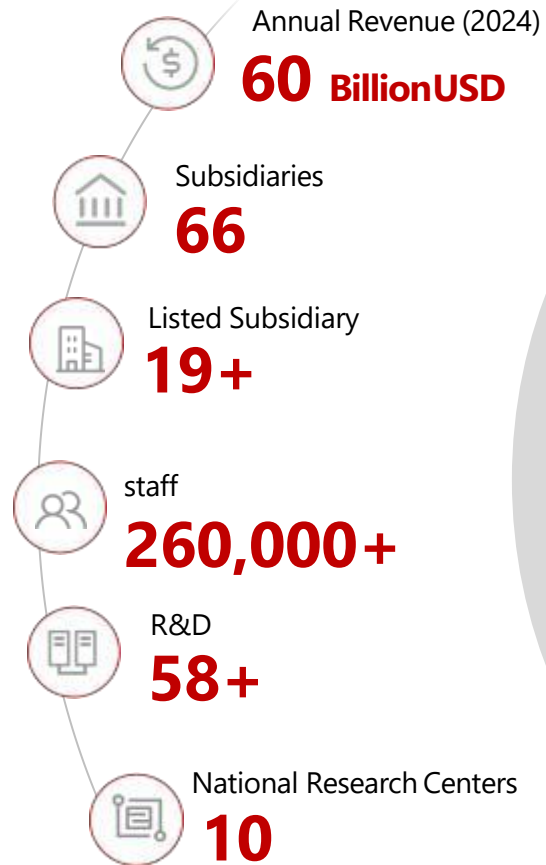




COMPANY OVERVIEW

CETC - Top 10 State-Owned Corporation



REDSOLAR

CETC New Energy Subsidiary

HIKVISION

CETC Security System Subsidiary

TAIJI

CETC Defense Electronics
Subsidiary

 **天奥电子**
ELECSpace

CETC Aerospace Electronics
Subsidiary

Red Solar Company Introduction

Performance & Capacity

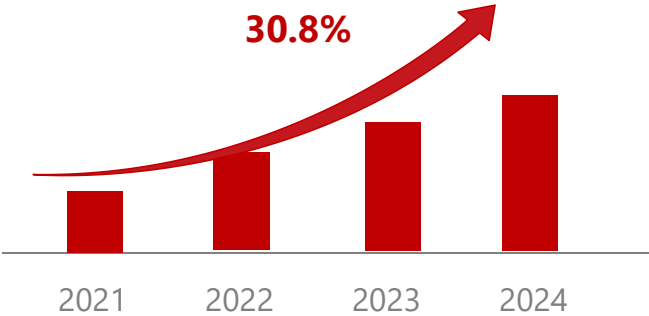
10GW+ Annual Module Manufacture Capacity

