



BILLION®



Billion Electric Co., Ltd. 2024 Q2 Conference

2024/04/15

Speakers: Elaine Chen

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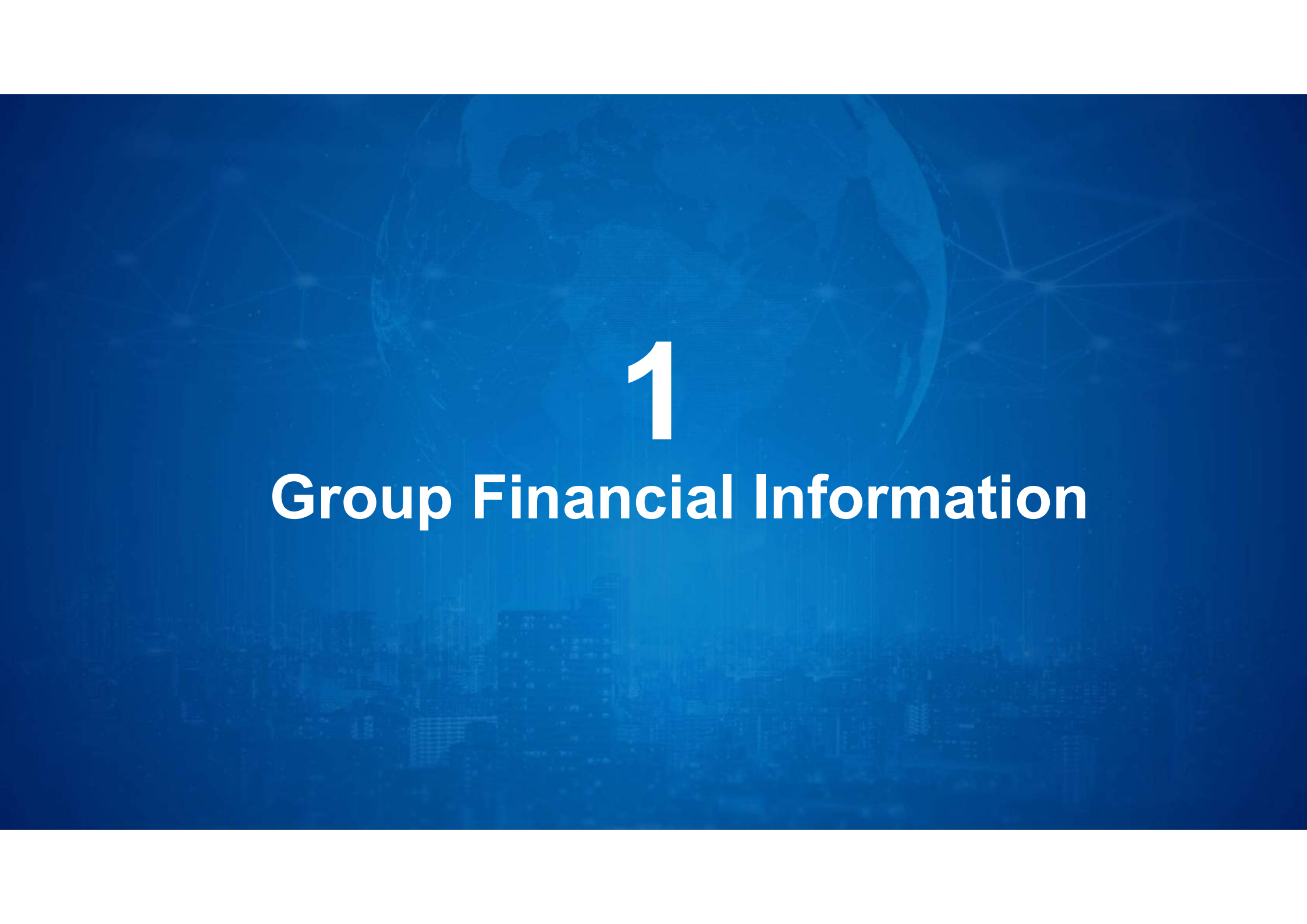
Content Outline

1. Group Financial Information

2. Group Energy Business

3. Billion Own MIT Brand Products

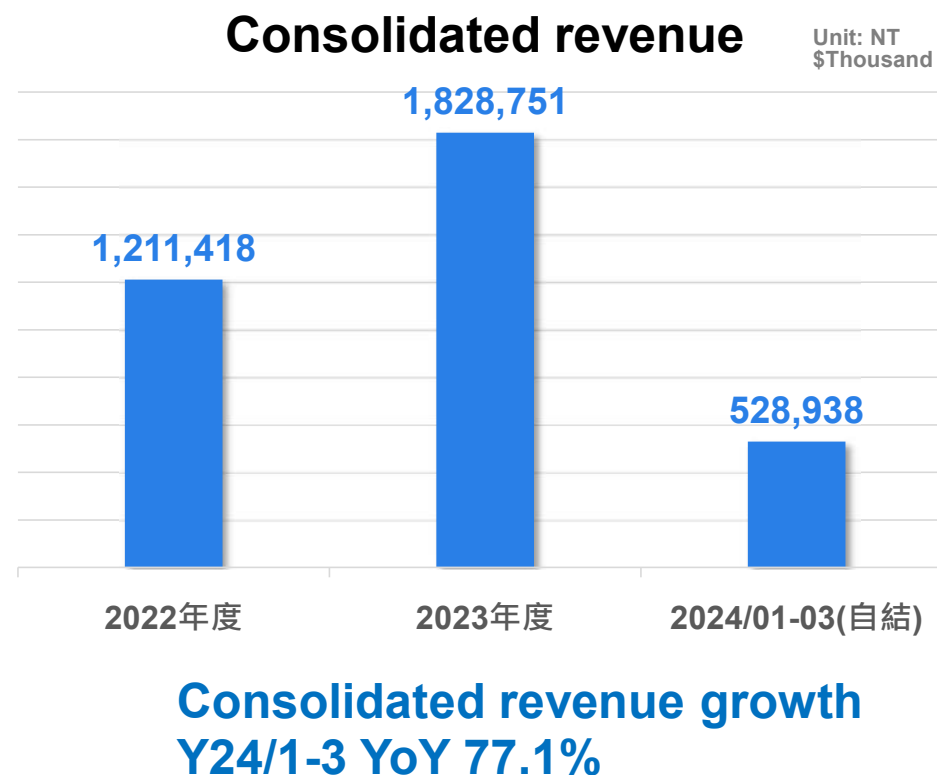
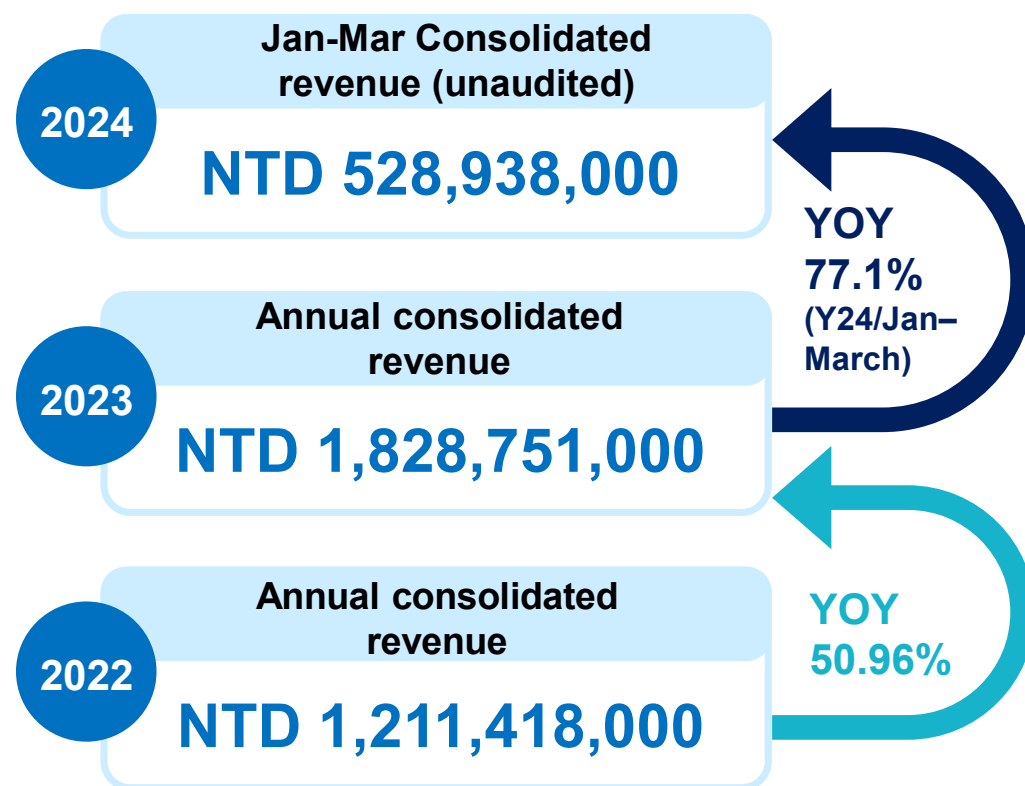
4. NZ plus Household/Commercial ESS



