



TOYON ENERGY SOLAR & ESS SOLUTIONS FOR C&I

Power Your Life, Anytime. Anywhere.



Toyon Energy Co.,Ltd.

Add: 6/F, Shangyuan Huichuang Building,Hefei,China

Email: info@toyonenergy.com Web: www.toyonenergy.com



Reliable, Safe, Lifetime Support

Our Corporation

Toyon Energy Co., Ltd

Toyon Group (Stock Code: 688679) was founded in 1999 and listed on the Shanghai Stock Exchange Main Board in 2020. The company employs over 1,500 people worldwide, including more than 200 R&D and technical staff, and achieved an annual revenue exceeding USD 500 million in 2025.

On the manufacturing front, Toyon Energy operates production facilities for lithium batteries and solar panels, with an annual lithium battery capacity of over 2 GWh and an annual solar panel capacity exceeding 1.2 GW. Its products have obtained market access certifications across multiple regions, including Europe, Africa, Southeast Asia, and the Americas.

Leveraging its strong technological expertise, outstanding resource integration capabilities, and comprehensive EPC and project management capacities, Toyon provides global customers with turnkey solutions for solar and energy storage – covering system design, project financing, installation, operation, and maintenance throughout the project lifecycle.

To date, Toyon has successfully delivered over 1.2 GW of projects worldwide, with its products exported to more than 85 countries and regions. The company has established local offices and installation & maintenance teams in Vietnam, Angola, Kenya, the UAE, and the Bahamas, continuously delivering efficient and reliable renewable energy services to global customers.

25+ Years

Industry Excellence
(Est. 1999)