7GW+ Cumulative Power Plant EPC

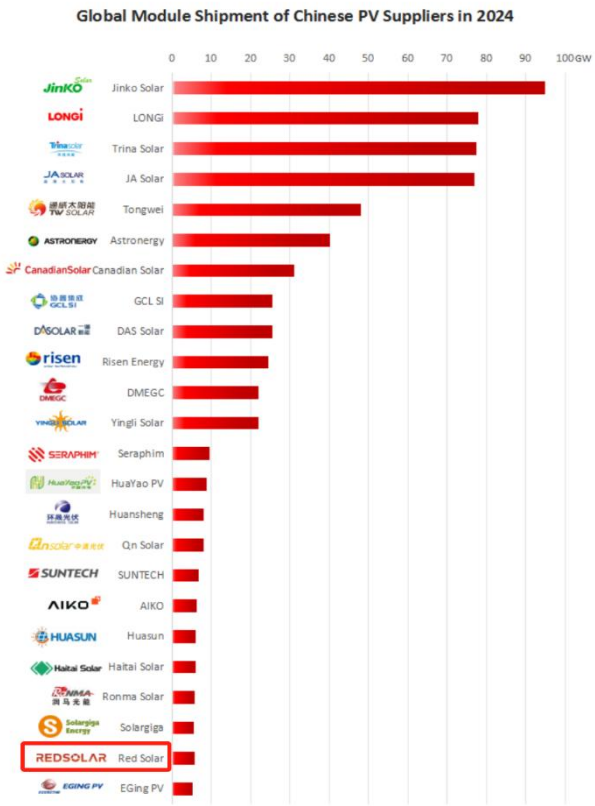
30GW+ Cumulative Cell & Module Products

50GW+ Cumulative Production Lines

Annual Average Performance Growth Rate



Global Solar Module Shipment



SOLARBE		
Top Solar Module Companies for Q3 2024		
(by shipment volume)		
Rank	Module Supplier	Shipment(GW)
1	Jinko Solar	67.65
2	JA SOLAR	57
3	TrinaSolar	54.55
4	LONGi	51.23
5	TV SOLAR	32
6	ASTRONERGY	29
7	CanadianSolar	22.9
8	DASOLAR	14.5+
8	GCL	14.5+
10	YONG SOLAR	~14
11	risen	13.6
12	DMEGC	12.79
13	SERAPHIM	8.9
14	Qin Solar	~6
15	环晨光伏	4.784
16	环晨光伏	4.1-4.4
17	RED SOLAR	3.9
17	DASOLAR	3.9
19	CECEP SOLAR	3.8
20	Haitai Solar	3.6
21	HY SOLAR	3.1
22	EGING PV	2.8-3
23	SOLAR PLUS	2.5
24	ReneSola	2.4
25	SUNREV SOLAR	2.34
26	SUNREV SOLAR	2
27	ZHSHINE SOLAR	1.426
28	WINHIT&CH	1.102

Data Resource: PVTIME



TOP 20
Global PV
Corporation



TOP 500
Global New Energy
Enterprises



R&D Capabilities & Certifications

China National Solar R&D Center



R&D team

- 19 national-level experts with National outstanding contributions, and Changjiang Distinguished Scholars
- 15 Researcher-level Senior Engineers
- 68 Senior Engineers
- 288 Engineers

Talent structure

- Leading enterprise of Hunan Province
- World-leading turnkey production line service
- Global Top 20 PV Enterprise (5GW Cells/Modules)
- 85 patents and 8 software copyrights

ISO 9001:2015



Certifications



Strategic Partners

Collaborating with partners, we provide global clients with comprehensive energy industry chain and solution

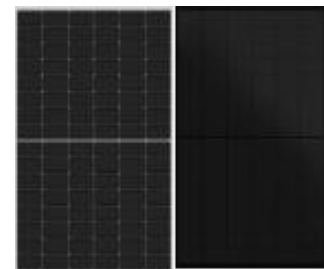
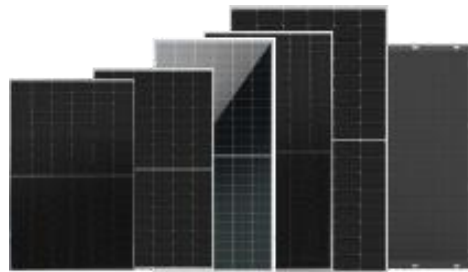
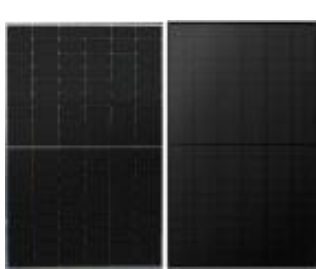




