

Billion Electric Co., Ltd

2021 Investor Conference

02 Nov 2021



Disclaimer

- The financial numbers hereby are based on International Financial Reporting Standards (IFRS) and audited.
- Predictive information referred to in this briefing, including operating outlook and business projections, is based on the Company's information from internal and external sources.
- The outlook for the future in this briefing is the company's view of the future so far. For these views, in the future, if there is any change or adjustment, the company is not responsible for revisiting or updating at any time.

Operating and Financial Performance

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Consolidated Income Statement

Unit: NT \$ thousand	110/4/1 - 6/30		109/4/1 - 6/30		110/1/1 - 6/30		109/1/1 - 6/30	
Consolidated income statement items	Amount	%	Amount	%	Amount	%	Amount	%
Operating income	249,628	100	210,638	100	450,338	100	382,937	100
Operating margin	86,569	35	79,959	38	156,618	35	150,202	39
Gains from Operations	17,864	7	16,532	8	14,671	3	31,872	8
Non-operating income and expenses	(418)	-	(2,368)	(1)	14,540	3	(7,351)	(2)
Net Income	12,832	5	9,487	5	17,950	4	16,766	4
EPS(dollar)	0.10		0.08		0.15		0.15	

Consolidated Balance Sheet

Unit: NT \$ thousand	110/6/30		109/12/31		109/6/30	
Balance sheet items	Amount	%	Amount	%	Amount	%
Cash and cash equivalents	613,363	24	625,270	25	616,290	27
Notes and Accounts receivable	113,159	4	119,247	5	114,886	5
Inventories	303,596	12	266,452	11	202,063	9
Real estate, plant and equipment	556,002	22	558,836	23	547,170	24
Total assets	2,582,209	100	2,448,657	100	2,301,070	100
Current liabilities	887,829	34	760,943	31	549,750	24
Non-current liabilities	201,893	8	204,694	8	277,187	12
Total liabilities	1,089,722	42	965,637	39	826,937	36
Total equity	1,492,487	58	1,483,020	61	1,474,133	64
Current ratio	158.60%		157.28%		218.85%	
Debt ratio	42.20%		39.44%		35.94%	

Sales Comparison of Main Product Line

					Unit: NT \$ thousand	
Product	110/1-6	% of Total revenue this year	109/1-6	% of Total revenue last year	Increase(Decrease)	
					Amount	%
Communication	246,625	55%	219,381	57%	27,244	12%
Power	81,198	18%	82,352	22%	(1,154)	(1%)
Solar Energy	122,515	27%	81,204	21%	41,311	51%
Total	450,338	100%	382,937	100%	67,401	18%

Product and Industry Prevision

- Communication Division



Product Lines

The rapid growth of the 5G terminal equipment market can be expected.

The fixed LTE market was valued at USD 81.36 billion in 2020 and is expected to reach USD 22.29 billion by 2026, at a CAGR of 24.5% over 2021 ~ 2026. There will still be a great room for LTE growth.

The availability of high-bandwidth LTE applications is getting popular since the coverage of LTE networks is increasing in many countries. Including the network requirements of the Rural Area, as well as applications such as smart bus, public safety, and remote monitoring.

In response to the new LTE frequency band used by Utility, Billion has been launching new products that meet the standard and participating in interoperability testing organized by related organization, such as UBBA (Utility Broadband Alliance).

With the opening of 5G networks, more applications will be emerging, and the rapid growth of the 5G CPE market can be expected.



Product Lines

Launch 5G Sub-6GHz and mmWave routers.

5G CPE Devices

The 5G Sub-6 GHz indoor router 5500A uses the latest 5G modules and supports Gigabit Ethernet LAN interface and 802.11ac wireless LAN.

The 5G Sub-6 GHz outdoor router 5700 can support dual connectivity of LTE and 5G (EN-DC) to support higher-speed Fixed Wireless Broadband (FWB) access functions and meet the needs of network speed for more network applications.

