HiCi

Green Technology
Zero-carbon Life

HICI Digital Power Technology Co., Ltd.

H High—tech

Leading Technology

i Innovation

Sustainable Innovation

C Cooperation

Customer First

i Integration

Unity of Knowledge and Action

HICI at a glance

500+ Employees

30%+ R&D Personnel

120+ Patents

60+ Countries

50000+ Chargers

HiCi Digital Power Technology Co., Ltd., founded in 2015, is a Wuhan-based company with 120+ patents, 500+ employees, 30% of whom are in R&D, delivering innovative technology that is driven by sustainability and digitalization to help lead the way to a greener future.

As a leading provider of "vehicle-charger-grid" solutions, HiCi provides communities, industry and the public with access to sustainable, reliable and economical green power. HiCi products consist of EV power systems and charging infrastructure, including energy storage solutions, AC/DC chargers, HPC systems, pantograph charging, port equipment and vehicle controllers. With primary operations in Wuhan (China) and worldwide services, HiCi has deployed more than 50,000 products to 200+ cities and 60+ countries.

HICI Milestones

2015

Start as EV Charger Manufacturer

2016

Strategic Partner

YUTONG

2017

First CCS Charger exported to England

2018

Photovoltaic–storage–charger successfully put into operation

2019

Strategic Partner

BYD

TOTAL

Land Transport Authority
We Keep Your World Moving

2020

Ultra fast charger launched and obtained bulk orders

2021

SANY

FIFA WORLD CUP Qatar2022

2022

Romania Government Demonstration Project

GUVERNUL ROMÂNIEI

2023

Leader in V2G Charging technology

Top 10 Gazelle High–Tech Enterprise

2024

MCS megawatt charging system

2,000+ VCU deployments (Nanjing)

2025-Future

Contributing to achieve "Zero–carbon Life"

R&D and Testing

30%+ R&D PERSONNEL

- Software
- Hardware
- Design
- Platform

Laboratory

- Salt Spary
- Dust Proof
- Water Proof
- High & Low Temperatur
- Anti errosion
- Thermal Shock
- Vibration
- High / Low-Speed E - Drive System Test

High-Efficiency Production Systems

MES Management System

- 2 AC Charger Lines
- 3 DC Charger Lines
- 1 Power storage Line
- PCBA Production
- Vehicle Controller Product Line

Project Breakdown

Total vehicles number from 15 to 20.
Each vehicle has battery of 350kWh, and require to charge from 20% to 80% by evening.

Target is to charge the vehicles while reduce grid consumption. To maximize the usage of solar power.

