



GCL SYSTEM INTEGRATION

GCL System Integration Technology Co.,Ltd.



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BRINGING GREEN POWER TO LIFE



WHO WE ARE

GCL GROUP

Golden Concord Holdings Limited (GCL) is an integrated energy group that specializes in clean and new energy. GCL is China's largest non-state-owned energy holdings company and the world's largest photovoltaic material manufacturer.

Since its founding, GCL has been committed to "bringing green power to life" by providing clean energy and outstanding service. GCL strives to be the most respected international clean energy group through innovation and its constant pursuit of excellence.



Vision

To be the most respected international clean energy enterprise

Mission

To provide high-efficiency clean energy and continuously improve the global living environment

Core Value

value-oriented, competition-motivated, connection-minded

 26B

With a total asset value of nearly USD 26 billion

 60⁺

manufacturing bases

 30,000⁺

employees worldwide

 28^{years}

anniversary

INDUSTRY CHAIN



Polysilicon
Annual polysilicon
production capacity
75,000tons



Ingots & Silicon Wafer
Annual silicon wafer
production capacity 40GW

Solar Cell & Module
Annual cell production capacity 2GW
and Module production capacity 6GW



Power Plant
Energy Storage System
Micro System
Over 6GW power plants
under O&M

ABOUT GCL SYSTEM

GCL System Integration Technology Co. Ltd (GCL S.I.) is part of the GOLDEN CONCORD Group (GCL), an international energy conglomerate specializing in clean and sustainable energy.

With a vertically integrated value chain operation, GCL S.I. has proven track record of capability in delivering one-stop and state-of-the-art solar package solutions incorporating DESIGN-PRODUCT-SERVICE.

GCL S.I. is the dominated manufacturer of PV modules and energy systems. It challenges the era of carbon footprint and offers affordable, sustainable solutions on a global scale.

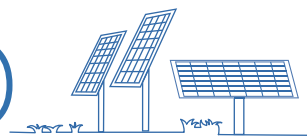


OUR POSITIONING

Being the one-stop integrated clean
energy solution provider



2 WHAT WE DO



FLEXIBLE BUSINESS MODEL

To differentiate itself to its peers, GCL System reinforce its core business with a flexible and effective business model. From silicon to energy platform, it combines the greatest ingredients to succeed in providing the one-stop solutions such as custom-made solar systems, EPC, operation & management (O&M), energy financing with capital leasing and funding.



PV MODULE



BOS

Balance of system
(ALL solar components other than PV module)