5G mmWave (millimeter wave) outdoor router 5800 uses high-power mmWave phased-array antennas to provide long-distance transmission. For the high-speed transmission of mmWave, 5800 supports 2.5 Gigabit Ethernet LAN interface, and samples are under performance testing in the field of North American wireless service providers.



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Product Lines

The market demand for the new CBRS frequency band is happening.

LTE CPE Devices

Outdoor LTE routers, bring secure, high performance mission-critical cellular connectivity to outside locations and harsh environments. It is expected that the demand of LTE routers is continuously growing, since the speed of LTE has been increasing and more spectrum have been released.

The 3.5~3.65 GHz frequency band was originally used by the USA military and satellites. In order to open this frequency band for commercial uses, the FCC defined this frequency band as CBRS B48.

Have been launching a more complete product series to meet different CBRS requirements, including indoor LTE-A Cat. 4 router MX-241NP and outdoor LTE-A Cat. 12 router 7000 R28.

Have launched a rugged USB modem that can support up to 1200Mbps LTE rate. It can be used not only with Billion own products, but also with other equipment, such as multimedia machines (Kiosk).



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Product Lines

Launch new products for smart vehicle's applications.

M2M Industrial Standard Devices

The series of M2M router with redundancy-mode, shockproof design and Wi-Fi hotspots, provide high reliability, high availability, and high speed. The devices are mainly used in vehicles and public safety, including buses, police cars, and fire trucks. The new product M600 / M600-PT, supporting 802.11ac interface and M12 connectors to strengthen the product line.

M2M routers with VPN, RS-232/RS-485, and explosion-proof are specially design for remote measurement and monitoring. Such as installed in natural gas field, the M2M routers use LTE network to transmit remote measurement and monitoring information back to the central control center.

Have launched MX-241NP that complies with the CBRS specification. The product has a small size and excellent performance. It provides stable LTE connection and Wi-Fi functions to strengthen the breadth and depth of the product line.



BILLION®

Marketing

North America Market

Have set up a branch office in Texas, USA. Expand markets with Billion's own brand.

Alliance with major LTE and 5G providers to provide quality products and services to telecom customers.

Actively participate in the broadband alliance-related activities of North American utility market, such as UBBA (Utility Broadband Alliance) , to develop the broadband business.

Global Market

Other than North American market, Billion also works with distributors in Southeast Asia, Australia, South America, Middle East, South Africa and Europe, mainly to expand markets with own brand.

This year, Billion has been certified by several telecommunications providers; next year Billion will continue to actively cooperate with the global target telecom operators.



Product and Industry Prevision

- Power & Energy Management Division



Product Lines

ESS

(Energy Storage System)

