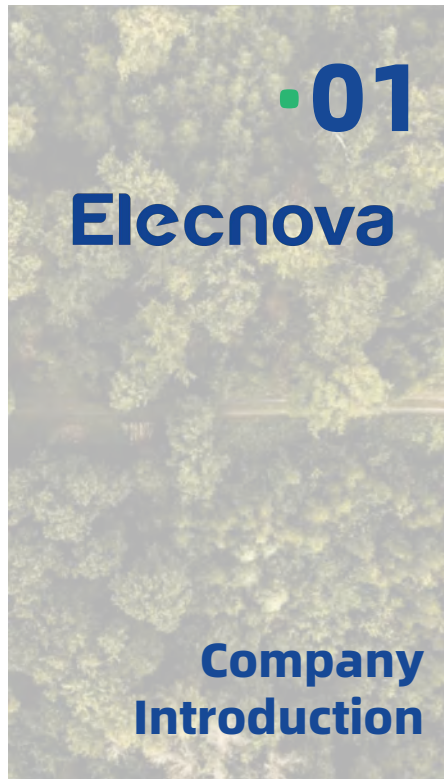
Energy for Earth, Power for People

# Agenda

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**• 01**  
**Elecnova**

**Company  
Introduction**



**• 02**



**ESS  
Products**



**• 03**



**Elecnova  
Guarantee**




**• 04**



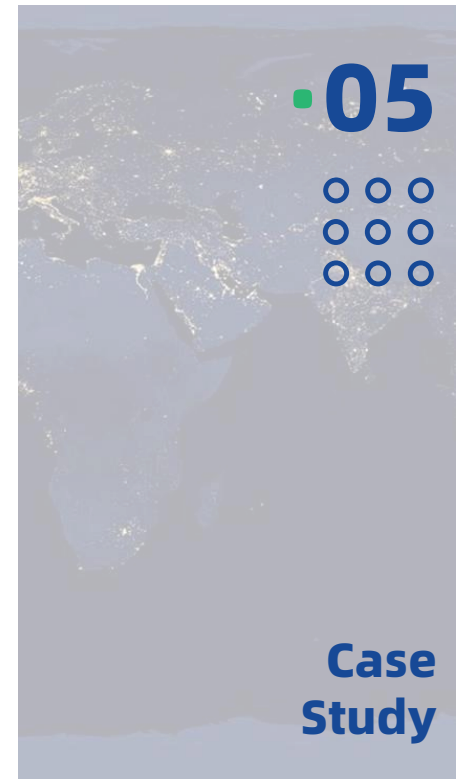
**Elecnova  
Solutions**



**• 05**



**Case  
Study**





• 01

Company  
Introduction

## ABOUT US

# Elecnova



Elecnova delivers smart and reliable energy storage solutions that empower businesses and communities to achieve energy independence and sustainability.

Leveraging advanced R&D and integrated manufacturing capabilities, Elecnova offers complete ESS solution packages – including PACK, PCS, BMS, and EMS – ensuring high performance, flexibility, and long-term reliability.



Tailored solutions built around real-world needs



Enabling clean, efficient, and low-carbon energy use



Contributing to a resilient and sustainable energy future



2

Factories



3

R&D Centers



28+

Years Established



700+

Employee



100,000+

Projects



# Company Milestones



## 1998

- Sfer Electric Power Meter was officially established

## 2003

- Award as "High-tech Enterprise" the first time
- Products passed CE certification

## 2008

- "Multi-function harmonic meter" won the "Beijing 2008 Olympic Project Excellent Product Award"

## 2013

- Cetified as a Software Enterprise
- Established the "Power Measurement & Control Device Engineering Technology Reserach Center"

## 2019

- Nanjing R&D center established



## 2021



- Strategic partner of Schneider Electric
- Excellent partner of ABB Electric(China)

## 2022



- Awarded “New Little Giant” enterprise

## 2023



- ELECNOVA ENERGY STORAGE CO., LTD. established in Shanghai

The first automated meter production line in China built

CNAS laboratory established

## 2024



- Dutch warehouse completed

## 2025



- Elecnova Dutch branch established

Elecnova new factory began production

# Global Strategy



## Global Partners

- Strategic Partner of Schneider Electric
- Excellent Partner of ABB Electric(China)

- a** Factory
- b** Shanghai Office
- c** Nanjing Office
- d** Dutch Branch & Warehouse
- e** Poland Office
- f** Romania Office
- g** Italy Office
- h** Turkey Office
- i** Vietnam Office
- j** Thailand Office
- k** Indonesia Office



# Business Scope

## Energy Storage System



- All-in-one Cabinet
- Hybrid Cabinet
- Battery Cabinet
- Battery Container

## Measuring Components



- AC Multi-Functional Power Meter
- AC Multi-Circuit Monitoring Power Meter
- Digital Power Meter
- DC Multi-Functional Power Meter
- DIN-rail Mounted Energy Meter

## Electrical Components



- Motor Protection Controller
- Communication Gateway
- Busway Temperature Monitoring System
- Temperature Monitoring Module

## Power Quality Device



- SVG Static Var Generator
- LV Power Capacitor Bank
- SLG Series Capacitive reactance
- PF Controller
- Static Var Generator Cabinet
- AHF Active Harmonic Filter
- Active Harmonic Cabinet

## Cabinets



- Intelligent Low-voltage Power Distribution Cabinet
- Control Cabinet
- Array Cabinet, Photovoltaic Grid-connected Cabinet, etc



• 02

ESS  
Products

# Products Map

## PCS All-in-one Cabinet



- 0.5P
- 100kW
- 233kWh
- 400V

ECO-E233LS



- 0.5P
- 100kW
- 215kWh
- 400V

ECO-E215WS



- 1P
- 100kW
- 101kWh
- 400V

ECO-E101WX



- 0.5P
- 125kW
- 261kWh
- 400V

ECO-E261LP-2A



- 0.5P
- 125kW
- 241kWh
- 400V

ECO-E241WP-2R

## Battery Cabinet+PCS Cabinet



- 0.3P
- 30kW
- 120kWh
- 400V

ECO-E120WP-P30



- 0.5P
- 60kW
- 107kWh
- 400V

ECO-E120WP-P60

*MPPT  
Option*

## Hybrid Cabinet



- 1P
- 25~50kW
- 64kWh
- 400V

ECO-E64WX



- 0.5P
- 50kW
- 107kWh
- 400V

ECO-E100/120WP

## Battery Cabinet



- 0.5P
- 372kWh

ECO-B372LS



- 0.5P
- 418kWh

ECO-B418LP

## PCS All-in-one Container



- 0.5P
- 1000kW
- 2170kWh
- 400V

ECO-E20FT2170LP-2

## Battery Container



- 0.5P
- 5015kWh

ECO-B20FT5015LP

# Low-voltage Grid Side ESS Product

Full C&I ESS Solutions

From 64kWh-2MWh capacity



**All-in-one Container**



**All-in-one Cabinet**



**Hybrid Cabinet**



**PCS Cabinet&Battery  
Cabinet**

# All-in-one Cabinets

## 400V Liquid-cooled Product

### Ultra Safety

- Top brands LFP cells
- Multiple rigorous tests
- Multi-levels Fire Protection
- Authoritative Security Certification

### Super Compact

- Built-in cooling system
- Built-in PCS, BMS., EMS
- Easy transportation
- Quick installation

### High Performance

- Support off-grid application
- Support multi-units parallel connection
- RTE > 89%

### Reassuring Warranty

- Max. >8000 cycles
- Standard 5-year warranty
- Support additional 5-year battery warranty

### Smart & Friendly

- Monitoring and alarm
- Remote operation
- Multi station management
- Smart strategy

### Fully Certified

- IEC 62477
- IEC 61000
- IEC 62619
- IEC 63056
- UL 9540A\*
- EN 50549

## ECO-E261LP-2A

 314Ah@0.5C

 125kW/261kWh

 Liquid Cooled



## ECO-E233LS

 280Ah@0.5C

 100kW/233kWh

 Liquid Cooled



\*UL9540A certification is only applicable to ECO-E233LS currently.

# All-in-one Cabinets

## 400V Air-cooled Product



### Ultra Safety

- Top brands LFP cells
- Standard production
- Multiple rigorous tests
- Authoritative Security Certification



### Reassuring Warranty

- Max. >8000 cycles
- Standard 5-year warranty
- Support additional 5-year battery warranty



### Super Compact

- Built-in cooling system
- Built-in PCS, BMS, EMS
- Easy transportation
- Quick installation



### Smart & Friendly

- Monitoring and alarm
- Remote operation
- Multi station management
- Smart strategy



### High Performance

- Support off-grid application
- Support multi-units parallel connection
- RTE > 88%



### Fully Certificated

- IEC 62477
- IEC 61000
- IEC 62619
- IEC 63056
- EN 50549

### ECO-E215WS

280Ah@0.5C

100kW/215kWh

Air Cooled



### ECO-E101WX

120Ah@1C

100kW/101kWh

Air Cooled



### ECO-E241WP-2R

314Ah@0.5C

125kW/241kWh

Air Cooled



# Hybrid Cabinets

## ECO-E64WX

 120Ah@1C

 64kWh

 Air Cooled

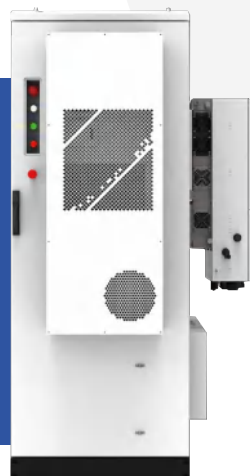


## ECO-E100/120WP

 280Ah@0.5C

 100/120kWh

 Air Cooled



### Hybrid Solution

- PV connection available
- Compatible with Solis, Solinteg



### High Performance

- DC coupled solution
- Inverter efficiency > 97%
- RTE > 90%
- Support multi-units parallel connection



### Wide Power Range

- 25/30/35/40/50kW
- 30/40/50kW



### UPS Switching

- Back-up loads connection
- Off-grid application
- Switching time < 20ms



### Smart & Friendly

- Compatible with hybrid inverter's platform
- Multiple work modes
- Smart monitoring & manage



### Fully Certificated

- IEC 62477
- IEC 61000
- IEC 62619
- IEC 63056

# PCS Cabinet & Battery Cabinet

## ECO-E120WP-P30

 280Ah@0.5C

 30kW/120kWh

 Air Cooled



## ECO-E120WP-P50

 280Ah@0.5C

 50kW/120kWh

 Air Cooled



### Hybrid Solution

Optional MPPT module, PV connection available



### High Cost-effectiveness

Compared to the hybrid cabinet solution, it has a cost advantage.



### High Performance

Support multi-units parallel connection in on/off grid application



### Customization Service

Customization services are offered to meet requirements such as grid-connected power limits.