85+

Countries & Regions Served

\$500M+

2025 Annual Revenue

2GWh+

Annual Capacity of ESS

1.2GW+

Projects Delivered Globally

1.2GW+

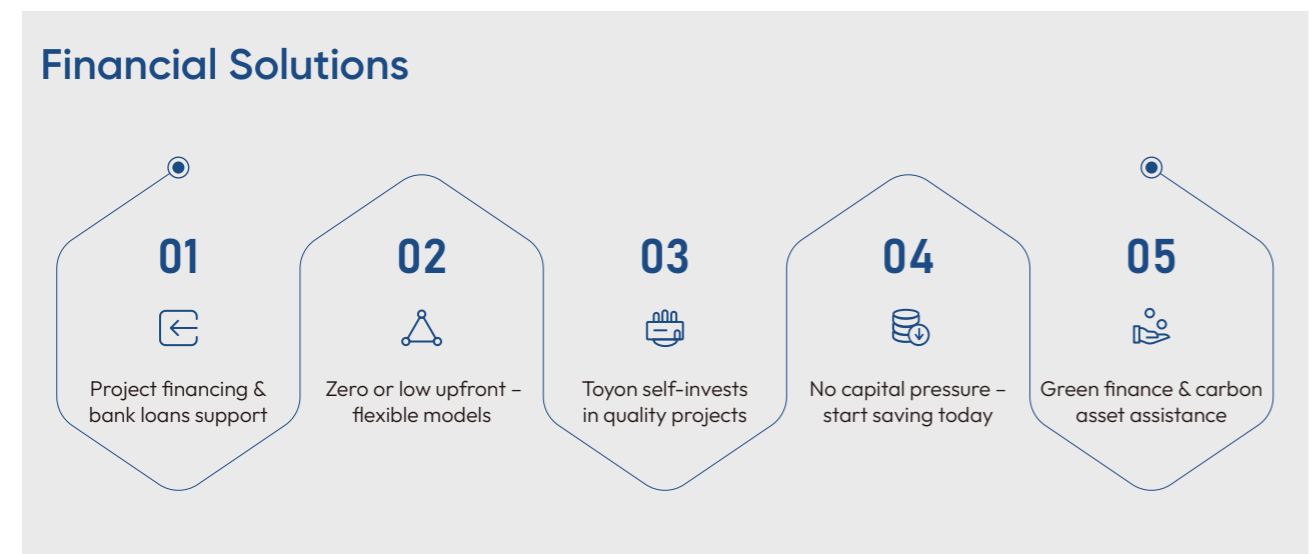
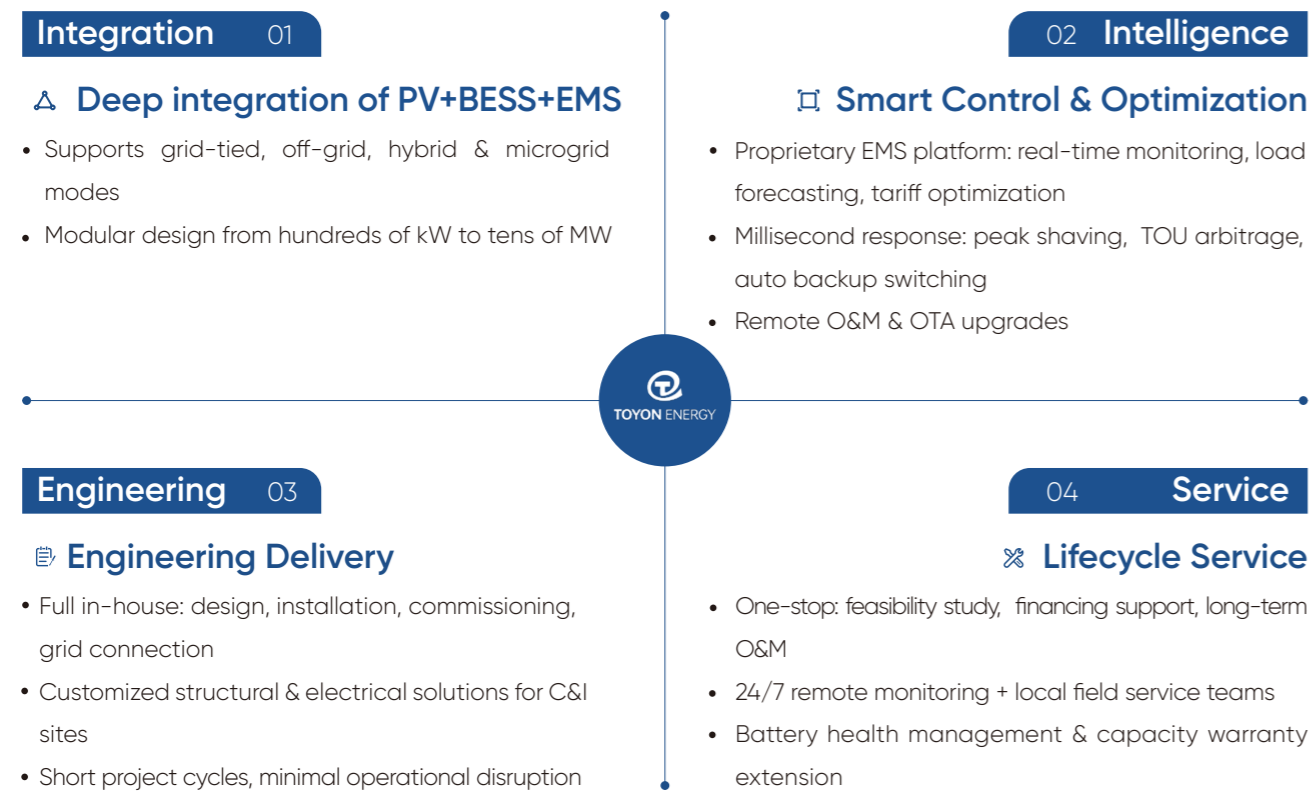
Annual Capacity of PV



Core Capabilities

Toyon Energy delivers end-to-end C&I solar + storage capabilities – from design to operation

System Integration



Why Choose Toyon Energy

- We Understand C&I Needs**
 Not a hardware supplier – an energy partner who speaks your business language
 Solutions built around your three core goals: lower bills, keep power on, cut carbon
- High Reliability & Safety**
 UL/IEC certified with multi-layer protection (cell-level fusing, thermal runaway warning)
 10 year system life, ≥8,000 cycles @80% DoD
- Flexible Business Models**
 Options: direct sale, EMC, leasing, PPA – zero or low upfront available
 Support for green financing & carbon credit monetization
- Global Experience, Local Delivery**
 Projects across Asia, North America, Europe – familiar with local codes & incentives
 Local technical support and after-sales teams



Certifications & Partnerships

300+




Application Scenario



Manufacturing & Industrial Facilities

- High energy demand, peak load management
- Power backup for critical processes
- Load shifting & demand charge reduction



