

China Yuchai International Ltd.

[NYSE: CYD]

**16th Annual Evercore ISI
Industrial Conference**

March 2024

This presentation may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The words “believe”, “expect”, “anticipate”, “project”, “targets”, “optimistic”, “confident that”, “continue to”, “predict”, “intend”, “aim”, “will” or similar expressions are intended to identify forward-looking statements. All statements other than statements of historical fact are statements that may be deemed forward-looking statements.

These forward-looking statements including, but not limited to, statements concerning the Company’s operations, financial performance and condition are based on current expectations, beliefs and assumptions which are subject to change at any time. The Company cautions that these statements by their nature involve risks and uncertainties, and actual results may differ materially depending on a variety of important factors such as government and stock exchange regulations, competition, political, economic and social conditions around the world and in China including those discussed in the Company’s Form 20-Fs under the headings “Risk Factors”, “Results of Operations” and “Business Overview” and other reports filed with the Securities and Exchange Commission from time to time. Among others, our business operations and financial condition may be materially and adversely affected due to a deteriorating market for automotive sales, an economic slowdown in China and abroad, a potential weakening of the financial condition of our customers, or other factors that we cannot foresee. All forward-looking statements are applicable only as of the date it is made, and China Yuchai specifically disclaims any obligation to maintain or update the forward-looking information.

The financial information presented herein for the year ended December 31, 2023, is unaudited.

Truck and Bus engines applications



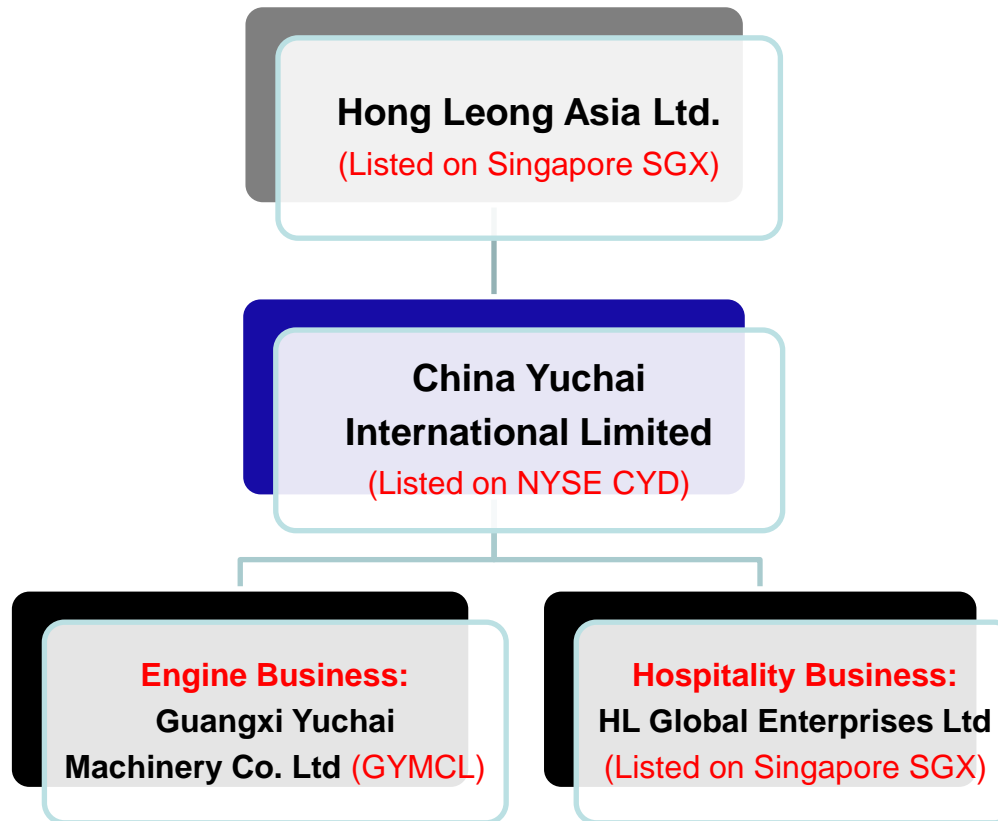
Off-road and Agriculture applications



Marine and Power Generator applications



Company Structure



- **GYMCL was founded in 1951**
- **One of the top commercial vehicle engine suppliers in annual unit sales as ranked by the China Association of Automobile Manufacturers (“CAAM”)**
- **Leading manufacturer of a wide array of light-, medium- and heavy-duty; and high horsepower engines including diesel, gas and hybrid engines for multiple markets**
- **Growing product portfolio for the EV and Fuel Cell markets**
- **Operates the largest single facility to produce commercial automotive and industrial engines in China**
- **Engine production facilities are based in both GYMCL and its subsidiaries, total capacity of 600,000 units per annum**
- **World-class R&D program with large patent portfolio**
- **Over 3,300 domestic services stations throughout China**