# All-in-one Container

## ECO-E20FT2170LP-2



 **314Ah@0.5C**

 **1MW Power (400V)**

 **Liquid Cooled**

 **Standard 20-ft**

 **2.17MWh Capacity**

### Hybrid Cooling System

- A liquid-cooled battery cooling system combined with an air-cooled PCS cooling system provides dual assurance for system efficiency

### All-in-One Design

- Highly integrated 3S system, cooling system, and fire-protection system, delivering greater capacity within a smaller footprint

### String-Based Solution

- Each battery cluster is independently managed, ensuring higher efficiency and system stability

### Standard 20ft Container

- Pre-tested and pre-installed before delivery, enabling easy transportation, simple commissioning, and shorter lead times



# All-in-one Container

## ECO-E20FT2170LP-2



Item	Specifications	Notes
<b>DC</b>		
Cell	LFP 314Ah	
Battery System	9P240S	
Rated Energy	2170kWh	100%DOD, (25±2) °C, 0.5P
Rated Voltage	768V	
Voltage	DC 672 ~ 864V	Single cell 2.8V~3.6V
<b>AC</b>		
Rated Power	1000kW	PCS x9
Power Max.	1100kW	
Rated Voltage	400V AC/3P+N+PE	
Frequency	50Hz/60Hz	
THDi	≤3%	
DC Component	< 0.5%I <sub>pn</sub>	
PF	-0.99 ~ +0.99	



# All-in-one Container

## ECO-E20FT2170LP-2



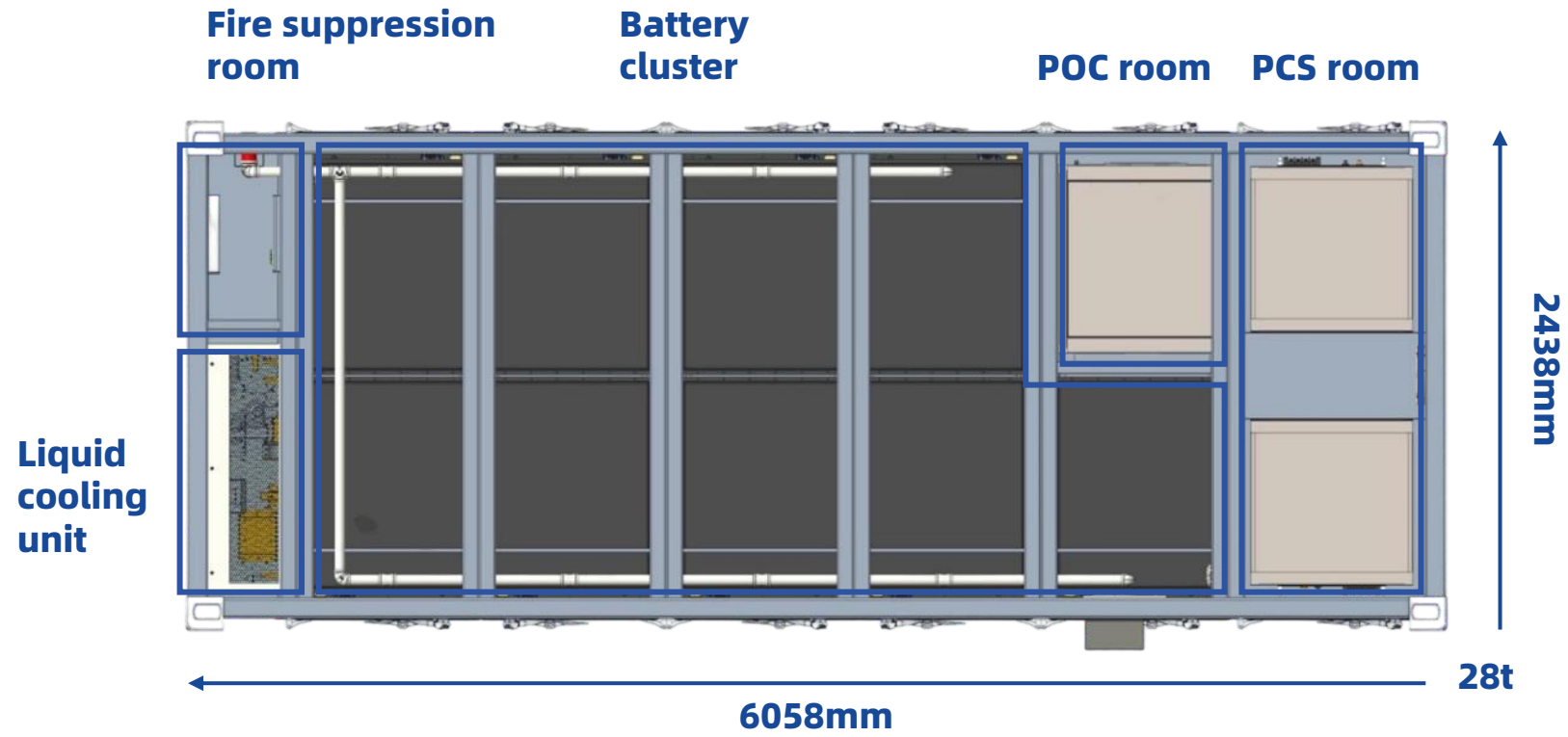
Item	Specifications	Notes
	<b>System</b>	
RTE	≥88%	
Charge/Discharge Rate	≤0.5P	
DOD	100%	
Cycle	≥8000 times (25±2°C)	25±2°C, 0.5P, 95% DOD
IP Level	IP54	
Cooling	Liquid cooling	
Operate Temperature	-25 ~ 55°C	
Humidity	0 ~ 95%RH	
Altitude	≤2000m	
Dimensions (W*D*H)	6058×2438×2591mm	20-foot standard cabinet
Weight	24t	
Fire suppression	Aerosol system (pack level and container level), water spray system	
Communication	Ethernet/RS485	

# All-in-one Container

ECO-E20FT2170LP-2

## Structural Design

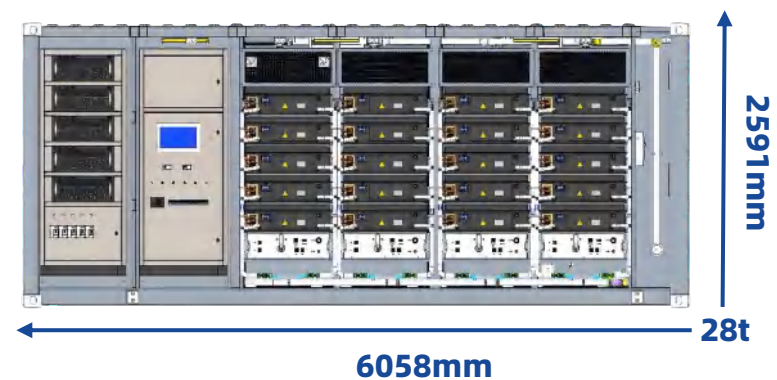
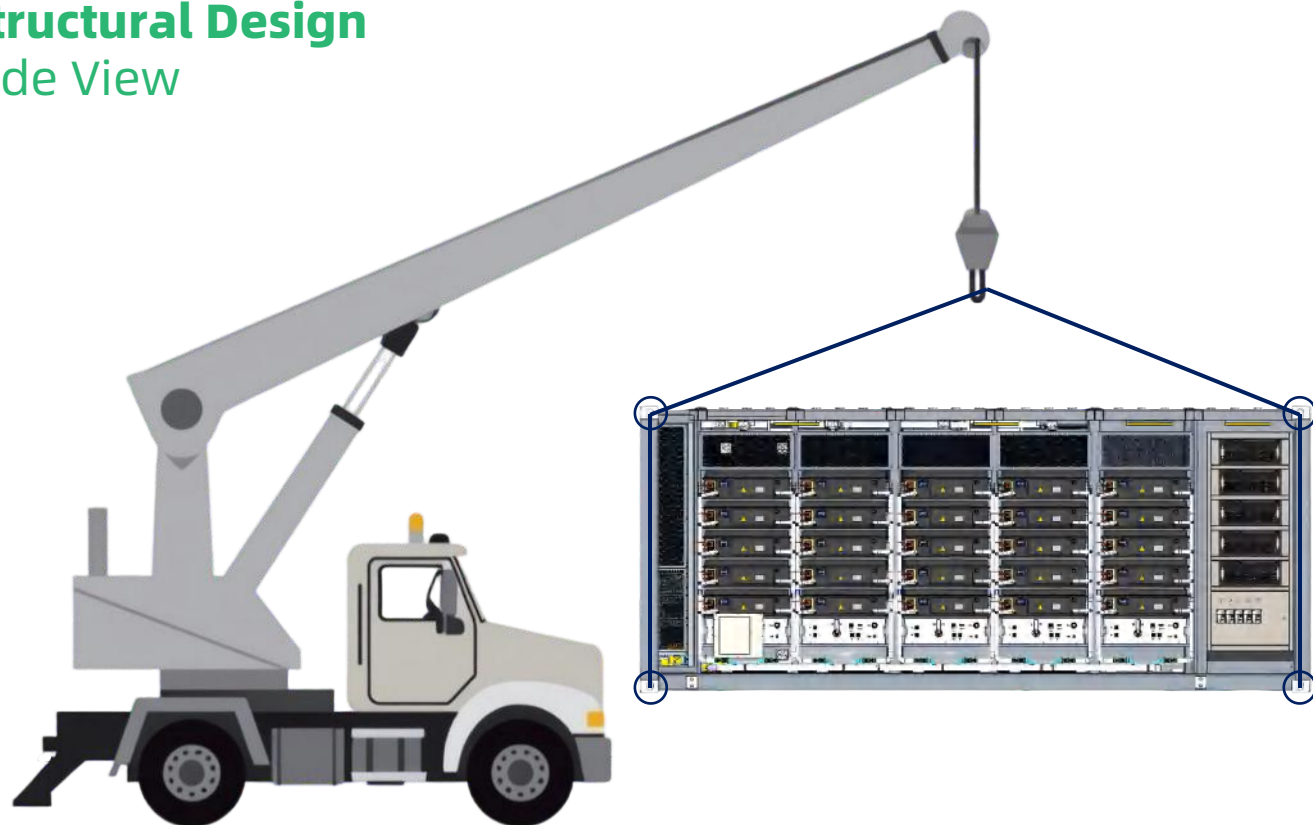
Top View



