CIMC ENRIC 中集安瑞科

3899.HK

Your Reliable Partner of Decarbonisation

H2 • RENEWABLE ENERGY

fostering the future,

CONNECTING the world

About CIMC ENRIC（3899.HK）

CIMC 中集

(Stock code: 000039.SZ / 2039.HK)

A Global Business Conglomerate

- Containers
- Vehicles
- Energy, Chemical and Liquid Food
- Offshore Engineering
- Logistic Service
- Airport Facilities
- Finance
- Returnable Packaging

CIMC ENRIC 中集安瑞科

(Stock Code: 3899.HK)

Leading intelligent equipment manufacturer in clean energy industry

Clean Energy | Chemical & Environmental | Liquid Food

Adhering to the Main Channel, Developing New Areas, and Building an Industry-leading Integrated Comprehensive Service Capability

Main Channel

	Chemical & Environmental (CIMC Safeway)	Clean Energy	Liquid Food (CLPT)
Existing Businesses	Chemical Equipment	Energy Equipment and Engineering Business Offshore Clean Energy Business	Beer Business
New Businesses	Environmental Protection Business	Hydrogen Business	Non-beer Business

Key Equipment + Core Technologies + Integrated Services

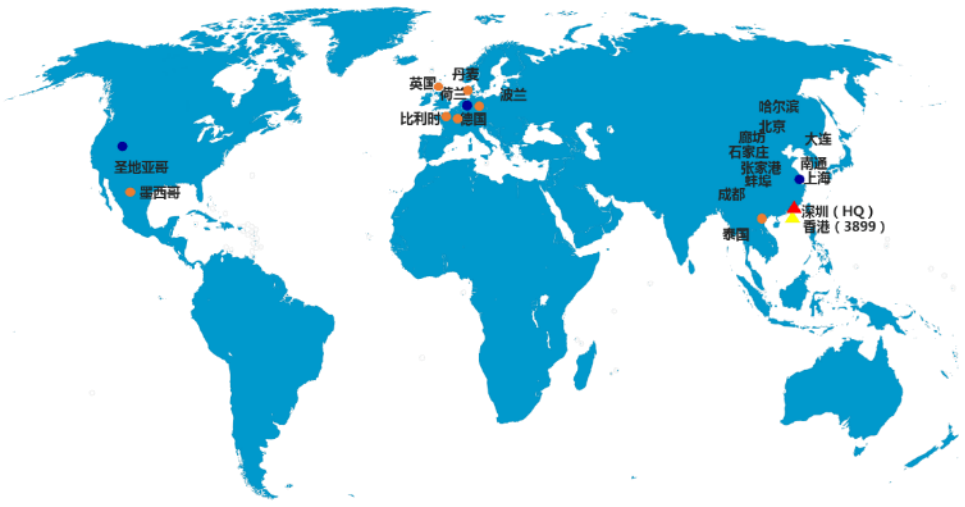
Comprehensive Service Provider of Technology-based Low-carbon Intelligent New Energy Solutions

- Focus in Product
- Innovation& Upgrade
- Operational Excellence
- Intelligent Interconnection

Make energy cleaner, make the environment more sustainable, and make life better!

Global Market Expansion with Roots in China

20+ domestic and foreign member companies, 10+ overseas representative offices, 19 R&D centers at home and abroad.



CIMC Enric recorded revenue of RMB23.63 Billion in 2023

Global Market Leader in

- ISO liquid tank container (No. 1)
- Brewery turnkey project (global leader)

China's Market Leader in

- Cryogenic transportation equipment
- High-pressure gas transportation equipment
- LNG, CNG, LPG storage equipment

Clean Energy

14.91B (63.1%)

Chemical & Environmental

4.41B (18.7%)

Liquid Food

4.29B (18.2%)

CIMC ENRIC

The Future Development Strategy of CIMC Enric (3+2+N)

Overall Positioning and Strategic Objectives:

Expanding from "equipment + engineering" to "comprehensive service provider", aiming to create a digitally integrated and value-added industry format based on "key equipment + core processes + integrated services" and become a technology-driven, low-carbon, and comprehensive service provider for intelligent new energy solutions.

Equipment engineering service provider → 2022 → 2023 → 2025 → 2027 → A technology-driven, low-carbon, and comprehensive service provider for intelligent new energy solutions

Overall Business Development Strategy

- ***Leadership Strategy: Prioritising Excellence in Top Tier Products***
  Strengthening the R&D of key equipment and core processes to enhance industry leadership; focusing on low-carbon, zero-carbon, and energy-saving and emission-reducing solutions
- ***Innovation Strategy: Technological Innovation, Comprehensive Services***
  Supporting the expansion of integrated service business through technological innovation and business model innovation
- ***Digital Strategy: Smart Interconnection, Value Rejuvenation***
  Establishing a unified network for both offshore and onshore, connecting end-to-end, and utilizing digitalization and intelligence to create comprehensive integrated service capabilities for clean energy
- ***Organizational Strategy: Organizational Restructuring, Operational Excellence***
  Supporting the implementation of business strategies through product lines, engineering consortiums, and digital organizational restructuring, linking people, organizations, and mechanisms.

Business Model Expansion: Key Equipment + Core Processes + Comprehensive Services

Intelligent Interconnection

Upstream: Resource — Storage Transportation Refuelling — Downstream: Application

Supported by upstream resources, the integrated service business drives the comprehensive upgrading of the entire industry chain

Expanding from "Production, Storage, Transportation, Refuelling and Application" to upstream gas sources and downstream application scenarios

Optimisation of Business Portfolio: Expanding from the first growth phase to the second and third growth phases

3 Core Businesses
- Energy / Marine Gas (Equipment + EPC)
- Chemical and Environmental
- Liquid Food

2 Growing Businesses
- New Energy
- Hydrogen

N New Businesses
- Smart Interconnection
- Multiple Energy Complementarity
- Biomass Energy (Green Methanol)

1st growth phase: Continuous optimisation and solid development

2nd growth phase: Layout enhancement and vigorous expansion

3rd growth phase: Innovation incubation and prudent investment

Mission: Make Energy Cleaner, the Environment More Sustainable, and Our Lives Better

CIMC ENRIC

Continuous R&D and Technological Innovation

R&D Innovation

R&D Investment

The R&D investment amounted to approximately RMB690 million in 2023, up 23.7% YoY;
Received 5 national and provincial-level scientific and technological progress awards in 2023

Hi-Tech

As of 2023, 17 member companies engaged in high-tech industries;
Led or participated in the revision of 39 national standards, 68 local, industry, and organizational standards.
Among the national standards, 37 related to clean energy, including 7 on hydrogen energy. Among the local, industry, and organizational standards, 59 related to clean energy, including 22 on hydrogen energy.

Global Patent Distribution

China, the United States, Germany, Japan, Pakistan, Australia, South Africa, Colombia, Canada, Indonesia, the United Kingdom, Peru, Thailand, and Turkey.

High-quality development

6 subsidiaries were selected for the National specialized, refinement, differential and innovation (SRDI)"little giants" Enterprises

International Patent

26 PCT international patent filings
44 global patent applications
25 granted patents

Domestic Patent

1,400+ domestic granted patents
Over 200 invention patents
4 China Patent Excellence Awards

Standard Development

Led or participated in the revision and formulation of
39 national standards
68 industry standards in areas such as pressure vessels and hydrogen energy

MSCI ESG and Wind ESG Ratings upgraded to AA

Sustainable Development Strategy

Technological innovation, smart interconnection, quality-driven growth, and the establishment of comprehensive integrated services for clean energy

Environment

CO_2 emissions intensity

9%

Achieved Board's goals

- Green products driving energy transition
- Active implementation of green production and operations

Technological innovation

Overall transformation towards "clean energy as an increment"

Green development leading enterprises

3

Transitioning self-consumption to low-carbon energy

The installed capacity of self-use photovoltaics recorded an increase in 2023, reaching

12.6 MW

Social

Safety culture construction

16

ISO 45001

2022: 13

100%

certification rate for specialized equipment and operators

R&D strength & innovative development

19

R&D centers in China and overseas

114

new invention patent applications

Emphasis on product quality

96%

Customer satisfaction

14

ISO 9001

Empowering industrial development

As one of the main drafting participants, GB/T 33145-2023 "Large Volume Seamless Steel Gas Cylinders", QB/T 5823-2023 "Workshop Beer Machinery Fermentation Tank"...

Governance

Board independence

88.9%

Proportion of Non-executive Directors (including INED)

Diversity goals

20%

Proportion of women on the Board of Directors by 2028 or before

0

Corruption cases
Significant corruption complaints

Aligning with international best practices, enhancing ESG-related policies and information disclosure

Improving the "Whistle-blowing Policy"

Publishing the "Integrity and Compliance Code of Conduct"

...

Enhanced Board's governance on climate change issues

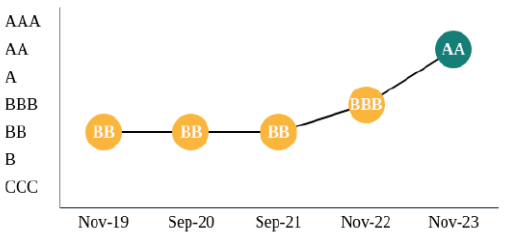
Substantial progress achieved in the implementation of TCFD project

ESG Rating

MSCI ESG rating has been upgraded to

AA

ESG Rating history



ESG Rating history shows five most recent rating actions

Wind rating has improved to AA compared with last year, ranking among the top

10% in the industry

25.7 Medium Risk

MORNINGSTAR | SUSTAINALYTICS

HSI ESG Index - Inclusion of constituent stocks in the Hang Seng Shanghai-Shenzhen-Hong Kong Stock Connect Hydrogen Themed Index

CIMC ENRIC

Core Competitive Edges

Substantial market potential

Solid industry leader position

Full industry chain coverage, high barriers to entry

Strong shareholder support
High standard corporate governance

Intelligent manufacturing technology

China focused, global layout

Strong brand recognition

Core Business | Clean Energy

Using Digital Intelligence to Create End-to-end Integrated Clean Energy Services

"Gas Source End" Production + Storage and Transportation + Application Scenarios "End"

Onshore Industrial Chain

- LNG Liquefaction Plant
- Wellhead Gas Recovery

- Methanol-to-H2 Conversion

- Water Electrolysis for H2 Production

- Coke Oven Gas to LNG/H2

- Cryogenic, Medium Pressure, High Pressure, Storage and Transportation Equipment

Offshore Industrial Chain

- LNG Receiving Terminal
- Overseas Gas Sources

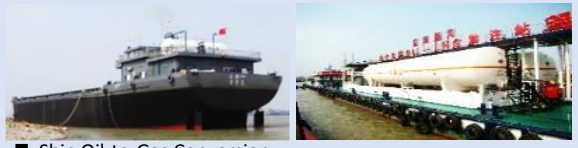
- LNG Tank Container Multimodal Transport

- LPG Carriers, Tankers, Ammonia Carriers, etc.

Automotive

- CNG Stations (Transportation)
- Gasification Stations
- Ports/Docks, etc.