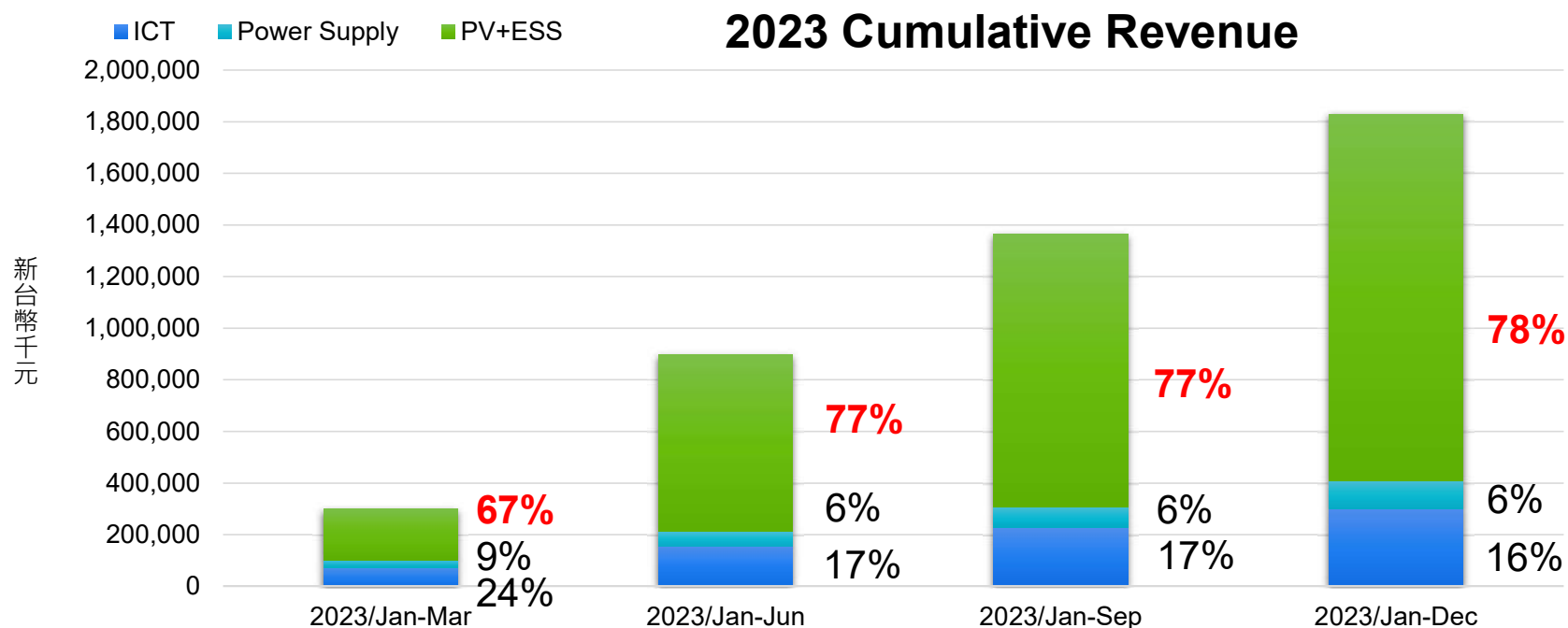
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Group Financial Information

Consolidated Revenue



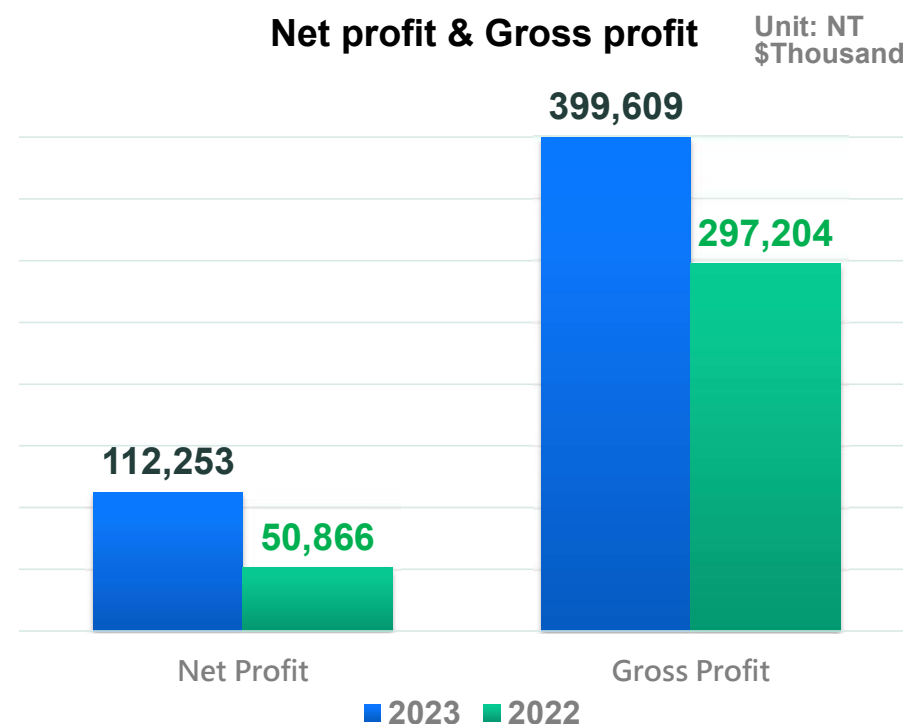
Comparison Table of Main Product Line Revenue



Product	January-March 2023	Percentage of revenue%	January-June 2023	Percentage of revenue%	January to September 2023	Percentage of revenue%	January-December 2023	Percentage of revenue%
ICT Products	72,210	24%	155,310	17%	228,543	17%	300,786	16%
power supply products	26,570	9%	56,576	6%	77,620	6%	108,032	6%
Solar energy + energy storage	199,922	67%	684,860	77%	1,058,696	77%	1,419,933	78%
Total Shares	298,702	100%	896,746	100%	1,364,859	100%	1,828,751	100%

Consolidated Statements of Comprehensive Income

Unit: NT \$thousands	2023		2022		Difference (YOY)	
Statement of Comprehensive Income Items	Amount	%	Amount	%	Amount	%
Operating Revenue	1,828,751	100	1,211,418	100	617,333	51%
Gross Profit	399,609	22	297,204	25	102,405	34%
Net Profit from Operations	-2,343		5,761		-8,104	-141%
Non-operating Income and Expenses	136,701	7	60,908	5	75,793	124%
Net Profit	112,253	6	50,866	4	61,387	121%
Earnings per Share (NT \$)	0.64		0.41			



Billion Group Consolidated Balance Sheet

Unit: NT \$thousands	2023/12/31		2022/12/31		Difference	
Balance sheet items	Amount	%	Amount	%	Amount	%
Cash and cash equivalents	849,660	23	650,137	20	199,523	11
Inventories	333,616	9	326,343	10	7,273	2
Cost to fulfill contracts-current	819,313	23	382,897	12	436,416	114
Property, plant and equipment	590,059	16	706,814	22	-116,755	-17
Total assets	3,628,801	100	3,306,441	100	322,360	10
Current liabilities	1,134,310	32	1,071,898	33	62,412	6
Contract liabilities	582,129	16	538,209	16	43,920	8
Non-current liabilities	128,493	3	510,661	15	-382,168	-75
Lease liabilities	48,699	1	376,607	11	-327,908	-87
Total liabilities	1,262,803	35	1,582,559	48	-319,756	-20
Total equity	2,365,998	65	1,723,882	52	642,116	37
Current ratio	210.87%		158.12%			
Debt ratio	34.80%%		47.86%			

The background is a solid blue color. In the upper half, there is a faint, stylized globe with a network of white lines connecting various points, suggesting a global network or energy grid. In the lower half, there is a faint, stylized city skyline with various building shapes. The overall theme is technology, energy, and global connectivity.