# All-in-one Container

ECO-E20FT2170LP-2

Structural Design  
Side View

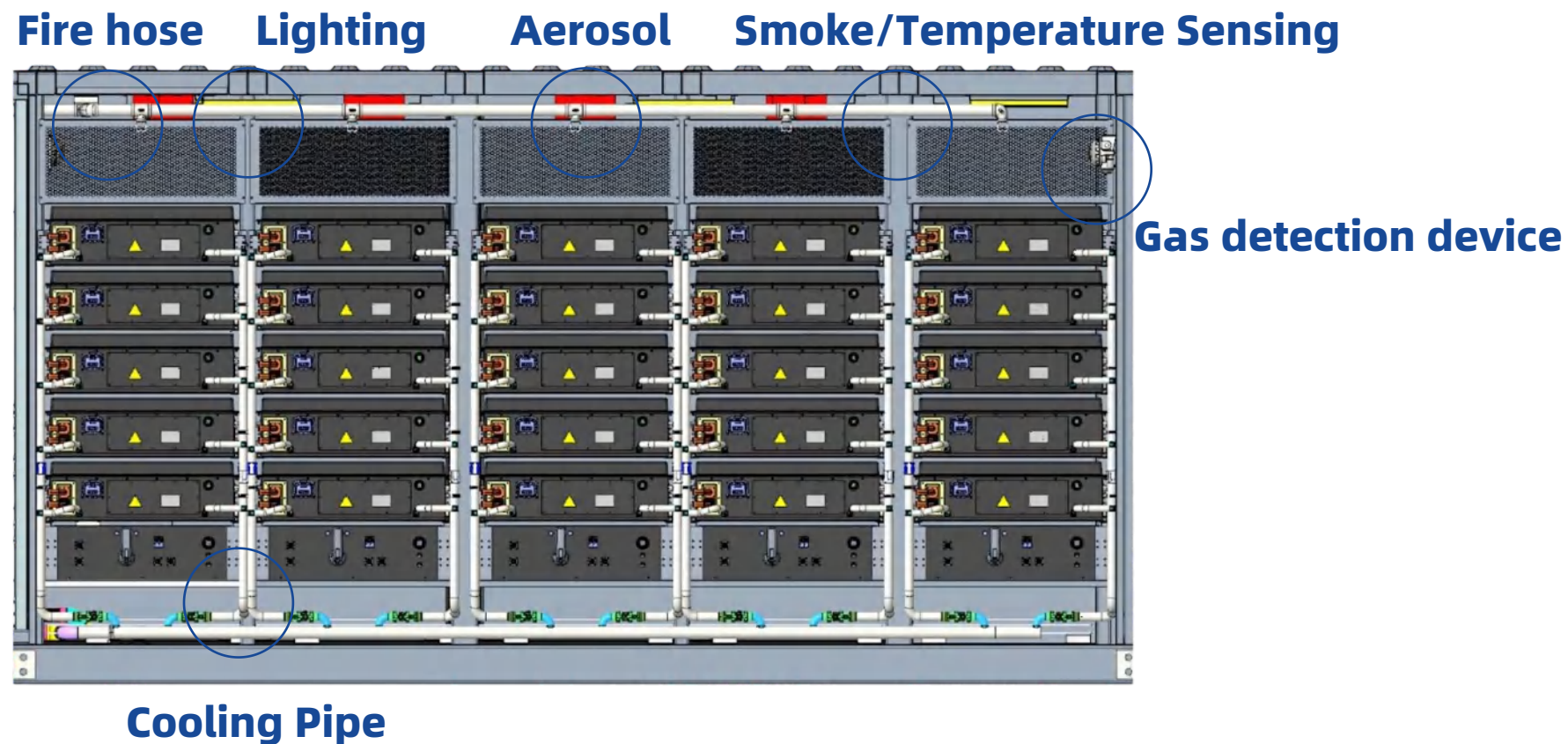


# All-in-one Container

## ECO-E20FT2170LP-2

### Structural Design

Heat dissipation and safety configuration



# All-in-one Container

## ECO-E20FT2170LP-2

### Transport Standards

- UN38.3

### Battery Pack

- TUV MARK  
(IEC 62619; IEC63056)

### Container

- EN/IEC 62477-1 LVD; EN/IEC 61000 EMC;

**On Going:** UL9540A; IEC 62933-5-2;



### Grid Connection



European  
EN Standard



Germany



United  
Kingdom



Netherlands



Belgium



Sweden



Bulgaria



Romania



Hungary



Poland



Greece



Spain



Ireland



Italy



Czech



Denmark



Austria



Estonia



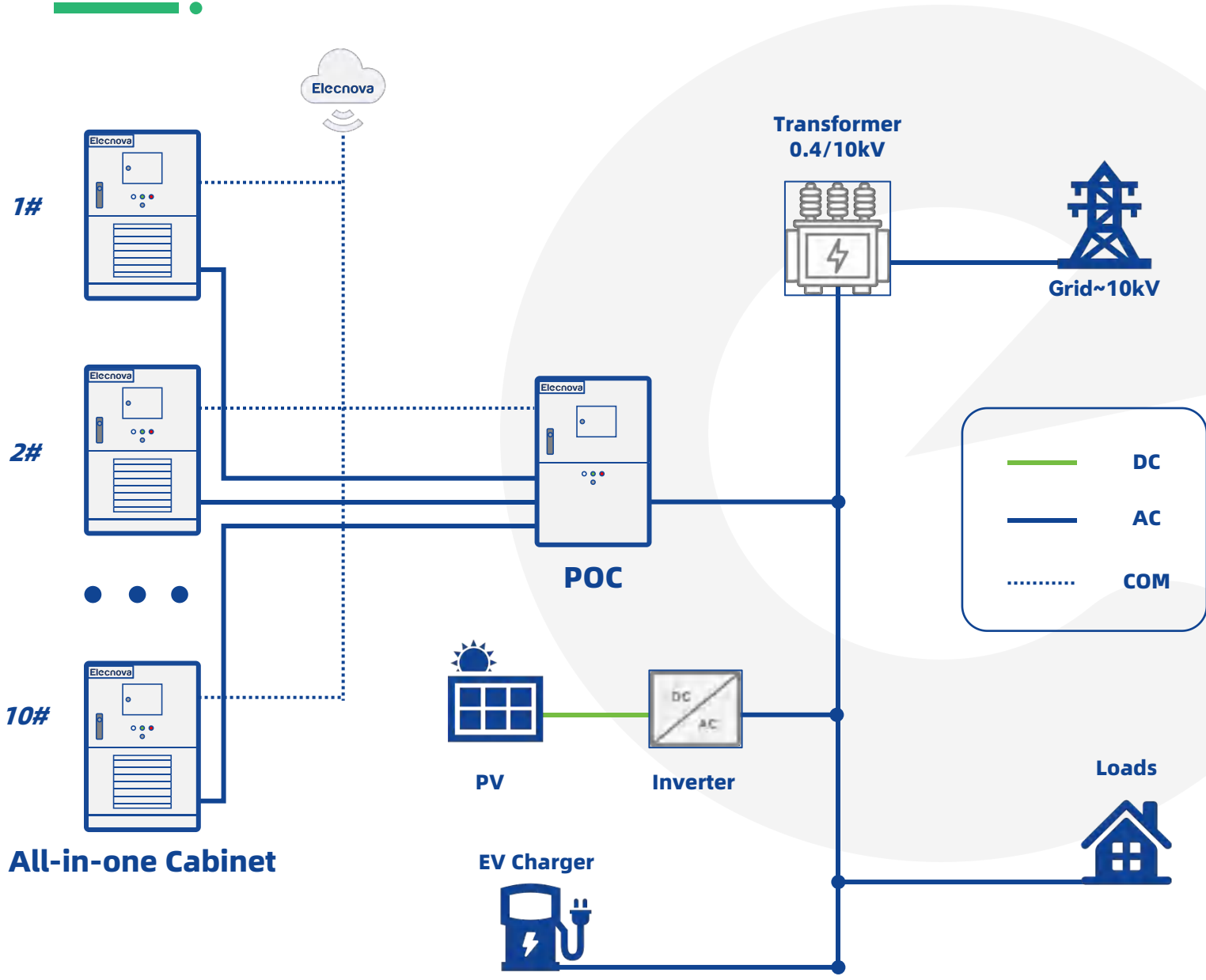
Thailand



Slovakia



# C&I Solution Elecnova Solutions

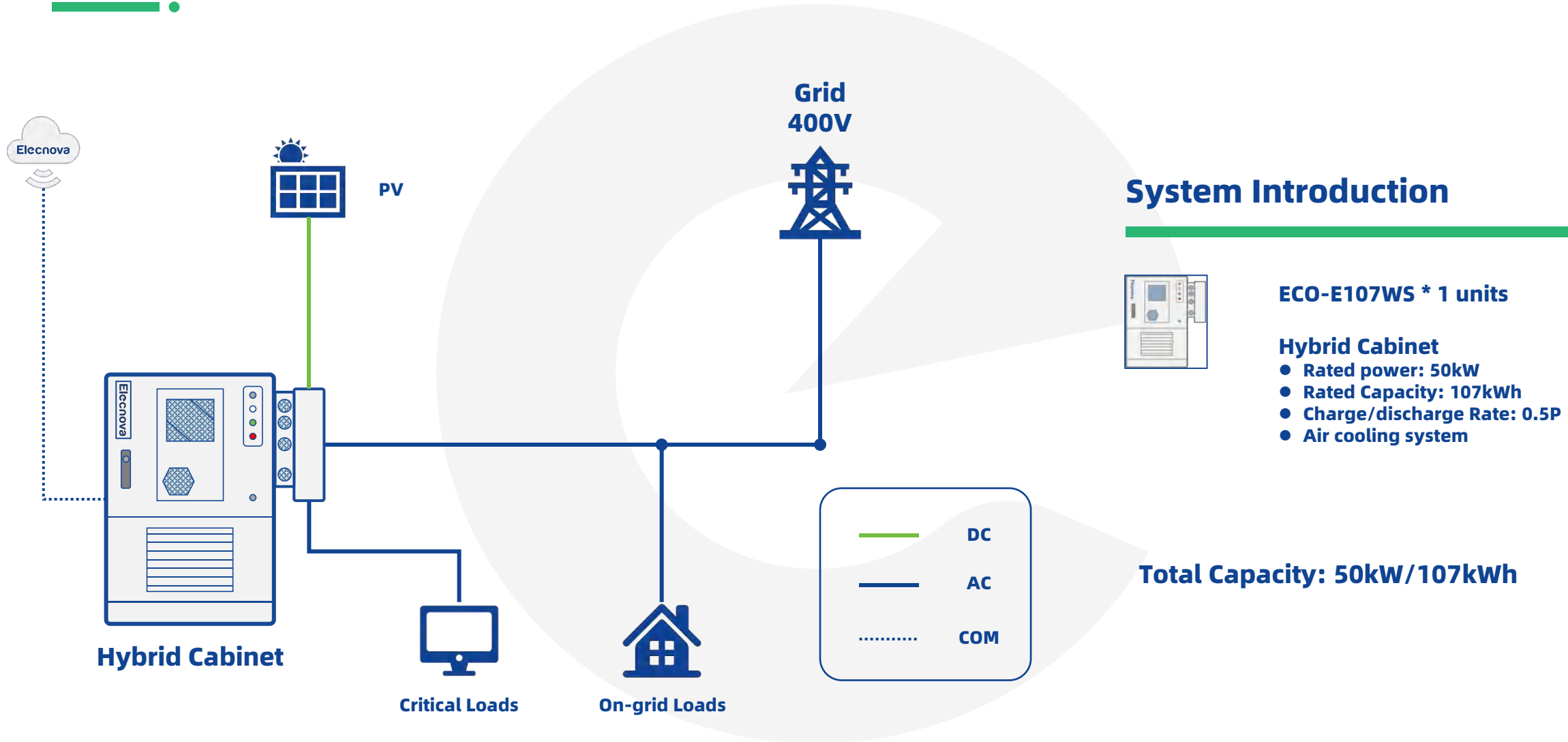


## System Introduction

- ECO-E233LS \* 10 units**
- All-in-one Cabinet**
  - Rated power: 100kW
  - Rated Capacity: 233kWh
  - Charge/discharge Rate: 0.5P
  - Liquid cooling system
- POC \* 1 units**
- Point of Connection Cabinet**
- Total Capacity: 1MW/2.3MWh**

# Hybrid Solution

Elecnova Solutions



## System Introduction

ECO-E107WS \* 1 units

### Hybrid Cabinet

- Rated power: 50kW
- Rated Capacity: 107kWh
- Charge/discharge Rate: 0.5P
- Air cooling system

Total Capacity: 50kW/107kWh

# High-voltage Grid Side ESS Product

Full Utility ESS Solutions

From 418kWh-5MWh capacity



**Battery Cabinet**



**Battery Container**

# Battery Cabinets



## Easy Expansion

- Modular design for easy capacity expansion



## Ultra Safety

- Liquid cooling system
- Top brand LFP cells
- Multiple protection



## Good Adaptability

- IP55 Protection
- Optional C5 corrosion resistance
- Indoor/Outdoor installation available



## Long Cycle Life

- Max. >8000 cycles
- Standard 5-year warranty
- Support additional 5-year battery warranty



## Quick Installation

- Easy to transport
- Standard installation to reduce the on-site labor



## Fully Certificated

- IEC 62477
- IEC 61000
- IEC 62619
- IEC 63056

## ECO-B372LS

280Ah@0.5C

372kWh

Liquid Cooled



## ECO-B418LP

314Ah@0.5C

418kWh

Liquid Cooled



# Battery Container

## ECO-B20FT5015LP

 314Ah@0.5C

 5.015MWh

 Liquid Cooled

 Standard 20-ft



### Industry Standard

- 314Ah top brands LFP cells
- Standard 20-ft container
- Flexible 5MWh capacity
- Customized output channel



### High Compatibility

- Default to using Sinexcel PCS, with support for matching specified PCS.
- Default to using the Elecnova EMS, with support for matching with third-party EMS.