Total energy storage upper limit required
= 350kWh*(80%−20%)*15= **3240kWh**

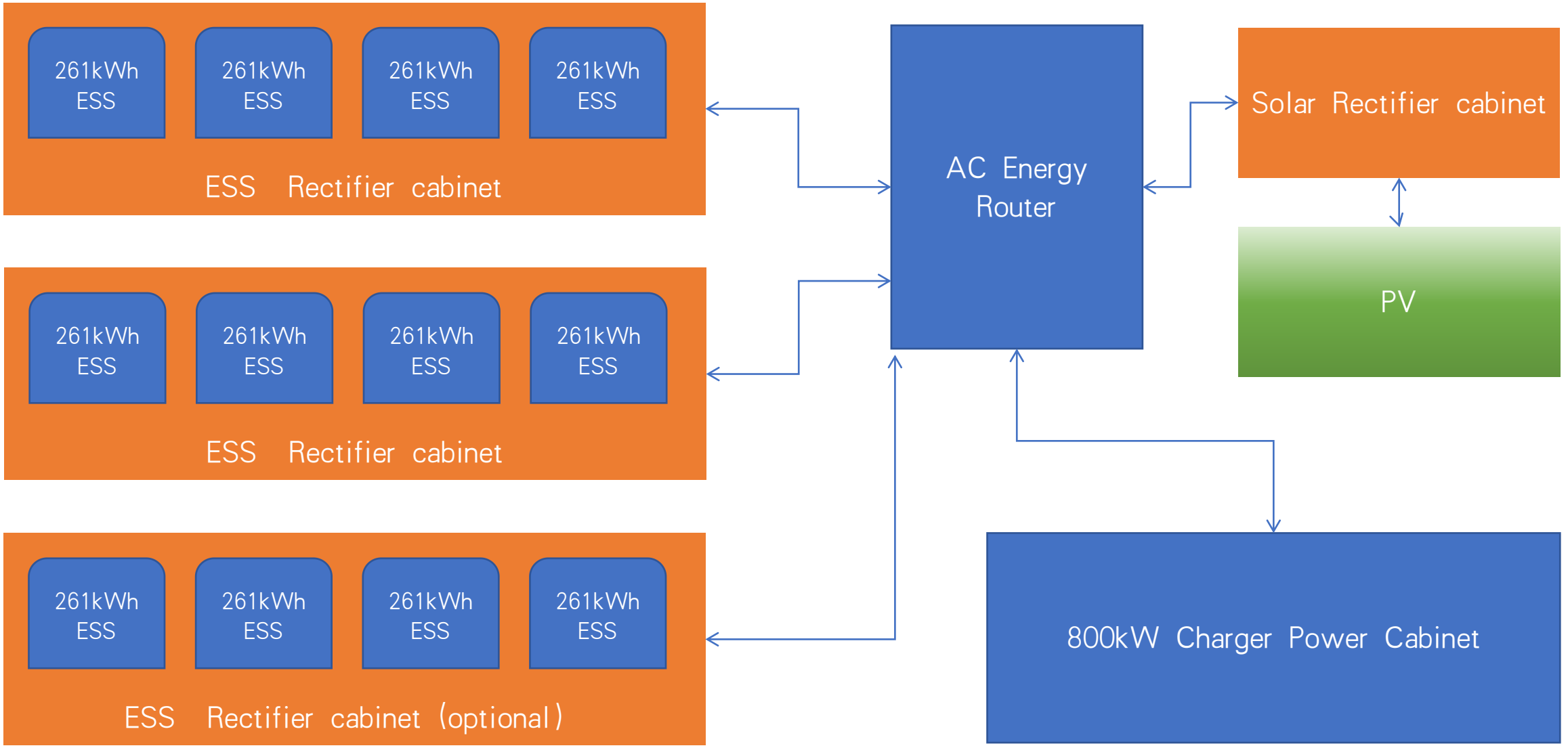
To start, 2000kWh ESS can be installed first and more ESS space can be reserved for future.