2

Group Energy Business

BILLION

Established in
1973



Number of
employees
220



Code: 3027

Stock listing
2002



Capital NTD
**1.154
billion**



Market value NTD
**5.273
billion**

March 2024

BILLION**Billion Electric Co., Ltd.**

Networking and Telecom Business Group

Communication Business Division

ICT Products

Automatic Industry, In-
Vehicle/Rail, Outdoor,
Enterprise/Telecom Router

Headquarter s in Taiwan

BEC
by BILLION

US Subsidiary

BEC
TECHNOLOGIES

The leading
manufacturer of
WAN Outdoor
Router equipment
has deployed more
than 3,000,000
network
communication
equipment devices.

**91.76%
owned**

Power & Energy Management Division

power and energy storage products

LED driver, power supply,
Battery Pack/Module/Stack

Headquarters in Taiwan

BILLION

Yilan Plant

Energy storage assembly project

Yilan MW container-
level energy storage
plant provides
Taiwan's localized
production and
assembly technology
capabilities.

Billion Watts Technologies



- Established in 2017
- Service locations: Taipei, Yilan, Yunlin, Kaohsiung
- Taiwan Solar energy and energy storage solution provider
- Power plant maintenance and management services
- November 2022-Paid-in capital: NT \$134,000,000
- Number of Employees: 80

**Share
Holding
59.82%**

Billion Power System

- EMS Energy Management System R & D

**Share
Holding
51%**

Billion Energy Storage

- Established in 2021
- Investment in energy storage stations
- Paid-in capital: NT \$80,000,000

**Share
Holding
100%**

VGwatt Energy



- Established in 2022
- Charging Pile and Energy Storage Supply Service Provider
- Paid-in capital: NT \$20,410,000

**Share
Holding
51%**

Billion EV Charging



- Established in 2023
- Community charging piles
- Home Solar/Energy Storage Service Provider

**Share
Holding
100%**

Taichuang Energy

- Established in 2022
- E-dreg Energy storage investment
- 64MW/262MWh

**Share
Holding
5%**

Hsia Ching

- Established in 2022
- Investment in energy storage stations

**Share
Holding
5.24%**

Billion Electric Holding

- Established in 2023
- dReg, E-dreg Energy storage investment

**Share
Holding
100%**

Sheng Kai green energy

- Established in 2023
- Energy investment

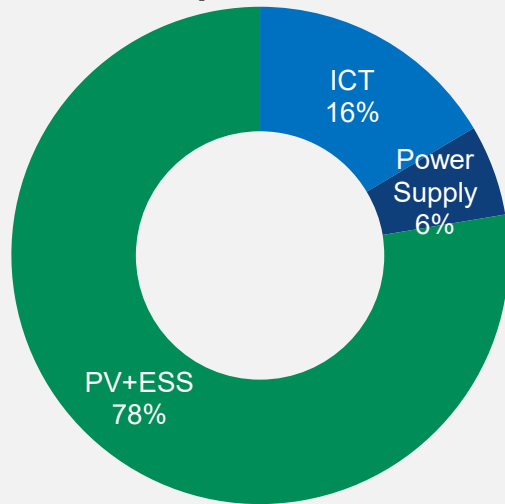
**Share
Holding
100%**

* Source: Compiled by Billion Electric Co., Ltd.

Confidential

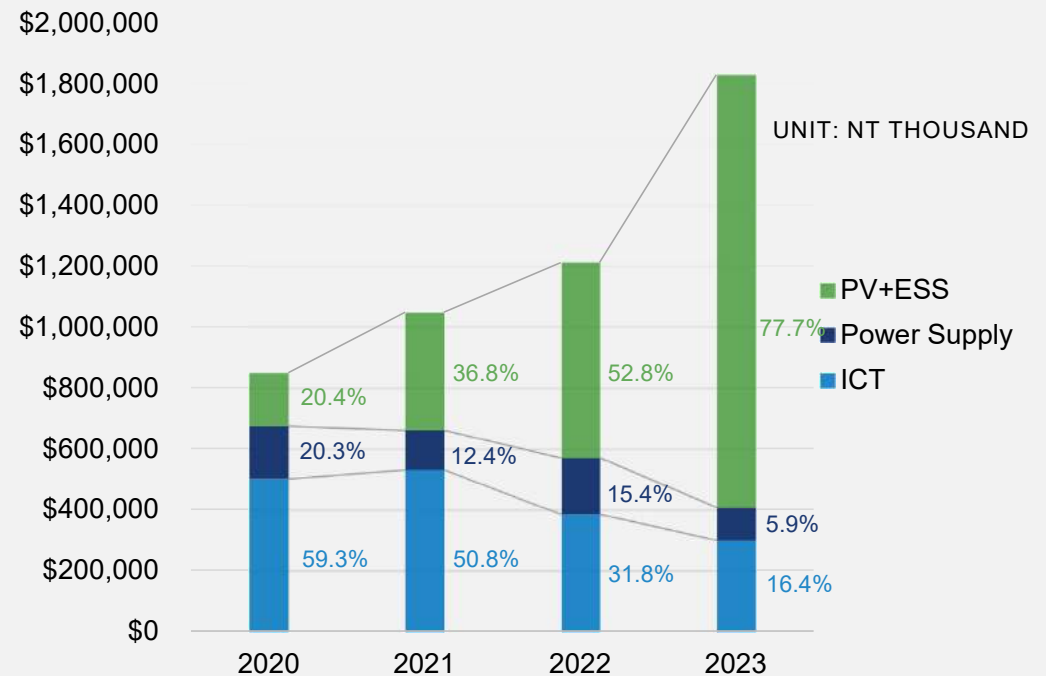
Billion Group Annual Revenue YOY

2023 Proportion of revenue of each product line



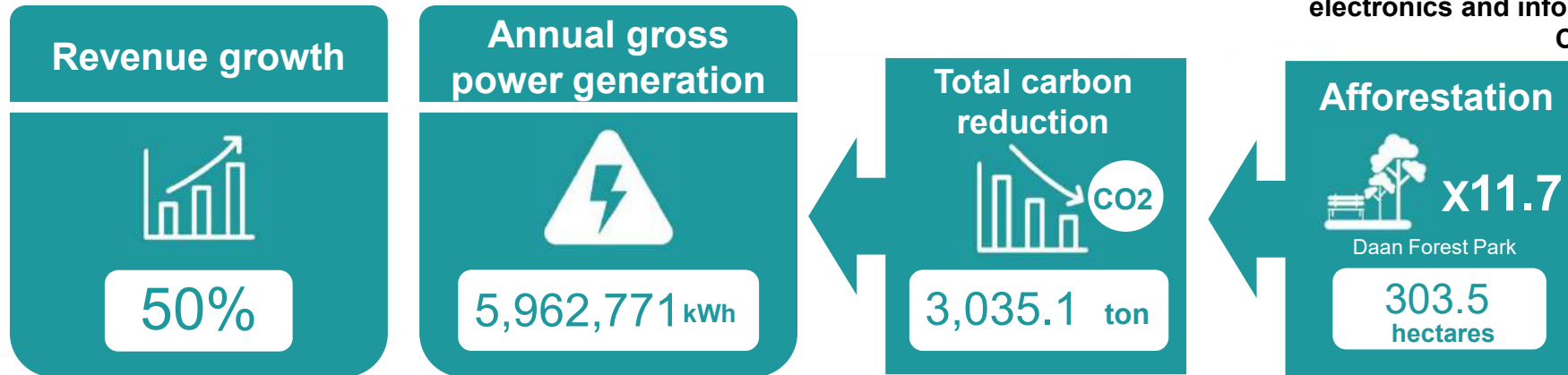
2023 Revenue
1,828,751
 Unit: NT \$Thousand

Revenue comparison table of main product lines over the years



ESG Sustainability Development

Received the TCSA Taiwan Corporate Sustainability Award in the category of electronics and information manufacturing Class 2 "Gold Award"



Strengthen Corporate Governance

Ensure transparent, fair and responsible management of the Company, establish an effective monitoring mechanism, and implement the commitment of sustainable development of the Company.

Environmental protection implementation

Implement ISO14001 and QC 080000 systems, cooperate with EZGPM (green supply chain management system), plan sustainable supplier management mechanisms, and establish strategic partners.

Fulfilling Social Responsibilities

Participate in the development and construction of PV field cases and optical storage applications, and participate in the Taiwan Power Company's "Light Storage and Integration" project. Implement the promotion of green energy and reduce the impact on the environment.



