KAORI 50+
Go For Sustainable Future

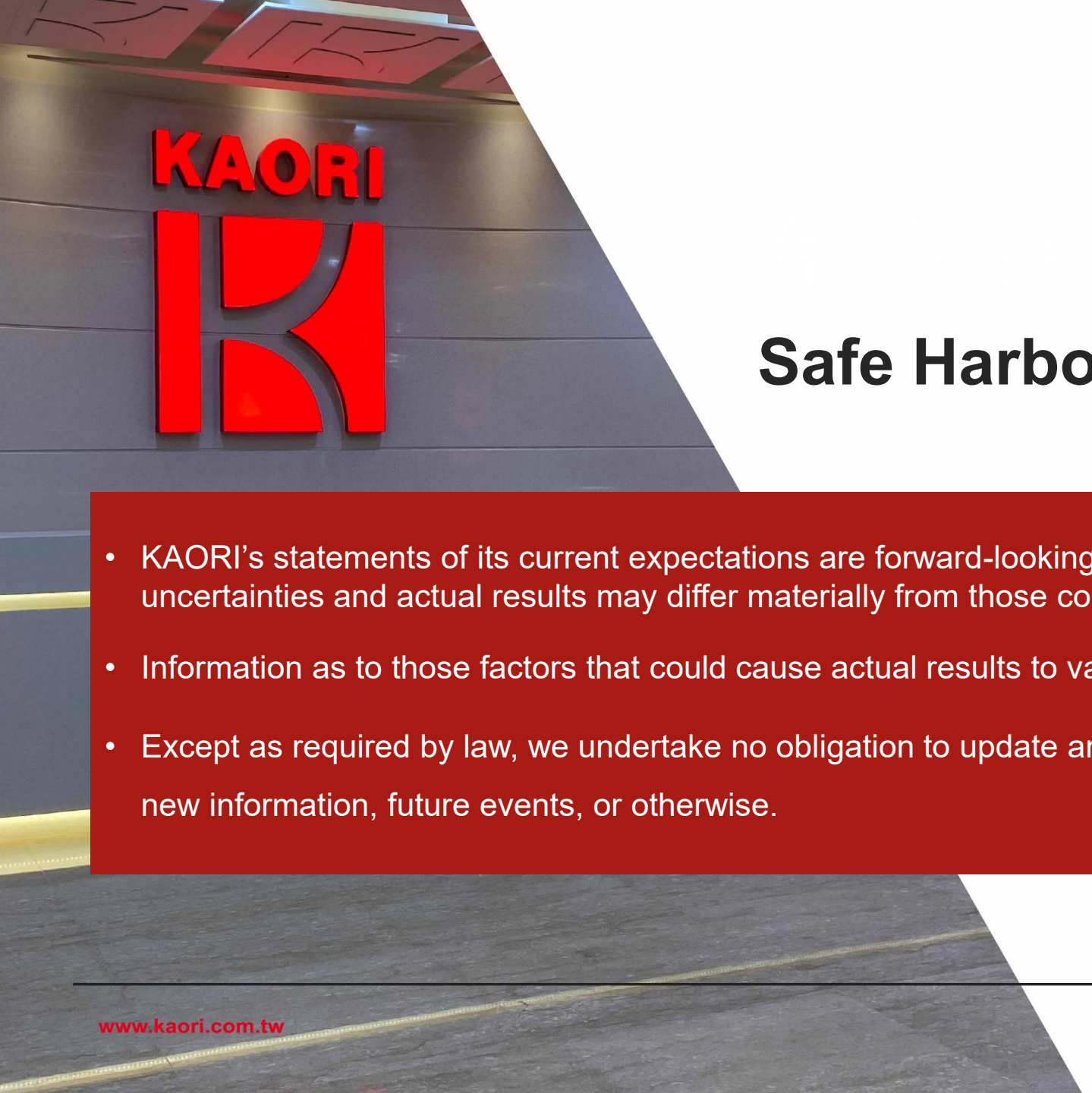
KAORI HEAT TREATMENT CO., LTD.