### One-stop Solution

- Elecnova provides a complete suit of solution with battery container and PCS boost container, ensuring convenient and worry-free experience

# 5MWh Product Parameters

## ECO-B20FT5015LP



Item	Parameter
Cell Type	LFP314 Ah
Pack Configuration	104.5kWh / 1P104S
System Configuration	5.015MWh / 12P416S
Rated DC Voltage	1331.2 V
DC Voltage Range	1165 ~ 1498 V
Max. Charge/Discharge Rate	0.5 P
Max. Depth of Discharge	100% (25 ± 2 °C)
Cycle Life	≥ 8,000 cycles
Fire Suppression System	Aerosol system(pack level and container level), water spray system
Ingress Rating	IP55
Cooling	Liquid cooling+Forced air cooling
Operating Temperature	-25°C~55°C (Derating after 45°C)
Anticorrosion Rating	C4 (C5 optional)
Humidity	0~95% RH (non-condensing)
Altitude	3000m
Dimensions (W*D*H)	6,058*2,438*2,896 mm
Weight	45 t



# Level Fire Suppression System

## ECO-B20FT5015LP

### 1st Layer Protection



Pack-level submerged protection system

- Real-time cell-level temperature monitoring
- Activate for the battery pack with abnormal temperature
- Aerosol injection
- Protection efficiency can reach 90%

### 2nd Layer Protection



Submerged gas extinguishing

- Thermal runaway spread to the container
- Temperature sensor, smoke sensor and/or gas detector triggered (fire alarm activated)
- Aerosol released for gas extinguishing

### 3rd Layer Protection

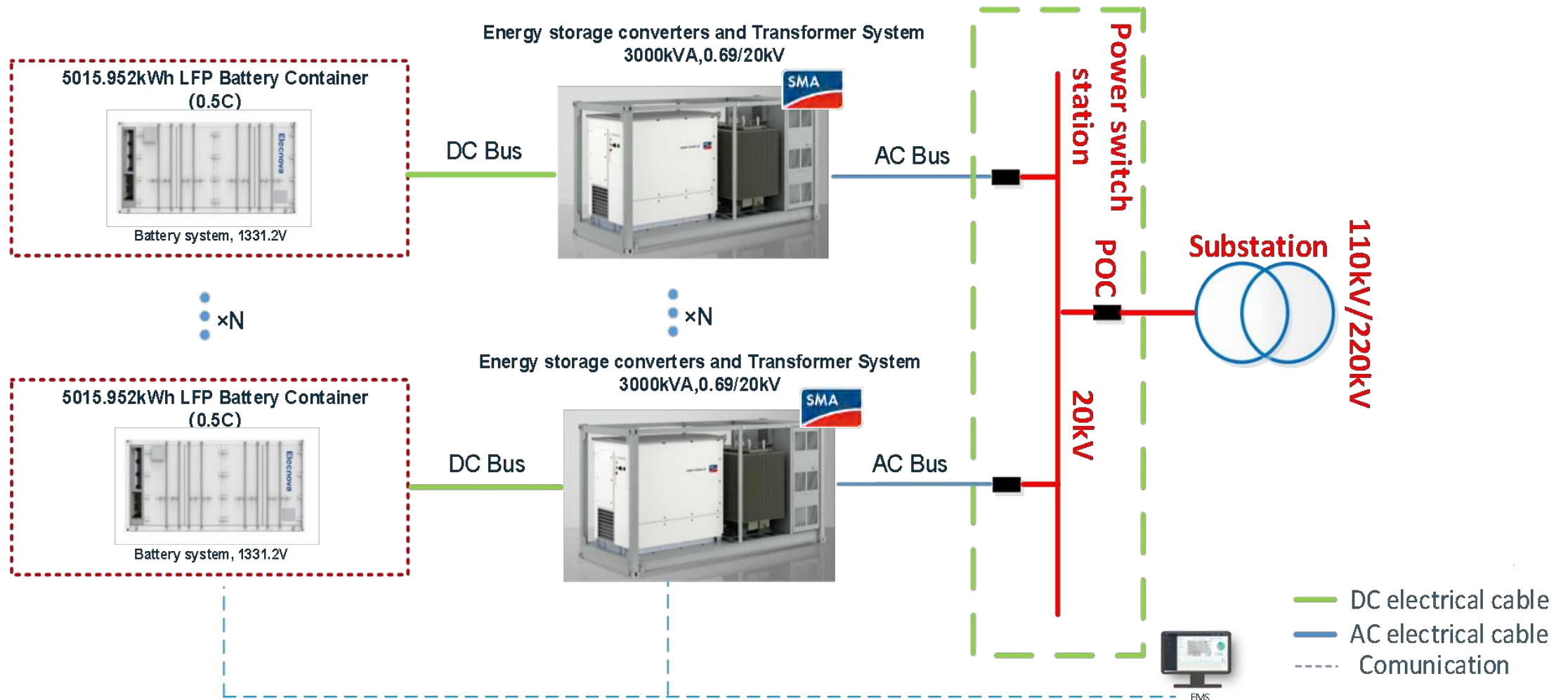


Water sprinkler system

- External fire hydrant required
- If level 2 aerosol extinguishing cannot control the fire in the container, active water sprinkler system to ensure the thermal runaway in the container does not spread to adjacent containers
- Cooling the whole container to prevent reignition

