CESS 4000 Product Introduction

——Product Management Department

RCT power

RCT POWER

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CESS 4000 Introduction——Composition

Battery Rack/Model

- The battery module is composed of cells connected in series, and multiple modules are connected in series to form a battery cluster.
- The battery module is used for electrical energy storage.

BMS

- BMS continuously monitors battery status and triggers immediate alarms upon detecting issues to protect the batteries.
- Main function: Precisely control charging and discharging process; Real-time monitoring of battery status; Battery capacity balance management; safety protection; data collection and so on.

Liquid Cooling/Fire Protection System

- The liquid cooling system provides better temperature control for PCS and battery modules.
- The fire protection system includes smoke detection, heat detection, aerosol, and water mist suppression.

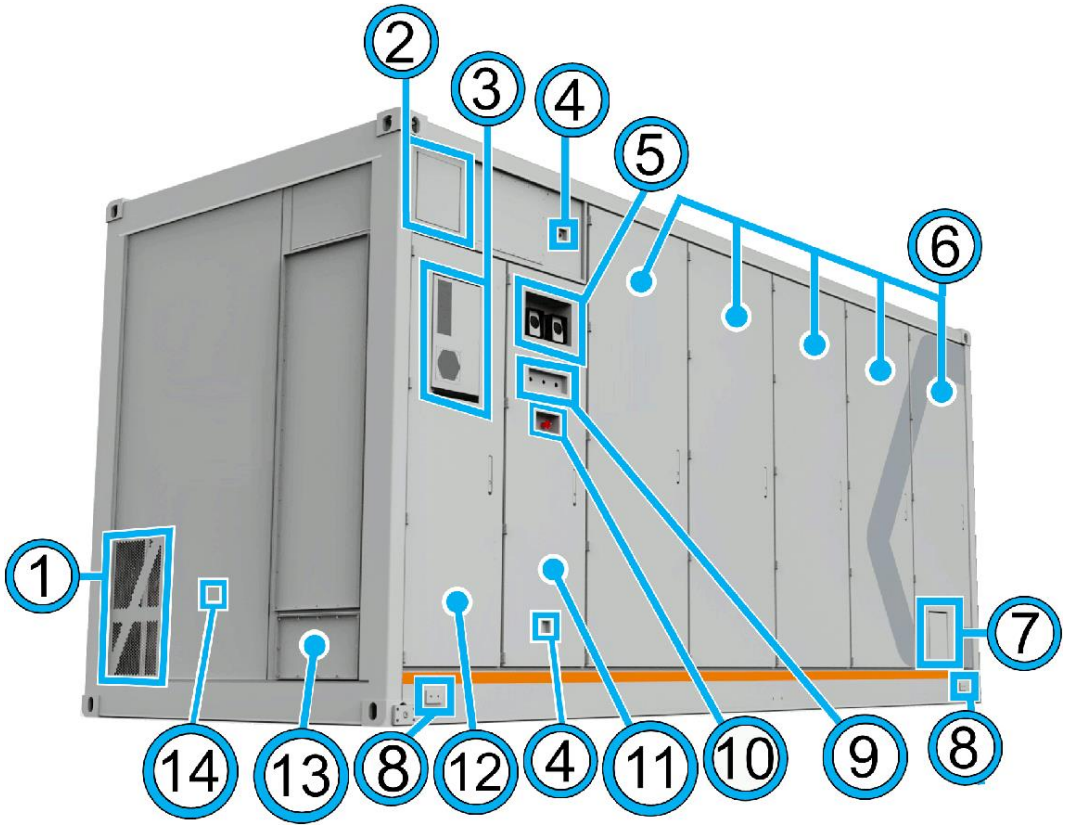
EMS

- Monitor the entire system operation to ensure stable and normal performance.
- Configure application scenarios based on requirements to meet diverse customer needs.