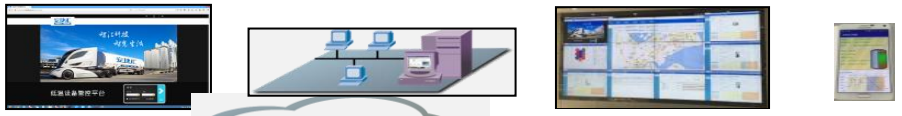
Marine



- Ship Oil-to-Gas Conversion, Marine Methanol/Ammonia
- Offshore Refueling Stations

Integrated Energy

- Industrial Energy Saving
- Mobile Energy
- Regional Energy Applications



GPRS Cloud Services

Smart Interconnection Platform

Establishing a unified network for both offshore and onshore, connecting end-to-end, interconnecting businesses and equipment

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Key Equipment: Prioritising Excellence in Top Tier Products

Upstream (Production)

Midstream (Storage & Transportation)

Downstream (Refuelling & Application)

Offshore Clean Energy

Offshore oil & gas treatment module

Small and medium-sized liquefied gas carriers for LNG, LEG, liquid ammonia, and clean energy-powered LNG vessels

LNG bunkering vessel

LNG A, B, and C-type liquid cargo tanks And fuel tanks

Onshore Clean Energy

Wellhead gas recovery package

LNG cryogenic storage tank

LNG tank container

Industrial gas cryogenic storage tank

Industrial gas tank container

on-vehicle LNG cylinder

Low-carbon energy station product (SL1500)

Liquefaction plant for natural gas, coal-bed methane and coke oven gas

LNG tank Trailer

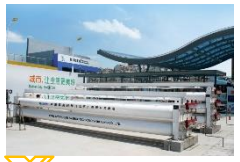
Industrial gas tank trailer

LPG trailer

Spherical tank

Hydrogen

Methanol reforming hydrogen production equipment



Stationary hydrogen tank container

Hydrogen spherical tank

Liquid hydrogen tank container

Liquid hydrogen tank trailer

Hydrogen tube bundle trailer (20MPa, 30MPa)

Liquid ammonia trailer

45MPa diaphragm compressor

90Mpa liquid-driven compressor

Skid-mounted hydrogen refuelling station

Type III on-vehicle hydrogen cylinders and supply systems

Designated as core champion products in clean energy

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Core Processes: For Clean Energy (Natural Gas, H2, Ammonia, Methanol) Whole Industry Chain

Production

- MRC mixed refrigeration process
- Nitrogen expansion process
- Biomass gasification process
- Methanol/ammonia synthesis process
- Advanced simulation design software

Storage

- 29 years of experience in large-scale cryogenic tank independent project, leading in global and Chinese market performance
- LNG tank manufacturing processes: sealing, refrigeration, precision welding

Built on manufacturing and application scenarios, master the complete user system for clean energy production, storage, and application, including process design, equipment integration, installation, and commissioning.

Transportation

- Manufacturing, materials, and testing processes for onshore and offshore transportation equipment for energy sources such as LNG, H2, liquid nitrogen, etc.

Refuelling

- Natural Gas: involving in LNG unloading, storage, vaporisation, and natural gas treatment encompass a variety of equipment, technologies, and safety measures.
- H2, Methanol and Other Clean Energy Sources: supporting systems for water and land use, such as H2 unloading systems, booster systems, H2 storage systems, H2 refuelling systems, nitrogen systems, venting systems, and technical defense systems.

Application

- Industrial application solutions
- Commercial building and other commercial solutions
- Distributed application solutions








Comprehensive Service——COG to LNG/H2/Ammonia/Methanol Co-Production

Confirmed production capacity: H2 - 50,000 tons, LNG - 400,000 tons
Targeted production capacity by 2027: H2 - 200,000 tons, LNG - 1,000,000 tons

3 replications of H2 production projects

Commencing in 2024, the projects will be progressively put into production, providing high-purity H2 and LNG

Establishment of a comprehensive "end-to-end" business cycle encompassing H2, LNG and other clean energy

Angang Steel Project

- Location: Yingkou, Liaoning
- Annual production capability: 15,000 tons of H2, 100,000 tons of LNG
- Already put into production in 2024

Shougang Shuigang Project

- Location: Liupanshui, Guizhou
- Annual production capability: 15,000 tons of H2, 160,000 tons of LNG
- Planned start of production: 3Q2025

Linggang Steel Project

- Location: Chaoyang, Liaoning
- Annual production capability: 20,000 tons of H2, 147,000 tons of LNG
- Planned start of production: 1Q2025

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End-to-End Integrated Services for Coke Oven Gas To Hydrogen Production

Angang Steel project: converting industrial waste gas into hydrogen, expanding energy efficiency and emission reduction applications and creating end-to-end comprehensive service demonstrations

Internal Application of Angang Steel

Transportation: hydrogen fuel cell heavy truck, LNG heavy-duty trucks

Hydrogen metallurgy

① Langfang integrated LNG and hydrogen filling equipment 4 sets

② CIMC Sanctum low-temperature storage tank 10,000 m^3

③ CIMC Shenleng Energy liquefaction cryogenic equipment 1set

④ Nantong Transport Energy refrigerant storage equipment 4 sets

⑤ CIMC Tianjin Lanshui DCS control system 1 set

Comprehensive applications in adjacent districts

LNG: LNG heavy-duty trucks, industrial boilers, and residential gas utilization

Hydrogen: Glass products, biopharmaceuticals, pesticides, hydrogen refuelling stations, etc.

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Demonstration: Angang Steel Co-Production Project

Providing "end-to-end" ecological solution for high value utilisation of coke oven gas (COG)
Injecting new quality productivity into traditional industries, assisting steel industry in energy saving and carbon reduction

Resource End

EPC Capability for COG to H_2 co-production LNG

Langfang Integration
LNG and H_2 refuelling equipment
4 sets

CIMC Shenleng Energy
Liquefaction cryogenic equipment
1 set

CIMC Sanctum
Cryogenic storage tank
10,000 m3

Nantong Transport Energy
Cryogenic storage equipment
4 sets

CIMC Lanshui
DCS control system
1 set

Integrate the core team of Beijing Zhongliansheng

- Engineering design and technical capabilities, with project experience for comprehensive utilisation of COG (including the production of H2, LNG, methanol, ammonia, etc.);
- Reinforcing the upstream production engineering capability

Application End

Application of Angang Steel

Transportation: H_2 fuel cell heavy truck, LNG heavy-duty trucks

H_2 metallurgy

Other applications

LNG: LNG heavy-duty trucks, industrial boilers, and residential gas utilisation

H_2:
Glass products, biopharmaceuticals, semiconductor, pesticides, H_2 refuelling stations, etc.

Digital Upgrade

- Developed independently by CIMC Anjiehui;
  First in China to combine digital intelligence technology with the entire energy production, storage, transportation, sales, and application scenarios.

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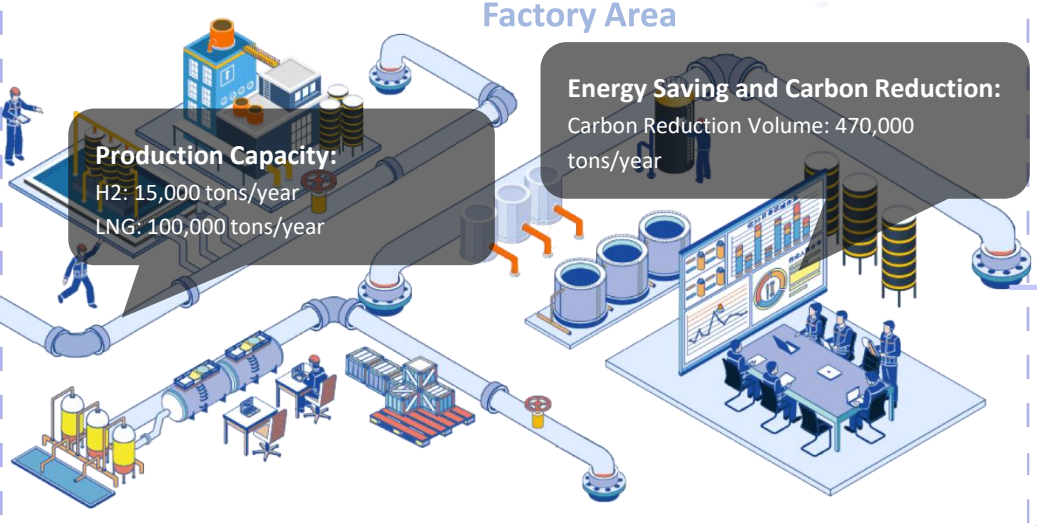
Demonstration: Angang Steel Co-Production Project

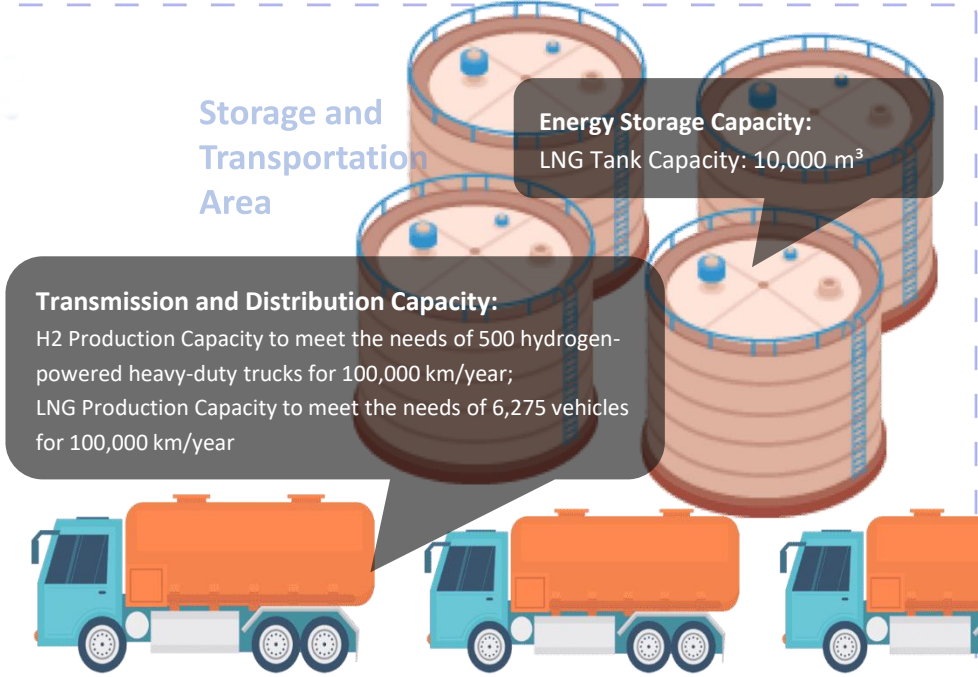
Factory Area



Production Capacity:
H2: 15,000 tons/year
LNG: 100,000 tons/year

Energy Saving and Carbon Reduction:
Carbon Reduction Volume: 470,000 tons/year

Storage and Transportation Area



Energy Storage Capacity:
LNG Tank Capacity: 10,000 m³

Transmission and Distribution Capacity:
H2 Production Capacity to meet the needs of 500 hydrogen-powered heavy-duty trucks for 100,000 km/year;
LNG Production Capacity to meet the needs of 6,275 vehicles for 100,000 km/year

PLC data, DCS data

Vehicle-mounted sensors, tank data

Safe Operation

Cost reduction & efficiency improvement

Intelligent Interconnected Platform

Innovative Business

Enhanced User Experience

Energy Consumption Area

End Customers:
Customer A – H2 Application in the Glass Industry: 470 tons per year
Carbon Emission Reduction: 2,500 tons per year
Customer B – H2 Smelting: 1,173 tons per year
Carbon Emission Reduction: 18,000 tons per year

Integrated Energy Services:
Service Industries: H2 Transportation, H2 Smelting, Glass, and 3 other industries

Refuelling Area

Hydrogen-powered Heavy-duty Trucks:
Customer A – H2 Consumption by Hydrogen-powered Heavy-duty Trucks: 151 tons/year
Carbon Emission Reduction by Hydrogen-powered Heavy-duty Trucks: 1,512 tons/year

Energy consumption data

Gas station data

Comprehensive Service: Offshore Vessel Oil-to-Gas Conversion

Jining Energy's "Gasification of Canal" Project (Reported by CCTV's Morning News on August 26, 2024)