Emphasis on R & D Innovation and Quality management



Continuously challenge themselves and encourage employees to continue to grow



Establish a cross-border sales strategy and continue to deepen partnerships



Create solutions with cost-effectiveness and added value to create a win-win situation for partners



* Source: Compiled by Billion Electric Co., Ltd.

Confidential

Energy Business Performance

- It served more than 1500 solar power plants successfully on-grid, and distributed PV inverter shipments with a total capacity of more than 300MWp, mainly responsible for the power generation system and monitoring system architecture. The shipment volume of the self-developed Pixel View smart cloud monitoring system has reached 500MW.
- In 2021, the Company launched the localized container type Energy Storage System with optimized safety. With a sustainable management model, the Company values Quality and Core Technologies, and has obtained the battery equipment of UL and IEC certification from many international manufacturers.
- Build a one-stop renewable energy as a service company in Asia, provide solar energy and energy storage equipment supply, engineering construction, operation and maintenance management and after-sales service, span optoelectronics, energy storage and smart grid, and provide diversified energy technology solutions.

200MW +

Energy Storage System is dedicated to commercial and industrial ESS, Energy Trading Platform, and PV+ESS storage solutions.

300MW +

The cumulative quantity of solar inverter installations includes roof type, water surface type, ground type, agricultural/electricity symbiosis, and fish/electricity symbiosis.

500MW +

Pixel View monitoring system shipments have been adopted by major renewable energy investors on their whole sites.

1500 sites

More than 1500 solar power stations successfully connected to the grid.

Billion Watts PV Power Station Performance



Kaohsiung City

Site category:	Large Ground-Mounted
Construction capacity:	445.25kWp



Tainan City

Site category:	Industry rooftop type
Construction capacity:	5.852MWp



Tainan City

Site category:	Lane scaffolding
Construction capacity:	514.76 kWp



Taichung City

Site category:	Campus roof type
Construction capacity:	768.3kWp



Taoyuan City

Site category:	Industry rooftop type
Construction capacity:	2MWp



Yunlin County

Site category:	Agricultural and electricity symbiosis
Construction capacity:	1.525MWp



Tainan City

Site category:	Large Ground-Mounted
Construction capacity:	77 MWp



Tainan City

Site category:	Water Surface type
Construction capacity:	13.7MWp



South Taiwan

Site category:	Large Ground-Mounted
Construction capacity:	476.55 kWp



Kaohsiung

Site category:	Large Ground-Mounted
Construction capacity:	2 MWp

Billion Watts Energy Storage Sites



Yilan 2.3MW/1.65MWh

Regulation Reserve dReg 0.25

SolarEdge High Power Battery Storage System.



Taoyuan 1.25MW/2.76MWh

Heavy Electricity User/Demand Reaction peak load shaving

LFP lithium iron Battery Storage System



Taichung 3MW/3MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Miaoli 5MW/5.2MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Yunlin 20MW/20.8MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Taitung 1.4MW/990kWh

Regulation Reserve dReg 0.25

SolarEdge High Power Battery Storage System.



6MW/6MWh, Tainan

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Yilan 2MW/2MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Tainan 3MW/3MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Chiayi 3MW/3MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.

Billion Watts Energy Storage Sites



Miaoli 2.5MW/2.6MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Changhua 4.8MW/4.8MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Nantou 3MW/3MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



4.8MW/4.8MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



4.2MW/4.4MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Changhua 4.8MW/4.8MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Hualien 4MW/4MWh

Regulation Reserve dReg 0.25

SolarEdge High Energy Battery Storage System.



Chiayi 3MW/4.6MWh

Regulation Reserve dReg 0.25

Saft Intensium Max



Tainan 4MW/8MWh

Regulation Reserve dReg 0.25



64MW/262.43MWh

Enhanced Dynamic Regulation Reserve E-dReg

Billion Group ESS Grid Connection Transaction Performance

- 13 December 2021 – The first construction (Yilan) site passed Taipower's communication and capability testing
- 1 January 2022 – Official trading of Taipower's power trading platform
- As of 25 March 2024, its market share exceeded 13% for the first time
- As of 25 March 2024, the total construction capacity was 95.55MW

Online transaction cases (14 cases 55.55MW in total)

- Yilan 2.3MW
- Yilan 2.1 MW(dReg 0.25)
- Yilan 2.5MW
- Miaoli 5MW
- Taichung 3MW
- Taitung 1.4MW
- Tainan 3MW
- Tainan 6MW
- Chiayi 3MW
- Yunlin 20MW
- Yilan 2MW
- Taoyuan 1.25MW
- Tainan 1MW
- Nantou 3MW

Recent online transaction sites (including 10 projects under construction dReg in total 40MW and E-dReg 64MW)

- Miaoli 2.5MW
- Changhua 4.8MW
- Changhua 4.8MW
- Yunlin 4.8MW
- Yunlin 4.2MW
- Hualien 4MW
- Tainan 3.6MW
- Tainan 4MW
- Tainan 4.3MW
- Chiayi 3MW
- Yunlin 64MW (Not included)

合格交易者清單 資源樣樣統計表

民間合格交易者：81 家

調頻備轉容量合計：710.5 MW

電能移轉複合動態調節備轉容量合計：116 MW

即時備轉容量合計：127.1 MW

補充備轉容量合計：262.9 MW

單位：MW

基本資訊					參與容量			
公司名稱	統編	地址	代表人	成為合格交易者日期	調頻備轉容量	電能移轉複合動態調節備轉容量	即時備轉容量	補充備轉容量
安盛集團股份有限公司	83224580	臺北市信義區松德路171號10樓之1	鄭智文	2021-10-04	0	0	8.4	60.1
漢翔航空工業股份有限公司	97160544	臺中市西屯區漢翔路1號	胡國宏	2021-10-28	15	0	0	0
台達電子工業股份有限公司	34051920	桃園市龜山區山頂里興和路31之1號	海英傑	2021-11-01	5	0	0	0
盛達電業股份有限公司	33659498	新北市新店區中興路二段192號8樓	陳忠廷	2022-01-01	9.9	0	0	0
義電智慧能源股份有限公司	52468511	臺北市信義區基隆路二段189號18樓之4	陳威廷	2022-01-14	4	0	45.3	58.7



3

**Billion Own MIT Brand
Products**

ICT Products FWA/Industry M2M/IoT product series

Fixed Wireless Access Products



Provide larger bandwidth and low latency networks for households and businesses from cities to suburbs, High speed and reliable 5G high bandwidth domain connection

- High-speed network connection
- Simple and fast installation
- Extensive coverage
- High elasticity and field application flexibility
- Cost-effective alternatives
- Suitable for commercial and residential area (indoor, outdoor, suburban) wide area applications
- High safety and reliability

Industry M2M & IoT Products



Smart communication that provides security and real-time processing capabilities for Industry M2M network communication and IoT applications
At the same time, it also provides reliable and secure network connections for smart transportation, energy/power retail enterprises and Industry IoT applications.

- Remote monitoring
- Provide reliable and stable connections
- Industry safety protection design
- Integrated into the data platform
- High elasticity and field application flexibility
- High safety and reliability

Application Examples of Billion ICT Products

Public Safety



M500-4 G LTE Dual-SIM dual-standby industrial control/In-Vehicle Multi-Carrier router

To provide stable and secure network connections, and multiple connection interfaces, users can connect the network to different institutional databases and provide map/GIS and location tracking functions.

Smart City



M500-4 G LTE Dual-SIM dual-standby industrial control/In-Vehicle Multi-Carrier router

LTE high-speed network connection, integration of network monitoring cameras and other related equipment, providing real-time two-way video transmission and data access functions.

Mass transportation



M500-4 G LTE Dual-SIM dual-standby industrial control/In-Vehicle Multi-Carrier router

Through dual SIM cards, bus operators provide free Wi-Fi hotspot services for bus passengers through multiple wireless access technologies, and further improve bus services by mandatory network gateways to collect passenger data.

Mining vehicles



M120N-4 G LTE Wi-Fi Hotspot SDN Industry/In-Vehicle Router

The integrated Multi-WAN can automatically backup the connection, and dual SIM cards can realize the mutual backup of wireless communication, providing highly reliable and uninterrupted network connection.

Suburban resort



4700 AZ-4 G LTE Wireless dual-band hot spot Outdoor router

The latest high-speed LTE module supports a variety of bandwidth applications. Antenna technology expands the coverage of the network cover and provides mobile Wi-Fi for Internet access in extreme outdoor environments.