Investor Meetings 2023

October, 12th, 2023

www.kaori.com.tw

Innovation、Quality、Responsibility、Honor



Safe Harbor Notice

- KAORI's statements of its current expectations are forward-looking statements subject to significant risks and uncertainties and actual results may differ materially from those contained in the forward-looking statements.
- Information as to those factors that could cause actual results to vary can be found in KAORI's Annual Report.
- Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.

Agenda

- **Company Profile**
- Financial Results
- 2023 Business Results and 2024 Outlook
- Q & A

About KAORI

Since 1970, the company's major goal has been to pursue cutting-edge heat treatment technology and to manufacture world-class products.

※Group employees: 644 in Taiwan; 83 in Ningbo, a total of 727. Statistical deadline 2023.10.01

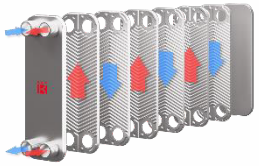
Milestones

Continuous innovation and transformation, towards the sustainable development of net zero carbon emissions.

1970

Established in
Heat Treatment

1994



Start Research & Development
For **Brazed Plate Heat Exchanger**

2008

Fuel Cell Battery
Heat Exchange Systems
Fuel Cell Power Generation Systems

2018

Launched Immersion
Liquid Cooling System

2021

Sustainable Development
ESG Management
R&D Innovation Momentum

Sustainable Development Strategy

Governance

Establish **ESG Committee** & **Carbon Management Committee.** Build a sustainable governance structure to promote sustainable affairs

Communication

Establish **communication platforms** as

- ✓ ESG Sustainability Report
- ✓ Climate Risk Opportunities Report
- ✓ Sustainable Supplier Meeting

Focus

Develop **sustainable products**
Focus on major issues and connect to the United Nations Sustainable Development Goals

Implement

Formulate carbon reduction / energy saving goals for climate action

- ✓ Greenhouse Gas Management (ISO14064-1)
- ✓ Product carbon footprint (ISO14067)
- ✓ International Carbon Tariff (EU 2023/ US 2024)

Sustainability Highlights

Environment

Management policy ：
Energy Consumption, Emission, and Waste reduction

- GHG emissions intensity **reduce by 17%**
- Manufacturing process **energy saving and automation**
- Sourcing **low-carbon raw materials** and improving **manufacturing process technology**
- Managing **waste reduction** and **package recycling**

The solar energy system 744.51kW of the Kaohsiung plant

Note ： GRI Disclosure 305-4, GHG emissions intensity = Direct (Scope 1)+Energy indirect(Scope 2)/annual revenue

Sustainability Highlights

Social

Management policy ：
Diversity, Equity, and Inclusion

- **8%** foreign employees
- Training development, **averaging 21 hours per employee**
- Birth & child care subsidy, **total USD$33,518**
- Employee safety and health, **0 major accidents**
- Annual health checkup, **100% of employees participated**
- The male and female salary ratio is **1:1**

Tea Talk - The management team and foreign migrant workers

Sustainability Highlights

Governance

Management policy ：
Operational Sustainability, Risk Control, Information Security

- Adopted the TCFD guidelines, **100% of ESG committee members participated workshop**
- The TWSE corporate governance indicators, **increasing two levels**
- Released **sustainable supply chain system**
- Adopted **ISO 27000 Information security management systems**

1ST Sustainable Supplier Meeting

Note： TWSE, The Taiwan Stock Exchange Corporation, TCFD, Task Force on Climate-related Financial Disclosures

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Financial Results

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Unit: NT$ in thousands / % / NT$(EPS)