- Collaborating with Jining Energy to establish a clean energy shipyard, power pack systems, gas source supply, and comprehensive service areas along the Grand Canal, jointly creating an end-to-end integrated cooperation model;
- Providing LNG-powered packages and support services to facilitate the implementation of the "Jining-Suzhou Green Crossing of the Yangtze River" project.
- Constructing LNG bunkering vessels and refuelling systems to meet the LNG refuelling needs of clean vessels on the Grand Canal
- Offering a one-stop solution of "equipment + technology + service" to support the green upgrade of inland waterways

LNG Tank Swap refuelling

Offshore/Onshore Refuelling Stations

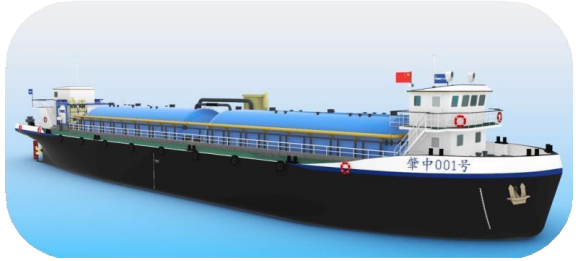
LNG Bunkering Vessels

Clean Energy Vessel Supporting Infrastructure

LNG/Methanol Fuel Supply System

IoT System

Safety and security system



Clean Energy Vessel Building/Conversion

LNG-powered package

Vessel Conversion

LNG-powered Vessel Construction

Gasification Pearl River Project

- Guangdong Province invested RMB550 million in subsidies for the oil-to-gas conversion of over 200 vessels
- Cooperation with leading engine manufacturer Weichai
- Awarded over 100 conversion orders, securing over 70% market share

LNG-powered vessel construction; Pilot project for LNG tank swap solution

- Constructing four 12,500-ton clean energy river-sea through dry bulk carriers for CSC Bulk Shipping for the "Gasification of Yangtze River"
- Initiating LNG fuel tank swap refuelling solution in the Yangtze River to slove refuelling problems

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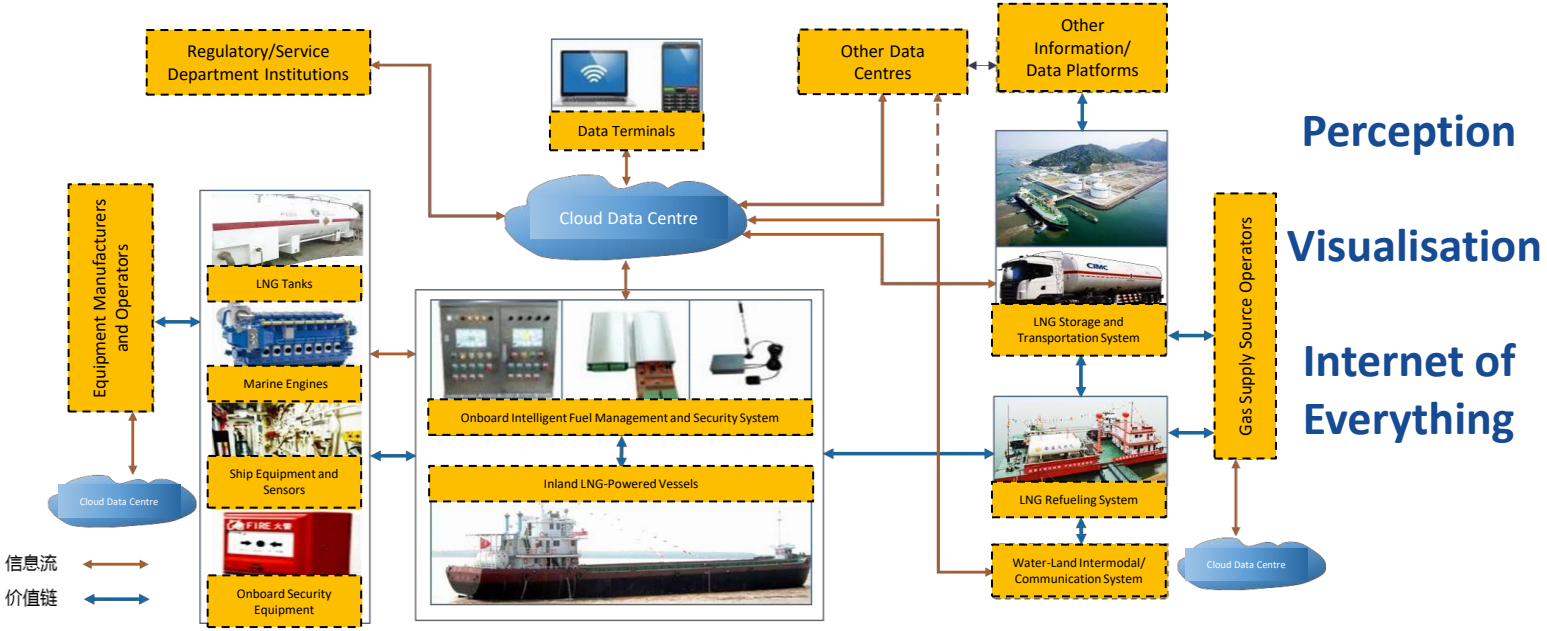
Demonstration - Ship Internet: Comprehensive Value-Added Services

To address the real-time monitoring of LNG-powered vessels and facilitate communication between the ship and shore, the company in the process of establishing an Internet information services network centered around LNG-powered vessels, linked through an intelligent fuel management and security system. This initiative aims to provide comprehensive value-added services for customers transitioning from oil to gas.



Perception

Visualisation

Internet of Everything

- The independently developed high-end core controller is based on an embedded electric control system, featuring a variety of communication interfaces, including RS232, RS485, CAN, and TCP/IP. This allows for easy integration of additional data acquisition modules and embedding within a big data collection system.
- Dual-mode positioning with BeiDou Navigation Satellite and GPS, along with communication capabilities that include maritime satellite data, 2G, 4G, 5G, and BeiDou regional short message communication, ensures seamless connectivity.
- An IoT-powered multi-party operational management platform is being developed to integrate ship operators, equipment operators, energy providers, and relevant government departments.

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Demonstration - Green Methanol Industry Chain Layout

Starting January 1, 2024, **the shipping industry will officially be included in the EU Emissions Trading System (EU ETS).**

Comparison of Four Alternative Maritime Fuels at 100 MJ

Fuel	LNG	Green Methanol	Green ammonia	Biodiesel
Cost (yuan)	8.7	19.8	31.3	17.2
Carbon emission (Kg)	4.95	0	0	0
Technological Maturity	★★★★☆	★★★☆	★	★★★★★

According to current market prices, LNG has the lowest cost and a relatively mature technological support system. In comparison, green methanol and green ammonia are less cost-effective. Under the current carbon tax regime associated with quota payments, LNG remains the most cost-effective choice.

Given the current trends in carbon management, alternative fuels for green shipping will be a necessity. ***Considering the calorific value, cost, and maturity of green methanol, it remains the best option for future decarbonisation.***

Currently, there is a mismatch between supply and demand for green marine fuels globally:

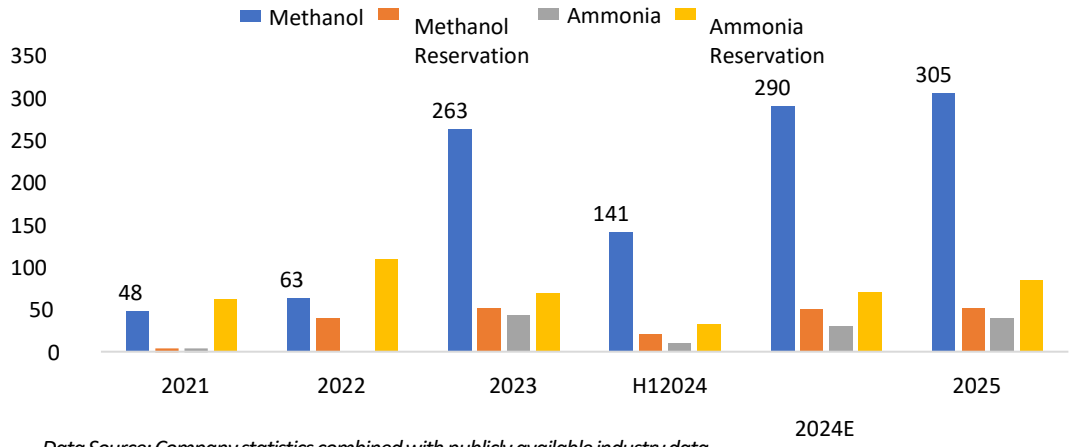
- From the demand perspective, by 2025, the projected delivery quantities of green methanol and green ammonia-fueled vessels are 356 and 125, respectively. The annual demand for a single methanol-fueled vessel is estimated at 50,000 tons, while that for an ammonia-fueled vessel is 10,000 tons. ***If the proportion of green fuel usage is estimated at 20%, the total demand for methanol and ammonia by 2025 will reach 3.56 million tons and 250,000 tons, respectively.***
- From the supply side, due to limitations related to green certification and production timelines, the actual implementation of announced projects remains uncertain. Based on a 2-3 year timeline for planning to production, ***the actual global supply of green methanol by 2025 is expected to be less than 2 million tons.***

Signing of Memorandum of Understanding (MOU) with Maersk

CIMC Enric has established a strategic partnership with the global container shipping and logistics giant Maersk, aiming to explore the establishment of a long-term and close cooperation relationship based on the green methanol project in the clean energy sector.

Order Data for Ammonia and Methanol-Fueled Vessels: High Order Volumes Projected for 2024-2025

Unit: Vessels



Data Source: Company statistics combined with publicly available industry data

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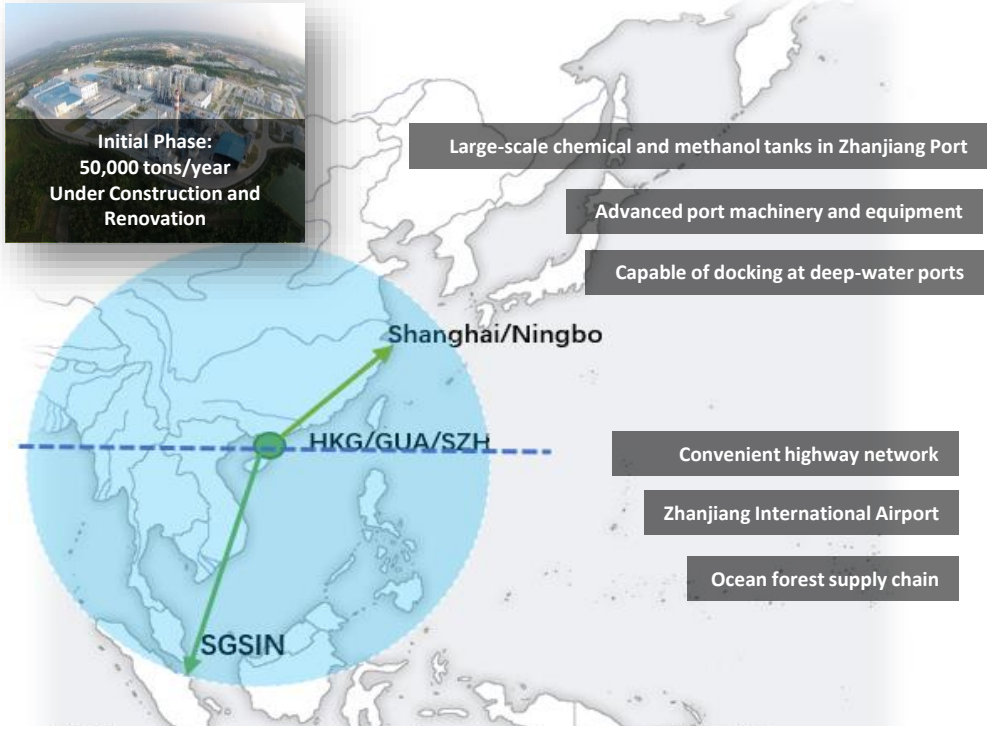
Demonstration- Pilot Project for Green Methanol Industry Chain ("5+20" Thousand Tons)

Location: Zhanjiang, Guangdong

adjacent to the deep-water port terminal and chemical tank area of Zhanjiang, which is close to the Guangdong-Hong Kong-Macao Greater Bay Area and the Beibu Gulf International Logistics Hub



The distance to the Port of Shanghai is only 1,200 nautical miles to the north, and to Singapore is just 1,400 nautical miles to the south, providing greater convenience and options for international delivery and refuelling of methanol.