ESS

Energy storage system



EPC

Engineering procurement construction

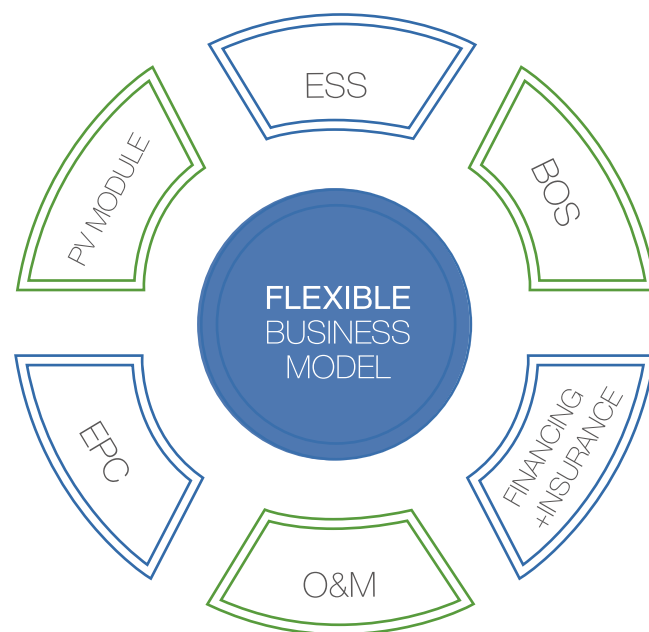


FINANCING+INSURANCE




O&M


Operation and maintenance



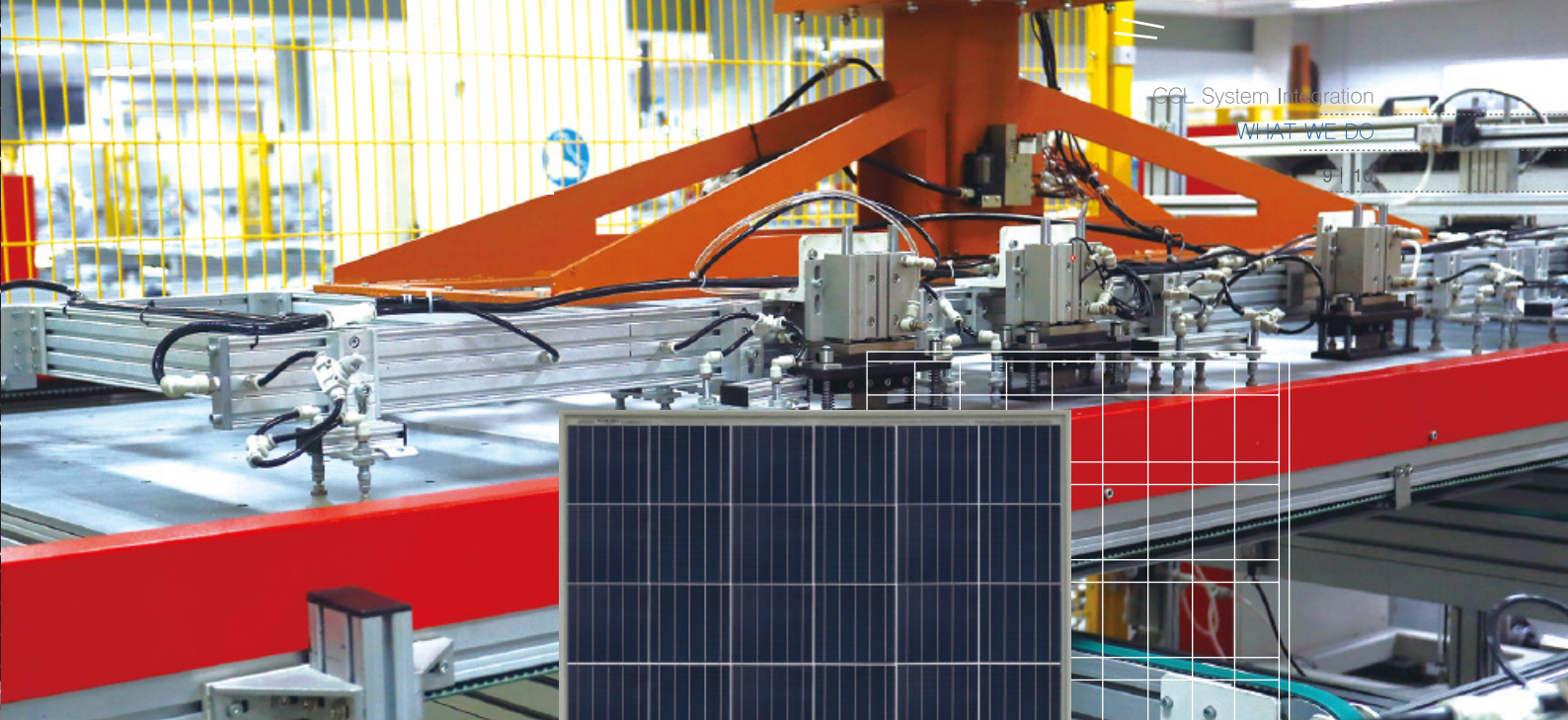
01 
MODULES

02 
MODULE+BOS=
SYSTEM INTEGRATION
PACKAGE

03 
MODULE+BOS
+EPC+O&M=
TURNKEY SERVICE

04 
MODULE+BOS+EPC
+O&M+FINANCE=
ONE-STOP SERVICE





TECHNOLOGY & INNOVATIONS

GCL System produces innovative and cost-effective solar modules with an advanced automated integrated industry. Indeed, our vertical supply chain business model allows us to