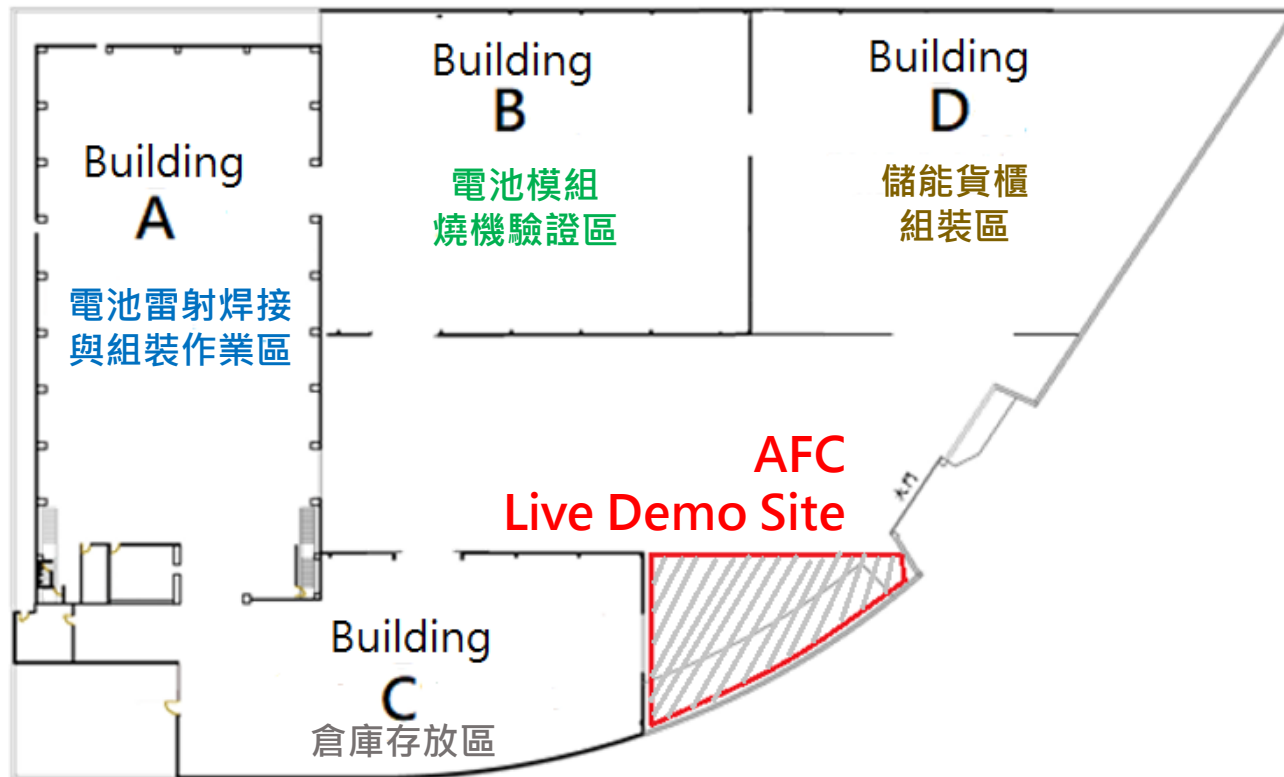
To expand R&D and engineering team of ESS products in Taiwan.

Strive for new business opportunities in auxiliary services of Taipower.

Strive for domestic and international business opportunities for battery modules assembly.