Project Breakdown

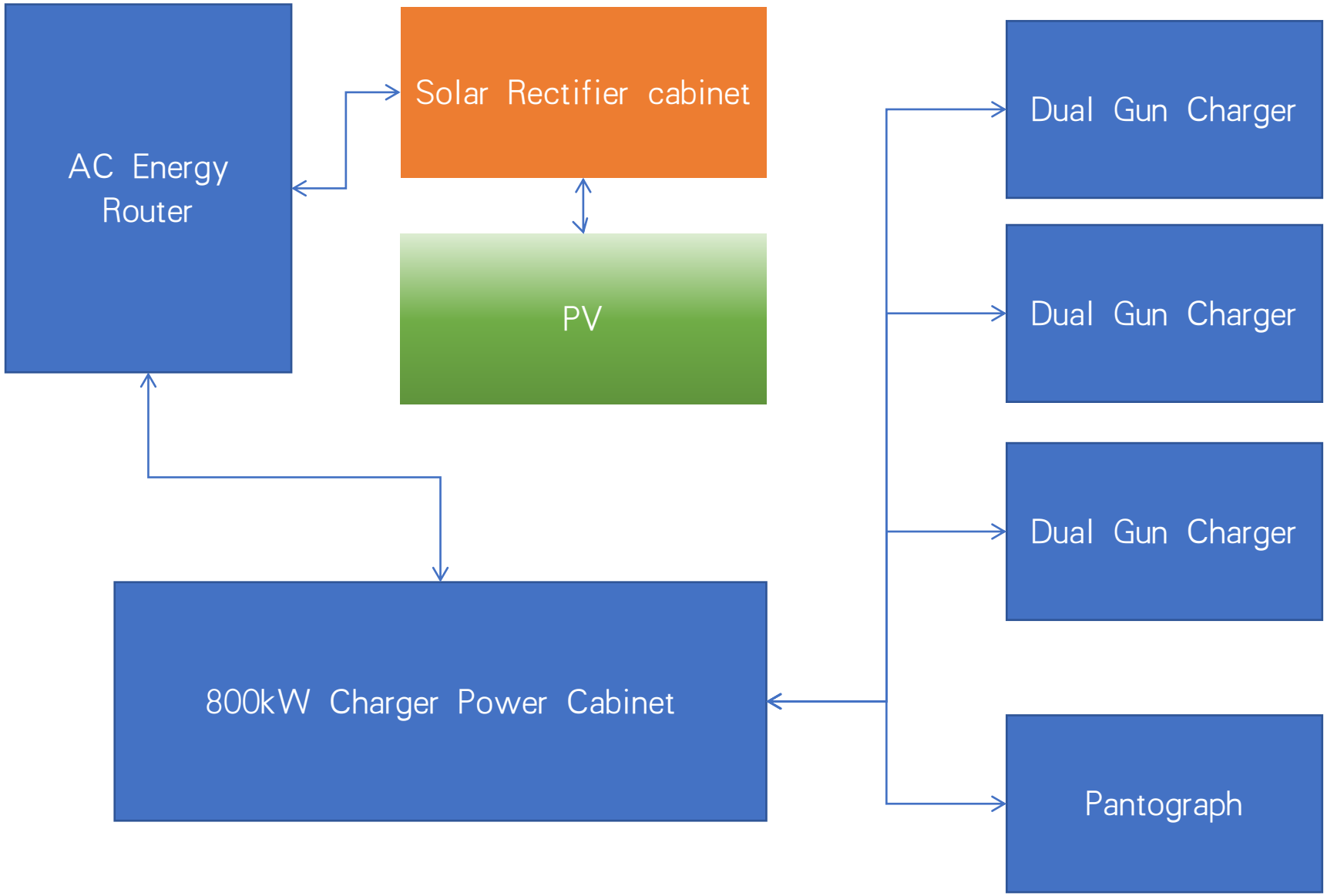
Charger break down：

800kW Power Cabinet+dual—gun terminal×N+Pantograph

Structural Introduction: ESS



Structural Introduction: Charger



Structural Introduction: Strategy

Solar First: Any solar generated power will be used for charging as first priority

Storage: Any power thats not requested by charger will be storage in ESS for reserve. With modular design, user shall increase the ESS capacity simply with more cabinets installation.

Day charge: Pantograph is supporting 600A/850A current output to the vehicles, and each bus shall come in fast charge for 18mins to charge 50% of capacity.

Night charge: 800kW charging power will be distributed amount all guns and uses ESS reserved energy to charge the vehicle.

Solar Power Calculation

PVOUT csi	1539.3	kWh/kWp
GHI	1852.7	kWh/m²
DNI	1656.8	kWh/m²
DIF	704.9	kWh/m²
D2G	0.383	
GTI opta	1937.9	kWh/m²
OPTA	19 / 0	°
TEMP	24.9	摂氏度
CDD	2535	日度差
HDD	0	日度差
POPUL	599	inh./km²

According to Nadi's local average solar power output, 1539.3kWh power can be generated from every 1kWp solar panel

For current 80kWp solar panel, yearly energy generated around 123120kWh.

Satellite Charging System dynamically distribute energy amount all charging terminals.

Product Name	Pantograph System
Standard	IEC
Input Voltage	400VAC±15%(3P+N+PE)
Working Frequency	45~65HZ
(MAX) Input Current	1460A
(MAX) Output Current	250A for CCS2 gun and 850A for Pantograph
Output Power	800kW
Output Voltage	200~1000VDC
Protective Level	≥ IP55
Efficiency	≥ 94%(≥95% for 50% or more loading)
THDi	≤5%
Working Temperature	-30℃~+55℃
Mechanical	＞IK10
Network	4G,10/100Base-T Ethernet
Charging Method	APP, RFID, Plug& Charge
Communication	OCPP1.6J
Metering	MID Certificate
Certificate	TUV CE