- Control manufacturing costs
- Decrease dependency on third party suppliers
- Optimize logistic chain
- Reduce production loss and improve overall product quality
- Streamline product development from R&D to mass-production
- Guarantee quality consistency

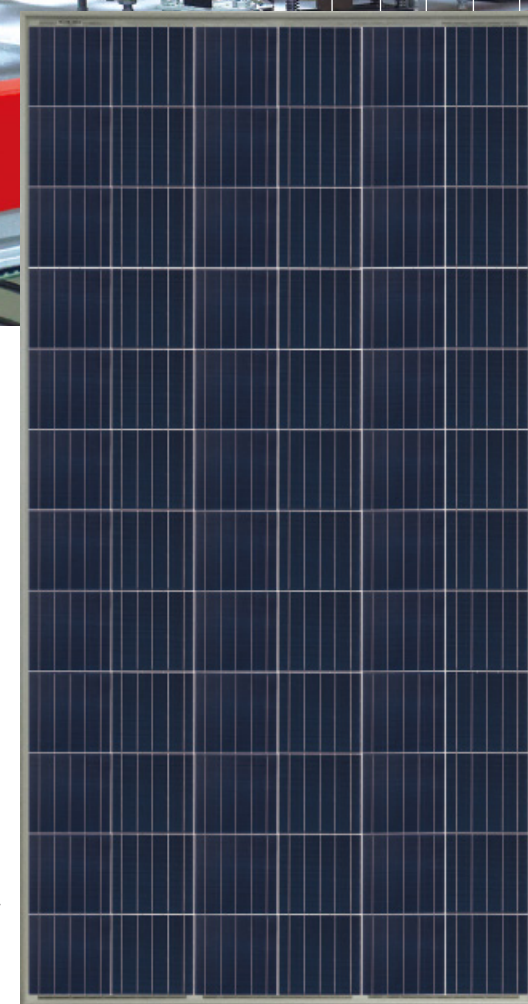


- ◎ **Vertically integrated manufacture**
- ◎ **Unrivalled economy of scale**
- ◎ **Maximum yield return & minimum system loss**
- ◎ **Global research institutions**
- ◎ **137 patents applied and 60 approved.**

GCL System emphasizes R&D and applications of high efficiency products via technology innovation. From polysilicon to One-Stop solutions, GCL System provides optimized designs for greater ROI. With multiple research institutions ranging from renowned universities partnership and laboratories like University of New South Wales/ Australia, Fraunhofer/ Germany, or NREL/ US , GCL System aims at constantly challenging energy resource progress.

MODULES

As a world class manufacturer of crystalline silicon photovoltaic modules, GCL System provides full range high quality products for various applications in the global market, including standard 60/72 cell poly products; mono module for rooftop application, double glass module for big power plant; high performance line such as King Kong series; The 96 cell high power module with single axis tracker. All products have undergone comprehensive inspection and rigorous testing.



- ◎ **A world-class manufacturer of crystalline silicon photovoltaic modules**
- ◎ **Fully automatic facility and cutting-edge technology**
- ◎ **Rigorous quality control to meet the highest standard: ISO 9001:2008, ISO 14001: 2004 and OHSAS: 18001 2007**
- ◎ **Tested for harsh environments (salt mist, ammonia corrosion and sand blowing test: IEC 61701, IEC 62716, DIN EN 60068-2-68)**
- ◎ **Long term reliability tests**
- ◎ **2*100% EL inspection ensuring defect-free module**