The proximity of logistics facilities significantly reduces the carbon footprint associated with methanol delivery.

Our Mission Focused on Converting Waste into Energy

Raw Biomass

Renewable Energy

Gasification/Synthesis Equipment

Chemicals Manufacturing plant (EPC)

Upstream

Storage Tank

Tank Carrier

Methanol Transportation Vessels

ISO Tank Container

Midstream

Biomass Methanol

Ethanol

Sustainable Aviation Fuel (SAF)

Green Fuels

Biobased Chemicals

Downstream

Our Four Core Competencies

Key Equipment
Gasification Island, Synthesis Tower, Energy Storage Equipment

Core Processes and Engineering
Biomass Gasification, Methanol Synthesis

Integrated Operations
Biomass Fuel Base Operations, Biomass Pellets

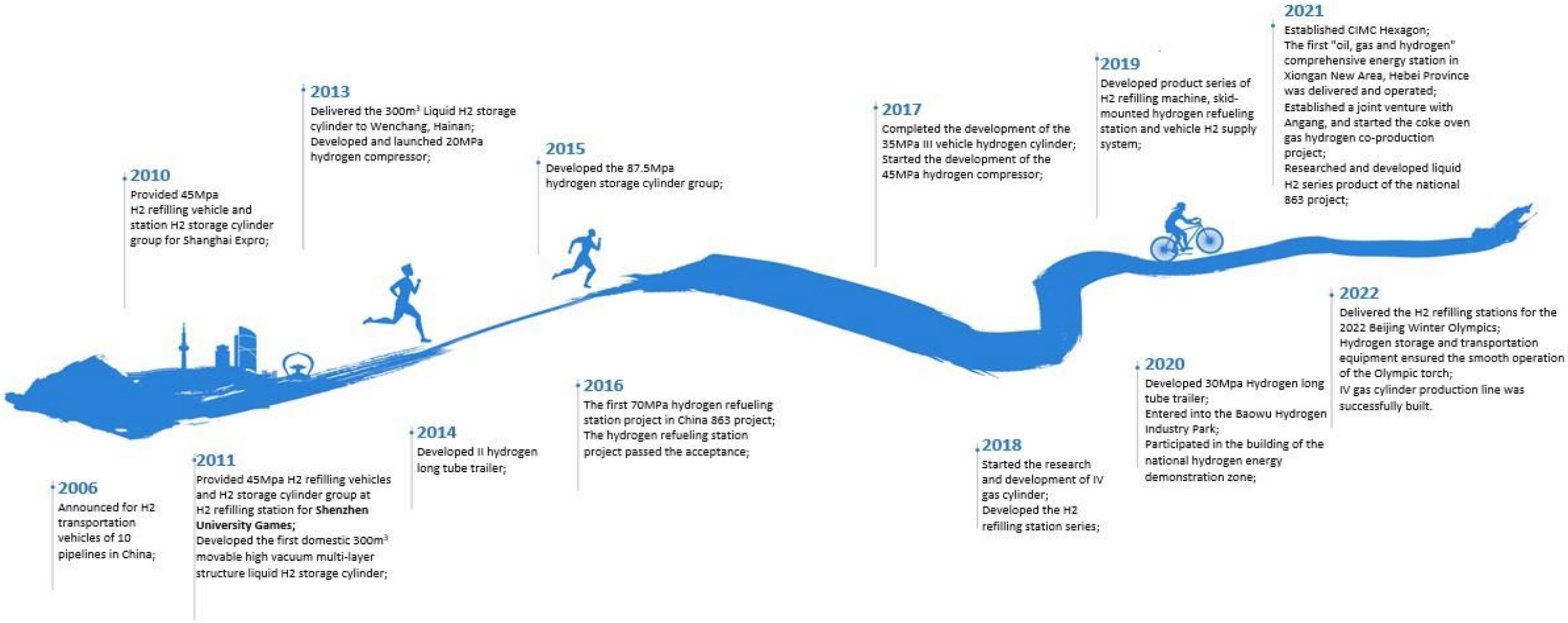
Green Certification
Mastering Green Certification Standards, Navigating the Green Certification Process

CIMC ENRIC

Clean Energy

Hydrogen Business

Hydrogen Energy Foot Print



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Integrated Business for the Whole Hydrogen Industry Chain

CIMC Hydrogen Energy Technology Co., Ltd. (CIMC Hydrogen), as a development platform dedicated to domestic and international hydrogen energy businesses under CIMC Enric, strategically focuses on the three major fields of transportation, hydrogen power, and hydrogen gas. It is committed to becoming an industry-leading technology-based enterprise in the field of hydrogen energy.

To build an integrated business of hydrogen production, storage, transportation, refuelling, application scenarios, and smart hydrogen energy

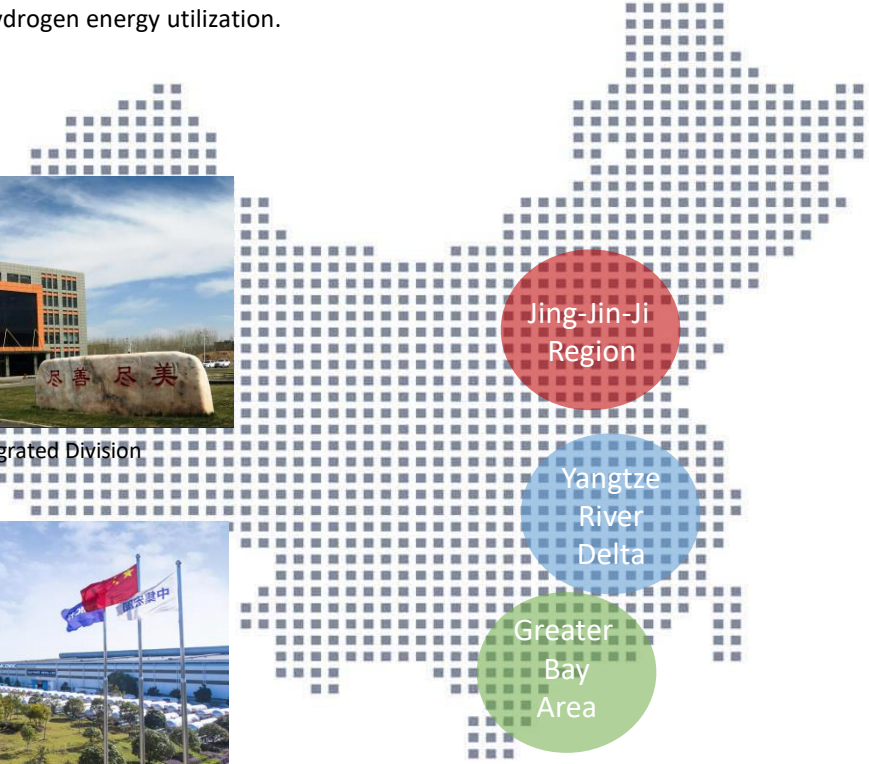
After years of development, CIMC Hydrogen Energy Technology has established 2 wholly-owned subsidiaries, 2 joint ventures, 5 major business departments, and 7 internationally leading equipment manufacturing bases located in Shijiazhuang, Langfang, Nantong, Zhangjiagang, Qidong, and Jingmen. With an international perspective and group operation model, it has formed an industrial pattern covering the entire hydrogen energy industry chain of "production, storage, transportation, refuelling, and application". Its business scope is centered on Beijing-Tianjin-Hebei, Yangtze River Delta, and Guangdong-Hong Kong-Macao Greater Bay Area, and radiates to more than 10 countries including Korea, Japan, Russia, Denmark, Switzerland, and the United States, providing customers with comprehensive solutions for green, convenient, and economical hydrogen energy utilization.

Shijiazhuang High Pressure Hydrogen Division

Langfang Integrated Division


Shijiazhuang Type IV On-vehicle Hydrogen Cylinder and Supply System Joint-ventures


Jingmen Ammonia-Hydrogen Business Division




Zhangjiagang Liquid Hydrogen Division


Qidong Offshore Hydrogen Energy Division

Nantong Type III On-vehicle Hydrogen Cylinder and Supply System Division

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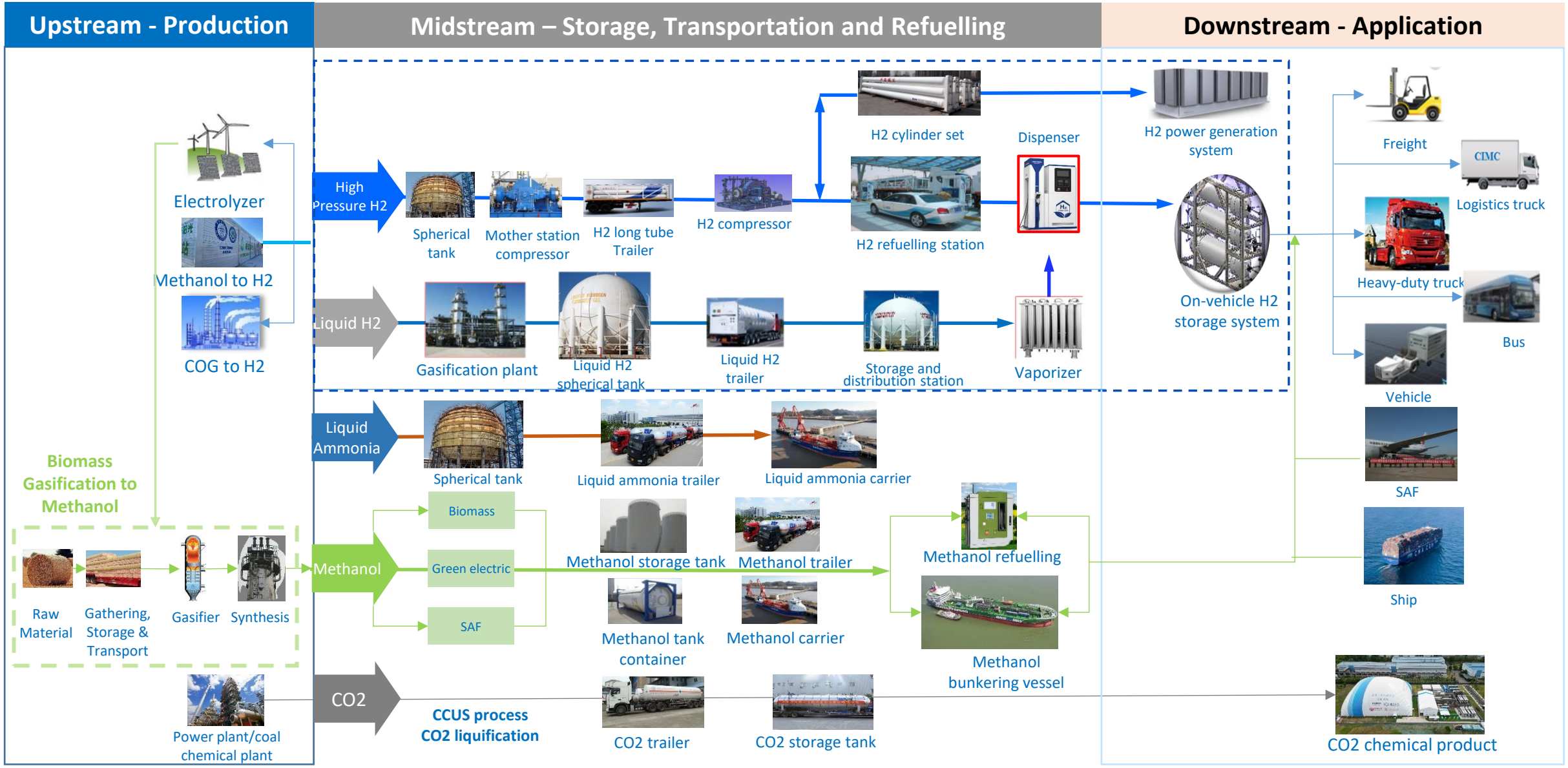
Strategic Layout for Hydrogen Energy Business