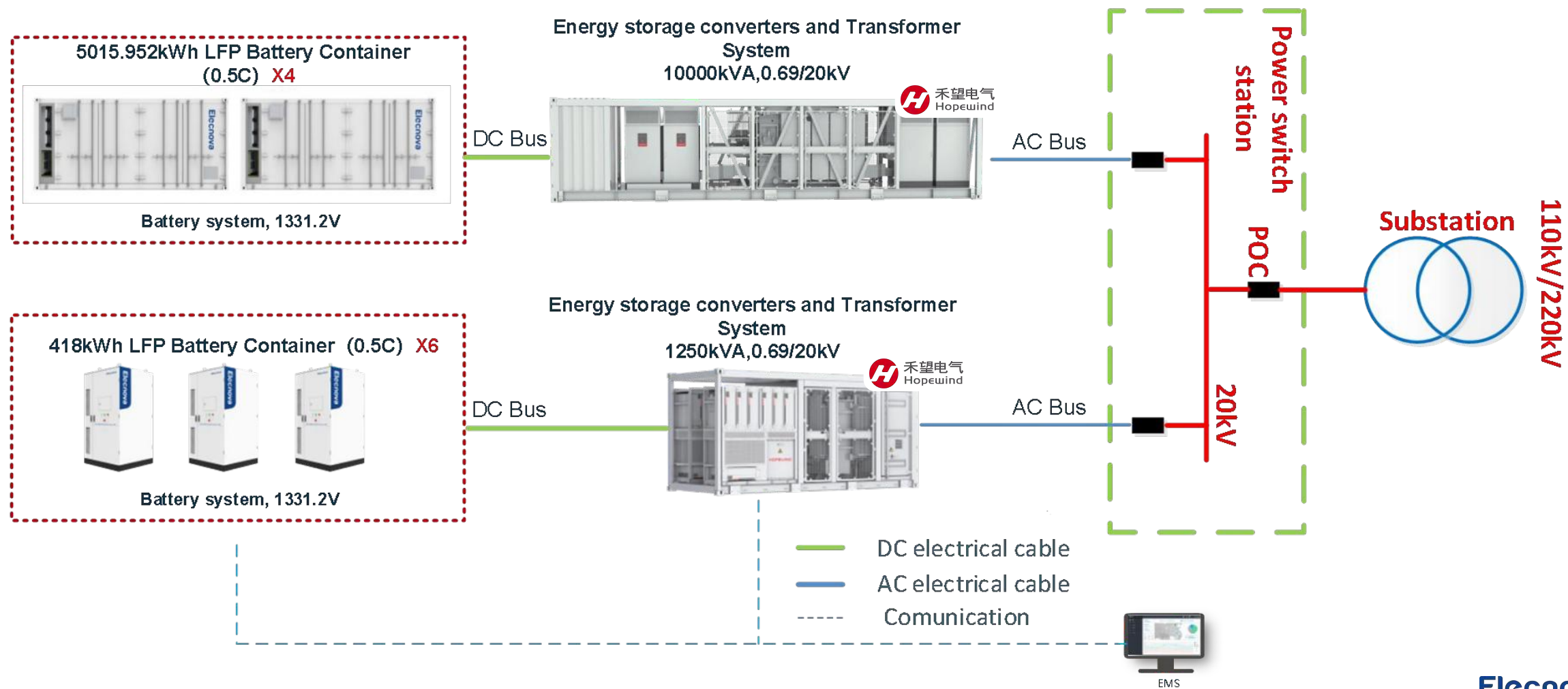
# Topology

## Source and Grid Side-2h System



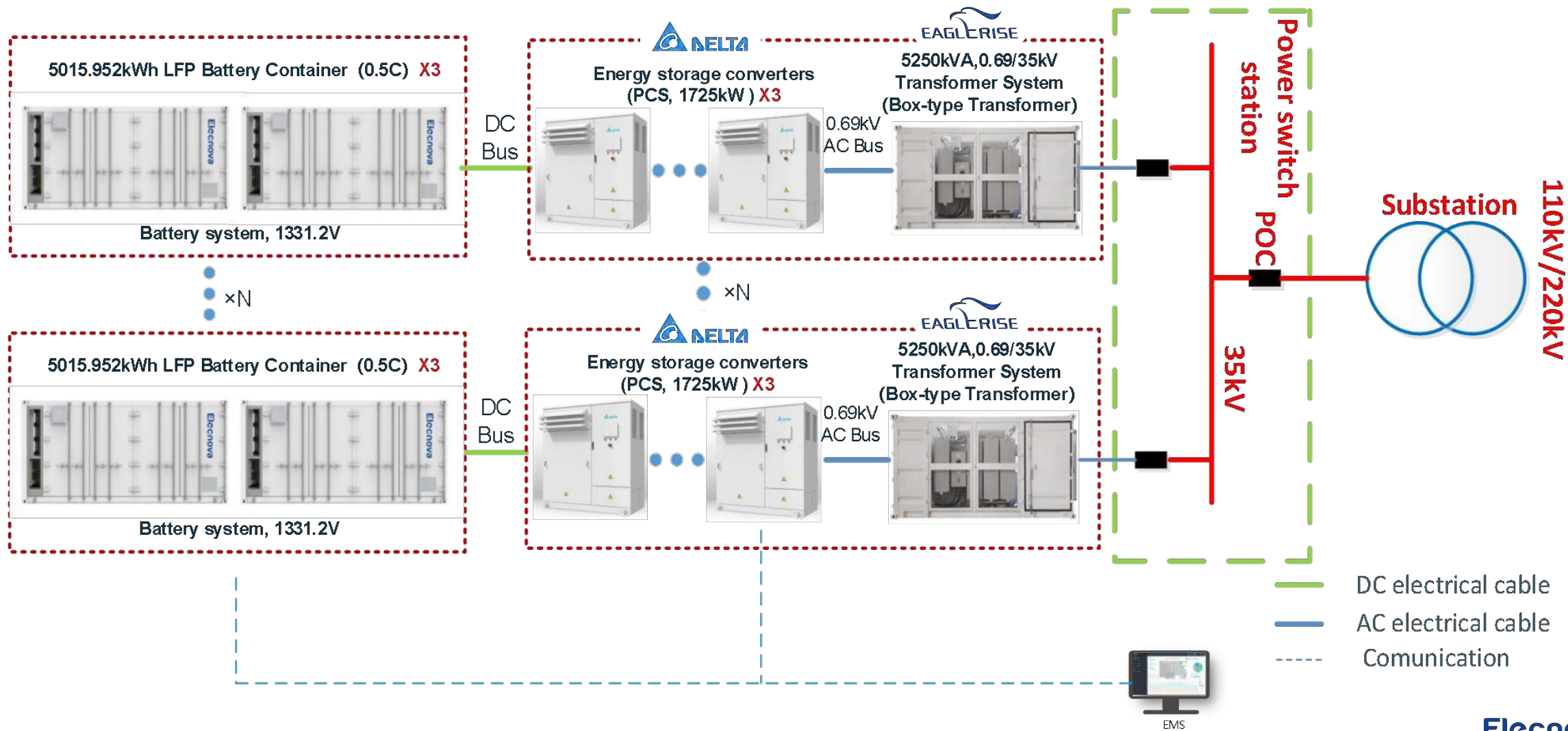
# Topology

## Source and Grid Side-2h System



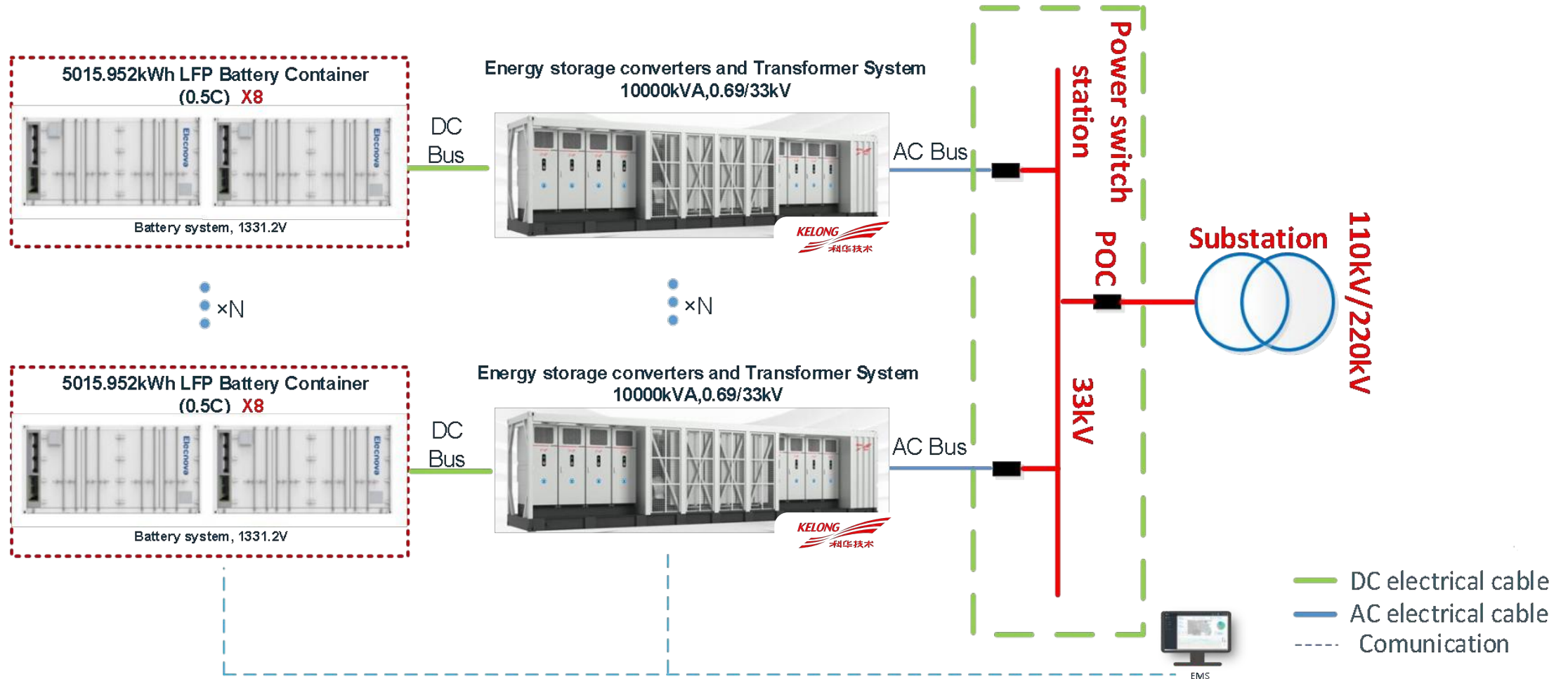
# Topology

## Source and Grid Side-3h System



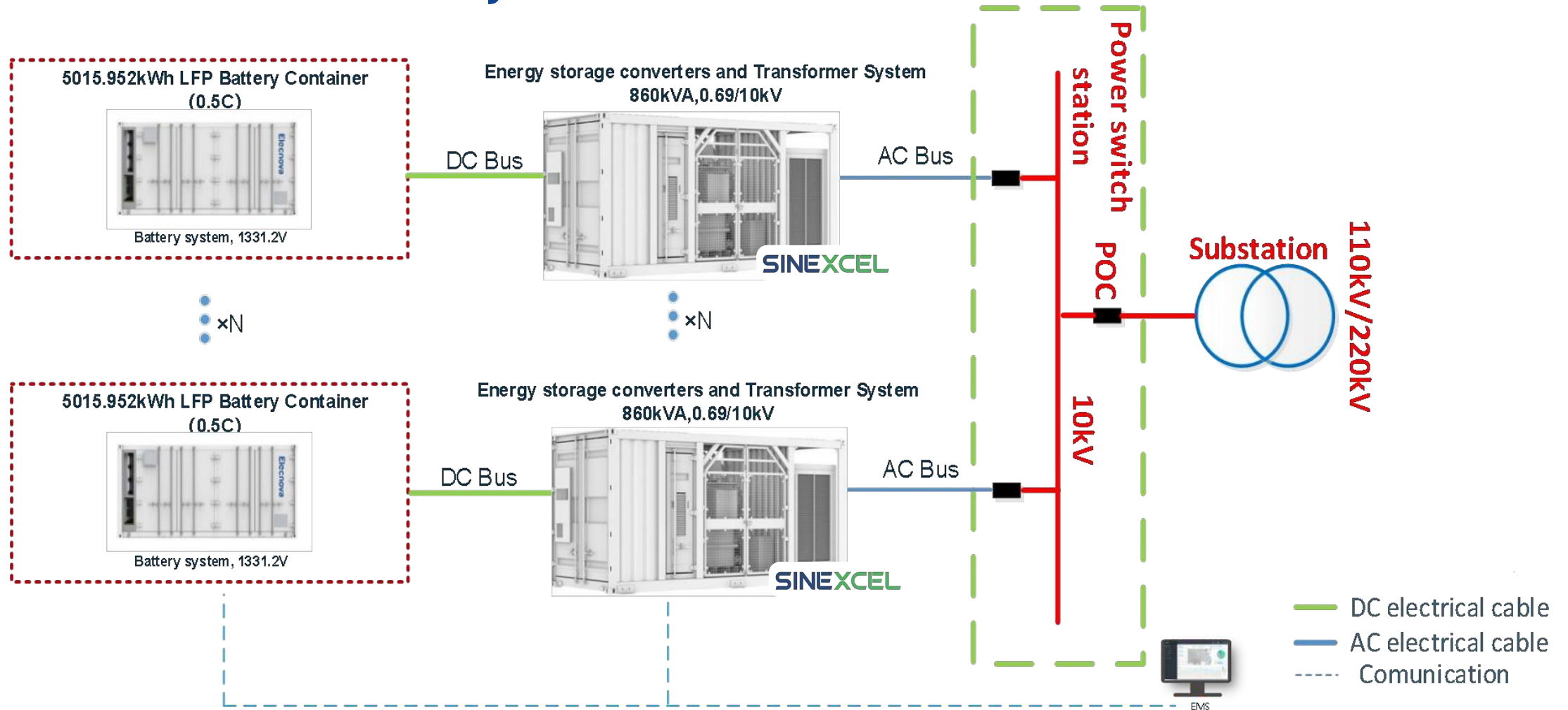
# Topology

## Source and Grid Side-4h System



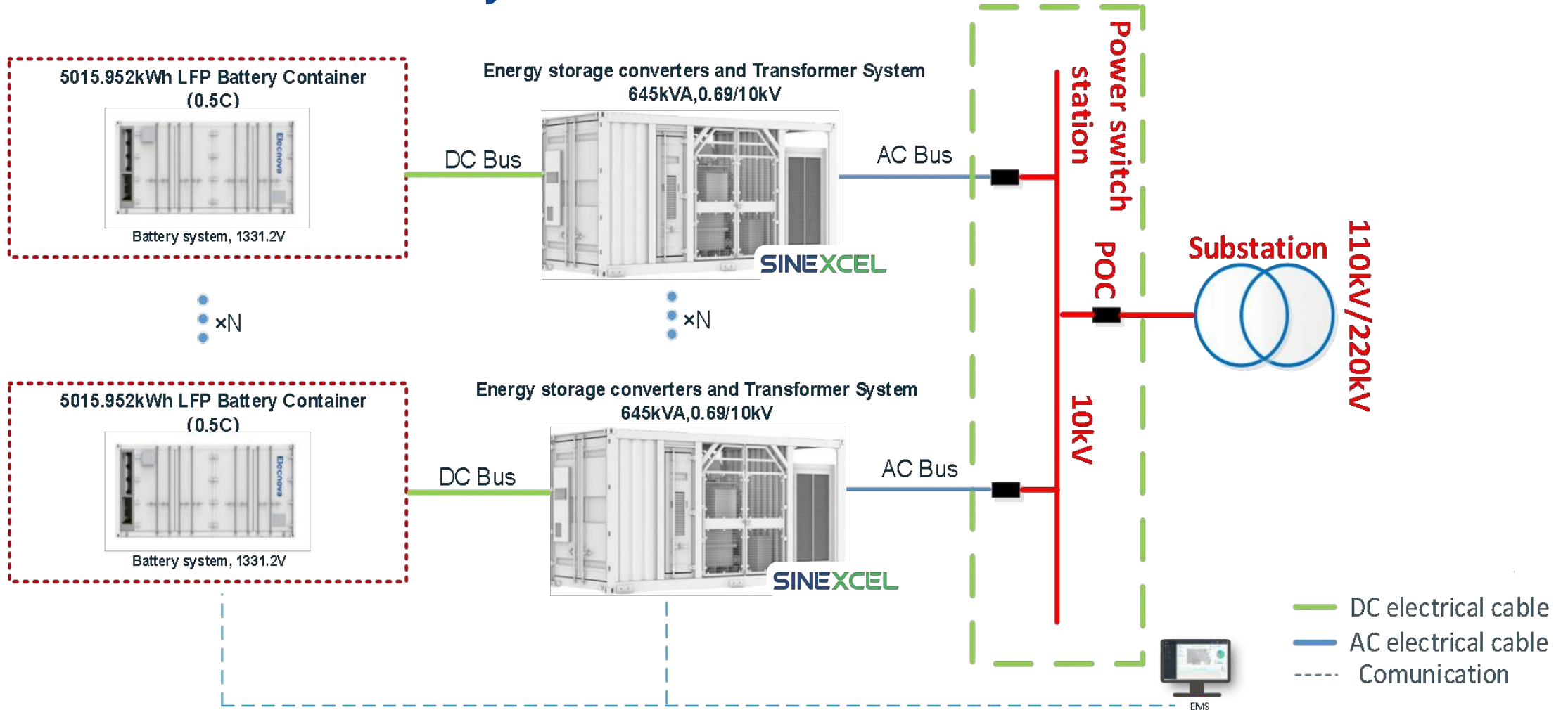
# Topology

## Source and Grid Side-6h System



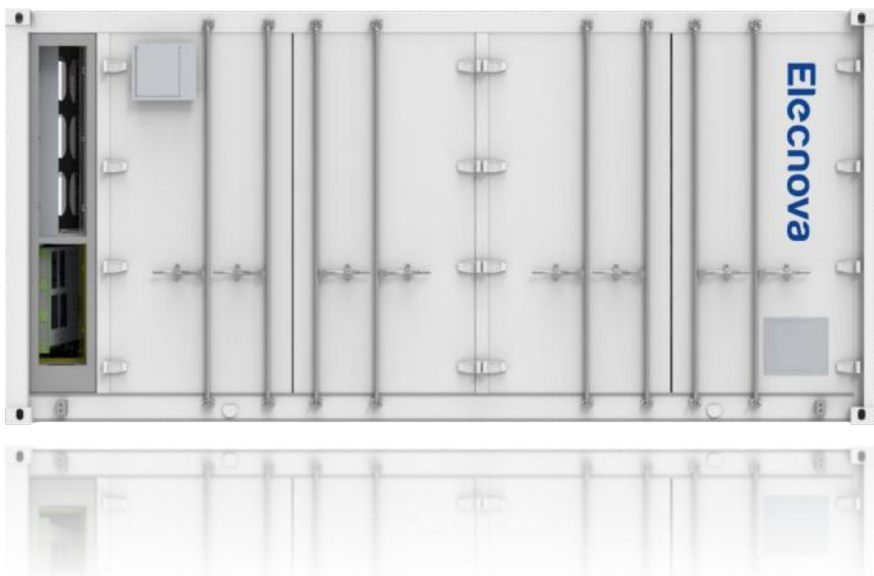
# Topology

## Source and Grid Side-8h System



# Battery Container

## ECO-B20FT5015LP



## ECO-E20FT5015LP

### Transport Standards

- UN38.3

### Container

- EN/IEC 62477-1 LVD; EN/IEC 61000 EMC;  
On Going: UL9540A; IEC 62933-5-2;

### Battery Pack

- TUV MARK  
(IEC 62619; IEC63056)

## Cooperative Partner



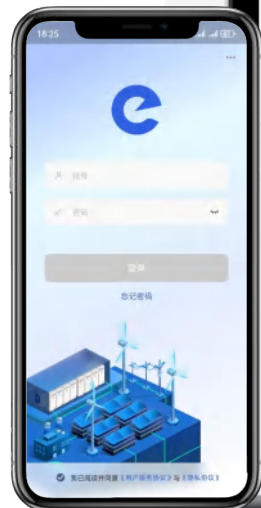
# Elecnova Monitoring



<https://cloud.elecnova-ess.com>