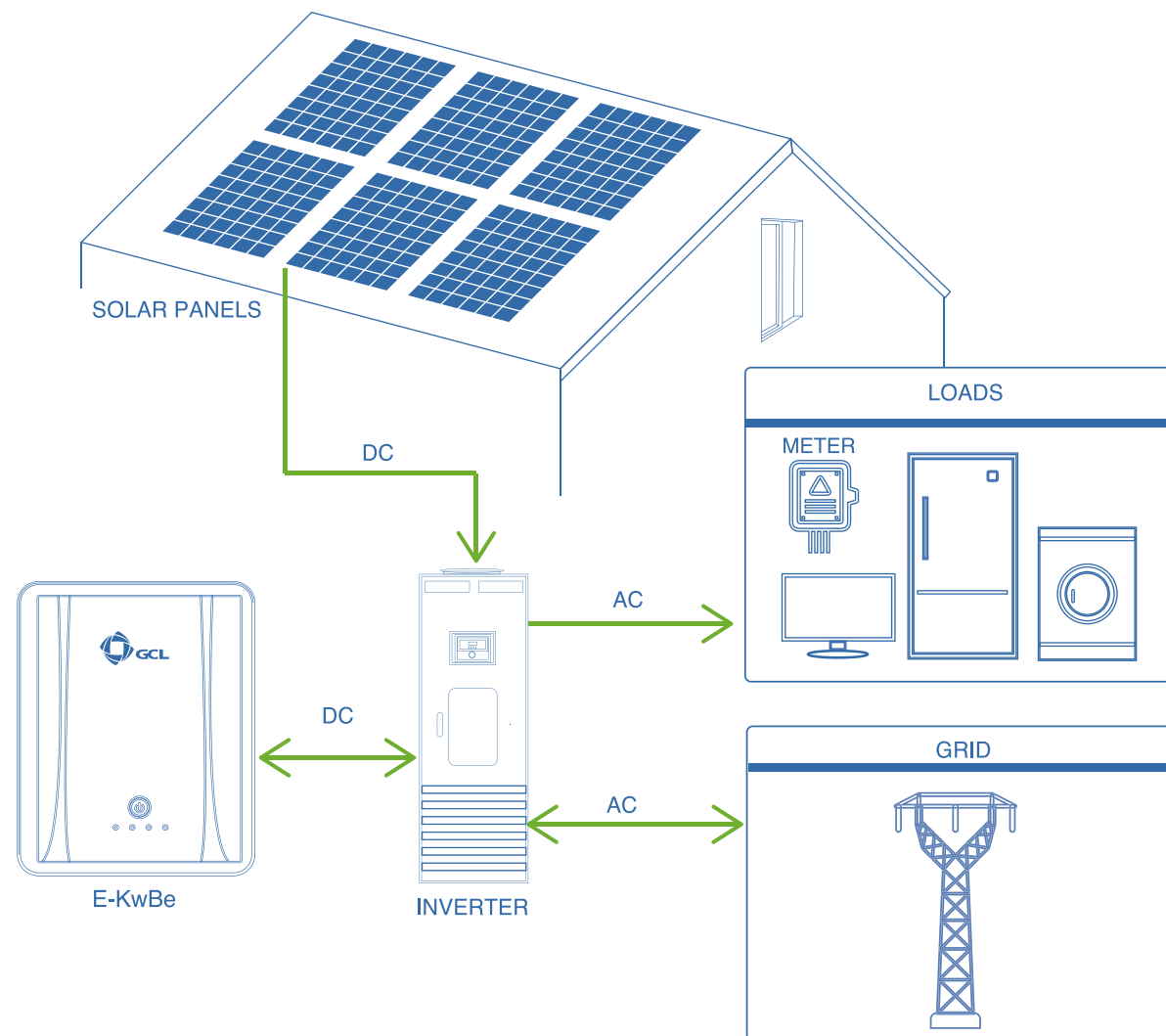
E-KwBe — Energy Storage Solution

The Lithium battery E-KwBe, recently designed and manufactured by GCL System , allows our customers to optimize the use of their solar energy system in their home, to save money on their electricity bills and reduce their carbon footprint.