CIMC ENRIC

Comprehensive Industry Chain Products and Solutions

Products and Solutions	Product Category
High-pressure gaseous hydrogen storage equipment	20MPa\30MPa hydrogen trailers 45MPa\99MPa\103MPa stationary hydrogen storage vessels
Hydrogen liquid storage and transportation equipment	Liquid hydrogen tankers, Liquid hydrogen storage tanks, Liquid hydrogen spherical tanks, Liquid hydrogen tanks, On-board liquid hydrogen cylinders
Hydrogen refuelling station solutions	Hydrogen refuelling stations, fixed hydrogen refuelling stations, skid-mounted hydrogen refuelling stations, integrated energy stations
Type III Cylinder, Type IV Cylinder and systems	35MPa Type III cylinders and supply system 35 and 70MPa Type IV cylinders and supply system
Hydrogen energy storage system	700w fuel cell - hydrogen power modules 5kw fuel cell - hydrogen power modules
Water electrolysis for hydrogen production system	Alkaline water electrolysis for hydrogen production with 1000Nm³/h, steam reforming of the methanol, biomass electroreforming coupled to green hydrogen generation

CIMC ENRIC

Demonstration: Green Hydrogen-Ammonia-Methanol Integrative Pilot

Comprehensive H_2 industry chain layout; Industry benchmark in storage and transportation; Integrated solution gains market recognition

Construction of China's first commercial liquid H_2 spherical tank

- Overcame multiple technical challenges;
- A total volume of 400m³, capable of holding over 25 tons of liquid H_2;

Completion of the Type IV H_2 cylinder production line

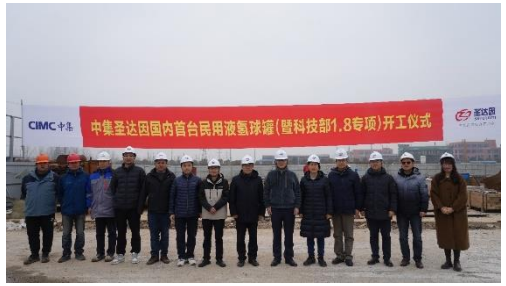
- Pilot production in 2H2024;
- Covering China and Southeast Asia markets;

Delivery of several H_2 refuelling stations

- Awarded a H_2 refuelling station in Hebei Province
- Awarded a liquid H_2 refuelling station in Anhui Province, with expected delivery in 2H2024

Awarded China's largest green hydrogen-ammonia-methanol spherical tank project

- Awarded the H_2 storage project of the largest green hydrogen-ammonia-methanol integrative project in China,
- Including 15 H_2 storage spherical tanks and 8 sets of compressor buffer tank equipment



CIMC ENRIC

Chemical & Environmental

Enhance strengths, accumulate experiences, expand to new businesses

Top 1 in Global Market Share of Chemical Tank Containers for 20 Consecutive Years

CIMC SAFEWAY（301559.SZ）Shenzhen Exchange Listed Company

Long-term leading position in the global tank container market in terms of market share

- CIMC Safe Tech is a global chemical logistics equipment manufacturer and full life cycle service provider integrated with business of tank container design and development, manufacturing and sales with the **world's largest manufacturing scale, most complete series of varieties and leading technology**
- In response to the development of different emerging industries, it has continued to **R&D new products**, such as the semiconductor industry's new liner tank containers, customised tank containers to meet the needs of electrolyte precision temperature control of new energy lithium battery industry, medical nuclear magnetic equipment products

Continuously expanding after-sale service outlets to build full life cycle service capability

- Providing professional repair, cleaning, refurbishment and modification services **for all tank containers in the market**
- Establishing after-sale service outlets in the world's major chemical industry clusters and tank container logistics hubs, such as **Netherlands, Jiangsu and Zhejiang**
- Demand for tank container cleaning and maintenance in chemical industry clusters and the growth in tank container ownership are driving the growth of the after-sales service business

Daily tank maintenance cost: ~RMB5,200/year, tank ownership: ~848,000 units

→ **Market space for tank container after-sales services: ~ RMB4.17 billion/year**

CIMC ENRIC

Liquid Food

Global Layout, excellent operation, grasp the wave of consumption upgrade

A Global Brand of Liquid Food Equipment, CLPT

Owned World-Renowned Brands in the Field of Liquid Food Equipment in Global Market

clpt CIMC Liquid Process Technology

- CLPT is a globally renowned enterprise engaged in the manufacturing and service of liquid food equipment under CIMC Enric.

BRIGGS

- Since 1732, it has been providing quality products and services to the world's leading enterprises in the distilled liquor, beer, and food industries.

McMILLAN COPPERSMITHS

- It is a subsidiary of Briggs, a well-known British manufacturer of copper distillation equipment founded in 1867.

Ziemann Holvrieka

- It is a German enterprise that is regarded as an industry pioneer in the production of stainless steel tanks and related intelligent process equipment.

DME

- It is headquartered in Canada and has been committed to providing solutions for craft beer enterprises for decades.

KÜNZEL
From Malt to Mash

- Founded in 1922 and headquartered in Germany, is a leading medium-sized machinery manufacturing company specialising in the global beverage/brewing industry.

Large brewery fermentation tank and project

Craft beer technology, equipment, system and engineering

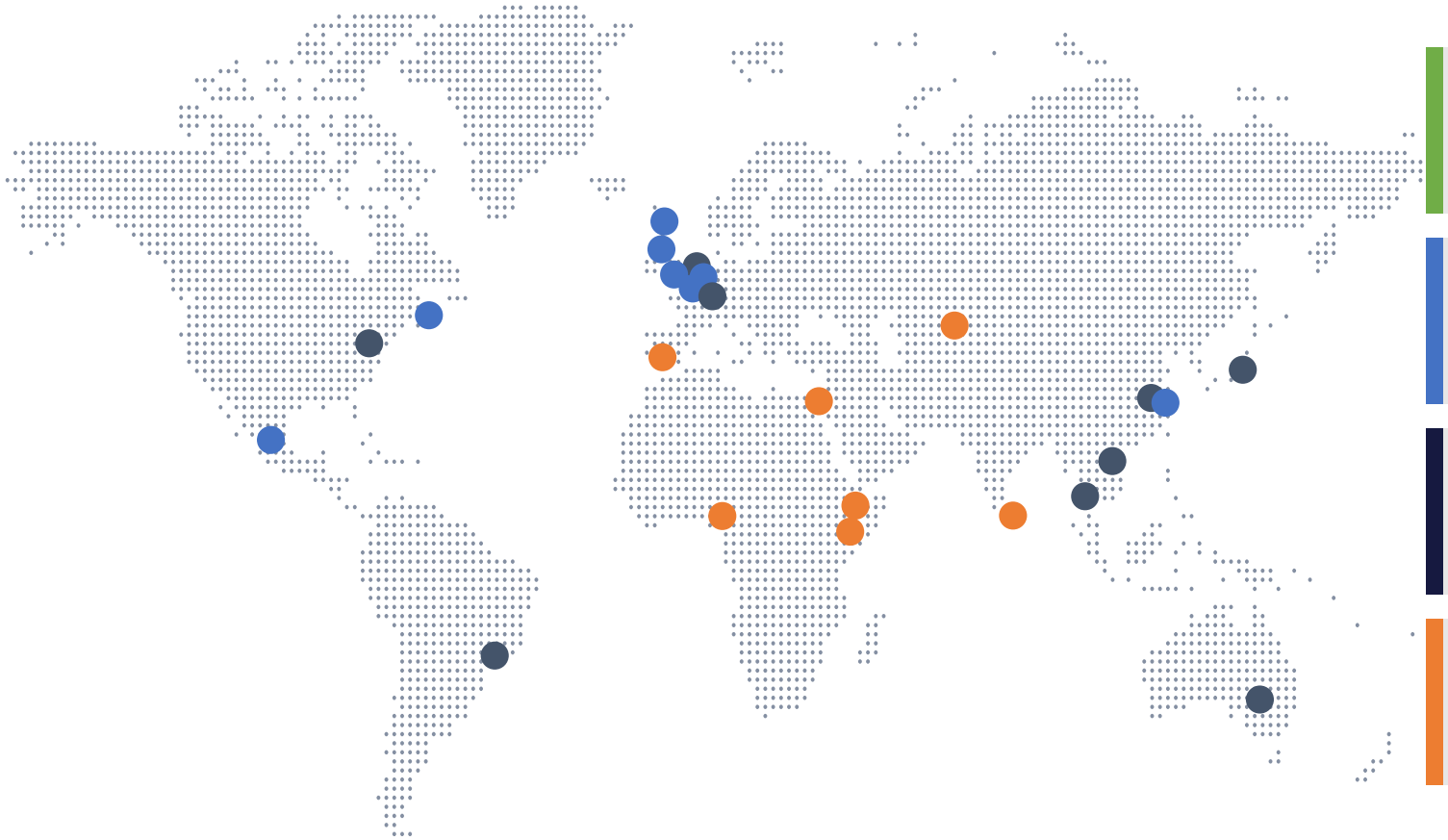
Liquid food storage tanks and engineering such as dairy products

Storage tanks for other industries such as pharmaceuticals, etc.