Items	Y2018	Y2019	Y2020	Y2021	Y2022	Y2023 Q1~Q2
Revenues	1,931,586	2,083,280	2,076,359	2,231,273	2,843,540	2,278,231
Gross Profit	566,945	575,456	528,382	593,603	785,630	664,611
Gross Profit(%)	29%	28%	25%	27%	28%	29%
Net Income before Tax	283,852	199,080	154,671	195,520	389,853	423,599
Net Income after Tax	229,734	158,138	112,524	149,156	301,020	334,263
EPS	2.57	1.77	1.26	1.67	3.37	3.74

Financial Results

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Unit: NT$ in thousands / % / NT$(EPS)

Items	Y2023 Q2	Y2023 Q1	QoQ	Y2022 Q2	YoY
Revenues	1,307,720	970,511	35%	648,223	102%
Gross Profit	387,400	277,211	40%	174,436	122%
Gross Profit(%)	30%	29%	4%	27%	10%
Net Income before Tax	264,977	158,622	67%	78,502	238%
Net Income after Tax	207,601	126,662	64%	61,709	236%
EPS	2.32	1.42	63%	0.69	236%

Financial Results

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Items	Y2018	Y2019	Y2020	Y2021	Y2022	Y2023 Q1~Q2
Current Ratio(%)	224	181	164	142	152	128
Quick Ratio(%)	134	110	101	85	61	69
Average Collection Days	67	48	60	61	61	68
Average Inventory Turnover Days	152	148	148	143	165	146
Debt Ratio (%)	32.77	34.28	44.7	44.76	50.46	55.81
Return on Total Stockholders' Equity(%)	12.63	8.61	6.01	7.84	15.27	31.07
Net Income to Sales(%)	11.89	7.59	5.42	6.68	10.59	14.67

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- **2023 Business Results and 2024 Outlook**

Plate Heat Exchanger

Hydrogen Clean Energy

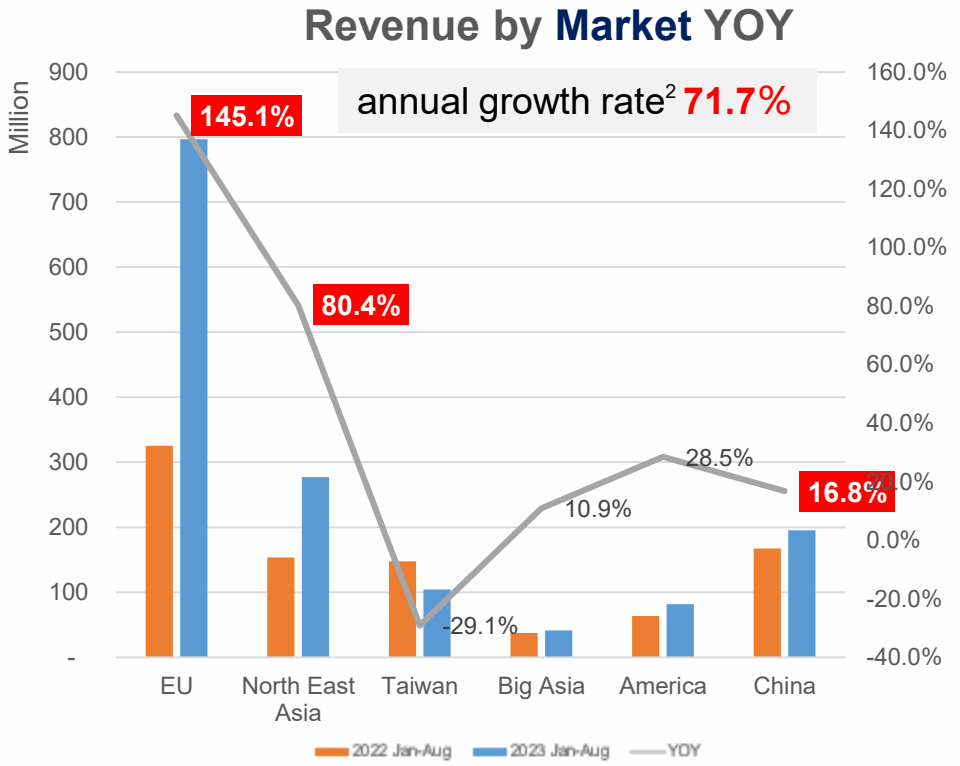
Immersion Liquid Cooling

PHE Division

Operation Overview (1) —

The global market size for BPHE is about USD 1.046 billion[1].
Kaori's market share is about 6.7%