E-KwBe is a sharp and modern design with a lifespan of up to 10 years. Additionally, multiple units can be stocked-up to store more energy and reduce your household's dependency on fossil fuel. By choosing GCL home storage solution, you will enjoy a smart energy saving technology to power your home safely and economically.

HOW IT WORKS

A solar system will produce energy during daylight hours which can be used to help power the house and appliances inside. The surplus electricity generated from the solar panels during the day is stored in the E-KwBe giving you the option to use it during peak times in the evening.



WHY E-KwBe?

Maximize your self-consumption of solar power

Panels convert sunlight into electricity that charges E-KwBe for your home load.

Load shifting

Bridge the gap between peak solar and peak demand, avoid paying heavy peak power charges to utility grid.

Back-up power

Assures power in the event of an outage

Super compatibility

Compatible with the main inverter solutions in the market.

Save the environment

Maximize the use of free energy from the sun and lower the costly fossil fuel from the grid.

Design based on plug-and-play



10+
years
LIFESPAN

7
years

PRODUCT WARRANTY

OPTIONAL CAPACITY



OPTIONAL COLOR



125^{wh/kg}

ENERGY DENSITY



CERTIFICATE

PHOTOVOLTAIC SYSTEM

GCL System focuses on investment in technology and cultivation of talent. With multiple solar projects successfully operated and managed, GCL System's proven-capability to foster the growth of integrated systems from small to large scale both for on-grid and off-grid applications made it a significant actor in the PV sector. GCL System is able to provide its customers tailor-made systems with optimal design schemes for different types and sizes.

ON-GRID SYSTEM

It is the most popular type of PV application. Through grid connected inverter, the on-grid system synchronizes solar electricity with the public grid then directly couple them. Green energy is generated, while the stability of power supply is ensured by the public grid. System owner may benefit from

- (1) offsetting the electricity bill by directly consume the solar electricity;
- (2) selling the unused or total solar electricity to the public grid;
- (3) getting renewable energy incentives;
- (4) a combination of above



Residential

3KW, 5KW, 8KW, 10KW



Commercial

50KW, 100KW, 500KW



Utility

1MW, 2.5MW solar block

BENEFITS

- ◉ **Package solution with all components in one box**
- ◉ **GCL reliable product with full certificate and warranty**
- ◉ **Cost saving and more solar energy harvest**
- ◉ **Easy installation and free maintenance**

SUPER 2.5MW Solar block for SUPER Performance

GCL System SUPER 2.5MW Solar block is the latest package solution with best technology for partners. The solution focus on standardization and optimization for the solar power plant.

Standardized block makes the design/ construction more convenient and efficient.

The **SUPER** 2.5MW block design target to

- ◉ **Simplify the design work**
- ◉ **Lower the construction cost**
- ◉ **Absorb more energy by tracking sun**
- ◉ **Increase the DC part efficiency**
- ◉ **Improve the system performance ratio**

With all these extraordinary advantages, the SUPER 2.5MW Solar Block set the benchmark of LCOE* for large scale solar plant.

*LCOE – Levelized Cost Of Energy

Jiangsu, China
2.5MW Solar Block

30MW

OFF-GRID SYSTEM

It is a solution for areas where the public grid is not readily available, or where the power quality does not meet the demands. Off-grid system combines solar panels, energy storage, diesel generators, public grids and other renewable energy systems like wind and small hydro. It utilizes the advantages of various power sources to provide qualified power supply to local loads. System automation and various protections are fully integrated to ensure the power quality and safety. System owners may enjoy peace of mind while getting stable power supply.