Net Zero Strategy: PV, ESS, EV Charging, Smart Eenergy management

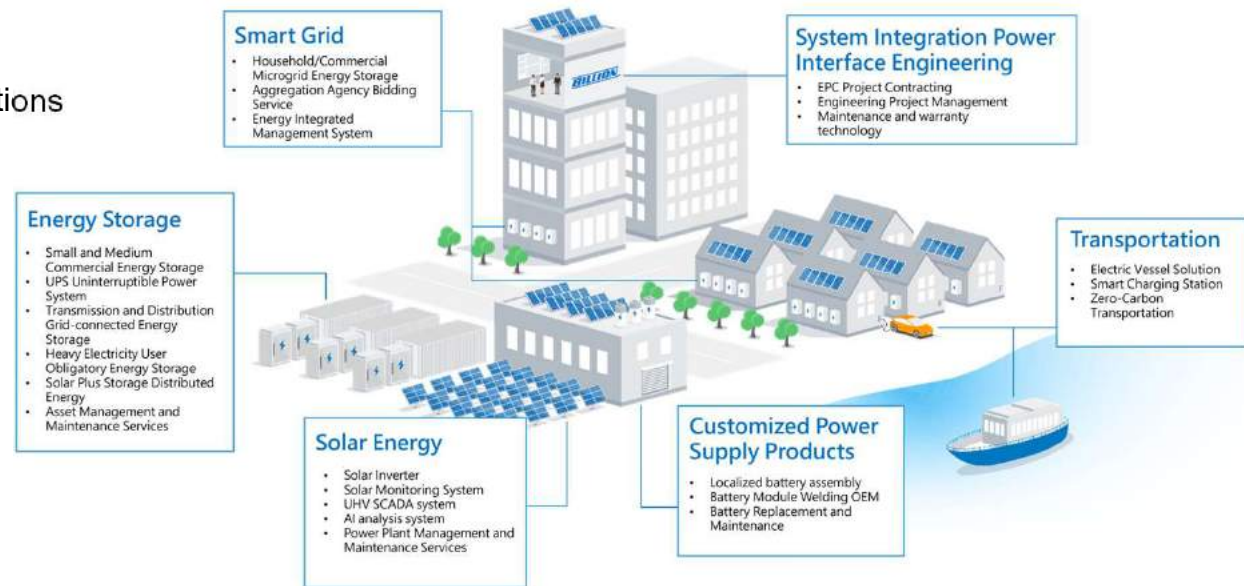
✓ Integrated fields including solar energy, energy storage, charging stations (AC/DC)

✓ **Application**

- Before the meter: Taipower trading platform (AFC)
- Behind the meter: Industrial and commercial energy storage/household energy storage
- Charging Piles: Community and commercial charging stations
- Energy management system: Solar energy monitoring, energy storage and Charging station EMS, smart grid

✓ **Establish a brand image as an international cross-border company**

- Develop proprietary (MIT) and distributing products
- Develop markets in Japan, the United States, Australia, and Southeast Asia



Strategic Goals Division

Green Energy Product MIT

- **Billion Taipei Xindian plant/Yilan Longde plant/Taichung Tanzi plant** BILLION Own brand
(Inverter/charging pile/energy storage cabinet/battery pack)

Smart Energy Management for Community PV+Charging+ESS

- **Billion EV Charging** Provision of BILLION AC charging pile equipment and EV-EMS system

Energy services and equipment sales, including PV, energy storage, PV+ESS, DC charging piles and smart grid one-stop services

- **Billion Watts**

Sales agency of PV Inverter; Before and behind the meter ESS, PV+ESS, EMS system integration

- **VGwatt Energy**

Sales agency of PV Inverter; ESS for industrial and commercial users behind the meter; Commercial DC charging pile equipment integration

ESS Battery Production Base – Yilan Longde Plant

Main production equipment

Module assembly line / Pack assembly line / Rack stacking assembly area /
Processing production line

Automatic laser welding machine



4000W laser welding equipment
+
XYZ three-axis platform

4000W laser welding equipment
+
Six-axis robot

pcs (power conversion system)

DELTA PCS 125



Power capacity: 125KW
AC side: 480VAC
DC side: 750 ~ 1000 VDC
Certificate: UL1741, UL 1741 SA (Rule 21), IEEE1547, FCC part 15 class A, HECO Listed, CEC Listed

Rally tester Tensile testing machine

HUATE HT-1066



Maximum tension: 2 tons
Test speed adjustment scope: 0.1-500mm/min (no grade adjustment, keyboard input)
The maximum test journey: Standard 800mm (can be customized for 1000mm) (excluding clamps)
Effective test width: 390mm
Grade of precision measuring: 0.5 (±0.5%)

Battery Impedance Meter

KIKUSUI BIM1100



Rated input : $\pm 1000V$
Sensitivity range: $0.1 \mu\Omega$
Measuring current range: 1mA ~ 100mA

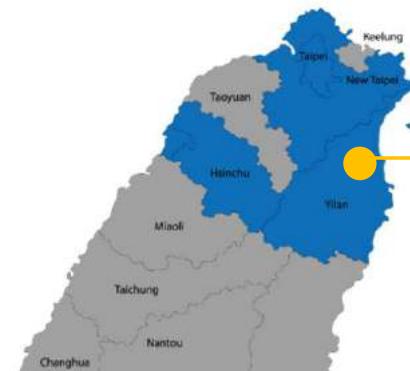
Pressure Resistance Test Machine (Insulation resistance test, grounding connection test, leakage current test)

Hi-POT Tester Others

KIKUSUI
TOS9303LC



ACW: 5KV/100 mA(500VA)
DCW: 5KV/20mA, 7.2KV/13.9 mA(100W)
IR: $0.1M \Omega \sim 100G \Omega$ (DC-25V ~)
-1000V/DC + 50V ~ 7200V
GB: $0.001 \Omega \leq 0.600 \Omega$ ($3.0A \geq 42.0A$)
LC: $1 \mu A + 100 \mu A$ (rms)



Total plant and land area 6,161 m²

Building A: 1400 m² Building C: 911 m²
Building B: 1210 m² Building D: 1256 m²



ESS Battery Production Base – Taichung Tanzi Plant

Automated module production line

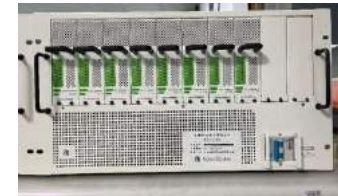
Cell type : Prismatic / Cell size: 25Ah ~ 300 Ah / Capacity: 4 ~ 6ppm



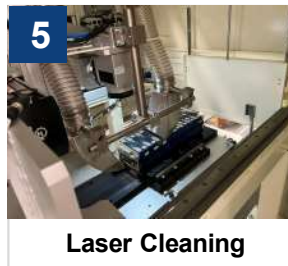
Constant temperature charge and discharge equipment



Rechargers



Constant temperature and humidity machine



Battery cluster tester



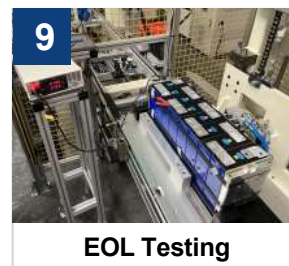
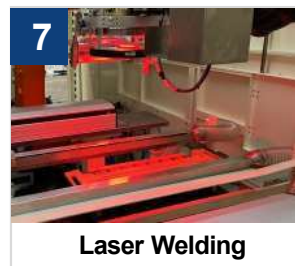
Battery cell tester



Battery pack tester



Electrical test



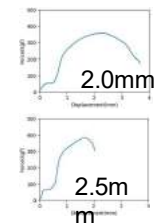
Metallographic treatment



tension test analysis



Rally diagram



Green Energy Product Layout - Own MIT Brand Products

- ✓ Solar inverter, industrial and commercial energy storage all-in-one machine and community EV AC charging pile



提供 光電 · 儲能 · 充電樁 MIT 新選擇

台灣製造一條龍，維修維運有保障

BNI 100-125K
光電變流器

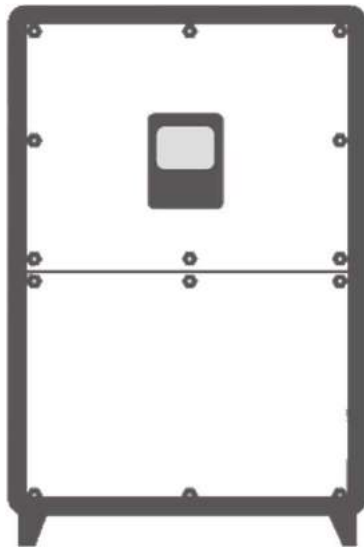
BNI 40-60K
光電變流器

BH-2000
AC充電樁

BNE 100kW/215kWh
工商一體化儲能系統

BILLION **BILLION WATTS** **BILLION E/C**
盛齊綠能 盛益能源

Advantages of Commercial BNI 40-60K Products



✓ Efficient power generation

High efficiency and maximum efficiency of 98.8%, maximum DC input voltage of 1100V, higher power generation efficiency

✓ Optimized design, beautiful and lightweight

Adopt the brand-new optimized heat dissipation design, which reduces the product volume by 30% compared with similar products.