Market	Growth potential
EU Japan	• Repower EU fuels the demand for heat pump • Change of natural refrigerant in commercial cooling (heating) causing replacement to increase • Demand in server cooling increases, and continue to increase in the future
China	• Carbon neutral by 2060, demand for heat pump district heating increases.

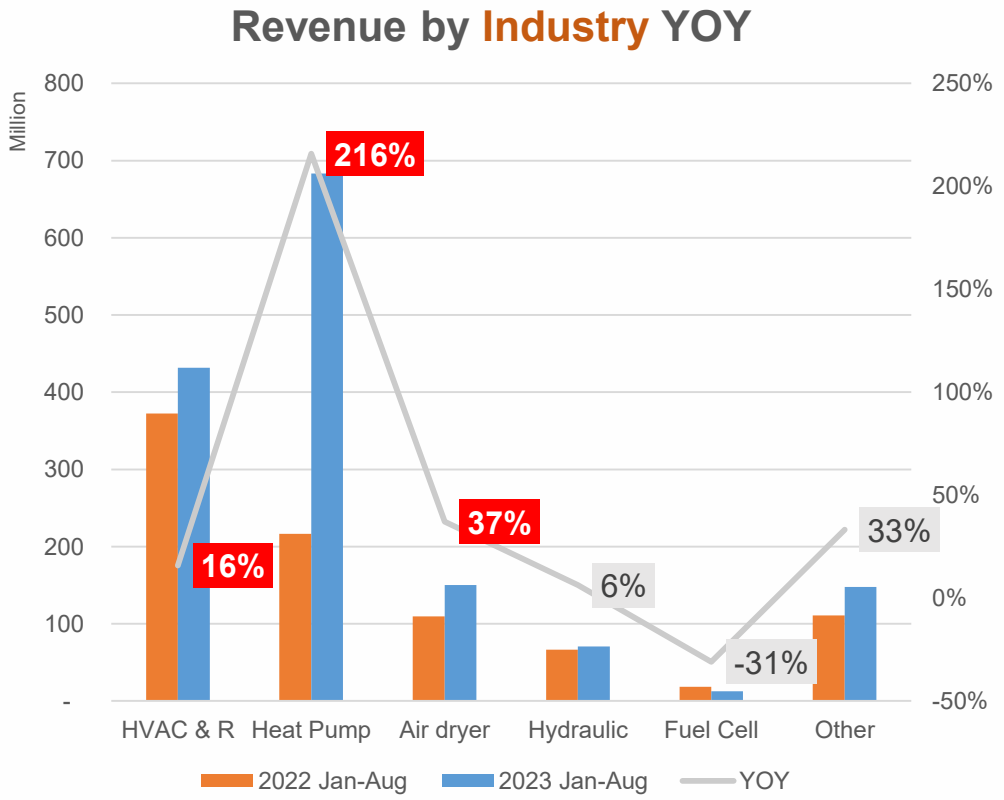


1. Source: MarketsandMarkets-Brazed Plate Heat Exchangers Market link
2. Annual growth rate: 2022 (Jan-Aug) VS 2023 (Jan-Aug)

PHE Division

Operation Overview (2)

Industry	Growth potential
Heat pump	• Less dependency on natural gas, boiler manufacturer starts to change to heat pump manufacturing
HVAC	• Carbon neutral effect, incentive on new HVAC equipment replacement
Air dryer	• Market stabilizes, growth main come from natural growth and price increase.