BENEFITS

- *Cube solution with solar, battery ,diesel generator full interconnected and integrated*
- *Smart monitoring and control*
- *Lithium iron based battery with better performance and long lifespan*
- *Design based on plug-and-play*

APPLICATIONS

Rural Electrification



Mining Camps



Islands



Water Treatment



Telecom Tower



Small size
3KW,5KW

Medium size
20KW,50KW,100KW

Large size
1MW



REMOTE POWER PLANT MONITORING



CUSTOMER SERVICE

Our global service network with its dedicated staff supports predictable performance at all times. Remote power plant monitoring, regular inspections which include visual and function checks, cleaning services, on-site support in the event of a fault and detailed maintenance reports are integral parts of the continual monitoring and management we offer.



SOCIAL RESPONSIBILITY 3

FINANCIAL SUPPORT

GCL System focuses on various approaches of financing to reduce financing cost by means of forfaiting, export credit loan and leasing. With over two decades' development, GCL System has established strategic relationships with domestic first-class financing institutions and international financing agencies, amounting to 1 billion USD of credit lines have already been achieved.

Financing Solutions Overview



Professional Financing Team

- Diversified knowledge background;
- Overseas working experience;
- Skillful and deep trade financing acknowledge

Customized Financing Solutions


By analyzing client's requirement and evaluating the risk, we provide specified financing solutions to maximize the company's value and improve operation and asset quality.

LOW CARBON & ENVIRONMENTAL PROTECTION

GCL has insisted on "Bringing Green Power To Life" and has applied this principle on daily business practices, operations and policies to make low carbon, energy conservation and safety as the basic priorities.

GCL CHARITY

GCL has established an integrated charity model featuring environmental charity, education subsidy and disaster relief, and created the GCL Sun Charity Foundation. Over the years, GCL has participated in hundreds of charity projects.

 **114M** tons
Saving standard coal over 114 Million tons

 **420M** tons
Reduced CO₂ emission over 420 Million tons

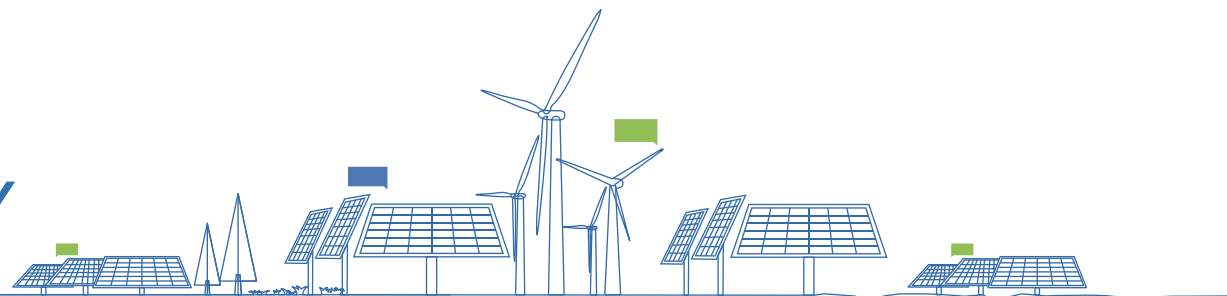
 **37M**
Donated to Charity over USD 37 Million