Android



iOS



## Monitoring

- Data viewing
- Fault alarm
- Local servers in Europe



## Management

- Multi site management
- Multi account management
- Regular maintenance system



## EMS Function

- Multiple work modes
- Customized strategy



• 03

Elecnova  
Guarantee

# Reliable Production Processing

## Quality Management System Certificate



GB/T19001



ISO9001

# 28+ Years

## of experience in electrical equipment manufacturing

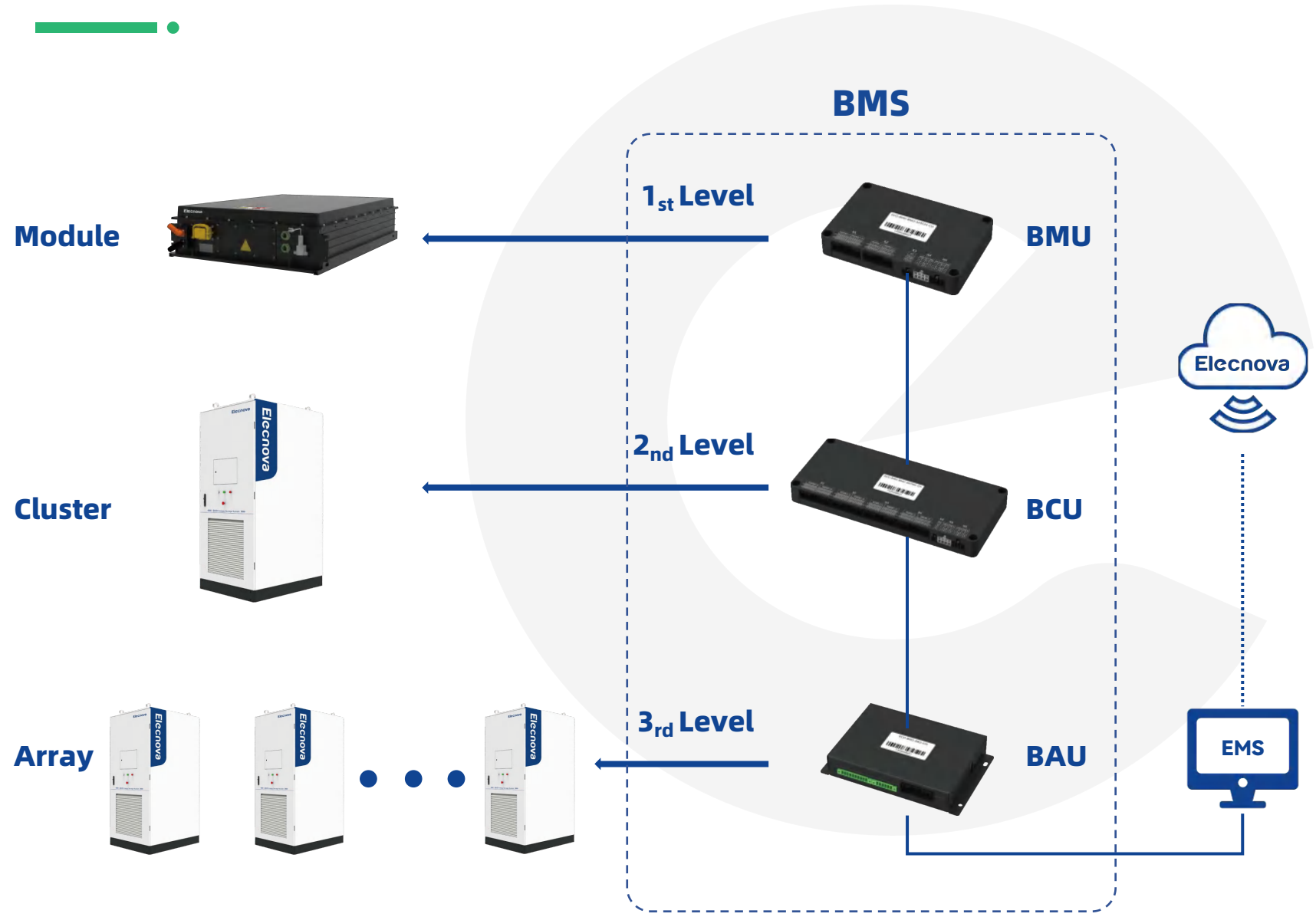
Comprehensive quality supervision system

ERP system

“One cabinet One code” Traceability system



# Battery Management System



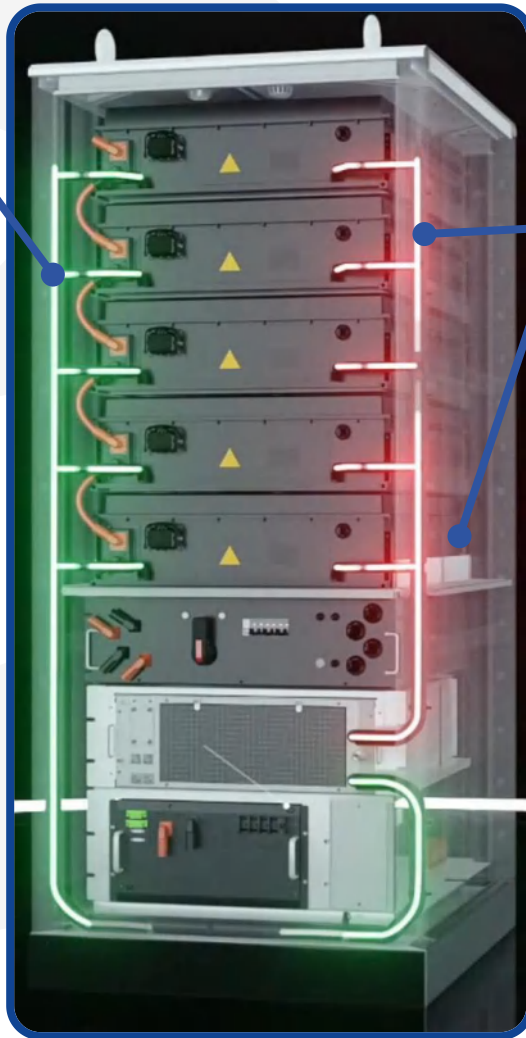
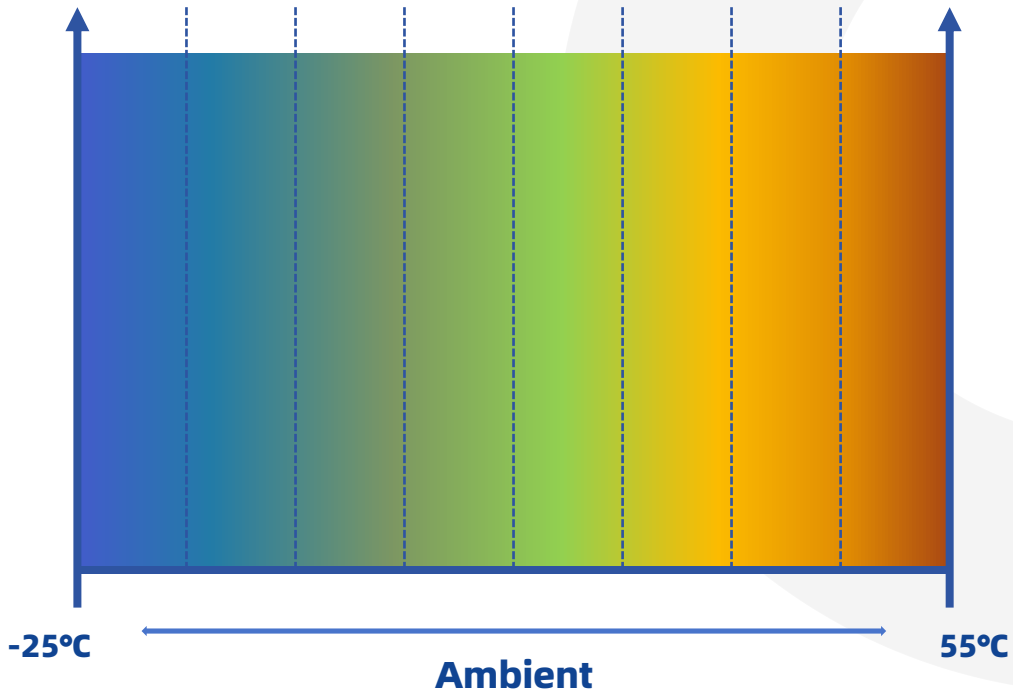
## BMS Protection

- Battery SOC, SOH monitor
- Battery parameter monitor
- Battery Safety management
- Battery communication management
- Battery balance management