CESS 4000 Introduction——Specifications

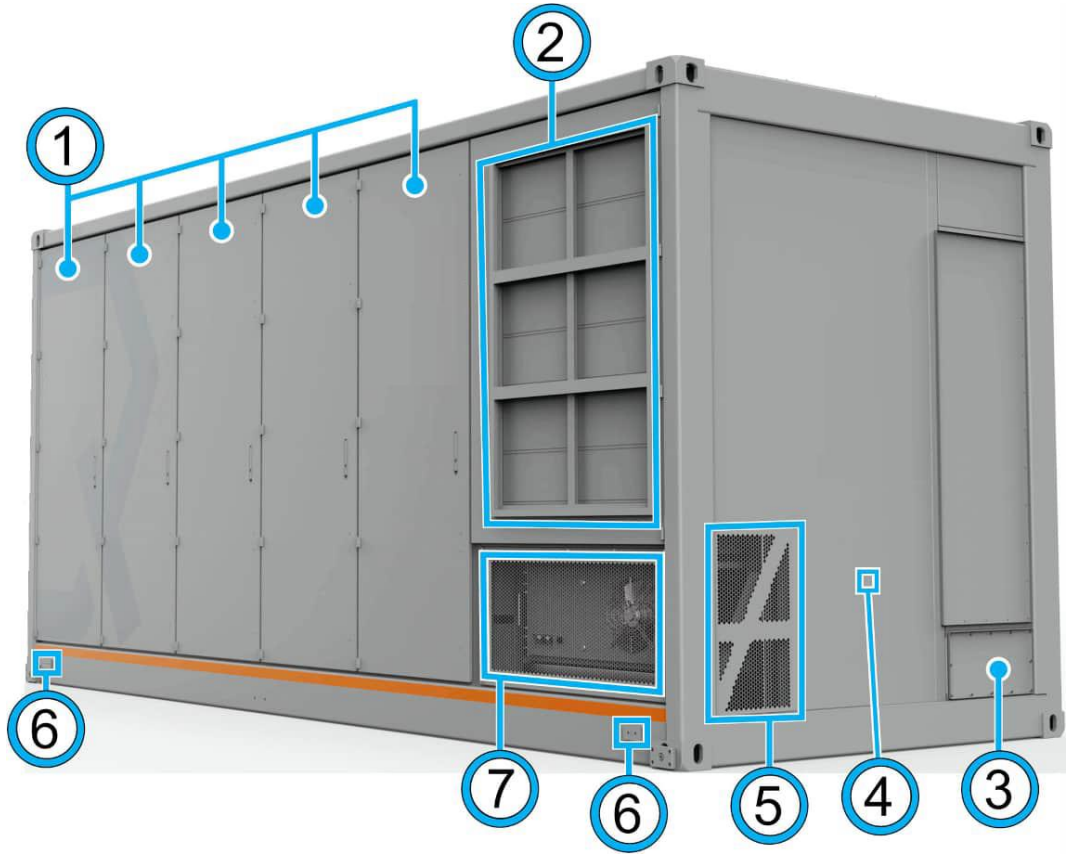
No.	Item	Parameter
1	System Energy	4073 kWh
2	Configuration	10P×8S×52S
3	Voltage range	1164~1498 Vdc
4	Nominal voltage	1331 Vdc
5	Nominal C-rate	0.1~0.5 C
6	Auxiliary load voltage	480V 60Hz and 380-415V 50/60Hz 3-phase
7	Auxiliary peak load	30kW
8	Weight	83775/38000 lbs/kg
9	Operating temperature	-30~+50 °C
10	Footprint	20' high-cube lso container
11	Dimensions(W*D*H)	6.1×2.4×2.8m
12	Noise	84 dBA at 1m
13	Coolant type	Water and glycol mix