Energy Storge Products

- Liquid Cooling Energy Storage Cabinet

125kW/261kWhEnergy Storage Cabinet General Specification

Battery Specification	
Cell Type	LFP 314Ah
Battery Pack	52kWh/1P52S
Battery System	261kWh/1P260S
Output Voltage	650~800V
AC Specification	
Rated AC Output	125kW
AC Rated Current	181A
AC Current Distortion Rate	＜3%
Liquid Cooling	5kW Cooling
Rated Grid Voltage	380V
Adjustable Power Factor	-1-1
Rated Frequency	50HZ

System Specification	
Overall Efficiency	≥90%
Charge Rate	≤0.5C
Charge Depth	90%DOD
Rated Voltage	TN380V
Life Cycle	≥6000
Charging/Discharging Switching Time	<100mS
Communication Bus	RS485
Protective Level	IP55
Cooling Method	Liquid Cooling
Working Temperature	-35~55℃
Moisture	5~95% RH, without condensation
Noise	<65db
Attitude	≤2000m
Dimension(W*H*D)	1000*1350*2350mm
Weight	2500kg

Energy Storge Products

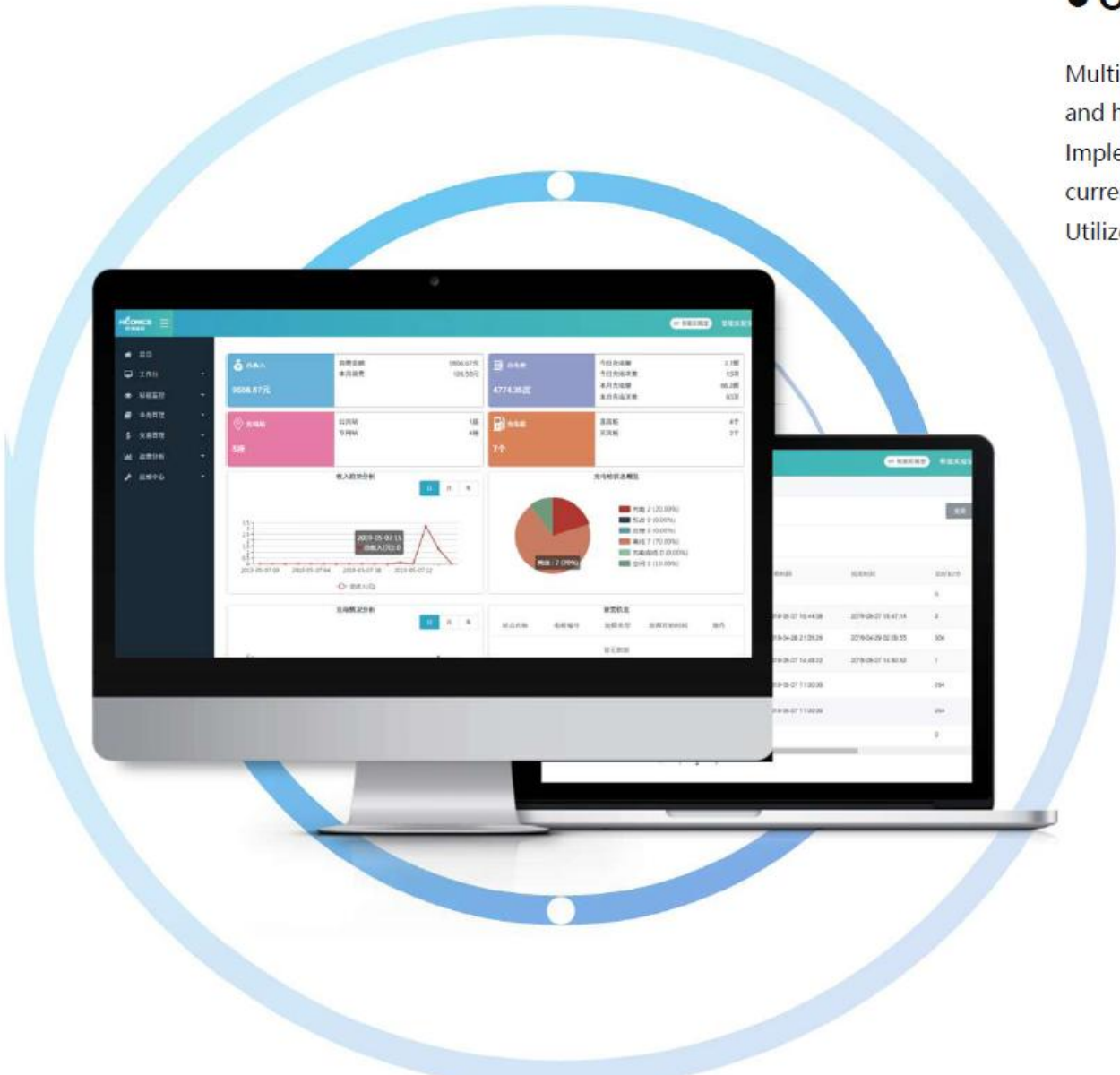
- AC energy system

☐ Product Specification

As the key unit for controlling all units within the micro-grid

- As a central control unit to connect every units on the AC power bus
- Constructing of AC power bus system allows multiple unit extension without major reconstruction.
- Support on-grid and off-grid solution ;
- Multiple source input, automatically allows grid, solar, wind, ESS working under the specific condition ;
- Different energy strategy available ;
- Local central control system for easy operation
- Optional cloud based control platform.
- The AC energy router combines EMS, Metering, controls MPPT & Chargers.

HICI CMS



● Online Management

Multiple charging station usage configurations, including open shared sites, internal private sites, and hybrid usage;
Implement various pricing strategies for charging stations, while distinguishing between direct current (DC) and alternating current (AC);
Utilize time-based fees and charging pile screen advertisements to enhance operational efficiency.

● Life Monitoring

Continuous monitoring of charger status 24/7;
Charger anomaly alerts with SMS notifications to administrators; remote control for device restart and self-inspection;
Multi-dimensional querying of charging orders with convenient Excel export for statistics; power distribution monitoring and charging monitoring.

● User Analysis

Set different user group for different charging rate.
Online management system allows multiple users using one account for balance check and different VIN authorization