RED SOLAR MODULES

Perc & Topcon Module Series

	G1	M6	M10	G12R	G12
PERC	• 310-415w • Small size of the N-version • The N version for repowering	• 360-465w	• 390-595w • Reliability and stability • Highly versatile, suitable for a wide range of usage scenarios		• 580-670w • Suitable for large-scale ground-based power plant
TOPCon			• 410-640w • Efficiency: 22.9% • Linear power attenuation 0.4% per annum (excluding 1st year) • Higher bifaciality (~80%) • Low-Emission Power Generation Technology	• 435-625w • Efficiency: 23.0% • Linear power attenuation 0.4% per annum (excluding 1st year) • Higher bifaciality (~80%) • Low-Emission Power Generation Technology • Lower BOS cost	• 690-715w • Efficiency: 23.0% • Linear power attenuation 0.4% per annum (excluding 1st year) • Higher bifaciality (~80%) • Low-Emission Power Generation Technology



Module Series (China & MEA)

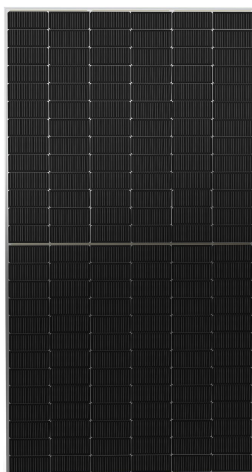


TOPcon

TOPcon
144 dual-glass
module



TOPcon
156 dual-glass
module



Power **570-640W**

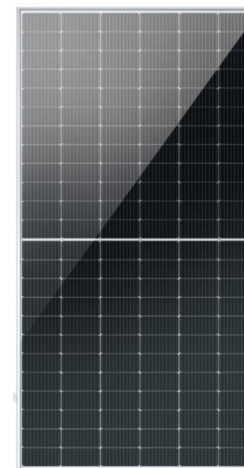
Highest efficiency
22.9%

System BOS cost
↓3%+



Rectangular TOPCon

Rectangular TOPCon
132 dual-glass module



Power **600-625W**

Highest efficiency
23.0%

System BOS cost
↓5%+

High Efficiency: up to 23%;

Wide Range of Power: 580-580W, 590-595W, 610-615W, 620-630W, 630-640W

Excellent Power Guarantee: First year degradation ≤ 1%, Linear degradation: 0.4%;

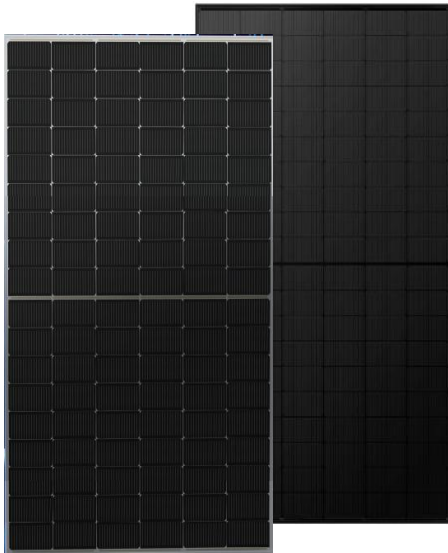
Warranty: 12 Year Product Warranty · 30 Year Linear Power Warranty;

Module Series (Europe)



TOPcon

TOPcon 108 module



Power **415-435W**

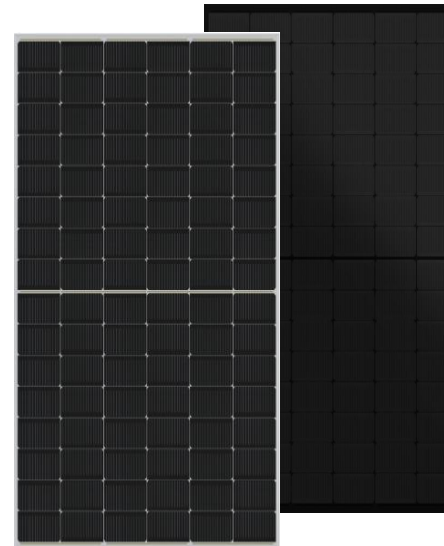
Highest efficiency
22.3%

Small size, **easy**
installation



Rectangular TOPCon

Rectangular TOPcon 96 module



Power **435-455W**

Highest efficiency
22.8%

With extreme sizes, **the**
first choice for
residential use

High Efficiency: up to 22.8%;