 **21,000+**
volunteers



4

CASE STUDY



Ningxia
China
Ground-Mounted
120MW



Inner Mongolia
China
Ground-Mounted
130MW





University of
San Diego, USA
Commercial Rooftop
1.2MW



North Carolina
USA
Ground-Mounted
83MW



Hanovo, Bulgaria
Ground-Mounted
5.5MW



Chiba, Japan
Commercial Rooftop
0.9MW

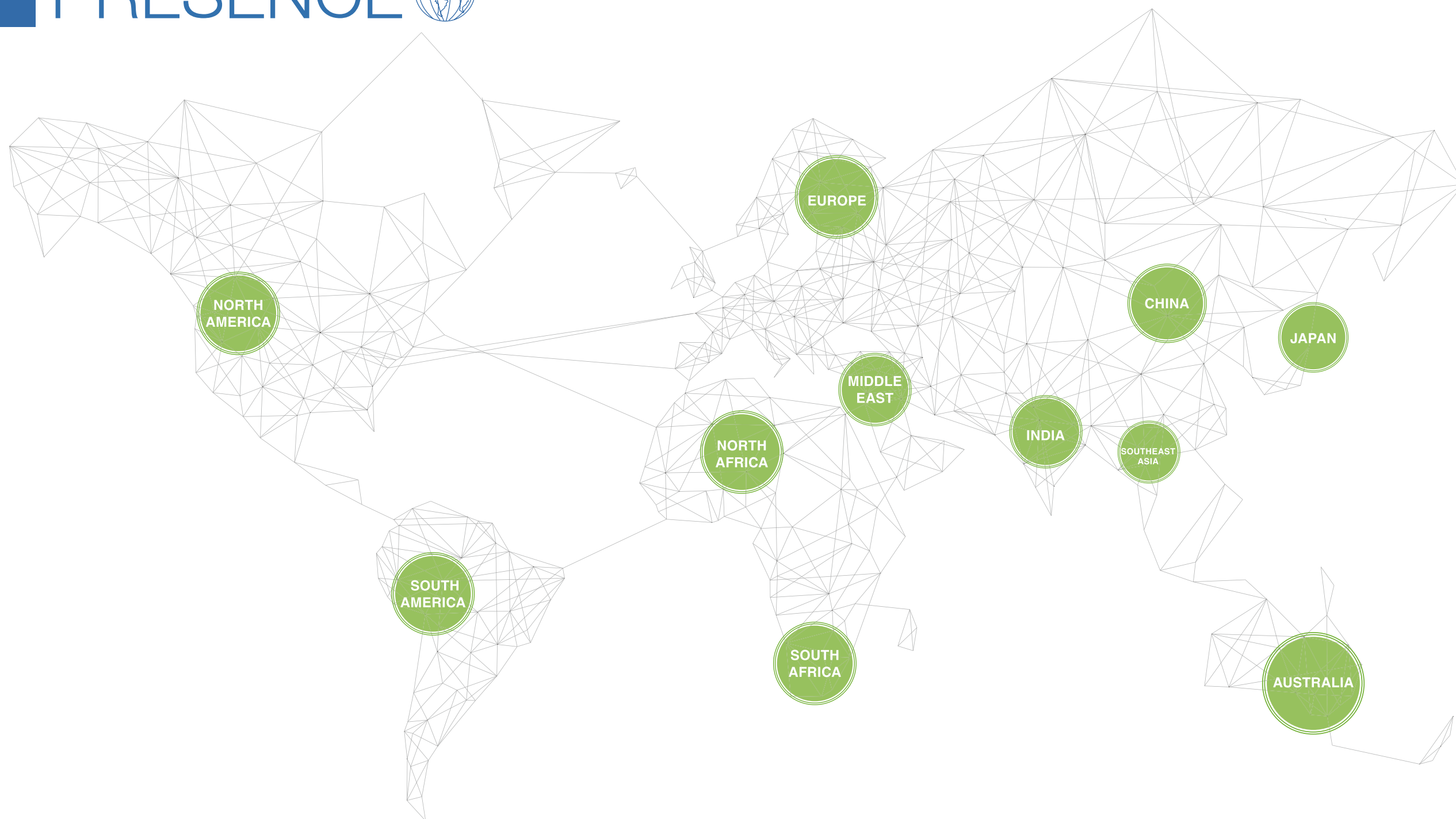


Super IGA Darch
Australia
Commercial Rooftop
100kW



Simmos
icecreamery
Australia
Ground-Mounted
100kW

5 GLOBAL PRESENCE



Global presence means closer relationship with our partners. GCL System intensively expands its overseas sales and industrial presence worldwide with dedicated and experienced teams. With a strong networking platform based on local high-tech industrial parks, it will create greater partnership with similar understanding, values and objectives.



SALES OFFICE

GCL System Integration