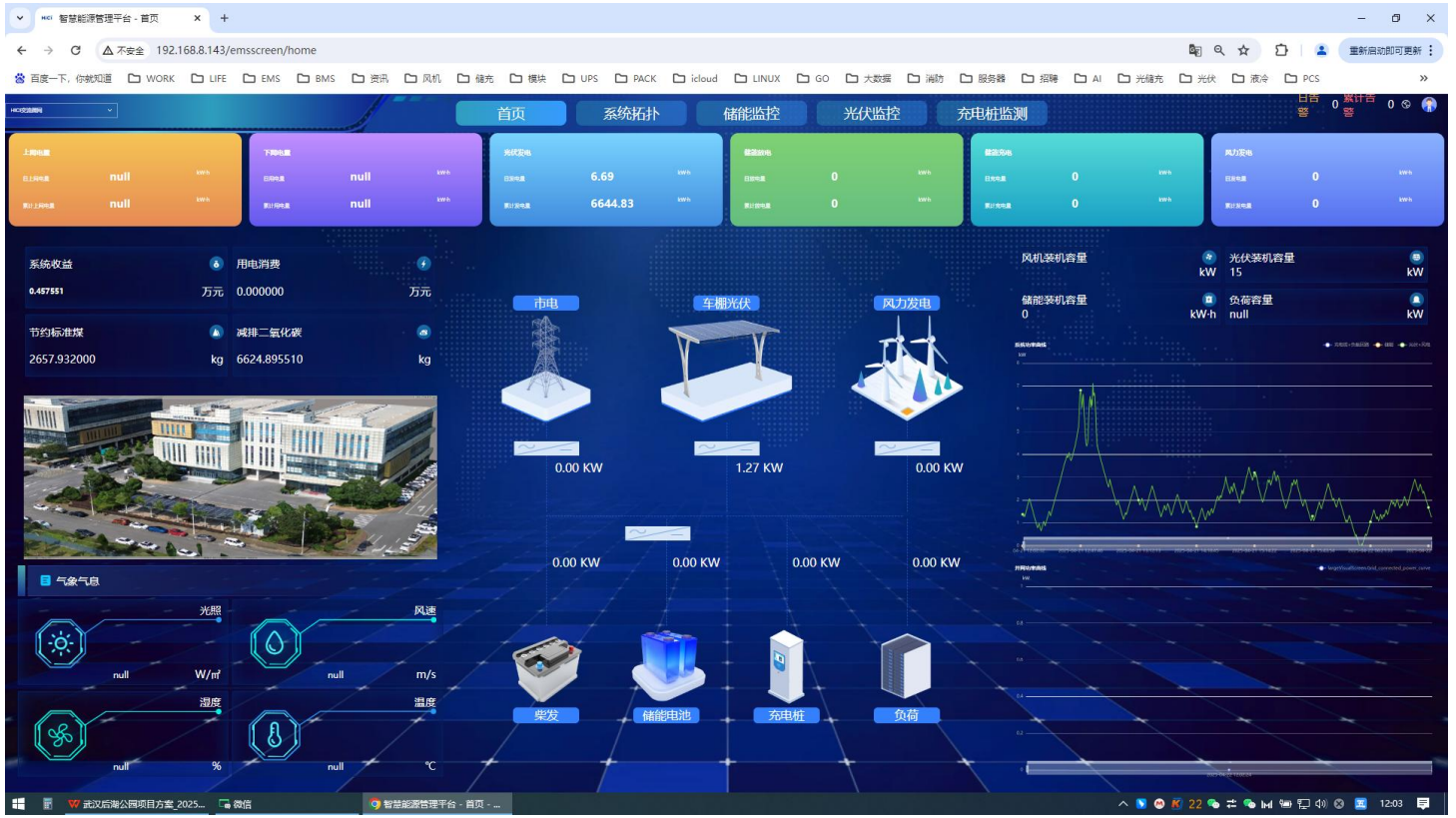
● Profit Analysis

Multi-condition operation analysis of electricity, duration, frequency, and income; the recent operation trend of each charging station;
Daily revenue sequential analysis; Automatic reconciliation, automatic meter reading, and timed charging.