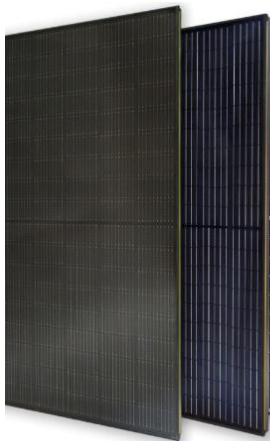
Wide Range of Power: 405-410W, 435-440W, 440-450W, 450-455W
Excellent Power Guarantee: First year degradation $\leq 1\%$, Linear degradation: 0.4%;

Warranty: 12 Year Product Warranty · 30 Year Linear Power Warranty;

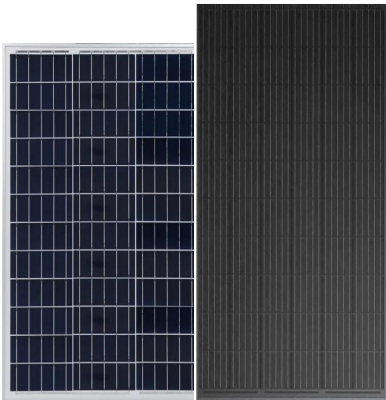
Customized Modules



Light Series



BIPV Series



Small Size Series



Light Flexible Module



Solar Street Light



Color Steel Tile Rooftop



BIPV (Building Integrated Photovoltaic)



RED SOLAR SOLUTIONS

Power Plant Solutions for Different Scenarios



Residential



Industrial Park



EV Charging Station



Mine



Desert Power Plant



Forestry Power Plant



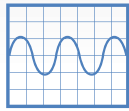
Fishery Power Plant

Challenge & Solution of Different Scenarios

High Cost of Electricity



1. High electricity **consumption equipment**
2. **Peak-to-valley** electricity price increase cost
3. High dependence on traditional energy, and pressure on **carbon emission**



Solution

1. **Energy storage** system balance electricity peak and valley: charges in the cheaper electricity time and discharges in high, reduces the electricity expenditure
2. Solar self-generation and **self-consumption**, reduce the purchase from the grid

Unstable Power Supply



1. **Insufficient and interruption** grid power supply
2. **Overload** caused by concentrated power consumption in some period
3. Delayed start-up of **diesel** power generation, noise pollution and high carbon emission



Solution

1. Build **solar + energy storage + diesel** generation system to provide stable power supply
2. **Smooth** solar power generation and load fluctuations through energy storage system

Operation & Maintenance



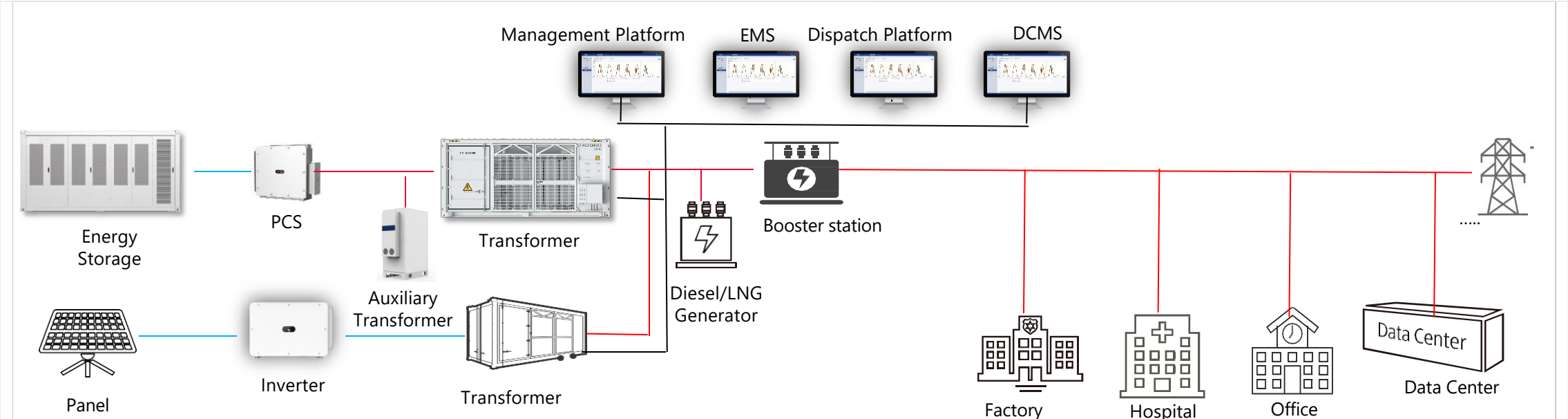
1. **Lack** of professional O&M team, lack of experience in microgrid system
2. **Safety risk** in operation of high-voltage equipment, battery thermal runaway and other safety hazards