Commercial Buildings
(Offices, Retail, Hotels)

- PV + storage for self-consumption optimization
- Backup power for common areas & critical loads
- Grid services (peak shaving, export limitation)



Cold Storage & Warehousing


- High, constant refrigeration loads
- Battery backup for temperature-sensitive goods
- Time-of-use (TOU) arbitrage



EV Charging Hubs

- Solar + storage to support fast chargers
- Avoiding demand spikes from EV charging
- Grid-friendly, scalable infrastructure

Application Scenario



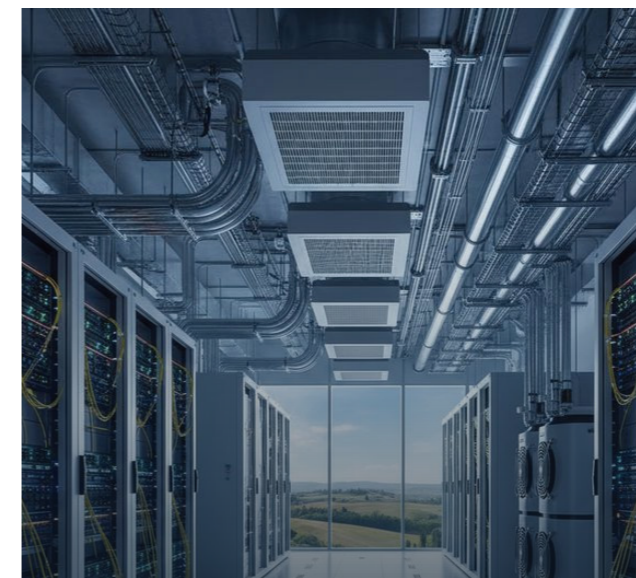
Remote & Weak Grid Locations

- Diesel reduction & replacement
- Grid-forming storage for stability
- Island mode capability



Microgrids & Multi-Customer Parks

- Shared solar + storage for industrial parks
- Resiliency & energy independence
- Peak load sharing & backup coordination



Data Centers

- Replace diesel generators with BESS backup
- Peak shaving + cooling → lower PUE & bills



Hospitals & Critical Facilities

- Sub-second backup – zero outage risk
- PV + diesel coordination – lower cost, higher reliability

Solution

Grid-Tied PV System

Scenario

Factory Rooftops

High daytime production load – direct PV self-consumption

Public Facilities (Schools, Hospitals, Government)

Utilize idle rooftop space – lower operating costs

Commercial Buildings (Offices, Retail, Hotels)

Daytime operation – reduce electricity bills

Agricultural Greenhouses & Farms

Stable daytime load – self-consumption with export

Feature

Plug & Play Design

Fast installation, minimal business disruption

Self-Consumption Priority

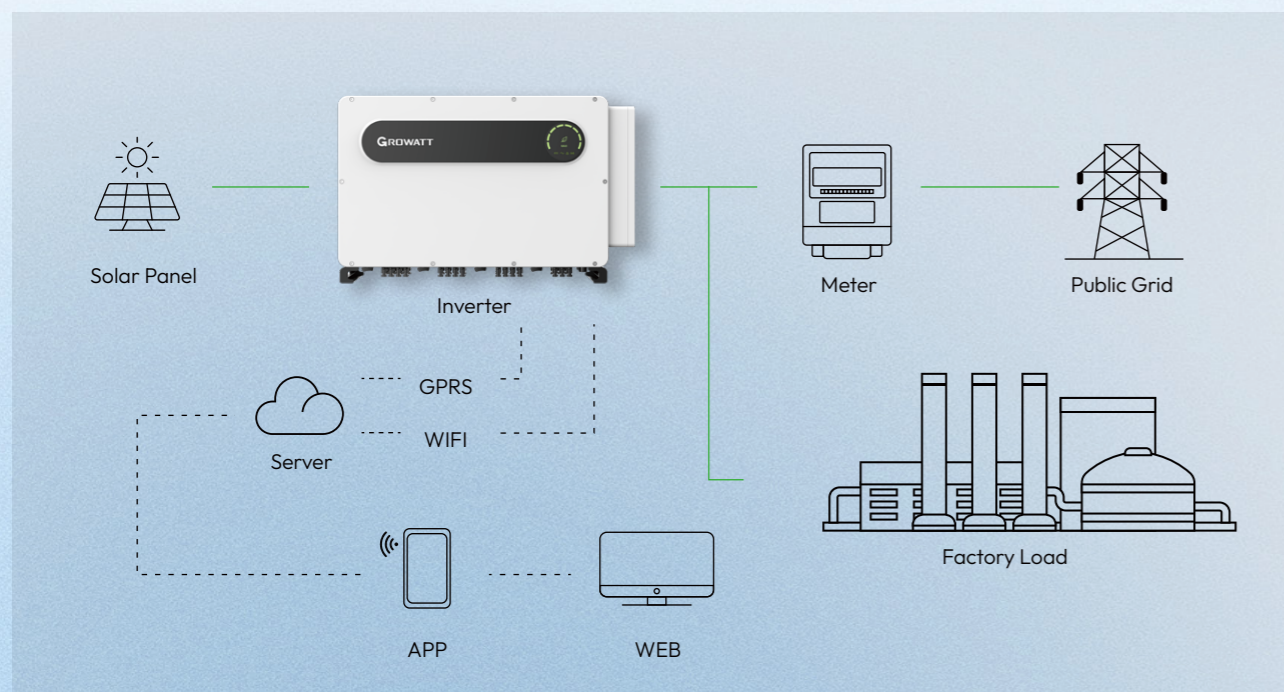
Export surplus to grid for additional revenue