CESS 4000 Introduction——External Structure



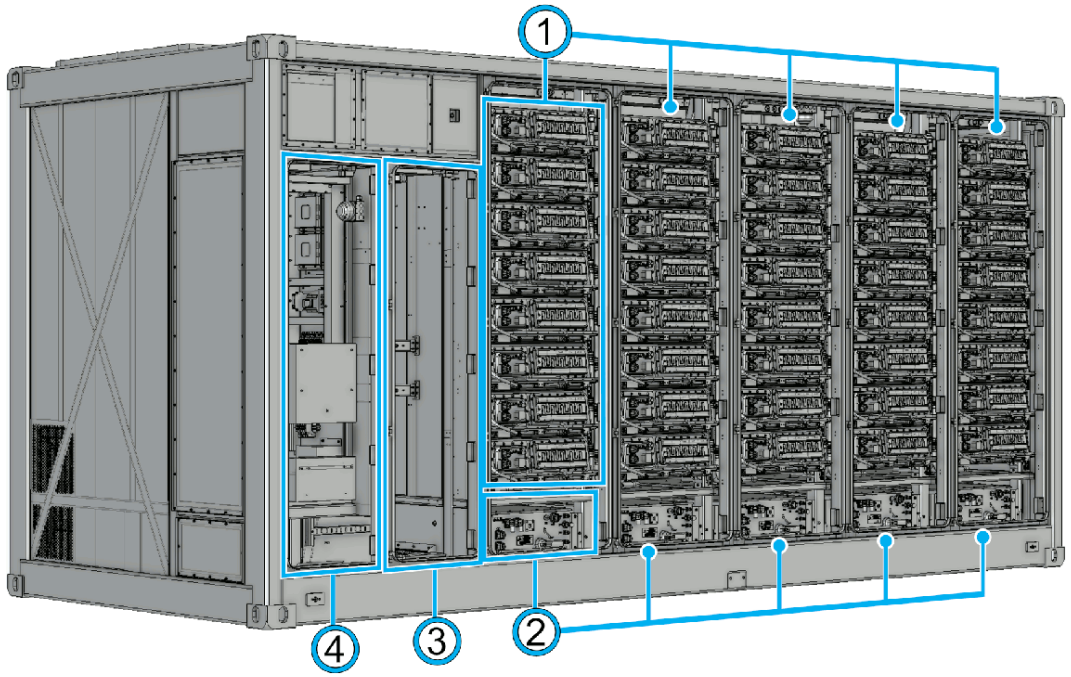
No.	Item
1	Thermal management ventilation (left side)
2	NFPA 69-compliant ventilation exhaust port with automatic louver (Explosion protection system)
3	500W HVAC dehumidifier on ACC door
4	Cable entry (gland) plates
5	Gas (yellow) and smoke alarm (red) beacon (or strobe) with siren (or sounder)
6	Battery module rack chamber doors
7	NFPA 69-compliant ventilation intake fan with automatic louver (Explosion protection system)
8	Exterior earth / ground plates
9	System Status Lights (Green, Yellow, Red)
10	System stop (Uses Key to unlock for system reset) and reset buttons DCC door
11	DC (battery power) combiner cabinet (DCC) door
12	Auxiliary control cabinet (ACC) door
13	ACC conduit side lead-through plate into ACC cabinet
14	Water inlet for dry pipe sprinkler system