PHE Division

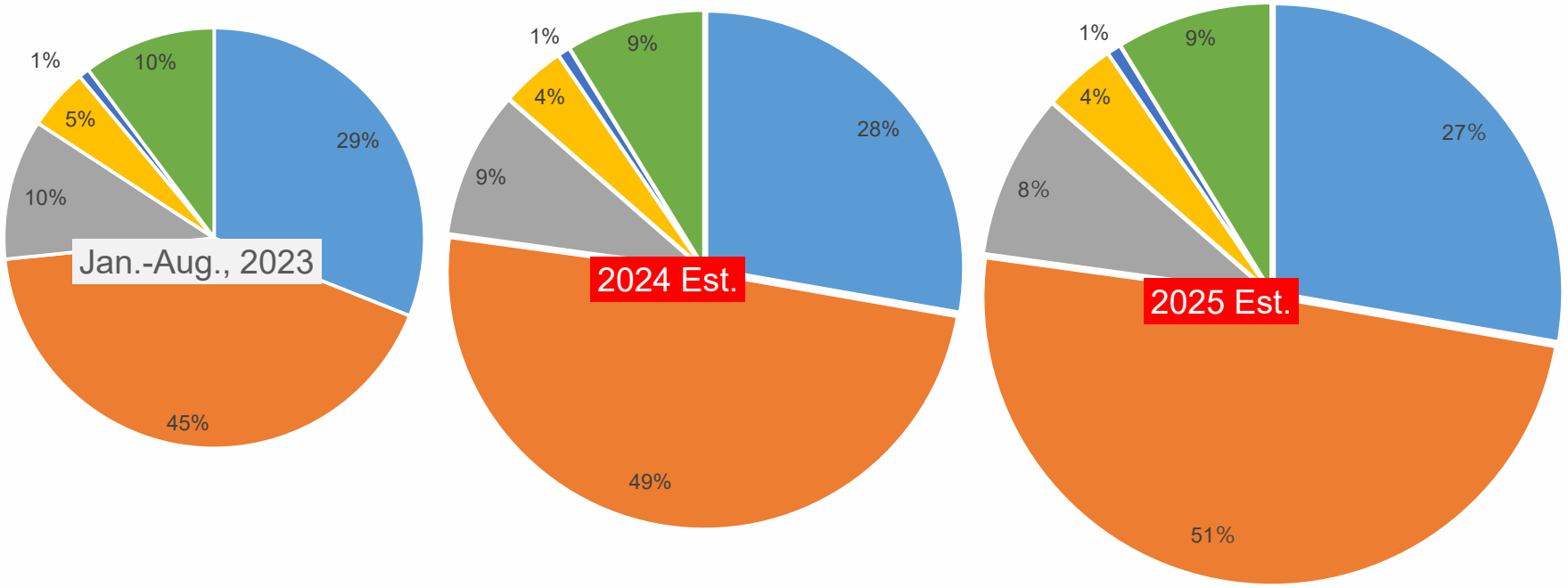
New Product Roadmap

Product series	Application	Purpose of development	Characteristics	Model	Launch in
	Heat pump	Replacement of natural gas boilers by heat pump in EU Joint development with heat pump manufacturer	Asymmetric channel design Suitable for new refrigerant Lower refrigerant charge Optimal performance and pressure drop	B200	2024.Q3
	HVAC	Weight reduction for sustainability	Thinner design Less material Increase in heat transfer efficiency	K050L K070L	2024.Q1
	**Hydrogen power** Semiconductor	Developed for green energy storage market	Low nickel content and lower cost Corrosion resistant Can be used with ultra pure water	S Series	2024.Q2

PHE Division

Market Opportunity— Main growth in 2023 came from heat pump with double digit growth

- HVAC
- Heat pump
- Air dryer for compressed air
- Hydraulic
- Fuel cell
- Electric Vehicle & Others



PHE Division

Capacity Plan

- Production equipment continues to increase with production capability.
- Ramp up of one stop pressing line
- Introduction of automation , increase production efficiency
  (1) Automatic inspection equipment
  (2) Installation of plate grabbing robot
  (3) CNC automation
- Permission for Qiaotou Science park has been granted,
- new plant under construction.