Solution

1. **Intelligent** O&M platform for maintenance and process management
2. Establish safety O&M **training**

Power Plant Core Design



Green Power Self-sufficiency

The solar power is preferentially supplied to the production load, and the remaining part is stored by BESS, which can achieve 100% clean power consumption

Reduce Carbon Emission

Solar power 1 MW, can save 305ton of coal per year, significantly reduce the carbon emission

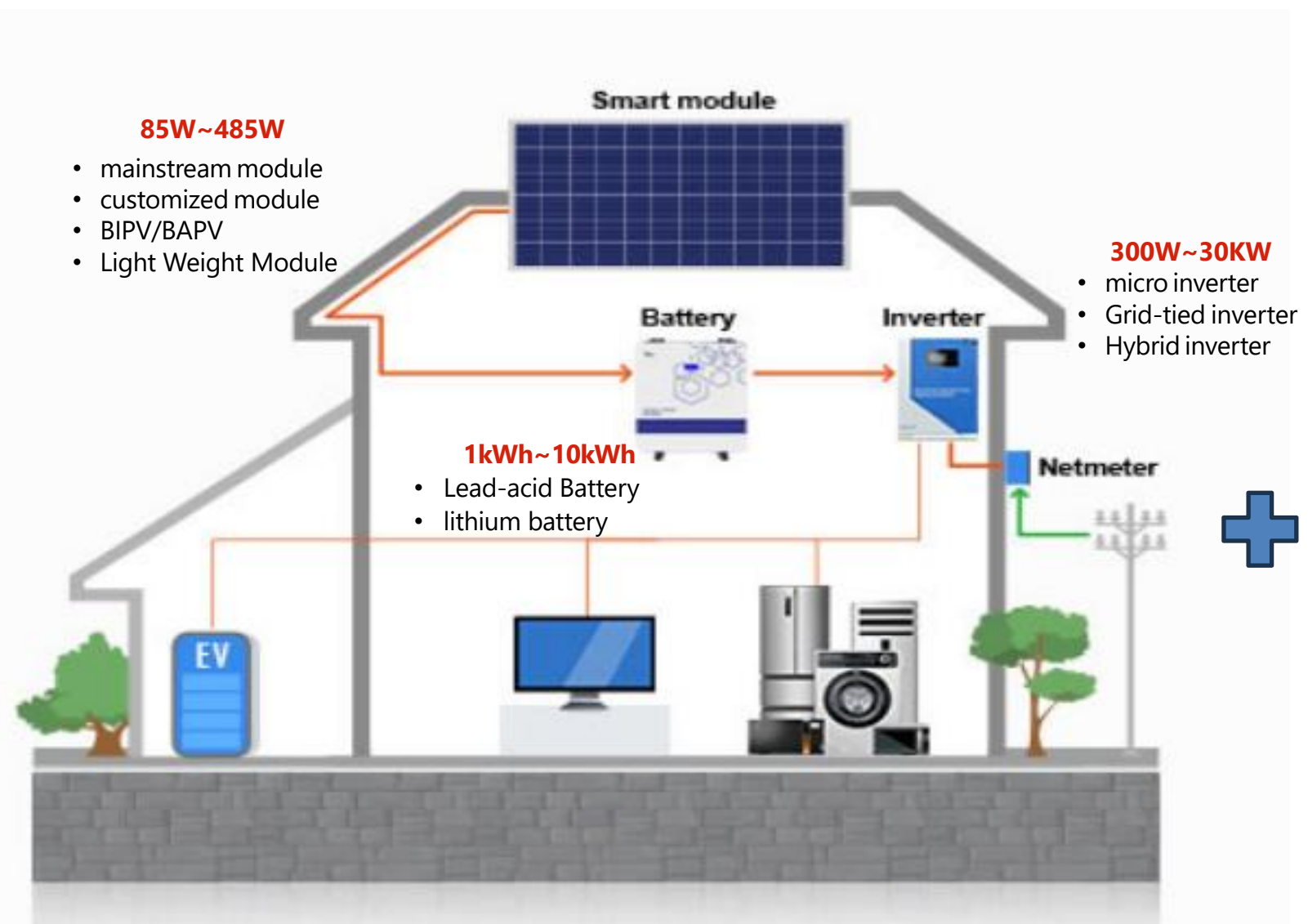
Save Power Cost

By consuming solar power, the unit price of electricity can be reduced by 20%+; BESS reduces 15%+ expansion of transformer

Full Electrification

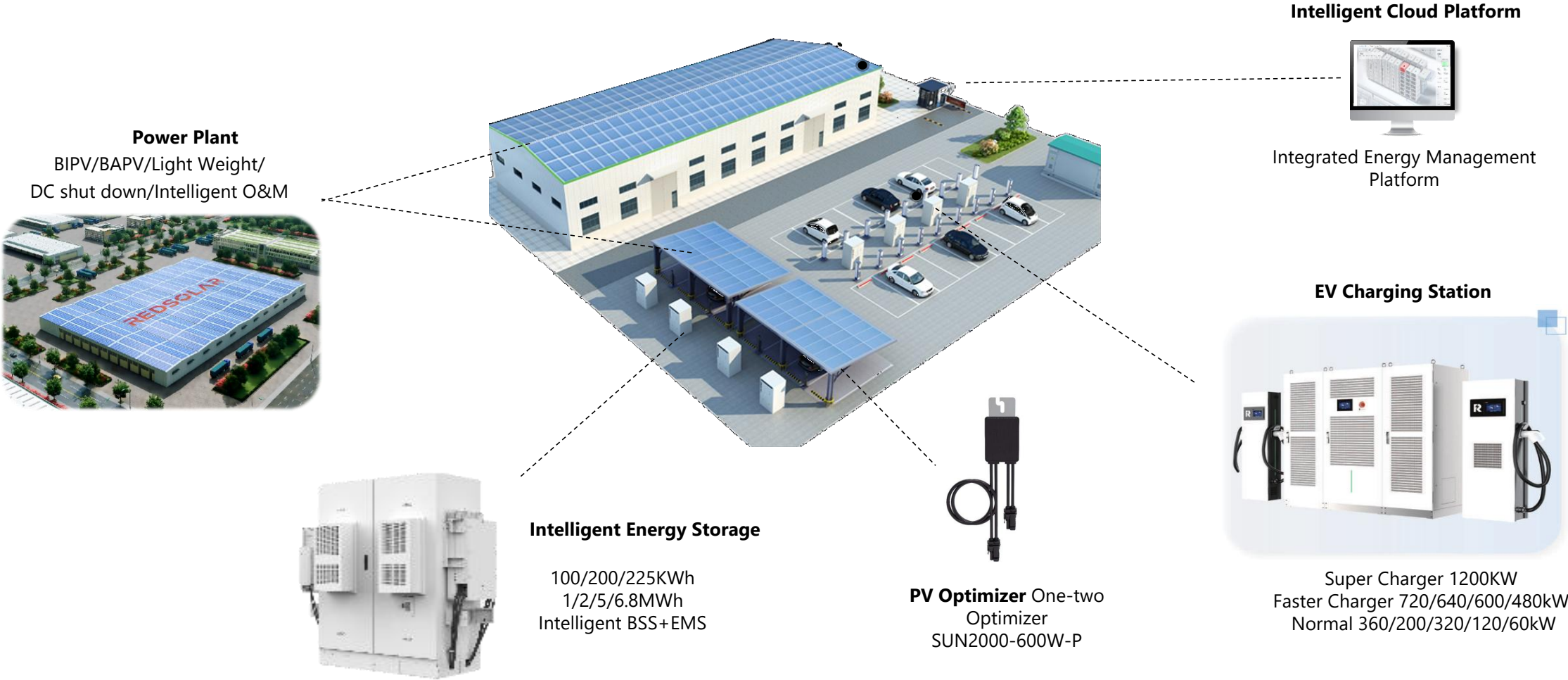
Green solar energy provides production power, enables energy intelligence and promotes total electrification.