CESS 4000 Introduction——External Structure



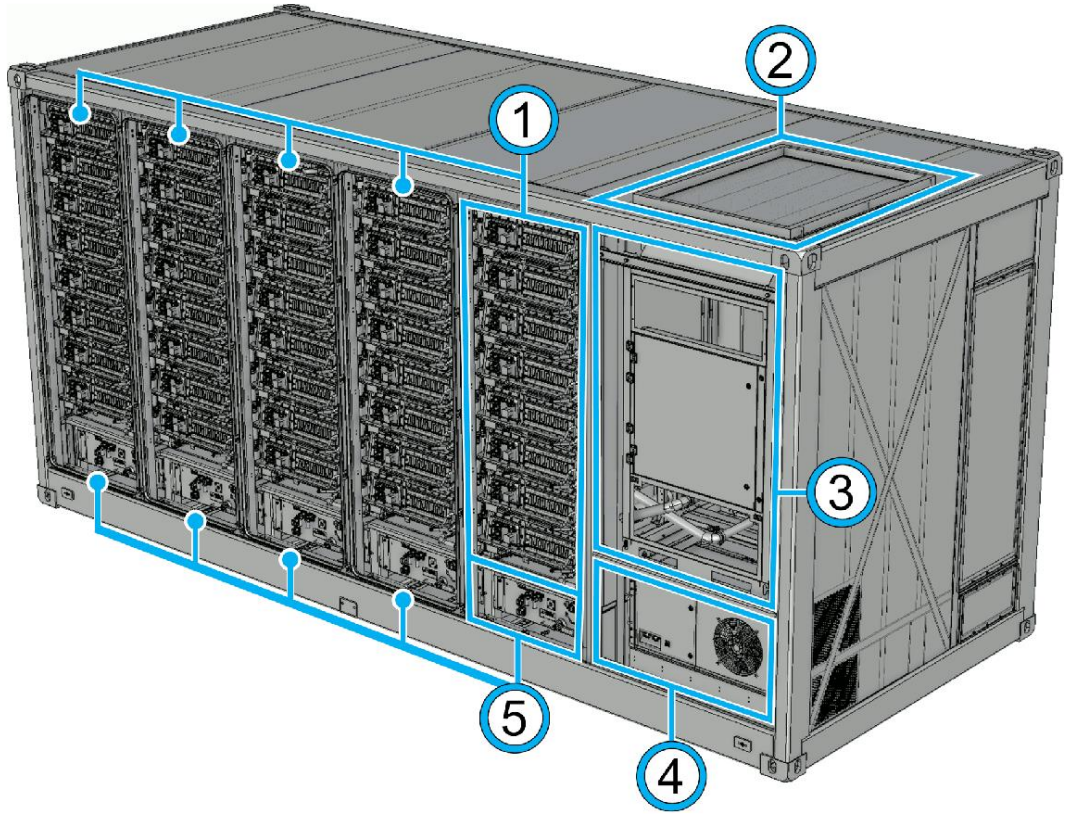
No.	Item
1	Battery module rack chamber doors
2	Battery module coolant chiller ventilated access service door
3	ACC conduit side lead-through plate
4	Water Inlet for dry pipe sprinkler system
5	Thermal management ventilation (Left Side)
6	Exterior earth / ground plates
7	HVAC (optional) access service ventilated door

CESS 4000 Introduction——Internal Structure



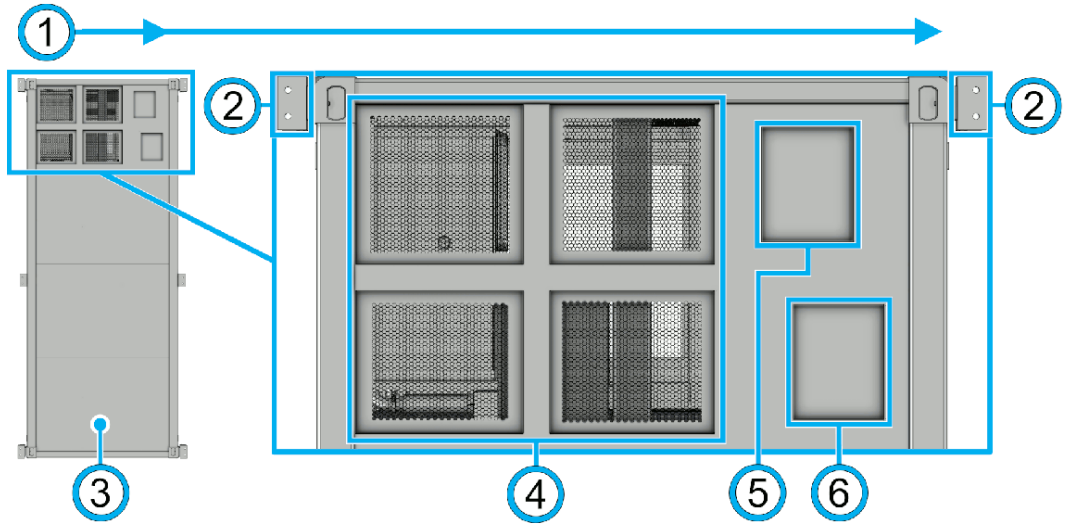
No.	Item
1	Battery rack, fully populated with 8 batteries (Battery rack chamber doors removed in image.)
2	Power distribution switchgear (1 for each battery rack)
3	DC combiner cabinet (DCC) interior (Door removed in image.)
4	Auxiliary control cabinet (ACC) interior (Door removed in image.)