CLPT Global Layout

Belgium, Menen
Brazil, São Paulo
Canada, Charlottetown
China, Nantong
China, Shanghai
Ethiopia, Addis Abeba
Germany, Ludwigsburg
Germany, Buergstadt
Germany, Mainleus
Israel, Tel Aviv
Japan, Tokyo
Kenya, Nairobi
Mexico, Monterey (start 2024)
Nigeria, Lagos
Scotland, Prestonpans

Spain, Madrid
Sri Lanka, Colombo
Thailand, Bangkok
The Netherlands, Zwolle
UK, Burton on Trent
USA, Rochester
Uzbekistan, Tashkent
Vietnam, Hanoi



Thousands of equipped customers

8 production facilities

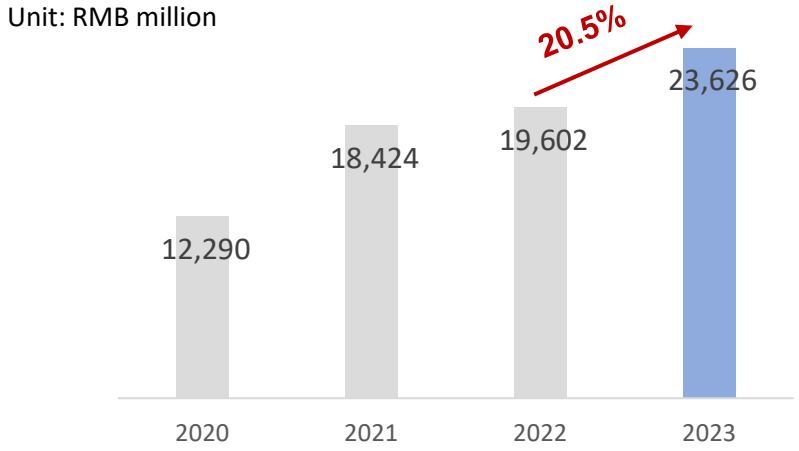
8 sales & PM offices

Global sales & service representatives

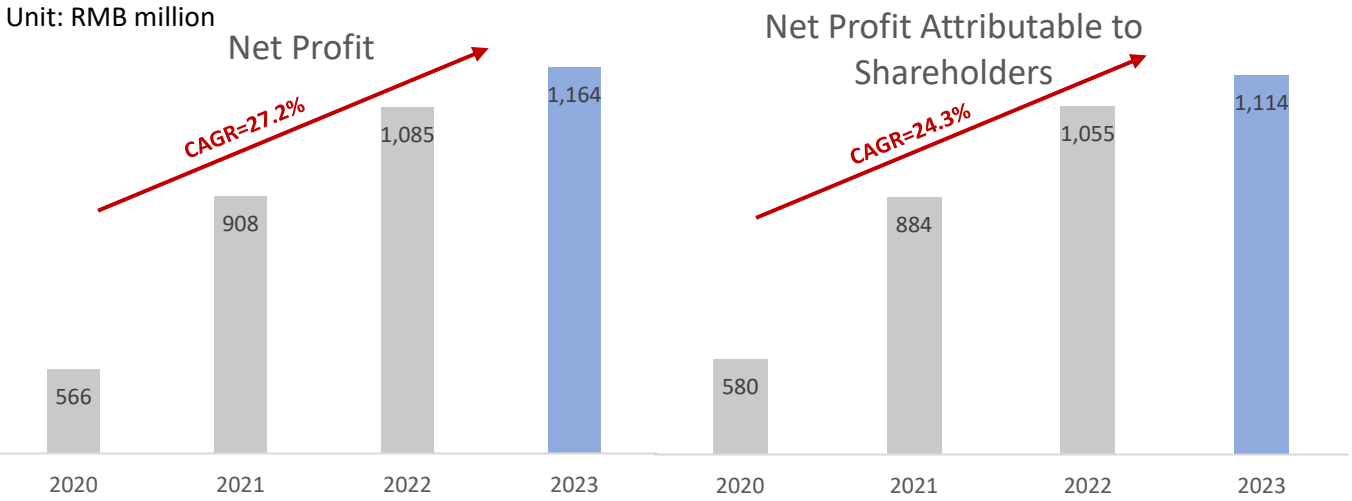
Financial Summery

Income and Net Profit Reached a Historic High in 2023, Dividend Payout Ratio Increased to 50%

Revenue increased significantly by 20.5% YoY, 2020-2023 CAGR=24.3%, Gross Profit Margin Remained Stable



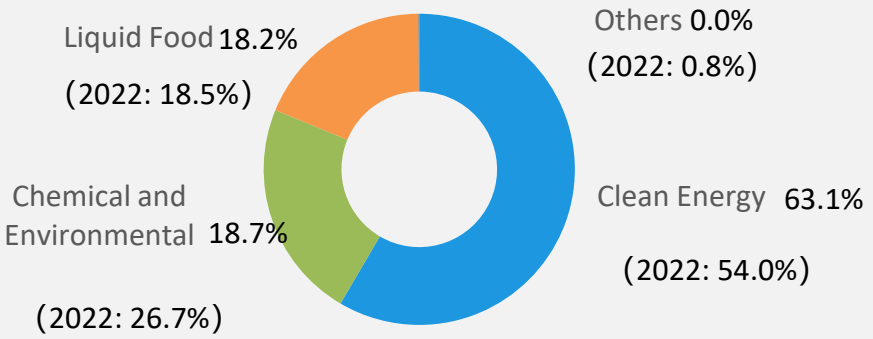
Net Profit and Net Profit Attributable to Shareholders up 7.2% and 5.6% YoY



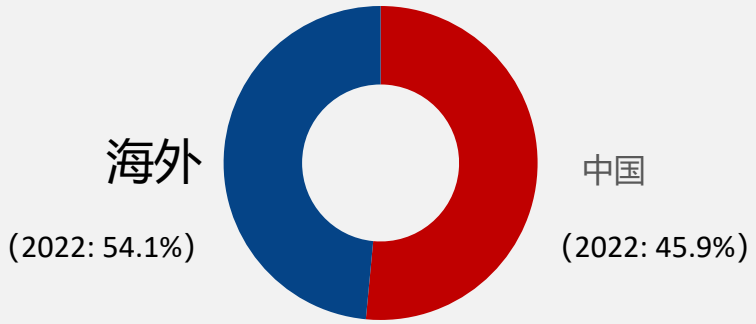
- **Dividend per share: HKD0.3 (RMB0.27); Net operating cash flow: RMB1.78 billion**

All financial data is in RMB, except for dividend per share

Revenue breakdown by segment



Revenue breakdown by location

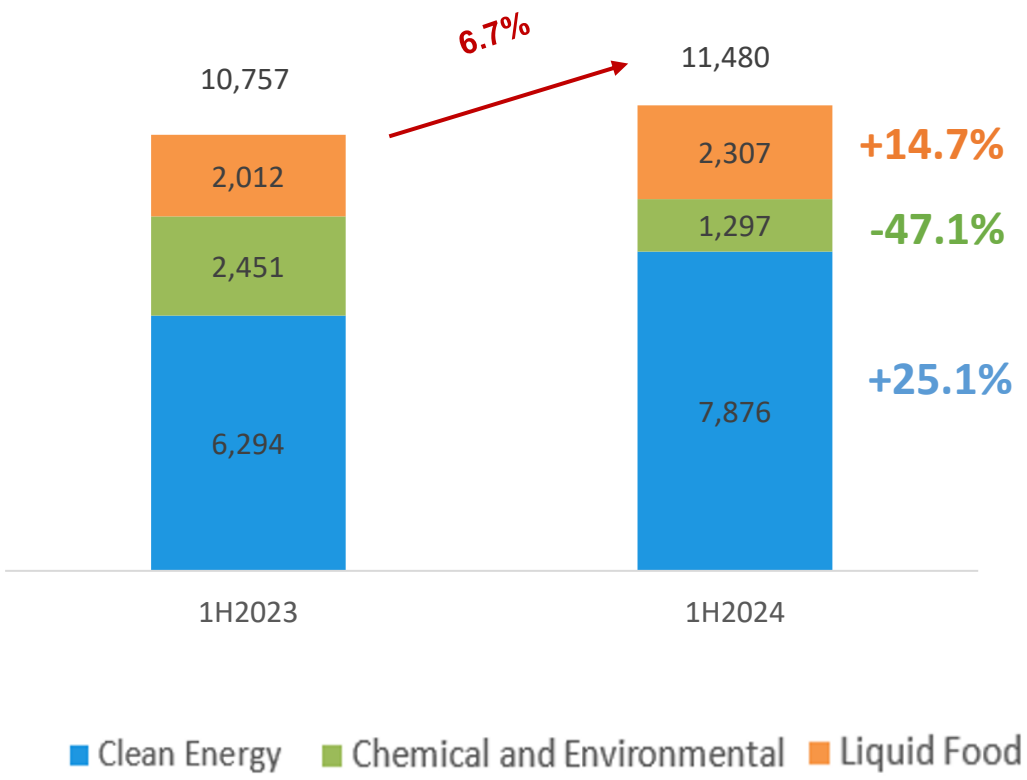


CIMC ENRIC

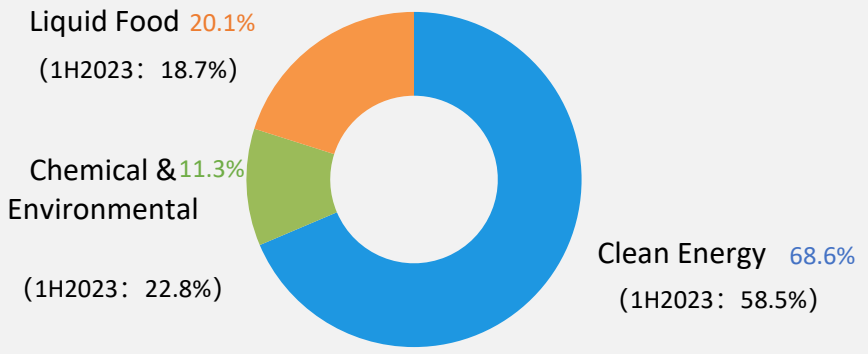
1H2024 Overall Revenue Increased YoY, with Robust Growth in Clean Energy Revenue

Clean energy revenue increased significantly by 25.1% YoY

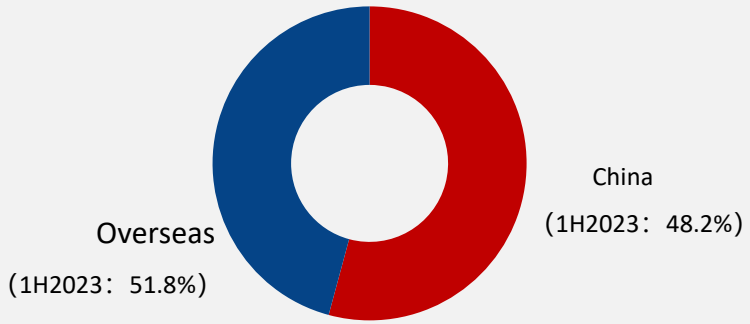
Unit: RMB million



Revenue breakdown by segment



Revenue breakdown by region



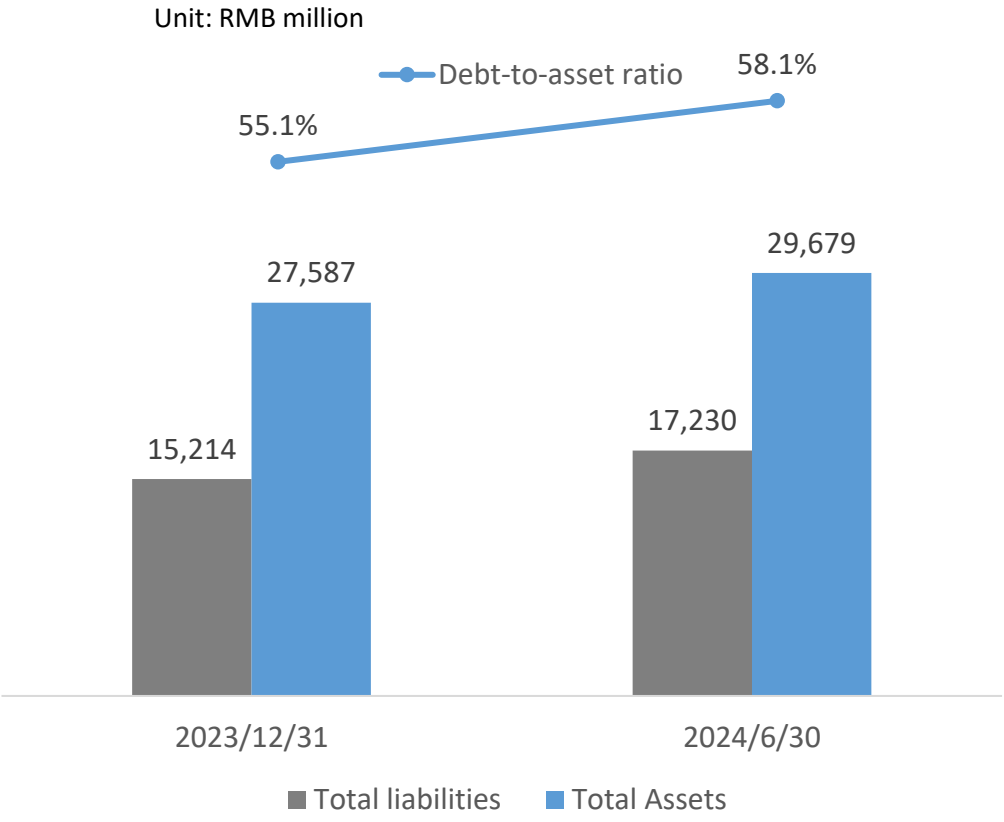
- 1H2024 hydrogen energy business revenue: **RMB450 million, up 65.2% YoY**
- Cash inflow from operating activities: **RMB620 million**