✓ OLED display, touch keypad design

One-touch, easy to operate, more than 3,000,000 times service life



▲ Passed VPC certification in 2024.

Commercial BNI 100-125K Solar Inverter



▲ Passed VPC certification in 2024.

Efficient design

- Maximum efficiency 98.7%
- Assemble current 16A, suitable for high current module
- 10-way MPPT design to adapt to complex application scenarios
- Embedded PID recovery function (optional)

Safety protection

- No fuse design, safety and maintenance
- Design of whole machine IP66, waterproof and dustproof
- C5 level of anti-corrosion, adapted to various harsh environments
- DC secondary lightning protection, AFCI 2.0 (optional)

Cost saving

- Single machine power up to 125KW, saving equipment investment
- Support large wire radial aluminum cable access and save cable investment
- DC BOX design can be exempted.

Intelligent monitoring

- Intelligent serial monitoring, accurate positioning failure
- Smart big data analysis, remote maintenance and upgrade
- Smart virtual work compensation to avoid excess power factors



Billion BNE 100kW/215 kWh(All-in-one) ESS



Safe

- PACK all-fluorine hexanone fire protection, system-level aerosols fire protection
- PACK IP67 protection, system IP54 protection
- System-level online insulation testing, accurate positioning, and rapid analysis



Simple

- High system power density, occupying only 1.3 m²
- Integrated design, easy installation and transportation, flexible configuration
- Modular combination, PCS + BMS + EMS integrated design



Smart

- Health status monitoring, real-time tracking of work status
- Refined thermal management, PACK internal core temperature difference $\leq 3^{\circ}\text{C}$
- Single-cabinet charging, overall system efficiency $\geq 91\%$



4 Major Application Types

1. Self-generated and self-used

Use batteries to store the power generated by photovoltaic power and increase the proportion of self-generation and self-use.

2. peak load shaving

The battery is charged during off-peak periods, and the battery is released during peak periods to reduce electricity costs.

3. Off-grid operation

When there is a power outage in the power grid, the output power of the solar system is controlled to avoid energy coming back to the power grid.

4. Available power

When the power grid outage occurs, it serves as a backup power.

Billion Commercial and Industrial ESS Selection



System Selection



100 kW-2 hours



200 kW-2 hours



300 kW-2 hours



400 kW-2 hours



500 kW-2 hours

Description of EMS Construction Process

✓ Expertise Energy Storage Management System Establishment and Process Management



1. EMS Design Planning

Execution of contracts with owners, generation of communications and server racks, appointment of project managers, and procurement of panels and major equipment.



2. Installation and Setting of Equipment

Installation and settings of computer host, network switch, firewall, uninterruptible power system and KVM equipment.



3. Communication and network engineering

Energy storage battery equipment, PCS, 22.8kV power distribution board communication equipment, protective relays, etc.



4. System engineering and testing

EMS light current system engineering, EMS network monitoring system engineering, equipment positioning, pre-transmission testing, etc.



5. Taipower Communication/Execution Capacity Test

Conducted telecommunications capacity test and execution capacity test in accordance with Taipower's regulations.



6. Education and training

EMS education and training include lecturer explanation, equipment operation manual documents, and operation instructions for on-site drills.

Billion Watts EMS Energy Management System



✓ **Monitoring equipment and operational mode control**

Comply with dReg/sReg/E-dReg frequency modulation auxiliary services and different resource settings, integrate the control power conversion system PCS and battery management system BMS, monitor various power supply systems including voltage, current, Energy Storage System, etc., and calculate power consumption data, including battery and PCS data charts and inquiries, equipment monitoring, and container environmental data.

✓ **Flexibly adjust Taipower scheduling in real time**

When a power grid emergency occurs, the Company actively detects the frequency of the power system, implements the high-end off-peak power transfer of charge and discharge, and sets parameters through remote login authorization, with the function of emergency suspension of operation, for human judgment whether the system needs to be stopped.

✓ **Integrated optical storage control system Implementation status**

It can integrate the photovoltaic Pixel View power generation data to provide optimized charge and discharge schedule and automatic discharge control for remote scheduling to meet the requirements of frequency regulation, voltage regulation, and power factor regulation.

Billion Watts ESS Visualization Smart Monitoring Platform



✓ Website visualization Cloud service platform

Through Web Service service technology, the owner of the construction site can access the platform with a single entry point to monitor the real-time implementation of the construction site. The monitoring data includes residual electricity, practical work (output +/-input-), implementation rate, etc., and provide data visualized graphical interfaces to quickly grasp the latest operation of the construction site (Taipower Data per second, stored in this cloud platform).

✓ Real-time full-day monitoring (Real-Time)

We provide multi-screen switches to achieve real-time (Read-Time) monitoring through the cloud AI information technology management system to ensure real-time receipt of abnormal responses, so that one person monitors the design of multiple places, monitors real-time display statistics and the implementation status of the control system 24 hours a day, analyzes and allocates resources to achieve optimal efficiency, make decisions more quickly and improve the implementation rate of the field.

BH-2000 EV AC Charging Pile

- Made in Taiwan, Quality Assurance
- Designed specifically for the Taiwan community
- The 4.3-inch screen display shows the implementation status is intuitive
- RFID identification, easy to control
- Time and price, providing the best charging solution
- Instant charging button, which can choose to charge immediately
- Combined with EMS smart regulation of charging volume to avoid excessive power load
- Provide exclusive APP to check the charging status at any time
- Integrate indoor intercoms and control the situation at home



RFID

RFID card reader design to provide identification and management



IP55

Equipped with IP55 outdoor waterproof and dustproof rating



IK08

Complies with IK08 impact protection level



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* Source: Compiled by Billion Electric Co., Ltd.

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BH-2000 Charging Pile Solution

Optimized Charging Solution



Automatic charging during off-peak hours, lower electricity costs

Can complete the charging process within a short period of time
EV-EMS allows users to insert vehicles during peak hours but start charging during off-peak hours to ensure minimal electricity costs and improve grid efficiency.

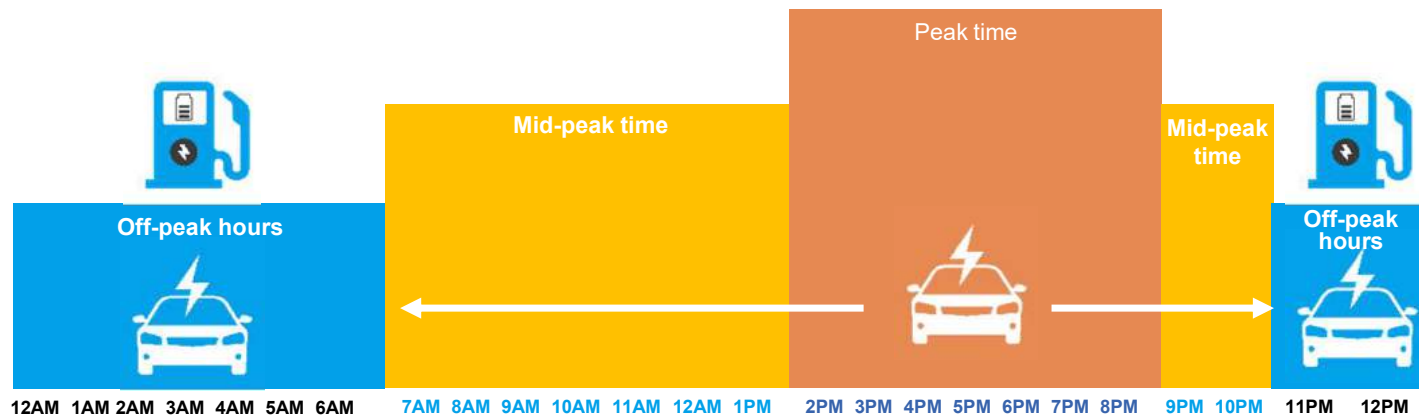
Immediate Charging Solution



Can complete the charging process within a short period of time

If users need to charge immediately, they can choose the "Immediate Charging Solution". Regardless of the period of peak or off-peak, the charging station will immediately activate charging, which is convenient for the residents who use the emergency electric vehicle.