Smart Monitoring

Real-time tracking & remote O&M

Top Brand Compatibility

Works with Growatt, Solis, FOX, Deye



Solution

DC-Coupled PV + Storage

Scenario

New Solar + Storage Projects

Simultaneous installation, DC-side coupling

Existing Pv System + Storage Add-On

Add storage at DC side – no inverter replacement

Remote Area Microgrids

DC coupling offers higher off-grid efficiency

High Self-Consumption Need

Store excess PV power before conversion to AC

Key Features

Higher Round-Trip Efficiency

Only one DC/AC conversion for stored energy – less loss, more savings

Maximized Self-Consumption

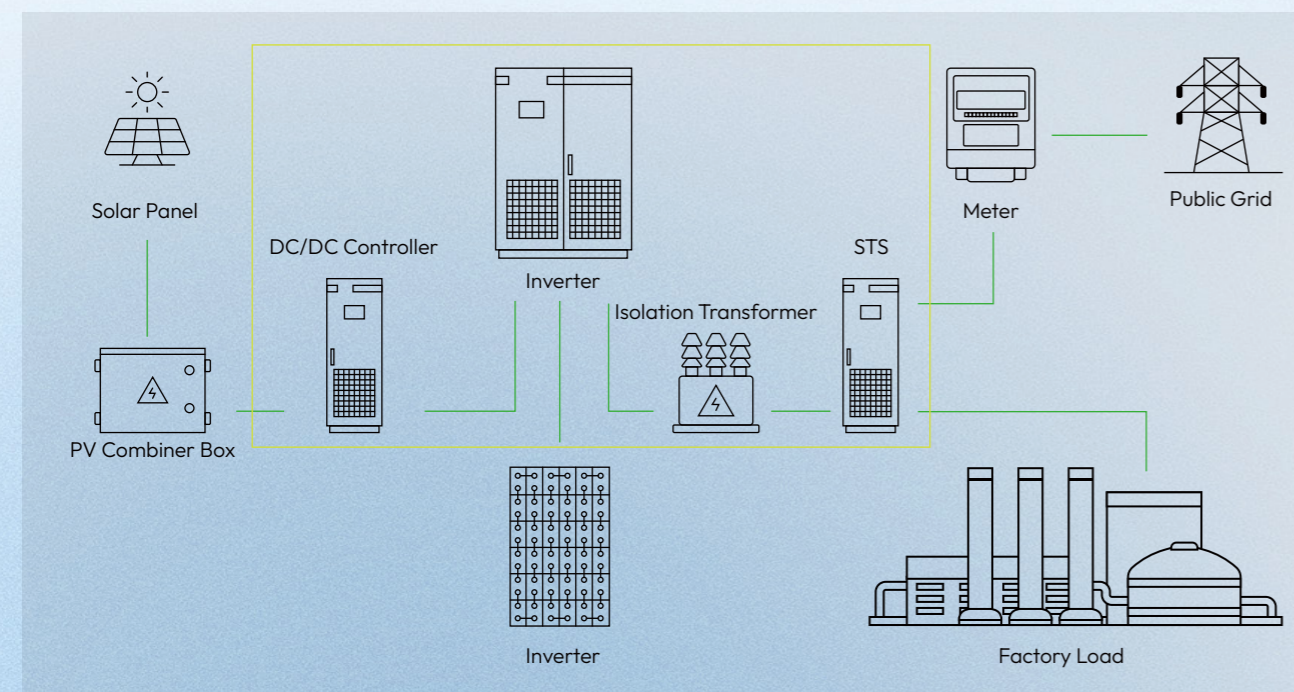
Store excess PV power before inversion – use more of your own solar energy