CESS 4000 Introduction——System Structure



No.	Item
1	Battery rack fully populated with 8 batteries per rack (Battery rack chamber doors removed in image.)
2	Battery chiller coolant thermal exhaust
3	Battery chiller (ventilated door removed) access service door
4	Air conditioner (HVAC) (option)
5	Power distribution switchgear (One under each battery rack)

CESS 4000 Introduction——System Structure



No.	Item
1	To CESS 4000 front (Left side when viewed from front of CESS 4000)
2	Container tie down (6 total – mounting platform options vary.)
3	CESS 4000 underside
4	Underside thermal management ventilation
5	DCC cabinet conduit lead-through plate
6	ACC cabinet conduit lead-through plate

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02 CESS 4000 Major Features

CESS 4000 Major Features

Multi-scenario configuration

Proven Safety

Optimized Thermal Design

Improved Environmental Impact

Industry-leading controls (GEMS)

Multi-scenario Configuration

●The battery clusters support flexible configuration from 1 to 10 units, meeting diverse energy demands across systems.

●Optional configurations:

DC switch, HVAC, water mist suppression, aerosol suppression, explosion-proof panels.

1 unit

Grid-scale energy storage system

Multiple containers can be paralleled, forming a larger-scale power system.

CESS 4000 Major Features

Proven Safety

Multi-scenario configuration

Optimized Thermal Design

Improved Environmental Impact

Industry-leading controls (GEMS)

Proven Safety

- International standard compliant
- NFPA 69 fan system standard
- NFPA 855 compliant conventional fire systems for all country variants
- Gas detection port for safe first responder use

Detector

Cooling System

DC Combiner

Proven Safety

NFPA 69 active ventilation fans

Annunciation for fire and gas alarm

Fire alarm panel

Fire wall rating 60min

24hr UPS backup period / 2hrs in alarm

Detection:

- Smoke (2x in battery enclosure, 1x in AC Cabinet)
- Gas (2x in battery enclosure)