The immediate charging mode can be adjusted by the management committee to increase the charging fee.



Charging Pile Energy Management System EV-EMS

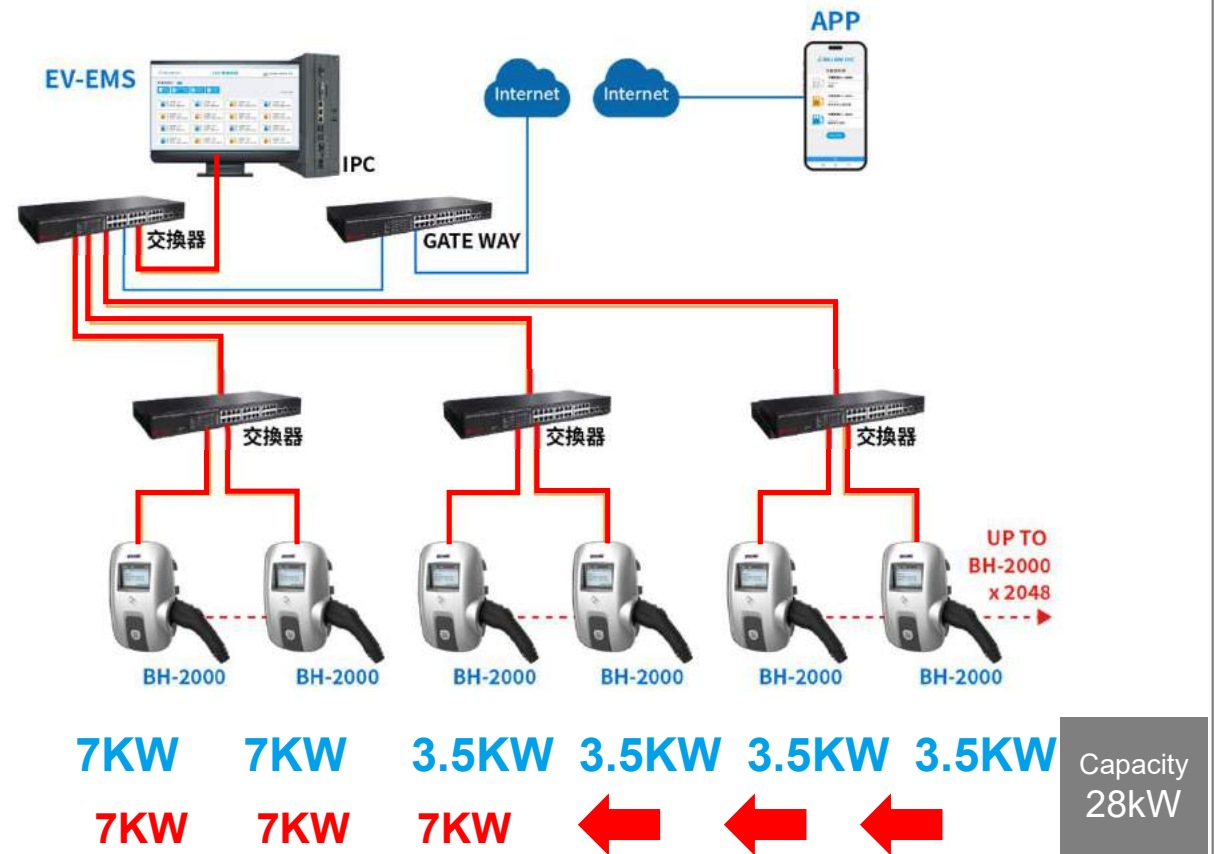
Smart monitoring-optimize contract capacity settings

- Charging distribution of charging pile
- Combined with EMS smart regulation of charging volume
- Avoid overloading of electricity
- Optimal community contract capacity

OCPP provides standardized connections to integrate electric vehicle charging solutions with back-end systems.

This standardized connection simplifies the integration process, reduces costs and allows flexibility in working with different suppliers. OCPP supports basic functions such as authorization management, smart charging and remote diagnosis.

BH-2000 and EV-EMS system application architecture



Charging Pile Energy Management System APP



- **List of charging piles**

List all the charging piles and click one of them to enter the corresponding functional menu

- **Charging pile status**

Check the charging status of charging piles and grasp the current charging status of charging piles and electric vehicles

- **Charging Record**

Please see details of charging and have detailed information of charging at any time.

- **Charging details**

Easy access to detailed information about the start and end time of charging.

- **Community Power Price Inquiry**

Announcement of tariff by the community on the same day of inquiries



4

NZ Plus Residential/Commercial Energy Storage Solutions

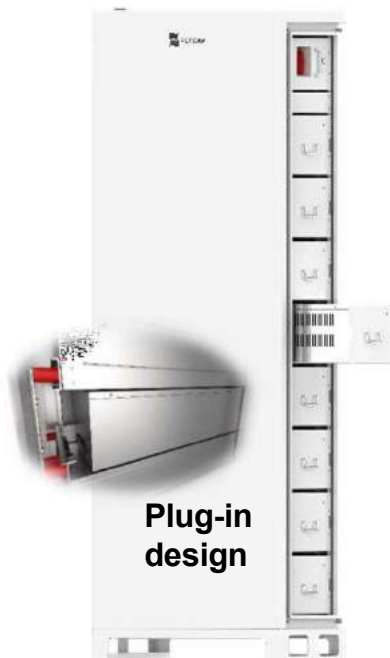
NZ Plus Residential/Commercial Energy Storage Products

- ✓ ESS with High-quality esthetics & installation convenient & integrated modular
- ✓ 11.5kW high-power output to meet the daily needs of home/commercial use
- ✓ High security UL9540 whole system certification
- ✓ Smart management UI app interface

Residential/Commercial Integrated Energy Storage Unit		
Diverse charging	Solar energy input	High power 2x 8.5kWp
	Grid Input	Nominal power 11.5kW
	Generator input	√
High-power output	Nominal power	11.5kW
	Nominal voltage	1φ 3W 110/220V
	Maximum current	52 A
Large capacity	Nominal capacity	Ah/20 kWh
	Charging Voltage	400 Vdc
	Total number of parallel expansion	6 (120kWh)

NZ Plus Modular Design

✓ Rapid installation



✓ Lightweight modularization



43kg

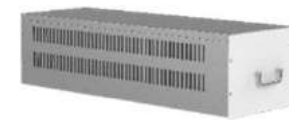
Universal PCS

✓ Design of fast connector



5.1 kg

BCMS
Others



21.5 kg

Battery (LiFePO4)



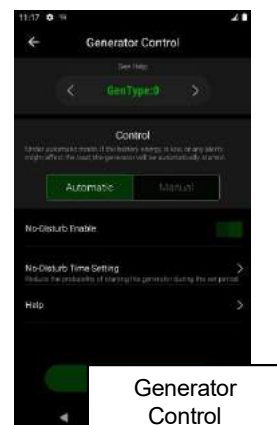
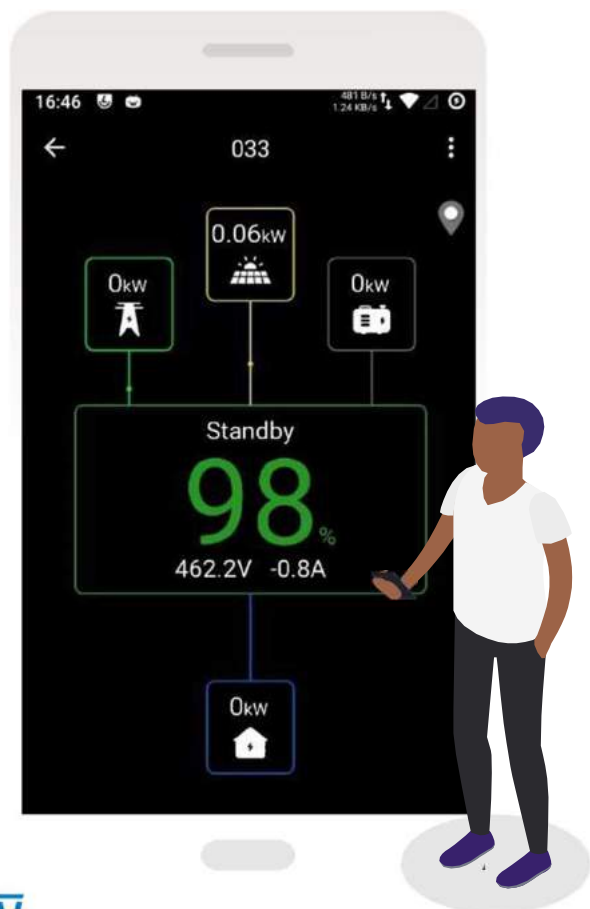
69.6kg