Off-Grid Ready

Seamless island mode operation during grid outages – keeps critical loads running

Scalable & Future-Proof

Modular DC-side design – easy to add more PV or battery capacity later



Solution

AC-Coupled PV + Storage

Scenario

Existing Grid-Tied PV + Storage Retrofit

Add storage at AC side – no impact on existing PV

Retrofit Projects With Installation Constraints

Minimal modification to existing system

Peak Demand Charge Management

Storage mainly for peak shaving, not PV surplus capture

Multi-Energy Hybrid Systems

Integrates PV, wind, diesel, and grid together

Key Features

Retrofit-Friendly

Add storage to any existing grid-tied PV system – no inverter replacement needed

Minimal Site Disruption

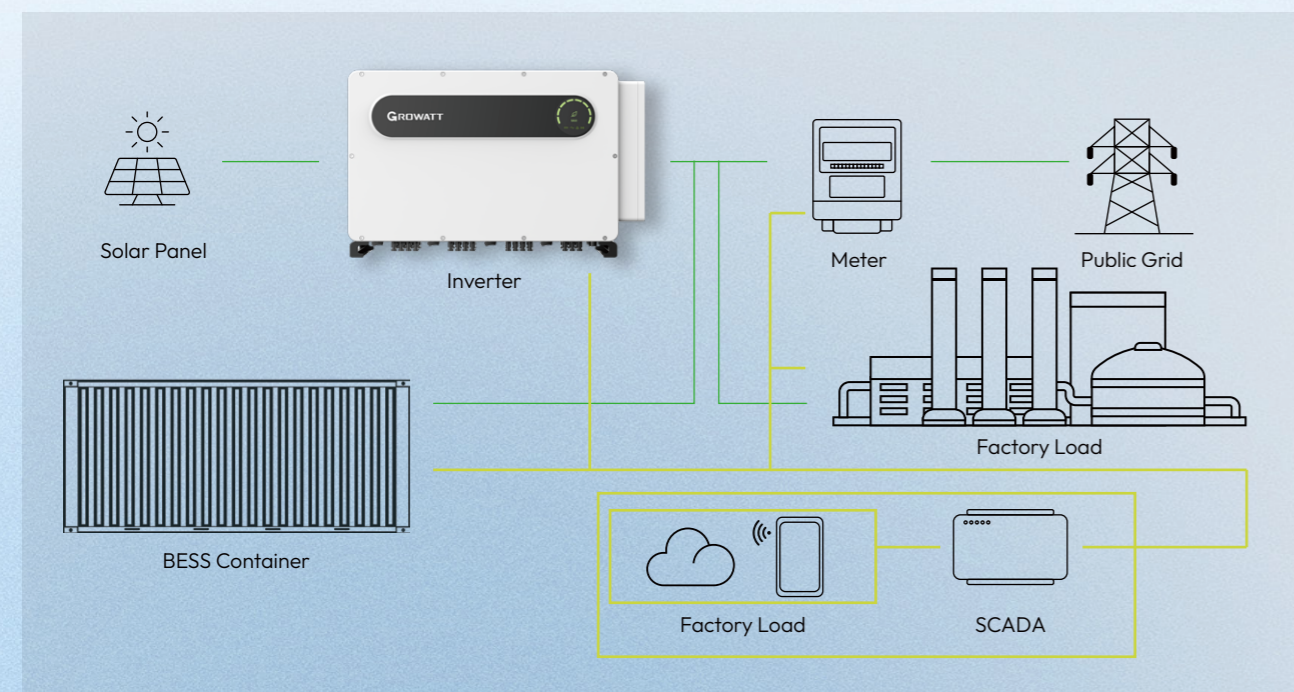
Simple AC-side connection – install without interrupting daily operations