EMS Function

Intelligent Dispatch

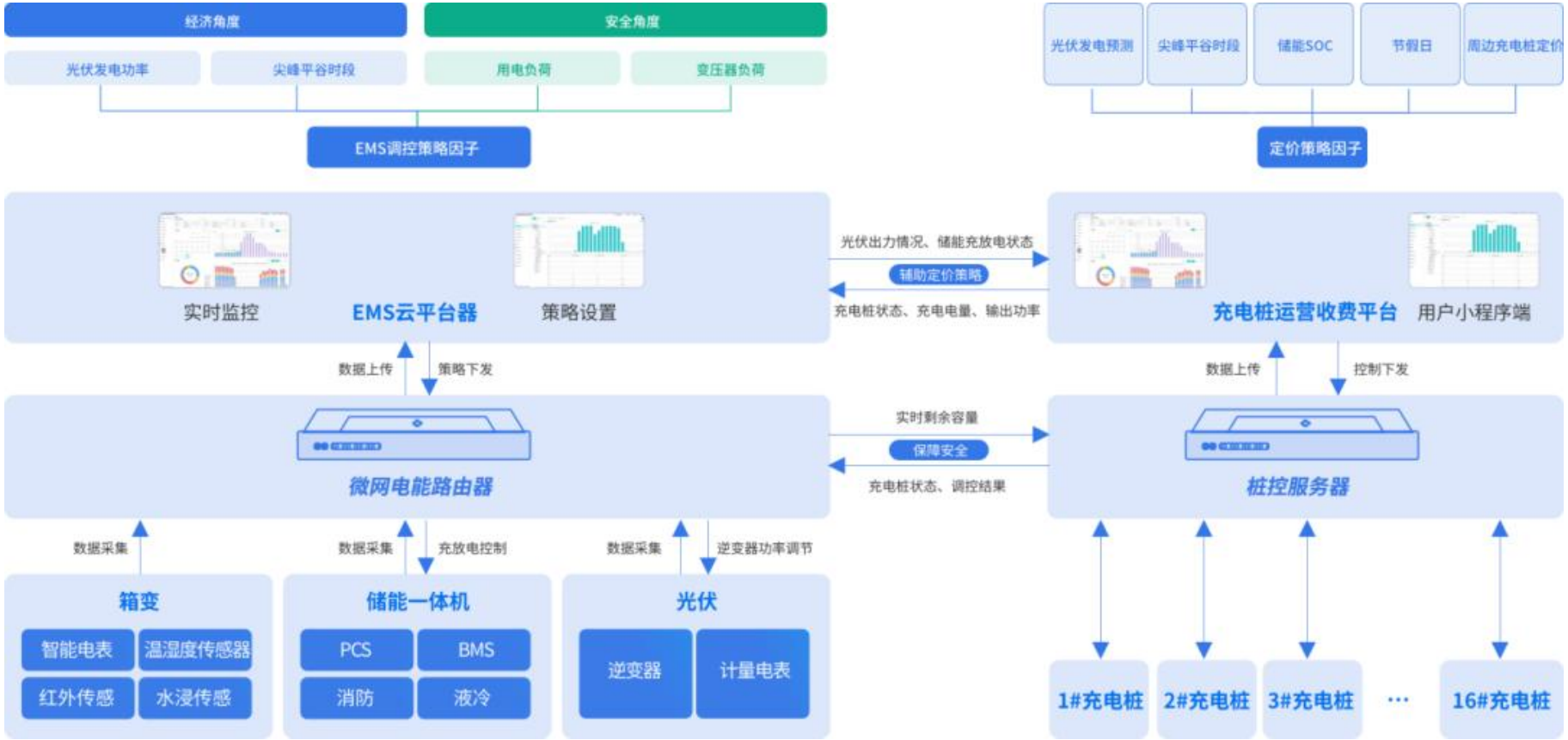
The control center displays the operating status and key data of the entire (EMS) operation system, such as real—time power generation, energy storage status, charging pile usage, etc., to visually monitor the overall system. At the same time, based on AI algorithms, it realizes real—time scheduling of each access unit and “source—network—load—storage—charging” intelligent optimization scheduling.



EMS Function

Source—network—load—storage—charge synergy

Real—time monitoring of various energy supply and demand situations within the microgrid, forecasting energy demand, optimizing energy allocation, scheduling resources, providing decision support, interacting with users as well as ensuring security and compliance to achieve efficient management and optimization of microgrid energy.