- **Y&C Engine Co., Ltd. (“Y&C”)** is a 45%-owned JV with Jirui United Heavy Industry Co., Ltd., specializing in heavy-duty vehicle engines.
- **MTU Yuchai Power Company Limited (“MTU Yuchai”)** is a 50-50 JV of Yuchai and MTU Friedrichshafen GmbH (“MTU”), a subsidiary of Rolls-Royce Power Systems, and sold 500+ MTU series 4000 diesel engines in China in 2023.
- **Guangxi Purem Yuchai Automotive Technology Co., Ltd. (“Purem Yuchai”;** formerly known as Eberspaecher Yuchai Exhaust Technology Co., Ltd.) is a 49%-owned JV with Purem International GmbH to produce and market new exhaust emission control systems for trucks, buses, farming equipment and industrial machinery. In 2023, Purem Yuchai produced approximately 34,500 after-treatment units.
- **Yuchai Xin-Lan New Energy Power Technology Co., Ltd. (“Yuchai Xin-Lan”)** is an 87.7%-owned subsidiary and conducts R&D to create new production capacity for new energy technologies, including fuel cell systems, range extenders, hybrid power and electric drive systems. In 2023 Yuchai Xin-Lan produced new energy powered systems for truck, bus and off-road machinery applications.
- **Yuchai CYNLand (Jiangsu) Hyentech Co. Ltd.** A new subsidiary under “Yuchai Xin-Lan” to design and manufacture fuel cell systems and hydrogen generating equipment.
- **Yuchai Xingshunda New Energy Technology Co., Ltd. (“Yuchai Xingshunda”)** is a 65%-owned JV with Beijing Xing Shun Da Bus Co., Ltd. for development, manufacture and sale of fuel cell powertrain systems and fuel cell power components for the Beijing, Tianjin and Hebei markets.

- **Suzhou Yuxing Automobile Technology Co., Ltd.** is a 30%-owned JV with certain engine service firms to provide vehicle monitoring, vehicle and engine maintenance and repairs solutions.
- **Guangxi Xing Yun Cloud Technology Co. Ltd. (“Xing Yun Cloud”)** a new subsidiary to develop proprietary operating systems for data analytics for smart and connected solutions for both on- and off-road vehicles and machineries. Xing Yun Cloud also manages IT operations maintenance, and develop new digital projects, and intelligent networks and processes for GYMCL group of companies.
- **Yuchai Power System (Thailand) Co., Ltd.** A new subsidiary incorporated in 2023 to assemble, test and sell power train systems. Also to carry out after-sales services for engine power products (such as maintenance and technical services).

Vehicle Engine OEMs

卡车



Truck



客车



Bus



轻型车

Light truck



Off Road / Marine Engine OEMs

船舶发电



Vessel Electricity



工程机械



Construction Machinery



农业机械



Agricultural Machinery



Market Statistics

China's economy reported a 5.2% GDP growth for 2023 up from 3.0% in 2022, but real estate activities struggled with new construction down by 20.4% and property developers becoming impaired, business and consumer confidence weakened as deflationary pressures rose, and exports declined by 4.6%.

According to CAAM, commercial vehicle unit sales (diesel & others):

1. CV industry increased 17.2% YoY (excluding EV)
2. Truck market – YoY change for HD (+35.1%), MD (+11.7%) and LD (+3.1%) segments
3. Bus market – YoY change for HD (+95.0%), MD (+49.6%) and LD (+22.1%) segments