Peak Shaving Focused

Reduce demand charges by discharging battery during high-load periods

Multi-Energy Compatible

Works with PV, wind, diesel generators, and grid – ideal for hybrid systems

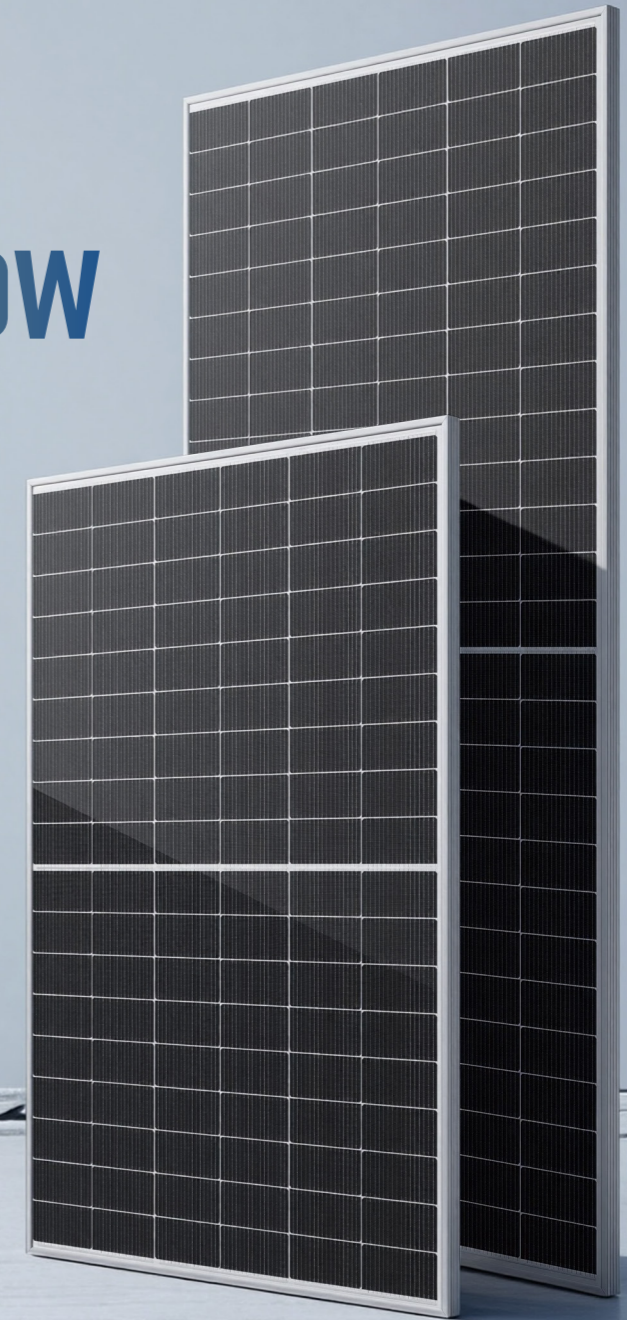


Product Portfolio



Solar Panel

590W-750W



Features



Multiple Tier-1 Brands, One Trusted Partner

- Jinko, Longi, Trina, JA, and Toyon – we offer the industry's best.
- We match the right panel to your project's budget, efficiency, and availability needs.



Proven Durability & Performance

- Certified to IEC standards.
- Excellent low-light response, PID resistance, and mechanical load tolerance (up to 5400 Pa snow / 2400 Pa wind).



High-Power Range – 590W to 750W

- Designed for C&I rooftops and ground-mounted systems.
- Fewer panels, lower BOS costs, and higher energy yield per square meter.



Backed by Toyon's System Integration

- Not just panels – a fully compatible package with our inverters, BESS, and EMS. One partner for design, delivery, and long-term support.

On Grid Inverter

20kW-350kW



Features



Top Brands – One Reliable Source

- FOX, Growatt, Solis, Deye – we bring you the industry's most trusted names.
- Toyon helps you choose the right fit for your project's specs and budget.