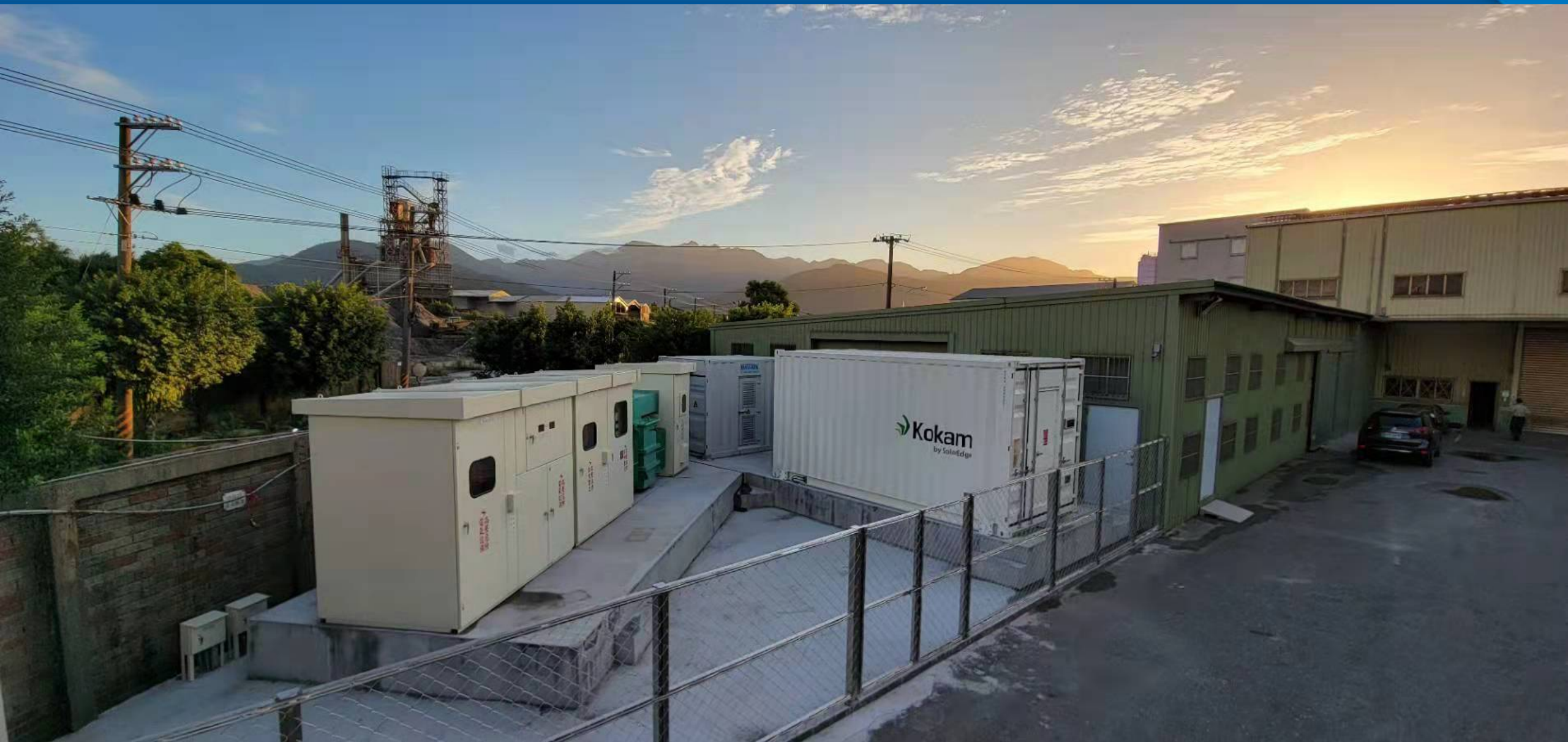
Cooperate with customers to customize small and medium ESS products.

Established Yi-Lan factory for energy storage cabinet assembly



- ✓ Area : Around 150 m²
- ✓ Battery : Kokam
- ✓ PCS : MIT 1250KW x 2
- ✓ EMS : Billion Watts
- ✓ SI : Billion Electric Co., Ltd.

AFC Site View- Attend Taipower AUX Service Platform



AFC Site View – Equipment Description



Billion Watts (Subsidiary) Product and Market Outlook

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 **BILLION Watts**

Executive Summary



Served nearly 700 solar power stations successfully connected to the grid, and the total installed capacity of PV converters exceeded 120MWp.



Complete technical support, design planning, on-site teaching, trial operation, and grid-connected setting of the watch, as well as up to 20 years of maintenance and warranty service.



In 2021, launch large-scale ground 69kV and 161kV booster stations and medium and high voltage SCADA systems, complete set of component supply and optical fiber wiring construction.



Launched a localized container-type energy storage system with optimized safety, with a sustainable management model that emphasizes quality and professional technology.

BILLION[®]

盛達電業集團
(TAIEX: 3027)