Scenario 1: Residential Solution



Bracket

Scenario 2: EV Charging Station + Power Plant + Energy Storage



Multi-energy
Complementarity

Multi-Scenario
Adaptation

Intelligent Operation

Safe & Reliable

Scenario 3: Lens Technology Industrial Park (C&I)

Pain Point:

1. ROI, the solar power consumption & CAPAX
2. Rooftop loading & site Area
3. Distribution room access intervals, insufficient transformer capacity
4. Water proof

Red Solar Solution:

1. Accurate power consumption calculation & 3rd party financing solution
2. Layout design of rooftop loading and size of site area
3. Fast construction plan

The Value We delivered:

1. 3rd party investment to save customer's cash flow
2. Save electricity cost & increase income
3. Waterproof, good looking of BIPV/BAPV



power plant capacity

76.12MW



Quantity of modules

133,559 units



Project area

**Colored steel
shingles
and concrete**



Annual Average
Energy Output

70.58Million KWh



Scenario 4: Guizhou Copper Mine (C&I)

Pain Point:

1. Cable network design & connect to state grid
2. Stable power supply + diesel + BESS
3. Consumption of solar electricity
4. EV truck station

Red Solar Solution:

1. Adequate site survey to support layout design including power calculation, grid network, battery capacity;
2. Consumption design to match mine power requirement
3. EV truck is charged during noon time to consume solar power

The Value We delivered:

1. Power generation 15,360KWh/year, save **40%** cost
2. Stable power supply and **95%** solar power is used
3. ROI = **2 years**
4. EV truck charge time is shorted from 1hour to **5**minutes



Scenario 5: Futian Vehicle Car Park (C&I)

Pain Point:

1. Car park for 8000+ vehicles, need to design large-span steel structure
2. ROI, the solar power consumption & CAPAX
3. Typhoon threat

Red Solar Solution:

1. Introduce 3rd financing partner;
2. Divide into 3 phases to test the typhoon protection level & capax
 - phase 1: Grade 9 typhoon protection with high cost
 - phase 2: Grade 5 typhoon protection with lower cost
 - phase 3: Grade 6 typhoon protection to match the budget
 - phase 4: follows phase 3 design, is on-going

The Value We delivered:

1. ROI from 10 years optimizes to 7 years



power plant capacity

16MW



Quantity of modules

27,298 units



Project area

Car Park



Annual Average
Energy Output

11.62 Million KWh

Scenario 6: Hainan Province Fishery Power Plant (Utility Scale)

Pain Point:

1. The soft bottom of the lake is challenge for structure
2. Module shadow should not influent fish breeding

Red Solar Solution:

1. 4 integrated design models, including fixed supporting bracket, fish pond bracket, flexible bracket and BIPV
2. The shadow of the panels lower down water temperature by 3- 5°C in summer, and enhancing spawning yield by 50%

The Value We delivered:

1. Fishery income increases **2million** RMB yearly
2. Power generation increases by **20%** yearly



power plant capacity

89.89MW



Quantity of modules

138,300 units



Project area

91 Hectare



Annual Average
Energy Output

116.9Million KWh

Scenario 7: Guangdong Energy Group Forestry Power Plant (Utility Scale)

Pain Point:

1. Unregular forest shadow
2. Fast deployment requirement as green energy demonstration of government
3. Underground cable landfill

Red Solar Solution:

1. Tilted angle spacing calculation method to design module layout
2. Deployment of multi-branch power collection efficiency enhancement technology
3. Robot cleaning

The Value We delivered:

1. Power generation efficiency increases by **0.6%**, system reliability enhances by **20%**
2. Deployment completes in **11** months, and cost reduces by **1.95%**



power plant capacity

100MW



Quantity of modules

181,844 units



Project area

120 Hectare



Annual Average
Energy Output

103.3 Million KWh

Scenario 8: Inner Mongolia Desert Power Plant (Utility Scale)

Scenario Pain Point:

1. Soft & mobile desert foundation
2. Dusty weather
3. Wind protection
4. Minimal worker oversight

Red Solar Solution:

1. Fixed innovation bracket solution to fix the modules firmly, with smart design of inverter, transformer layout
2. Validation of N/P type modules, enhancing efficiency by 10% through different layout
3. CCTV solution
4. Robot cleaning solution

The Value We delivered:

1. Electricity output 155.6million KWh yearly



power plant capacity

200MW



Quantity of modules

370,370 units



Project area

367 Hectare



Annual Average
Energy Output

155.6Million KWh



PRODUCTION LINE TURNKEY SERVICE

End-To-End Turnkey Production Line

1. Project Design



Turnkey production line within 8-12 months, with subsequent operational service designed to reduce client cost

2. Equipment Mobilization



Proprietary equipment, coupled with AI-powered real-time monitoring, ensures a product yield rate of 99%+

3. Capacity Ramp-Up



Expedited ramp-up service, additional profits generated for clients during the EPC phase

4. Diverse Training Program



A diversified training system that integrates video with hands-on teaching, designed to expedite the time to proficiency

5. Supply Chain Service



A well-developed supply chain system to minimize procurement period

6. Production Line Operation



A three-tiered approach ensures seamless integration and unhindered communication, guaranteeing the production line fully meets customer requirements

Türkiye Ingot to Module Fully Supply Chain of Production Line

**2019.08: Solar Industry Strategy
Negotiation**



**2019.10: Kalyon & CETC 500MW PL
Signature Ceremony**



**2019.11: Kalyon & CETC 1st
Kick-off Meeting**



**2020.06.17: Launch 1st Module in
Türkiye**



**2020.07.31: Launch 1st Ingot in
Türkiye**



**2020.08.07: Launch 1st silicon
wafer in Türkiye**



**2020.08.15: Launch 1st Solar
Cell in Türkiye**



Türkiye Ingot to Module Fully Supply Chain of Production Line

2020.08.19: President Recep Tayyip Erdoğan & Chinese Ambassador in Ramp Up Ceremony



2020.08.19: Turkish A Haber TV 1st Solar Industry with 1400 work position



2021.05.11: Phase I Handover Successfully



Red Solar New Energy: The Premier Partner For A Green And Bright Future

Cumulative Green
Electricity
Generation

31.17 _{GWH}

Conservation
of Standard Coal

1193.6 _{million tons}

Reduction
of Carbon
Dioxide Emission

3715.6

Equivalent
to planting
approximately

761,395.8 _{acres}