CESS 4000 Major Features

Multi-scenario configuration

Proven Safety

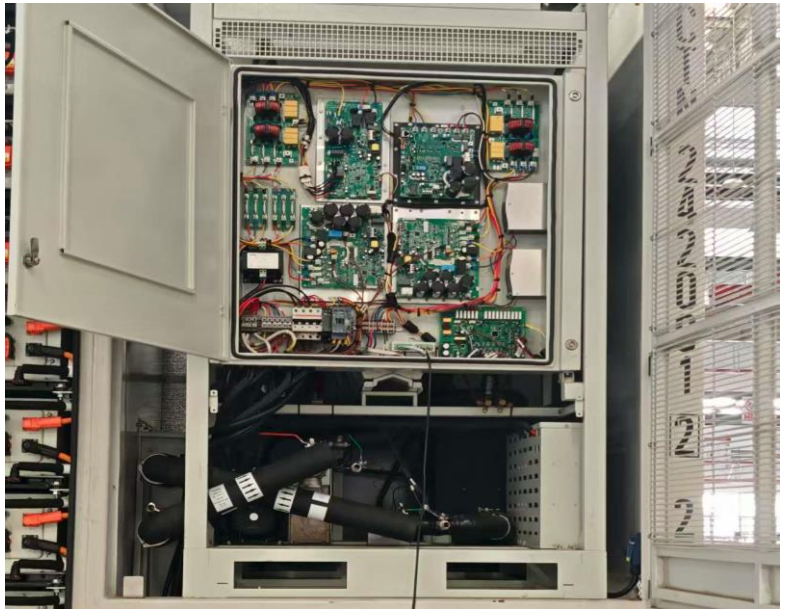
Optimized Thermal Design

Improved Environmental Impact

Industry-leading controls (GEMS)

Optimized Thermal Design

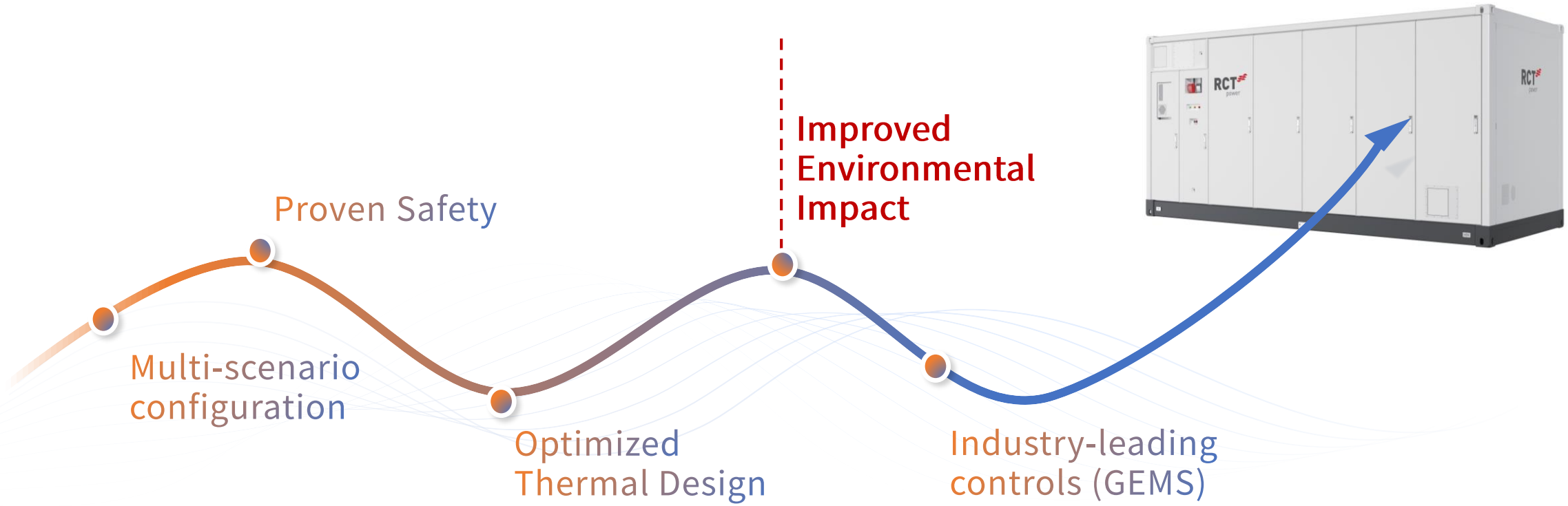
Air Conditioner



Liquid Cooling Unit

The intelligent temperature control system, consisting of a liquid cooling unit and air conditioner, ensures stable operation of the battery compartment and electrical room.

CESS 4000 Major Features



Improved Environmental Impact

- **Wind PV Consumption**

CHARGE when the load can not consumpt all the energy generated by Wind or PV, and discharge at night. SMOOTH the output of wind and PV.