*All financial data currency is in RMB

CIMC ENRIC

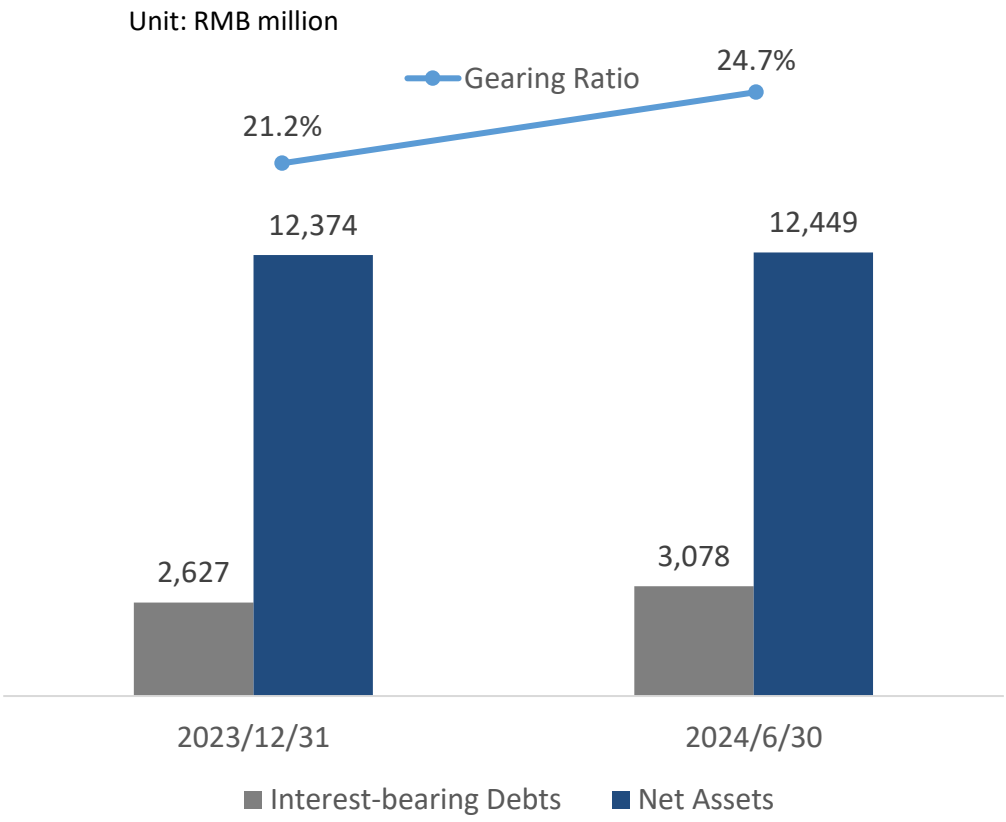
Long-term Robust Asset-liability Structure

Robust asset-liability structure



- Total liabilities of RMB17.23 billion included accounts payable, contract liabilities, interest-bearing debts, etc.
- Interest-bearing debts was RMB3.08 billion.

Gearing ratio up slightly

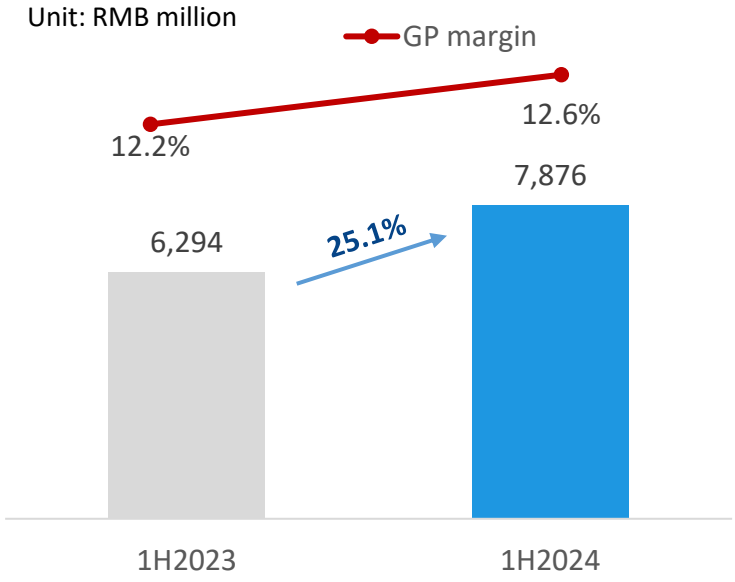


- Interest-bearing debts included zero-coupon convertible bonds of RMB1.51 billion, medium-term notes of RMB500 million and loans from financial institutions of RMB1.07 billion
- Excluding the effect of convertible bonds, the gearing ratio was 12.6%.

CIMC ENRIC

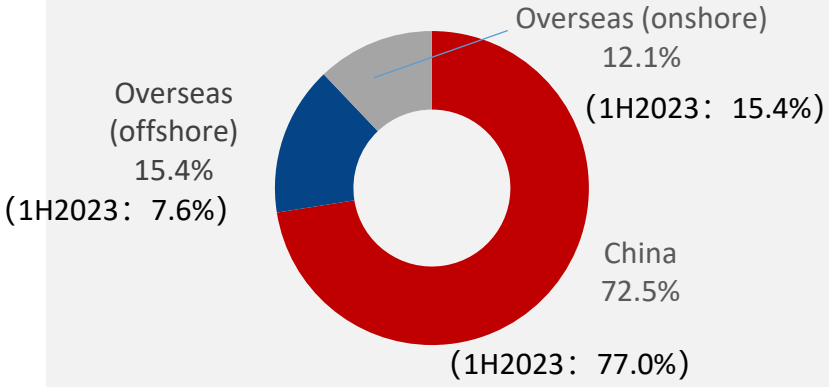
Clean Energy Segment Performance

Revenue sharply increased by 25.1%

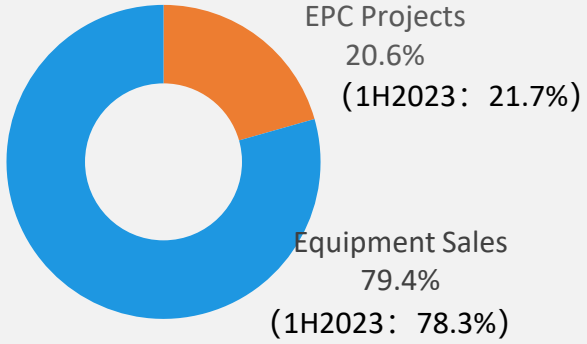


- 1H2024 hydrogen energy business revenue: **RMB450 million, up 65.2% YoY**
- 1H2024 offshore clean energy revenue: **RMB1.77 billion, up 48.9% YoY**

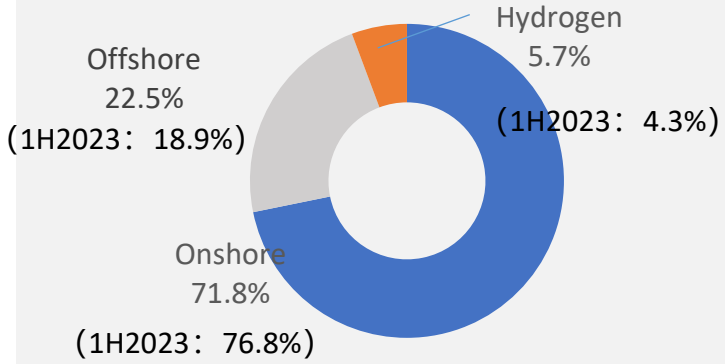
Revenue breakdown by location



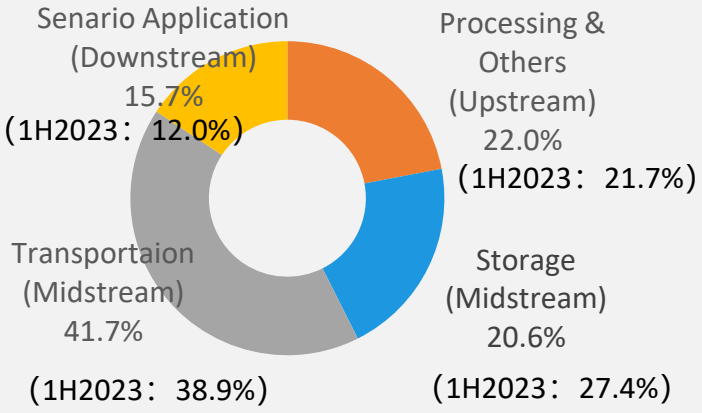
Revenue contribution from EPC



Revenue breakdown by business



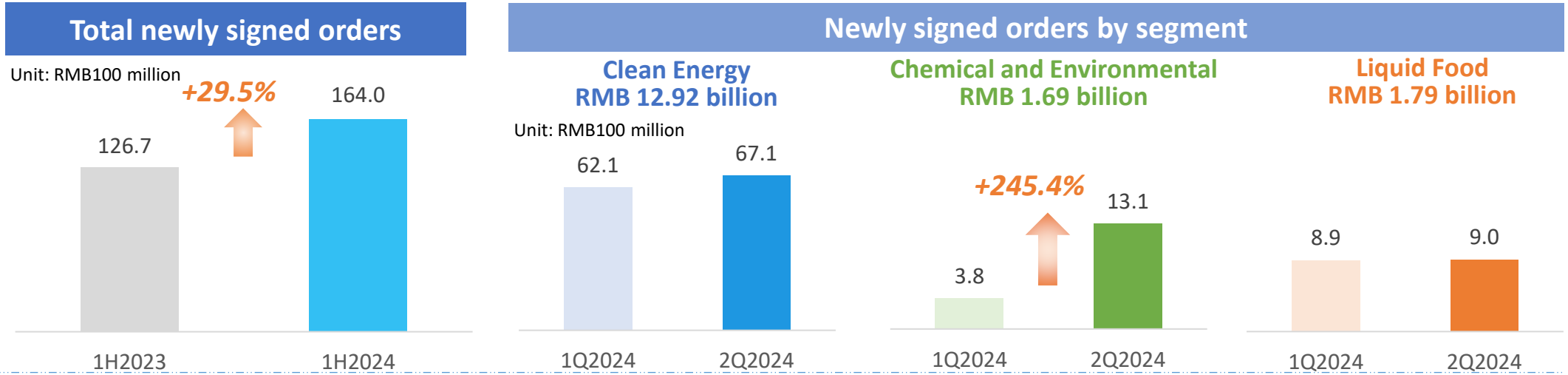
Revenue breakdown by industry chain



CIMC ENRIC

Newly Signed Orders – Clean Energy Soared

- Newly signed orders for clean energy soared 63.3% to RMB12.92 billion, with offshore clean energy up 128.0% YoY to RMB6.86 billion, and overseas onshore clean energy up 48.8% YoY to RMB1.51 billion fueled by strong overseas business expansion;
- Newly signed orders for chemical and environmental segment in 2Q2024 surged 245.4% QoQ, up 28.6% YoY;
- Liquid food segment secured several domestic whisky projects. As more large-scale beer projects were awarded in 1H2023, including a major turnkey beer project in Mexico valued at EUR180 million (RMB1.43 billion), newly signed orders in 1H2024 comparatively decreased YoY.