700 +

Service more than 700
Taiwanese solar power
plants

120 +

Shipment and installation of
inverter. The total capacity
exceeds 120MWp

200 +

Pixel View monitoring
system installed over
200MWp

Executive Summary

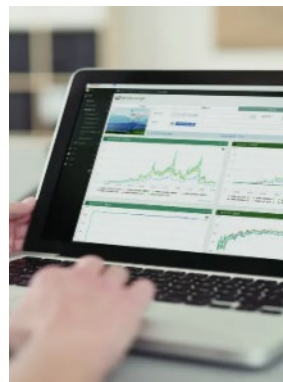
- The full-year revenue of Billion Watts for 2020 is \$135 million, which is nearly 23% higher than YoY in 2019 (\$110 million).
- As of the end of September 2021, Billion Watts's operating income was \$225 million, up 130% from the same period last year (\$98 million) YoY.
- January to September 2021, the revenue of Billion's Renewable Energy Product Line has grown 95% compared to the same period last year.
- In the past 12 months, we have successfully obtained several index solar projects using the SolarEdge system, including Tainan Chigu 77.52MW, Pingtung Linbian & Fangliao 30MW, Tainan Guantian 12MW, and large energy consumption users 20MW & 12MW.
- The integrated SCADA medium and high voltage monitoring system were launched this year, and successfully obtained the 77.52MW project of Tainan Qigu and the 40MW project of Pingtung Gaoshu, which is expected to be closed before 2022Q1.

Core products

solar**edge**



Pixel View



ESS



O&M



Market analysis PV growth rate

- Each GW is expected to be calculated using solar products sold by the group

Taiwan (MW)	2018	2019	2020	2021 (F)	2022(F)	2023 (F)	2024 (F)	2025 (F)
New PV installation (year)	955	1,256	1,129	1,241	1,366	1,502	1,652	1,818
Estimated market share	2.0%	2.0%	3.0%	11.2%	11.5%	12.0%	12.0%	12.5%
Inverter sales (year)	19.11	25.12	33.86	138.42	157.04	180.26	198.29	227.20
Total PV installation	2,342	3,598	4,727	5,968	7,334	8,836	10,488	12,306
Inverter sales (all)	19	44	78	217	374	554	752	979

Note:

Sales of PV products are divided into SolarEdge inverters, Pixel View monitoring (including: PV Gateway), SCADA monitoring, and O&M maintenance services

The product categories are commercial (commercial) and utility-grade (utility-grade). The company sets sales targets and individual product gross profit separately.

SolarEdge Inverter shipments in 2021 H1 ranked third in Taiwan

PV InfoLink 2021H1台灣逆變器出貨排名

Rank	Company
1	Delta(台達)
2	PrimeVolt(新望)
3	SolarEdge(所樂)
4	Huawei(華為)
5	Goodwe(固德威)

PV InfoLink 2020FY 台灣逆變器出貨排名

Rank	Company
1	Delta(台達)
2	Sungrow(陽光電源)
3	Huawei(華為)
4	PrimeVolt(新望)
5	SolarEdge(所樂)
6	Ablerex(盈正豫順)
7	SMA(艾思瑪)
8	Allis(亞力)
9	Goodwe(固德威)
10	ABB(台灣瑪基)、KACO(西門子)

*資料來源: “2021上半年台灣市場模組與逆變器出貨排名出爐: 元晶首次躍上榜首.” InfoLink, <https://www.infolink-group.com/zh-tw/solar/feature-rankings/TSEC-climbed-to-1st-spot-in-Taiwan-module-and-inverter-shipment-ranking-1H21>.

Market analysis of energy storage growth rate

- Due to the inaccurate forecast of renewable energy output, the resulting grid frequency modulation demand
- 10% of the capacity of renewable energy installations; using 26,700MW of PV and wind power in 2025, the American Electric Power Research Institute (EPRI) analyzes the increase in auxiliary services required by Taiwan's power grid system, which is 2,670MW.
- With the increase in the amount of renewable energy installed, the energy storage will be expanded to 590MW/590MWh (1-hour discharge) by 2025.
- The goal of building energy storage equipment in 2025 is planned to increase from 590MW to 1,000MW.
- It is expected to provide the system with 2,000 MWh of peak shifting and dumping energy.