- **Low GWP cooling option**

Supports renewable energy integration, significantly reducing CO_2 emissions from conventional power generation.

- **Low noise with new fan system**

CESS 4000 Major Features

Multi-scenario configuration

Proven Safety

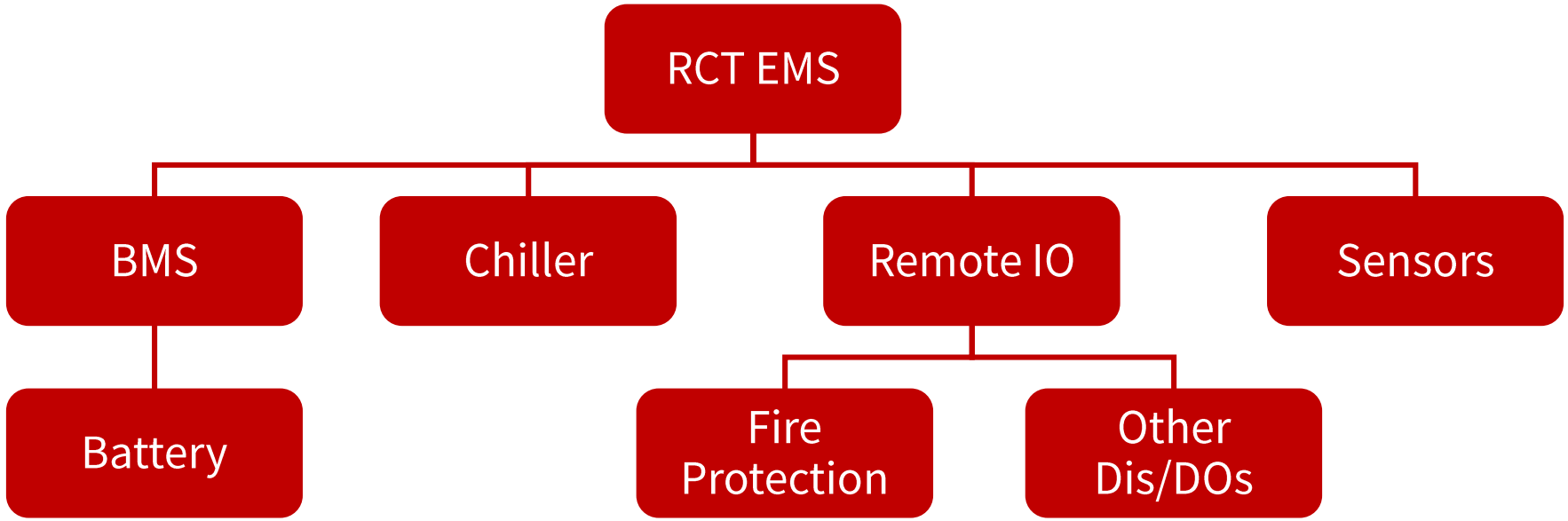
Optimized Thermal Design

Improved Environmental Impact

Industry-leading Controls (EMS)

Industry-leading Controls (EMS)

- Provides an aggregated communication interface for Power Plant.
- Contains all the logics needed to autonomously operate the container without outside help.
- Provides an HMI for integrator / commissioning engineer / customer.
- Provides simple and streamlined software update capabilities.