High Efficiency & Grid Compliance

- Peak efficiency >98.5%.
- Fully compliant with international grid codes (UL/IEC VDE) – smooth utility approval and interconnection.



Wide Power Range – 20kW to 350kW

- From small commercial rooftops to large industrial installations.
- Single-unit or parallel-ready for even higher capacity.



Built-In Smart Features

- Integrated monitoring, remote firmware updates, and reactive power control.
- Maximize self-consumption and reduce payback time.

Hybrid Inverter

20kW-2580kW



Features



Top-Tier Brand Choice

- Growatt, Solis, Fox, Deye – Toyon integrates the best.
- We recommend the right brand for your budget, performance needs, and local service support.



Rugged & Certified

- IP65 rated, wide temperature range (-25°C to 60°C), and certified to UL/IEC/VDE standards.
- Built to last in harsh environments.



True Hybrid & Seamless Backup

- Grid-tied, off-grid, or hybrid mode.
- Millisecond switchover to backup power during outages – keeps your business run



Smart Savings, Built-In

- Peak shaving, time-of-use arbitrage, and export limitation – automated via EMS.
- Remote monitoring included.

Energy Storage System (ESS)

100KWh-5000KWh



Features



Highly Integrated – Plug & Play

- Pre-assembled and factory-tested. Simple on-site connection reduces installation time and labor costs – deploy faster, start saving sooner.



Scalable Capacity – 100kWh to 5MWh+

- Modular design supports parallel expansion. Start small and grow with your business – no system replacement required.



Flexible Product Portfolio – One Stop Solution

- Outdoor air-cooled cabinets, integrated or external hybrid inverters, 10ft solar + storage + charging container, and 20ft standard containers. Toyon has the right fit for every C&I need.



All-in-One Integration Options

- Choose from PCS + DC/DC + isolation transformer integrated inside the cabinet, or external hybrid inverter for maximum flexibility. Simplified installation and system coordination.

Installation Scenario

Ground Mounting



Ground screw mounting system



Concrete pier mounting system

Roof Mounting



Metal roof mounting system



Flat roof mounting system



Carport



Tracker



Floating

Project Cases



Turning Trash into Treasure: A Landfill-to-Solar Success Story

Once an environmental burden, this closed and properly capped landfill site has been given a second life. Toyon Energy transformed it into a clean, productive energy asset – without disturbing the underlying waste or compromising the integrity of the final cover system.

2025 Performance:

54,400 MWh of clean electricity generated

That's enough to power thousands of local homes annually, while displacing significant CO₂ emissions.

Jinde, China

2.22 MW On Grid PV System

Rooftop Solar for Food Manufacturing

In the heart of metropolitan Bangkok, a food factory has turned its roof into a power station.

A 2.6 MW solar PV system now sits above a working production line – capturing Thailand's abundant sunlight and converting it into clean electricity that runs the very same facility below.

No extra land. No disruption to operations. Just smart energy where it's needed most.

Bangkok, Thailand

2.6MW PV +5MWh BESS



Factory, Indonesia 800 kW PV + 1.5 MWh BESS



Market, China 1.95 MW PV



Hospital, China 240 kW PV



Warehouse, Italy 850 kW PV + 1.8 MWh BESS



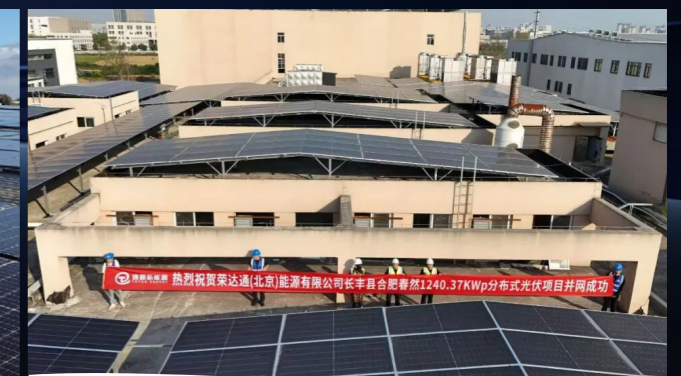
Industrial Park, Myanmar 1.24 MW PV + 1.5 MWh BESS



Factory, China 1.2 MW PV + 2 MWh BESS



Farm, Panama 700 kW PV + 1.2 MWh BESS



Logistics Center, China 1.24 MW PV