單位：MW

Year	106	107	108	109	110	111	112	113	114
PV wind power cumulative capacity	2,460	2,460	5,602	7,834	10,601	13,687	17,023	20,609	26,700
(A) Consider the need for backup of stable frequency and unit failure	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200
(B) Consider the need for backup of inaccurate renewable energy forecasts	250	360	520	760	1,040	1,350	1,680	2,050	2,670
(C) Reserve capabilities such as gas-fired units, pumped storage power, demand response, etc.	4,010	4,140	4,190	4,280	4,400	4,540	4,720	4,920	5,280
Energy storage demand (A)+(B)-(C)	-	-	-	-	-	10	160	330	590

According to the official instructions of the Taipower Dispatching Office, the already announced 590MW is expected to increase to 1000MW

電力交易平台輔助服務市場/推動目標

推動目標量	2021夏季	2021年底	2022夏季	2025夏季 (目標值)
儲能設備	3.8	8	25	100
需量反應	4.6	6	10	30
自用發電設備	1.0	6	10	25
合 計	9.5	20	45	155

資料來源：台電電力調度處

單位：萬千瓦

製表：張秉鳳

Note:

- (1) Due to the increase in offshore wind capacity, adjust the cumulative capacity of PV+ wind power to 26,700MW.
- (2) Item (A) in the table refers to the total of system frequency modulation (700MW), heat engine backup for maximum unit capacity (1000MW), cold engine backup for maximum unit capacity, and load forecast change (1500MW) totaling 3200MW.
- (3) Item (B) of table (B) takes into account the inaccurate forecast of renewable energy output and the additional power demand. According to the EPRI report, the recommended value is 10% of the capacity of intermittent renewable energy installations.

Energy storage market – group strategy

Power Conversion System	 • 500kW to 1MW PCS • 1.25MW to 2.8MW PCS	Procurement, construction, engineering, maintenance, and agent operation integrated services A dedicated power trading platform for Taipower's auxiliary services – frequency modulation and transfer to dReg 0.25/dReg 0.5/E-dReg, obtaining ten qualified trader licenses and completing the first phase of 30MW investment MOU, partners include energy investors, life insurance, overseas funds Repatriation of surplus and listed companies.
Battery System	 • LFP 280Ah (0.5-1C) • HP 85Ah (1-3C) • 20/40/53 呎櫃 • Cell等級：UL1642、UL9540A、UL1973、IEC62619、UN38.3 • Module等級：UN38.3、IEC62477-1、IEC61000-6-2/-4、IEC62619 • Rack等級：IEC62619、IEC61000、IEC62477-1	Energy Management System  • Control power conversion system • Energy Management Monitoring • System Alarm system and event record • A real-time operation information chart
ESS Site Controller	 • Data logger • Controller • switch • Uninterruptible power system • Environmental control • Air Conditioning System • Access control system • Communication control system • Anomaly monitoring system • Automatic fire fighting system	EPC (Engineering General Contracting) Planning, procurement, engineering  • Project management and design. • Power connection (switchboard, transformer) • Civil engineering construction. • Integrated communication test. • Operation and maintenance warranty

Energy storage market – group strategy

The first AFC dReg 0.5 energy storage system will be launched before the end of this year, becoming the top five qualified private traders who have officially passed Teclast's capability and communication tests.

1

Localized energy storage cabinet manufacturing technology (complete production history can be provided) including:

- Battery cell characteristic measurement grouping
- Energy storage battery module assembly
- Battery module welding
- Energy storage battery cabinet assembly

2

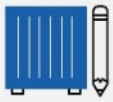
Responsible for the battery and container transportation to Taiwan for local assembly, verification, and testing of system integration power connection projects, with sufficient batteries and peripheral spare parts

3

Provide immediate replacement and maintenance of backup machines during the warranty period of the energy storage system, reducing operational interruption, recovery time, and failure risk



管線安裝
與排佈



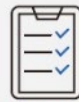
儲能櫃
機構設計



儲能櫃
熱流分析



消防
通風設施



定期保養
測試校驗

Yilan Factory Address: Longde Industrial Zone
The total area of plant and land is 6,161m²





The Future is Now

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Thank You!