- **2023 Business Results and 2024 Outlook**

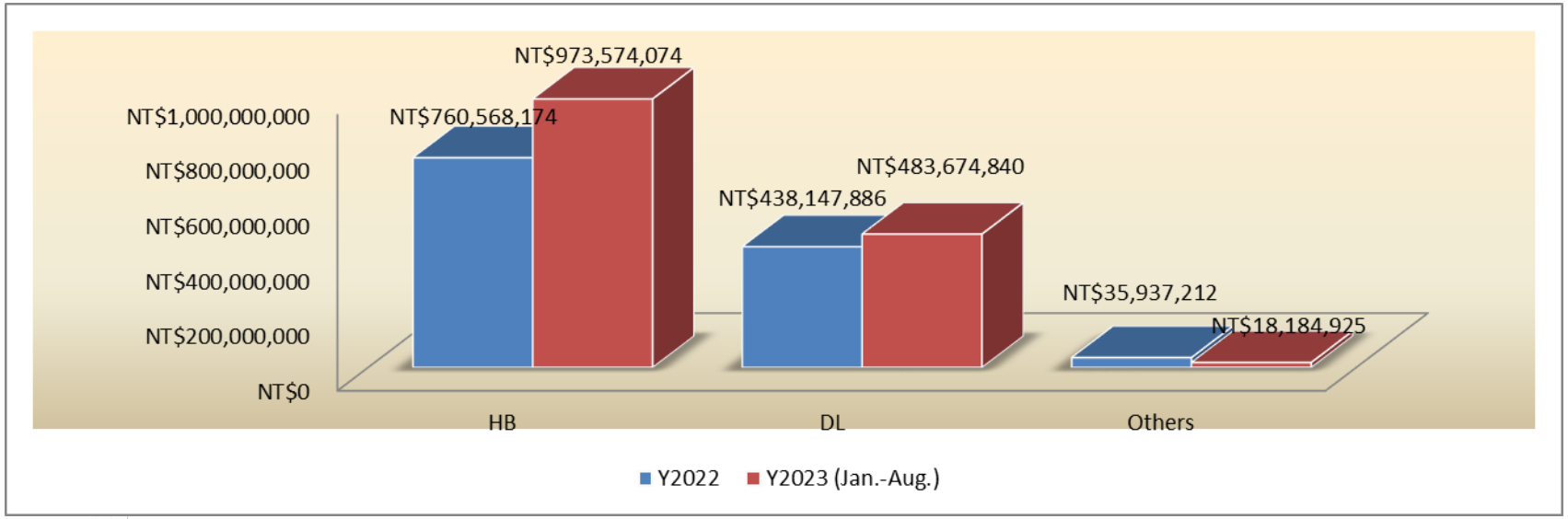
Plate Heat Exchanger

Hydrogen Clean Energy

Immersion Liquid Cooling

Hydrogen Clean Energy

Operation Overview - Revenue



Items	Y2022	Y2023(Jan.-Aug.)
HB	NT$760,568,174	NT$973,574,074
DL	NT$438,147,886	NT$483,674,840
Others	NT$35,937,212	NT$18,184,925
Total	NT$1,234,653,272	NT$1,475,433,839

Hydrogen Clean Energy

2024 Outlook

Support international manufacturers
Bloomenergy
Promoting Hydrogen Application Technology