# High Performance with Excellent Heat Dissipation

Stable Liquid-Cooling System

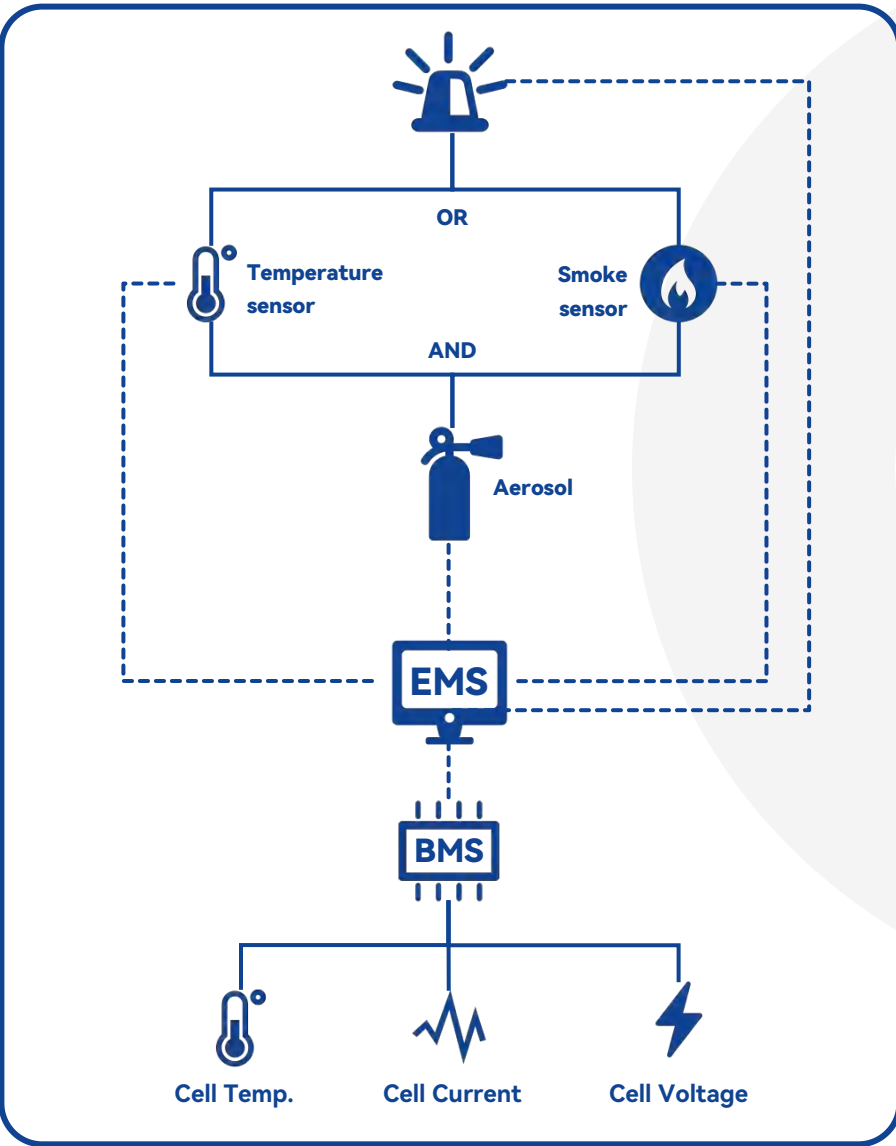
Keeps the system running smoothly between -25°C to 55°C



Cells Difference

≤ 3°C

# Fire Suppression System

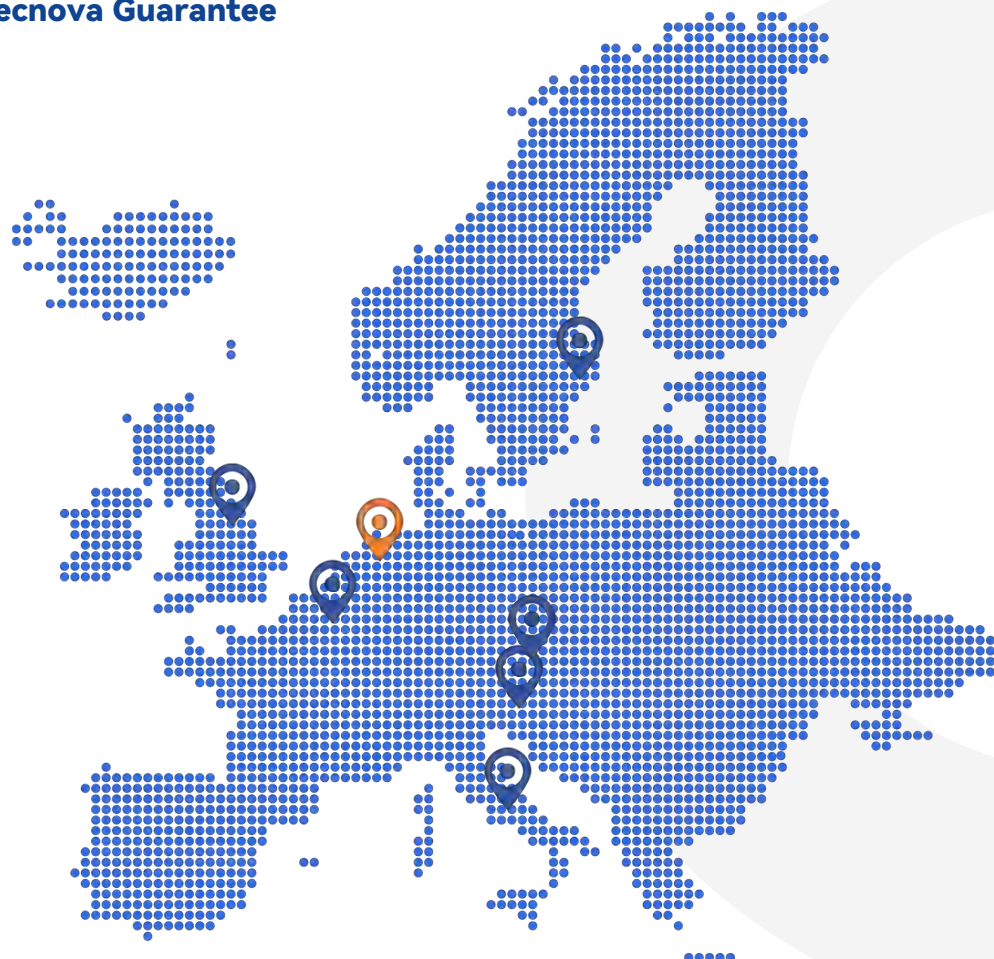


Pakc Level Fire Suppression

Aerosol Device

# After-sale Service

Elecnova Guarantee



## Growing Local Service

- Dutch after-sales center
- 6 service partners
- Rotterdam warehouse with adequate spare parts



## Warranty Claim

- Max. 5+5 years warranty
- Cells performance warranty  
(Max. 8000 cycles@75%SOH)



## After-sale Service

- On-site & on-line training and support  
(Maintenance & Installation training, Sales training)
- Technical guide and support  
(Specifications, Schematic, Basement, Placement design, etc.)
- 3rd party EMS Test
- Special project support



After-sale Service Center



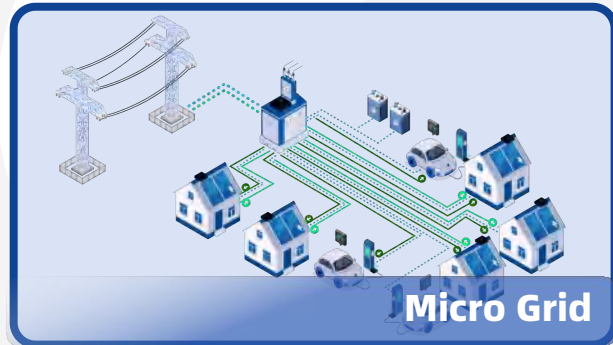
Service Partner



• 04

Elecnova  
Solutions

# Elecnova Solutions



## Application Scenarios



Peak-Valley Arbitrage



Grid Balance



Green Energy Balance



VPP Market



Energy Trading



Off-grid Application



Carbon Credits

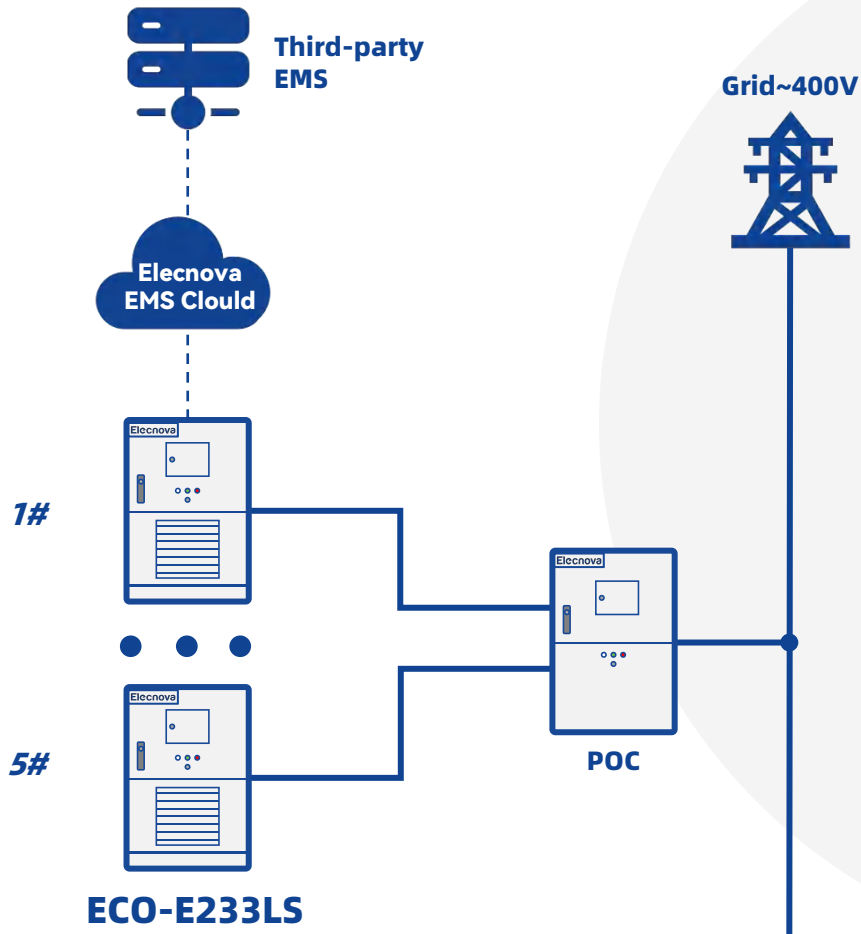


• 05

Case Study

# C&I Application Case Study

## Project Info



**Location:** Netherlands

**Model:** ECO-E233LS \* 5 Units

**Application Scenario:**

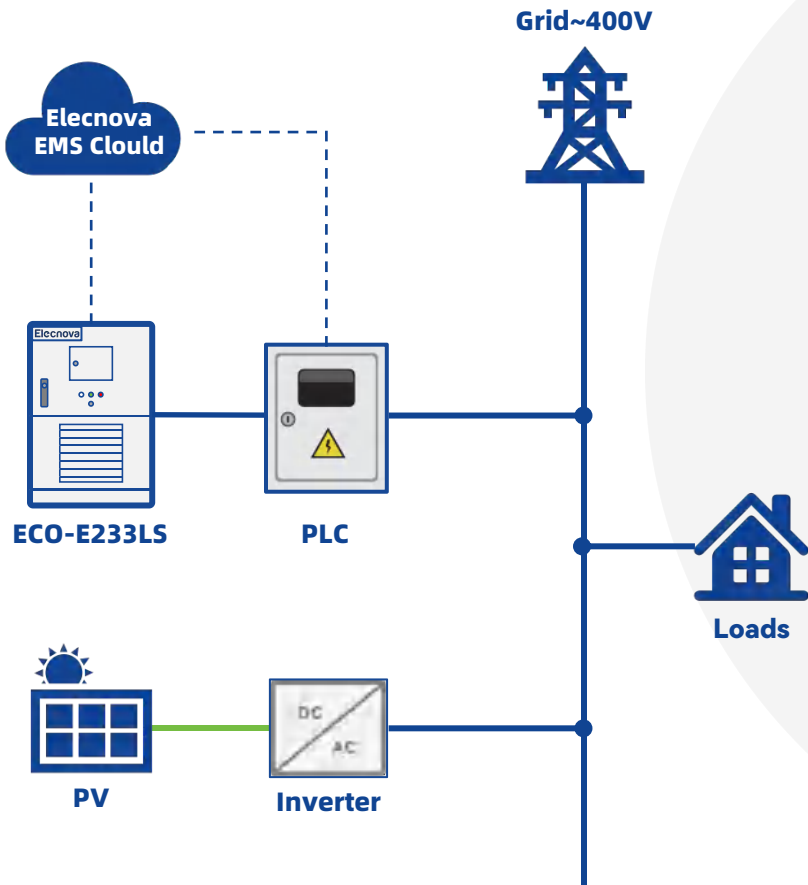
- Peak Shaving
- Arbitrage
- Frequency Containment Reserve