RCT Power Dashboard
(Demo)

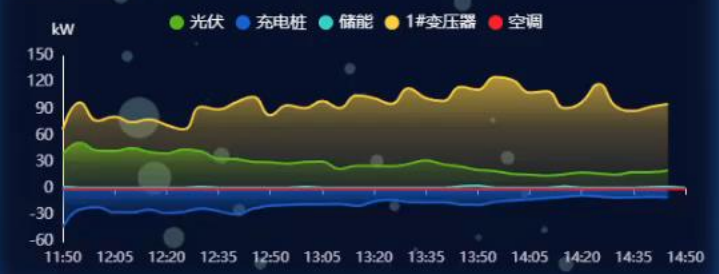
XXXX年XX月XX日 XX时53分43秒

Safety Announcement（安全公告）

- 保障能源安全的基[illegible]
- 合理利用充电桩，[illegible]电车
- 碳中和的投入是一个动态工作，每年根据产能的变化会有相应的减碳目标
- 依托全流程数字化运营，搭建一个数字工厂
- 以降本增效、绿色低碳为核心目标，以碳咨询为牵引，打造低碳发展的智能制造工厂标杆
- 先安全后生产，不安全不生产；安全在你脚下，安全在你手中
- 谨慎生产，防范治理;监督教育，安全常驻。
- 安全生产要牢记

Electricity statistics（电量统计）

Power curve（设备功率曲线）



Reduce Usage 碳减排量

本月	本年
21.14 吨	88.00 吨

Emission 碳排放量

本月	本年
0.62 吨	63.71 吨

Offsetting 23年碳汇/绿证核销量

碳汇	绿证
220.29 吨	1200 张

Baseline 碳排基线

本月	本年
21.76 吨	151.72 吨

1#变压器 104kW

光伏板 7.2kW

光储充L200 SOC:0% -2.4kW

空调 0kW

负载 112.4kW

储能L1500 SOC:37.5% 1.2kW

Days without Recordables

本厂区安全无事故

10XX 天 Days

事故是可以预防的!
ACCIDENTS ARE PREVENTABLE!

今年总电能	154476(kWh)
功率(kW)	7.2
电压(V)	225.5 | 226.3 | 226.1
电流(A)	12 | 12 | 12

今年总电能	25334(kWh)
功率(kW)	-2.4
电压(V)	226.2 | 226.4 | 225.8
电流(A)	4 | 6 | 6

储能

累计总电能	150584(kWh)
今年总电能	70516(kWh)
功率(kW)	1.2
电压(V)	225.5 | 226.3 | 226.2
电流(A)	28 | 30 | 32

1#变压器

累计总电能	931944(kWh)
今年总电能	194880(kWh)
功率(kW)	104
电压(V)	225.7 | 226.1 | 226.1
电流(A)	152 | 192 | 184

2号变压器

累计总电能	424(kWh)
今年总电能	112(kWh)
功率(kW)	--
电压(V)	225.3 | 226.1 | 226.1
电流(A)	-- | -- | --

A区外空调主机

累计总电能	130450(kWh)
今年总电能	2226(kWh)
功率(kW)	--
电压(V)	225.5 | 226.2 | 226
电流(A)	-- | -- | --

A区内空调主机

累计总电能	42824(kWh)
今年总电能	32(kWh)
功率(kW)	--
电压(V)	225.4 | 226.1 | 226
电流(A)	-- | -- | --

B区外空调主机

累计总电能	55534(kWh)
今年总电能	2054(kWh)
功率(kW)	--
电压(V)	225.5 | 226.3 | 226.1
电流(A)	-- | -- | --

Weather Report

明天	星期六	星期天
18~26	19~24	18~28

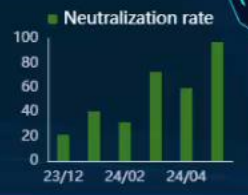
19~26 ℃

System Condition（系统运行状况）

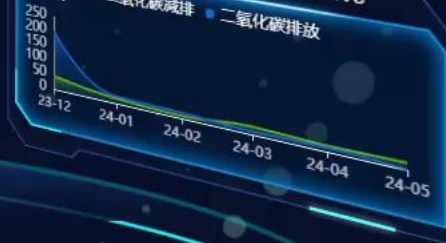
From PV/Storage: 7/0%

PV Energy Today: 27(28)%

PV Energy Month: 47(65)%



CO2 Reduction Curve



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