Product	Growth Momentum
SOFC (Natural Gas) Solid Oxide Fuel Cells	• Successfully developed **65kW** power generation equipment and will move on the mass production stage in 2023 • Bloom Energy Signs First Customer in Germany (July 31, 2023)
SOFC (Biogas) Solid Oxide Fuel Cells	• Bloom Energy's Dairy Farm Installation Receives National Recognitions for Biogas Innovation and Sustainability Achievements (July 18, 2022)
SOEC (Electrolyze) Solid Oxide Electrolyzer cells	• Bloom Energy Demonstrates Hydrogen Production with the World's Most Efficient Electrolyzer and Largest Solid Oxide System (May 3, 2023) • Bloom Energy Celebrates Important Milestone in Massive Green Hydrogen Commercialization Project (May 22, 2023)
Marine Application Solid Oxide Fuel Cells	• Bloom Energy Fuel Cells Demonstrate Effectiveness in First Major Marine Deployment Aboard Cruise Ship Built by Chantiers de l'Atlantique (March 2, 2023)
Carbon Capture Solid Oxide Fuel Cells	• Help customers to achieve low carbon, zero carbon or negative carbon emissions

Source: Bloom Energy Press Release, 2023

Hydrogen Clean Energy

2024 Outlook —— Recycle exhaust hydrogen & Realize circular economy

Solution	Product Development	Growth Momentum
Industrial exhaust hydrogen – purification and recycle	• High recycle rate and low energy consumption for reducing cost and carbon emission. • Cost saving from hydrogen purchasing to achieve 80% to well justify capital investment with ROI around 2.5 years with carbon tax not counted in. • Automatic operation with safety interlock without influencing existing processes.	• According to ITRI data, around 6 billion M3 of industrial exhaust hydrogen produced, and converted to electricity estimated 740MW. • Industrial applications：heat treatment, powder metallurgy, metal threading and steel manufacturing that consuming huge amount of hydrogen. • Already proven application metal threading and sea-water electrolysis, and to be expanded in capacity.
Methanol reforming hydrogen generator	• To replace hydrogen cylinder usage with ROI around 0.5~1.2 years, depending on consumptions. • Applied to weather balloon to solve Helium shortage and save cost around 90%, then expanding to portable type.	• Reinforce the applications to variant industries and hydrogen fueling stations. • More than 2,000 weather stations globally.