**Brief:**

The customer has entered into a partnership with Elecnova, with Elecnova providing ESS and basic EMS functionalities. The customer develops an EMS with frequency regulation qualifications and dynamic pricing capabilities. After communication matching, it achieved FCR and Arbitrage.

# PV Energy Storage Case Study

## Project Info



**Location:** Italy

**Model:** ECO-E233LS \* 1 Units

**Application Scenario:**

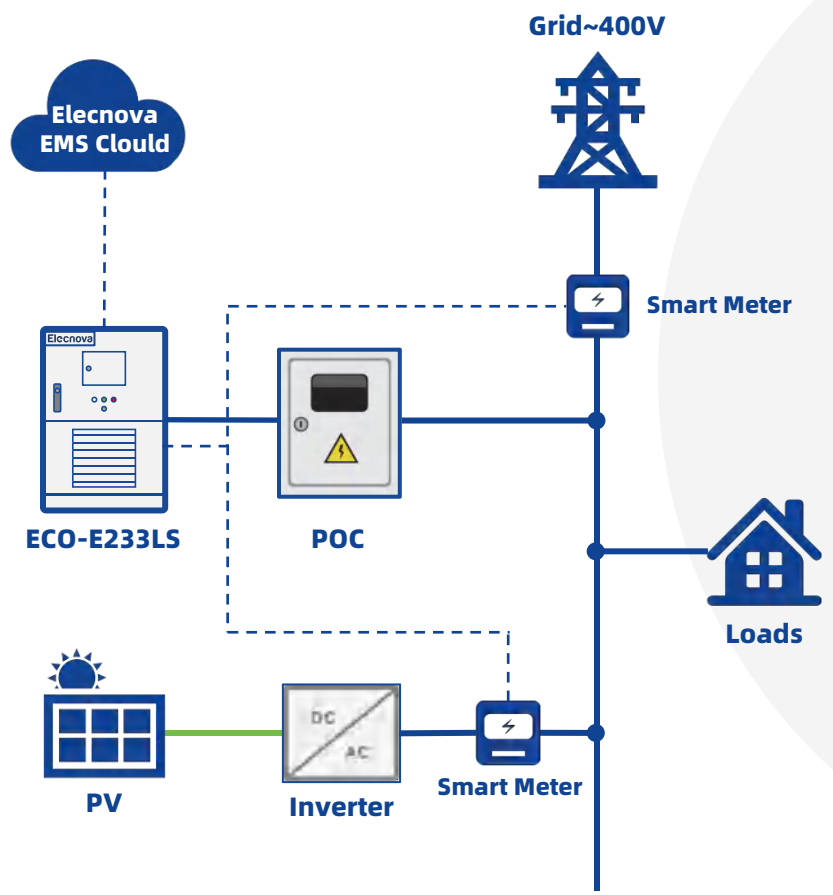
- Peak Shaving
- PV Self-consumption

**Brief:**

After installing PV, the customer added Elecnova ESS and successfully compatible Elecnova EMS with their own developed PLC, achieved remote monitoring and control through their PLC software.



# Strategic PV Usage Case Study



## Project Info



**Location:** Poland

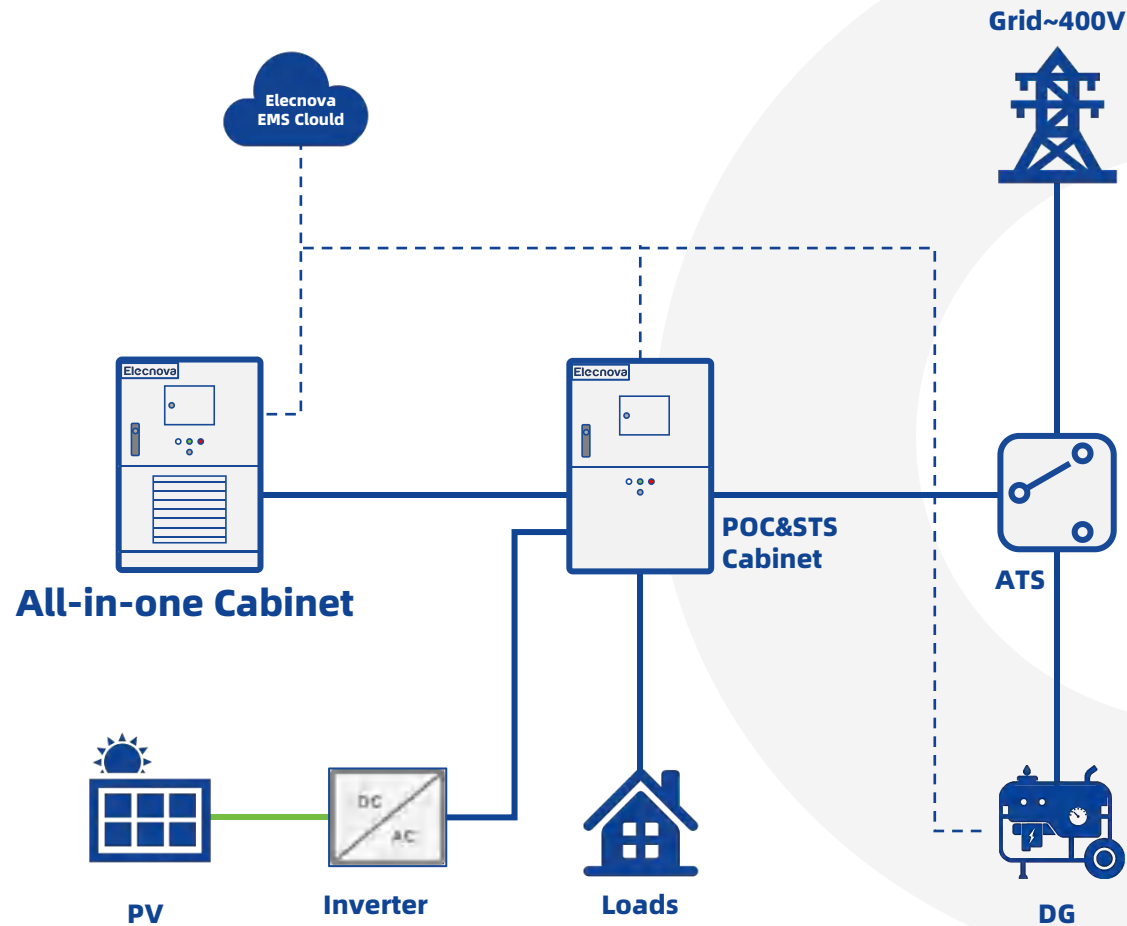
**Model:**  
ECO-E233LS \* 1 Units

**Application Scenario:**  
Strategic PV consumption

**Brief:**  
The customer can collect real-time data on the PV power and grid power by installing the Elecnova meter. Moreover, the customer can develop power consumption strategies through the Elecnova EMS platform, which is capable of realizing a variety of dynamic regulation functions, such as zero-export, self-consumption, peak load shifting and etc.

# Off-grid Application

Case Study



## Project Info



**Location:** China

**Model:**

- ECO-E101WX \* 1 Unit
- POC&STS Cabinet \* 1 Unit

**Application Scenario:**

- Peak Shaving
- Off-grid Backup Power Source

**On/off-grid Switch Time:** <20ms

**Brief:**

By installing STS and ATS, the project can switch to off-grid operation within 20ms in case of grid outage.

ESS will serve as the backup power source to supply critical loads. When the battery SOC is low, the EMS will start the DG to charge the battery and supply power to critical loads.



# Other Case

## Peak Shaving Arbitrag FCR



Date: 2024.07  
Model: ECO-E233LS  
Project Volume: 400kW/932kWh



**Netherlands**

## Peak Shaving Arbitrage



**Netherlands**

Date: 2025.07  
Model: ECO-E233LS  
Project Volume: 500kW/1165kWh



# Other Case

## Peak Shaving Arbitrag



Date: 2025.04  
Model: ECO-E233LS  
Project Volume: 200kW/466kWh

Poland



Date: 2025.08  
Model: ECO-E233LS  
Project Volume: 100kW/233kWh

## PV Energy Storage Peak Shaving Arbitrage

Poland



# Other Case

## Peak Shaving Arbitrage



Date: 2025.06  
Model: ECO-E107WS  
Project Volume: 200kW/428kWh

UK

## Peak shaving



Date: 2025.06  
Model: ECO-E107WS  
Project Volume: 200kW/428kWh

Portugal

# Other Case

## PV Energy Storage Peak Shaving Arbitrage



Date: 2025.06  
Model: ECO-E107WS  
Project Volume: 100kW/214kWh

Czech Republic

## Peak Shaving Arbitrage



Date: 2025.08  
Model: ECO-E233LS  
Project Volume: 600kW/1165kWh

Czech Republic



# Other Case

## PV Energy Storage Peak Shaving Arbitrage



Date: 2025.02  
Model: ECO-E233LS  
Project Volume: 100kW/233kWh

Italy

## PV Energy Storage Peak Shaving Arbitrage



Date: 2024.05  
Model: ECO-E233LS  
Project Volume: 100kW/233kWh

Romania



# Other Case

## Arbitrage



Date: 2024.06  
Model: ECO-E233LS  
Project Volume: 100kW/233kWh

Belgium

## PV Energy Storage Peak Shaving Arbitrage



Date: 2025.08  
Model: ECO-E107WS  
Project Volume: 100kW/214kWh

Belgium



# Other Case

## PV Energy Storage Peak Shaving



Date: 2025.05  
Model: ECO-E64WX  
Project Volume: 50kW/64kWh

Belgium

## Peak Shaving Arbitrage



Date: 2024.07  
Model: ECO-E215WS  
Project Volume:  
- 1.2MW/2.58MWh  
- 2\*POC

China



# Other Case

## Peak Shaving Arbitrage



Date: 2024.10  
Model: ECO-E215WS  
Project Volume:  
- 500kW/1075kWh  
- 3\* POC

China



**THANKS!**

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**Energy for Earth, Power for People**