Clean Energy Categories	Newly signed orders in 1H 2024 (Unit: RMB 100 million)		
	Current Period	Same Period Last Year	YoY Change
Storage	24.7	20.3	21.3%
Transportation	87.6	44.3	97.7%
Scenario Application	14.5	8.7	66.6%
Processing and others	2.4	5.8	-58.4%
Total	**129.2**	**79.1**	**63.3%**

Clean Energy Categories	Newly signed orders in 1H 2024 (Unit: RMB 100 million)		
	Current Period	Same Period Last Year	YoY Change
Onshore Clean Energy	56.1	45.6	23.1%
Offshore Clean Energy	68.6	30.0	128.0%
Hydrogen Energy	4.5	3.5	29.3%
Total	**129.2**	**79.1**	**63.3%**

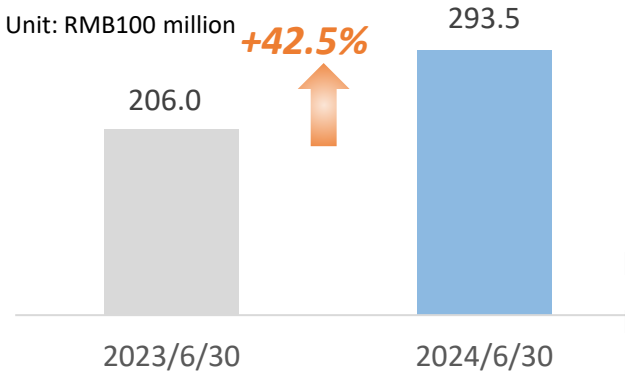
- Newly signed orders: Cumulative value of all orders signed in 1H2024
- The change in ratios is consistent with 2024 Interim Results Announcement

CIMC ENRIC

Backlog Orders Reached A New High

- Backlog orders amounted to RMB29.35 billion, significantly up 42.5% YoY
- New lighthouse production line for LNG on-vehicle cylinders commenced operation during the period, with a significant increase in production capacity and delivery efficiency

Overall backlog orders



Backlog orders by segment

- Clean Energy: RMB22.93 billion, surged significantly by 70.7%
- Offshore Clean Energy: RMB15.06 billion, up 136.9%
- QoQ improvement for chemical and environmental
- Maintained robust backlog orders for liquid food

Clean Energy Categories	Clean Energy Categories		
	Current Period	Same Period Last Year	YoY Change
Storage	46.9	40.5	15.7%
Transportation	164.0	75.0	118.5%
Scenario Application	10.1	10.8	-6.4%
Processing and others	8.3	8.0	4.0%
Total	**229.3**	**134.4**	**70.7%**

Clean Energy Categories	Clean Energy Categories		
	Current Period	Same Period Last Year	YoY Change
Onshore Clean Energy	75.4	67.1	12.4%
Offshore Clean Energy	150.6	63.6	136.9%
Hydrogen Energy	3.3	3.7	-11.0%
Total	**229.3**	**134.4**	**70.7%**

- Backlog orders: Backlog orders as of 30 June 2024
- The change in ratios is consistent with 2024 Interim Results Announcement

CIMC ENRIC

Vision and Mission

Vision

To be a respected world-leading enterprise in Clean energy, chemical and environmental, and liquid food industries.

Mission

To provide high-quality and reliable smart equipment and services to customers, generate sound returns for shareholders and staff, and create sustainable value to the society.

Industrial Outlook

Aim to build an interactive value-added industry based on "key equipment + core technology + comprehensive services",

and become a Comprehensive Service Provider of Technology-based Low-carbon Intelligent New Energy Solutions

1. The Fourteenth Five-Year Plan will further promote clean energy consumption.
2. 'Dual circulation' strategy is expected to help reducing market volatility.
3. Strategical layout in the hydrogen energy industry chain, which shall be one of the future driver.
4. Intelligent monitoring system to build up the internet of clean energy equipment and create value for clients.

Appendix: Milestone of CIMC ENRIC

2007

CIMC Group acquired "Enric Energy Equipment Holdings Ltd", a Hong Kong listed company

2008

Acquired Jingmen Hongtu and entered into the realm of LPG and other medium-pressure storage and transportation equipment

2009

Zhangjiagang Sanctum, a LNG cryogenic equipment company, Nantong CIMC Tank (currently known as CIMC Safe Tech), a chemical tank container company and Holvrieka, a beer fermentation tank brand, were introduced by CIMC Group to Enric Energy Equipment Holdings Ltd, completing the business layout of clean energy, chemical and environmental and liquid food segments, renamed as "**CIMC Enric Holdings Limited**"

2010

Provided hydrogen equipment for Shanghai World Expo

2011

Acquired Nanjing Yangzi Petrochemical Design & Engineering Co., Ltd., developing relatively complete capabilities in the realm of energy and chemical engineering

2012

Acquired Ziemann, a world-class brewing system design and EPC turnkey brand, to improve industrial beer turnkey engineering capabilities

2013

Delivered 300m³ liquid hydrogen storage tank to Wenchang, Hainan

Included in Hong Kong Hang Seng Composite Index constituent stock

2014

NCLS, a company engaged in liquid food storage tank and beer turnkey project business, was introduced by CIMC Group to CIMC Enric, accelerating development in China market

2015

Bought out Dutch BURG SERVICE B.V, initiating the chemical logistics after-sales business layout

2016

Acquired Briggs, a British renowned spirits equipment and engineering supplier, diversifying into spirits, yeasts, pharmaceutical, biofuels and other industries

2017

Acquired SOE, enhancing offshore natural gas equipment and engineering capabilities

Established Anjiehui , initiating the intelligent business

Developed 35MPa Type III on-vehicle hydrogen cylinder

2018

Contracted to build the first 70MPa hydrogen refueling station in China under the National 863 Program, and successfully passed the inspection and acceptance

Nantong CIMC Tank (currently CIMC Safe Tech) was awarded the "Manufacturing Industry Champion Demonstration Enterprise" by the Ministry of Industry and Information Technology

2019

Acquired DME, a North American craft beer engineering designer and brewing machine maker, opening a new chapter in product diversification and North American market expansion

CIMC ENRIC

Appendix: Milestone of CIMC ENRIC

2020

Completed R&D of 103MPa hydrogen storage containers and 30MPa hydrogen tube bundle vessels

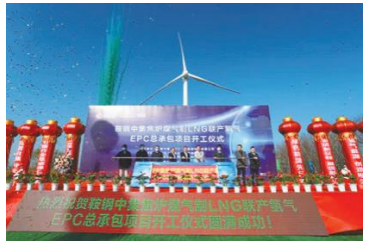
Nantong CIMC Tank Equipment Co., Ltd. (completed its share reform and was renamed as CIMC Safeway Technologies Co., Ltd., initiating its A-share IPO listing process

2021

Established the hydrogen energy business center to focus on the strategic implementation and value-added operation of hydrogen energy

Set up joint ventures with Hexagon Purus to domestically produce the world's leading Type IV on-vehicle hydrogen cylinders

Set up a joint venture with Angang Steel for the joint production of LNG and hydrogen from coke-oven gas, and entered into the hydrogen production business



Provided Beijing Winter Olympics with a full range of high-quality hydrogen equipment

Established the new energy business center to engage in upstream liquefaction, processing and operation business

Acquired shipyards and berths along the Yangtze River Route, seizing the development opportunities arising from the offshore clean energy industry chain

2022

LPG tank truck with pump successfully obtained the "Three New Assessments (三新評審)", among the first two intelligent LPG micro-pipe network integrated solution providers in China to pass the review

Delivered 78 oil-to-gas conversion vessels to help green upgrade of inland waterway shipping

Developed green methanol production business and formed strategic supply intention with global shipping giants

2023

CIMC Safe Tech was successfully listed on A-share

Completed the R&D of 45MPa diaphragm hydrogen compressor and 90MPa liquid-driven hydrogen compressor, becoming the only domestic integrated solution provider that can independently produce all core equipment for hydrogen refueling stations

- Clean Energy
  - Hydrogen Energy
- Chemical & Environmental
- Liquid Food

CIMC ENRIC

Appendix: Milestone of CLPT

1852

A. **Ziemann** established a coppersmith workshop, which marks the beginning Ziemann's legacy.

1865

Samuel **Briggs** establishes S. Briggs in Burton-on-Trent, an ironmonger and coppersmith workshop.

2007

Holvrieka was acquired by the largest tank container producer in China. Our group becomes part of **CIMC Enric Holdings**

2009

Our production facility in **Nantong**, China was established.

2012

Ziemann International GmbH joined the group.

2016

Briggs of Burton was acquired in 2016 and joined the group.

2019

Craft brewing equipment manufacturer **DME** joined the group.

2020

Scottish Copper stills manufacturer **McMillan** joined the group.

2021

clpt CIMC Liquid Process Technology

Our group entity CETP was renamed **CIMC Liquid Process Technology (CLPT)**.

2023

Raw material handling expert **Künzel Maschinenbau GmbH** joins the CLPT group

CIMC ENRIC

Continuous R&D and Technological Innovation

Completed the development of **the first phosphine and hydrogen gas mixer manifold container** in China, with leading product specifications , marking a breakthrough in domestic electronic gas storage and transportation equipment

Completed **the R&D of the SL series distributed energy stations and application**， delivered to clients, contributing to industrial energy conservation and effectively expanding the low-carbon integrated energy service business.

Massive delivery of **the largest-capacity CO2 semi-trailers in China,** intended for carbon capture, utilization, and storage (CCUS) projects, contributing to the development of a carbon circular economy.

Breakthrough and innovation of cutting-edge onshore clean energy equipment

First project of MGC carriers for offshore clean energy

Completed the design and development of **B-type cargo tanks for LNG carriers**， constructed and delivered the largest one in China, providing customers with solutions for A-type, B-type and C-type liquid cargo tanks.

Won the first project of A-type liquid cargo tank MGC, creating a full range of product series for small and medium-sized offshore liquefied gas carriers.

The **methanol fuel supply system** has been granted the Approval in Principle (AIP) certificate for methanol fuel supply systems by DNV, the Norwegian classification society.

CIMC ENRIC

Continuous R&D and Technological Innovation

R&D in hydrogen energy leading the industry

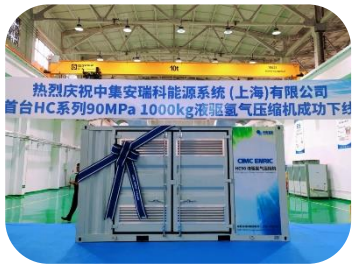
Liquid hydrogen: Completed the development of ASME standard liquid hydrogen storage tank, and successfully signed the first order; launched the first commercial liquid hydrogen tank truck in China

Storage and Transportation: Successfully launched the first 30MPa hydrogen tube bundle container and the first cryogenic anhydrous ammonia transport carrier in China and achieved mass orders for both products.

Hydrogen compressor: Successfully launched 90MPa 1000kg liquid-driven compressor and 45MPa diaphragm compressor, and achieved independent production and construction of all core equipment for hydrogen refuelling stations

Standards: Participated in the preparation of the national standard for Type IV cylinder, which was released and implemented; led in the completion of a number of group standards for hydrogen storage and transportation containers;

Hydrogen production: launched 1200Nm³/h alkaline electrolyser and skid mounting methanol-to-hydrogen equipment;



CIMC ENRIC

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Tel: 0755-2680-2312 / 0755-2680-2134

Email: ir@enric.com.hk

Address:

CIMC R&D Center, No.2 Gangwan Avenue, Shekou Industrial Zone, Shenzhen, Guangdong, The PRC

Unit 908, 9/F., Fairmont House, 8 Cotton Tree Drive, Central, Hong Kong

IR portal: https://en.enricgroup.com/ircommunication

Website: https://en.enricgroup.com/