- **2023 Business Results and 2024 Outlook**

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Immersion Liquid Cooling

Data Center Applications

a) E-Commerce

b) 5G communication

c) Big data applications — face recognition, telemedicine

d) Virtual Reality Software — Autonomous Driving

e) Google and Baidu map applications

f) AI Artificial Intelligence — Industry 4.0

Immersion Liquid Cooling

Sustainable Development

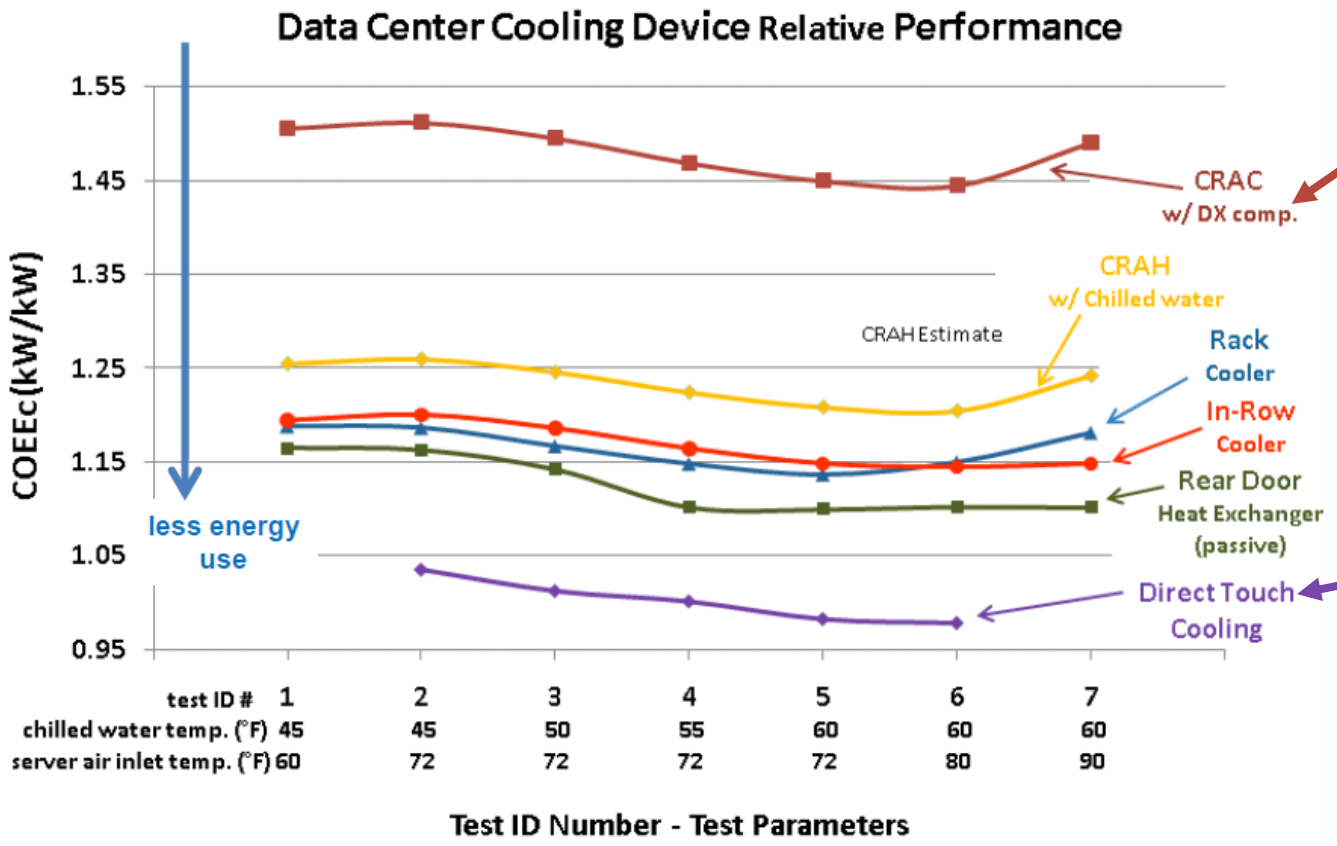
- **Improve power consumption structure** - reduce data center energy consumption
  - ✓ The Chunghwa Telecom IDC in 2021 is 161.94 million kilowatt hours, and the PUE is 1.657
  - ✓ Using server liquid cooling technology, PUE dropped from 1.657 to 1.1
  - ✓ Electricity saving 33.6%=(1.657-1.1)/1.657, saving 44.755 million kWh/year

- **Improve water use structure** - reduce data center water use
  - ✓ Using server liquid cooling technology to reduce water use by 20%

Source:
1.2021 Energy Vision Summit Forum
2. Chunghwa Telecom 2021 Corporate Social Responsibility Report

Immersion Liquid Cooling

Server Cooling Technology Evolution



Traditional Air Cooling

Utilize compressed air conditioner

Immersion Cooling

Utilize low energy consumption liquid cooling technology

Source: Tests by Lawrence Berkeley National Laboratory (LBNL)

Immersion Liquid Cooling

Product Roadmap

Server Liquid Cooling Market

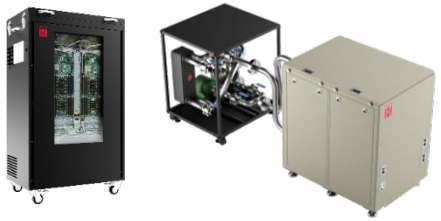
Y2022 Q4 | Y2023 Q1 | Q2 | Q3 | Q4

In-Rack CDU

4U80kW CDU

- with water cooling plate
- with standard products of server manufacturers

Immersion Tank & CDU



- Edge Computing(2U/4U)
- Hyperscale Data Cent
- Containerized Data Center

25U Tank &100kW CDU

- working fluid insulating oil
- multiple units connected in parallel are used in large-scale data centers
- container type data center application

40U Tank & 200kW CDU

- working fluid insulating oil
- multiple units connected in parallel are used in large-scale data centers
- container type data center application

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