EMS Function

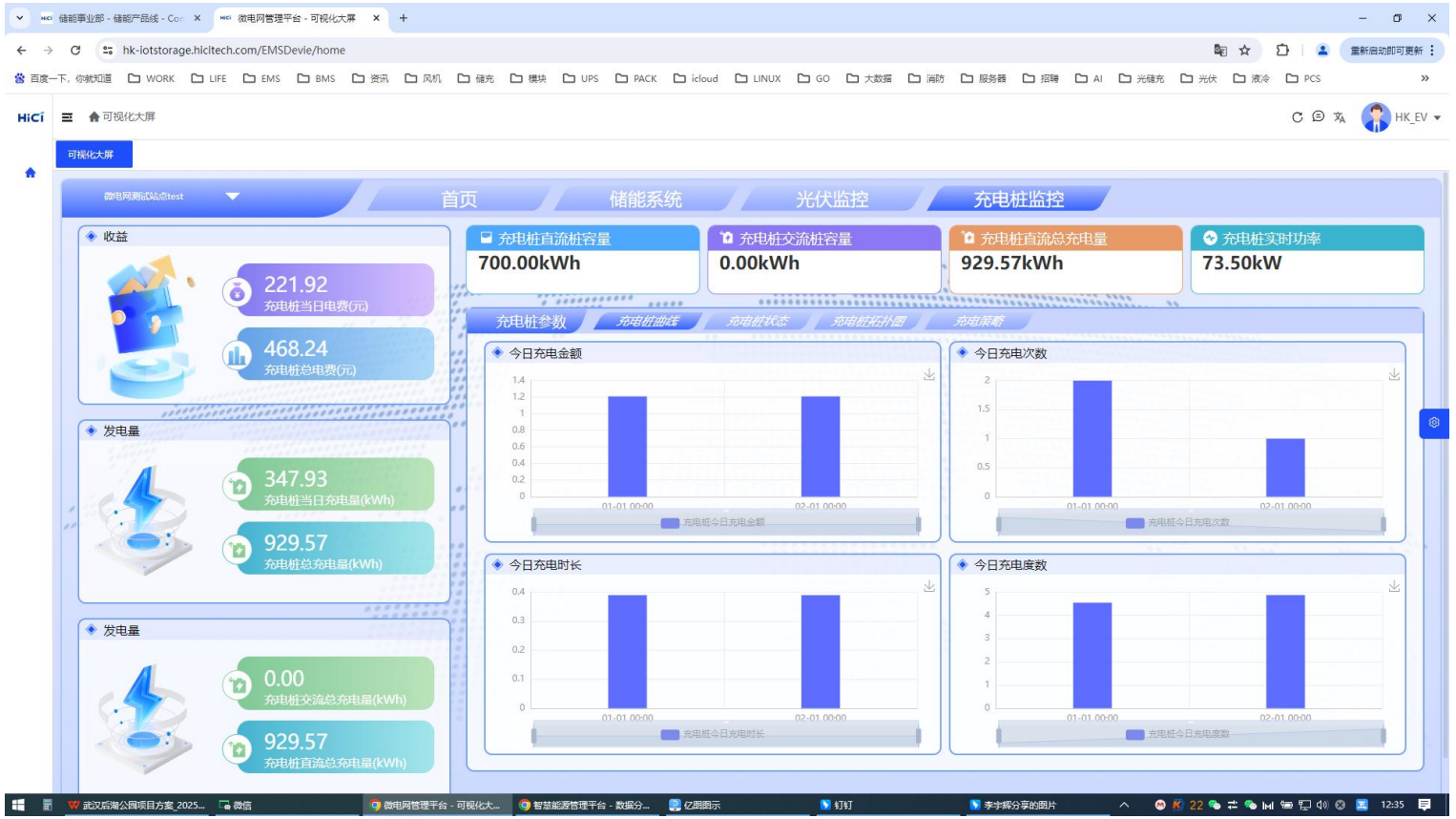
Statement of energy use structure

Detailed records of energy use and analysis functions, a first—hand grasp of the efficiency of energy use, to find out the potential space for energy saving, for energy management, charging station operations, etc. to provide data support.

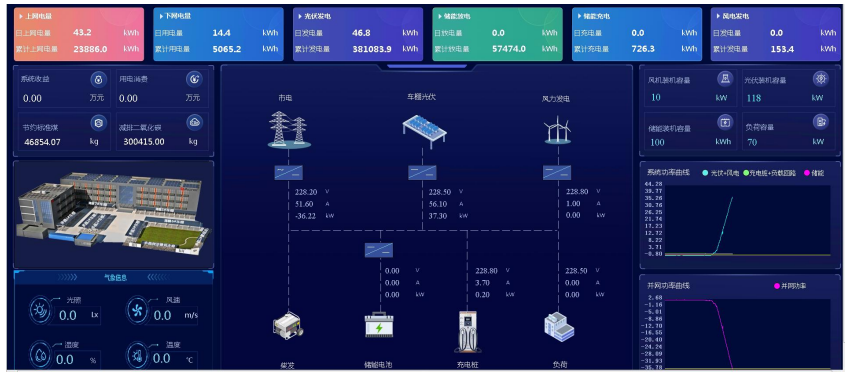
EMS Function

Charger—— PV——ESS synergy

The charging pile works in concert with the PV and energy storage systems to ensure that the operation of the charging pile matches the energy supply, automatically adjusts the working status of the charging pile according to the energy generation and charging demand, and realizes the optimization of the charging efficiency and energy utilization while avoiding overloading of electric power and improving the service life of the charging facilities, as well as ensuring the stability and reliability of the charging service.



EMS Display



System Home

Energy Storage Monitoring

PV Monitoring

Charger Monitoring