Battery cabinet
(Aluminum)

NZ Plus Cloud Energy Management APP

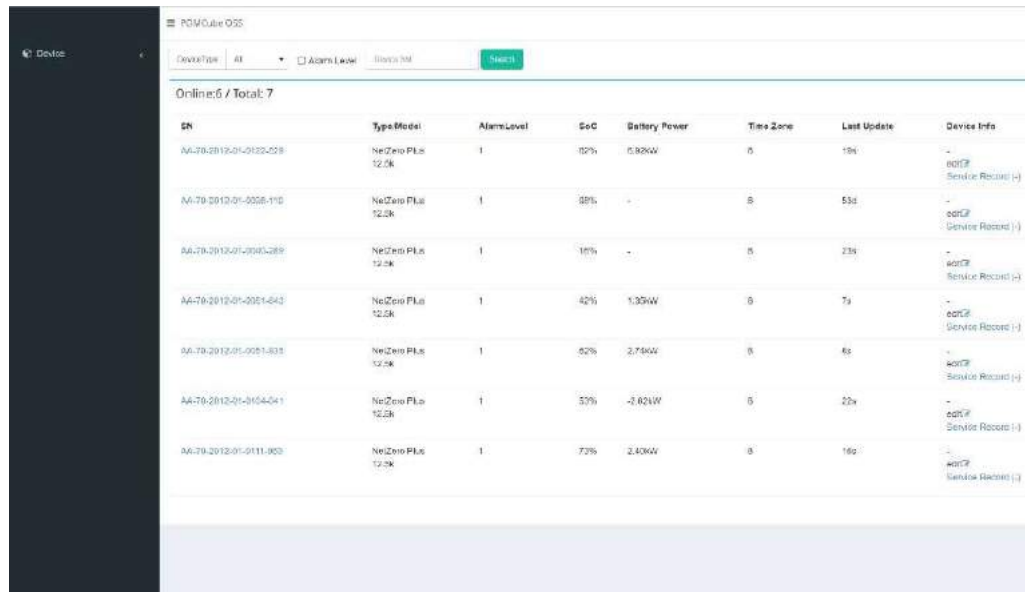
✓ Automatic switching between PCS, grid and generator

✓ Real-time monitoring application and tailor-made energy management



NZ Plus Cloud Monitoring System Platform

✓ Online support and maintenance platform

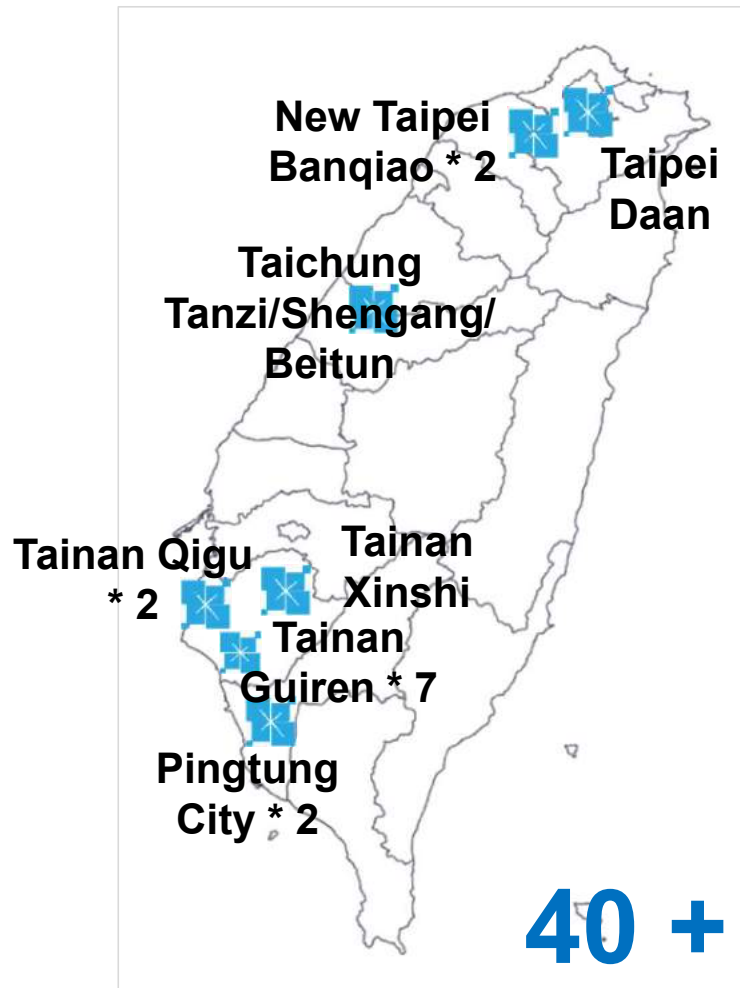


Online: 6 / Total: 7

SN	Type Model	Alarm Level	SoC	Battery Power	Time Zone	Last Update	Device Info
AA-70-2012-01-0103-028	NiZero Plus 12.2k	1	82%	0.89kW	0	18s	edit Service Record (+)
AA-70-2012-01-0026-110	NiZero Plus 12.2k	1	88%	-	0	53s	edit Service Record (+)
AA-70-2012-01-0045-289	NiZero Plus 12.2k	1	16%	-	0	23s	edit Service Record (+)
AA-70-2012-01-0051-643	NiZero Plus 12.2k	1	42%	1.09kW	0	7s	edit Service Record (+)
AA-70-2012-01-0051-833	NiZero Plus 12.2k	1	52%	2.74kW	0	8s	edit Service Record (+)
AA-70-2012-01-0104-041	NiZero Plus 12.2k	1	53%	-2.82kW	0	22s	edit Service Record (+)
AA-70-2012-01-0111-903	NiZero Plus 12.2k	1	73%	2.40kW	0	16s	edit Service Record (+)



Global Performance of NZ Plus



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NZ Plus performance case

NZ Plus Tainan Performance Case

Construction for operation power consumption

- High demand for energy storage batteries with solar energy systems to save electricity costs
- Location: A cafe in Tainan
- Use scenario: Solar energy is self-generated and self-used, with a construction volume of 5.44 KWP



NZ Plus PV+ESS Case Example

Original power supply quality unstable

- solar generation + Energy Storage
- solar generation quantity 11.55 KWP
- 30-60 kWh saved per day



NZ Plus performance case

NZ Plus Taichung Performance Case

Building for self-use

- Relatively rigid demand with low price sensitivity
- Location of installation: 4F, Mingtian Chuo, Shengang, Taichung
- Energy storage equipment with solar power for self-use, in line with off-peak power price schedule



NZ Plus Taipei case Example

Emergency backup

- Relatively rigid demand with low price sensitivity
- Location: An apartment in Da' an, Taipei
- Medical respirators are used by elders at home, energy storage equipment is built to prevent power outages leading to critical load interruptions.

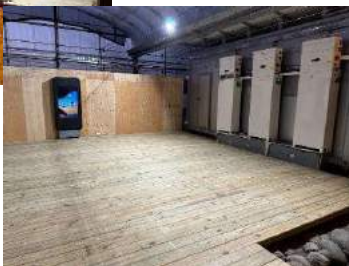


NZ Plus performance case

Case of NZ Plus Tainan Lantern Festival

2024 Tainan Lantern Festival High-speed Rail Light Areas

- green energy Power Supply System Demonstration
- 6 sets of equipment for merging
- Consolidated maximum power output of 54kW/output of 120kWh



NZ Plus performance case

Difficulty in getting electricity

- Independent operation + remote monitoring function is required
- Installation location: public transport elevated under bridge
- 2.46kWp Solar, supplying bridge monitoring system





Thank You!

Please visit www.billion.com or
email to us at sales@billion.com
for more information!