Market review – On road

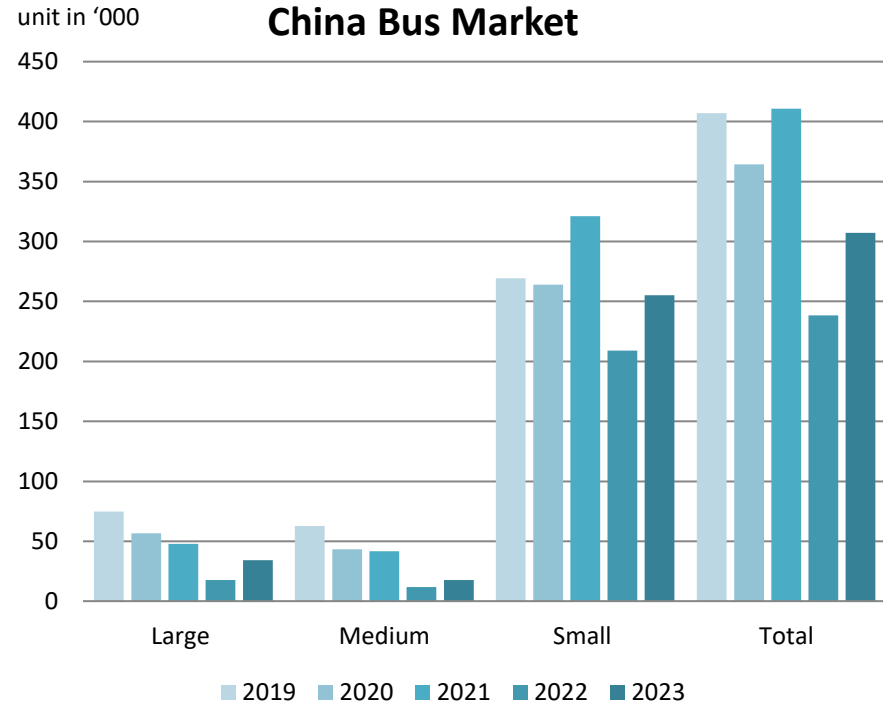
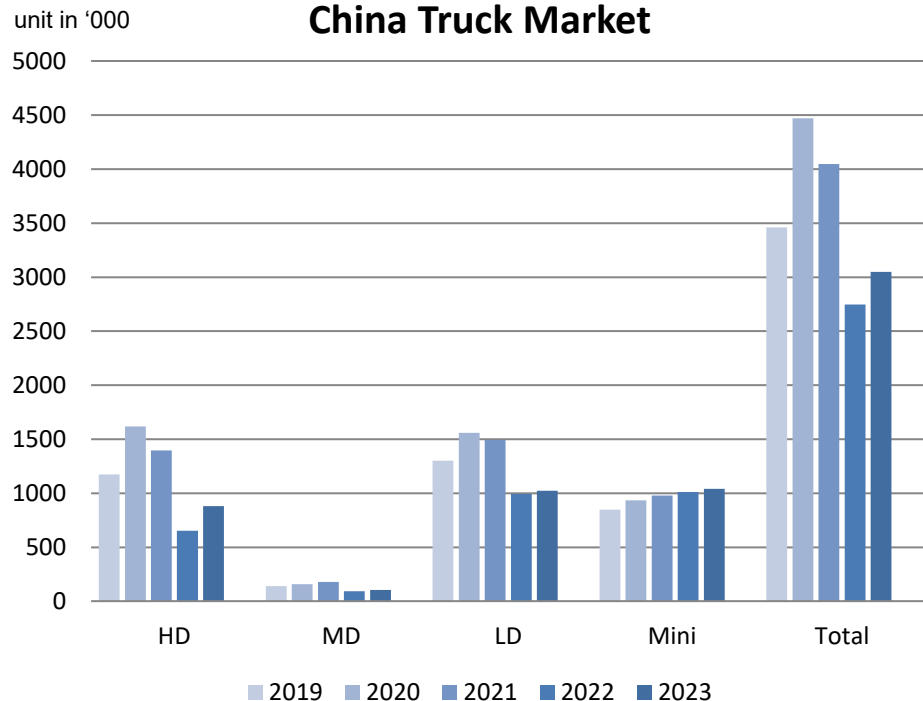
1. Higher HD, MD and LD truck unit sales, with HD up 35.1% YoY to approximately 881,000 units (diesel and others)
2. The HD, MD and LD bus segments were significantly higher YoY

Market review – Off road

1. Agricultural machinery sales decreased partially due to reduced government incentives which affected purchases of new equipment
2. Demand for industrial applications declined due to reduced market demand in some segments and the suspension of property development projects
3. Marine and Genset segments increased primarily due to higher demand for power generation including to accommodate growth in data centers

(Note: 2022 numbers reflected post Covid-19 recovery)

Market Overview: Commercial Vehicles 2019-2023



Source: China Automotive Industry Newsletter
(Powered by Diesel and Others)

China Truck Market Drivers

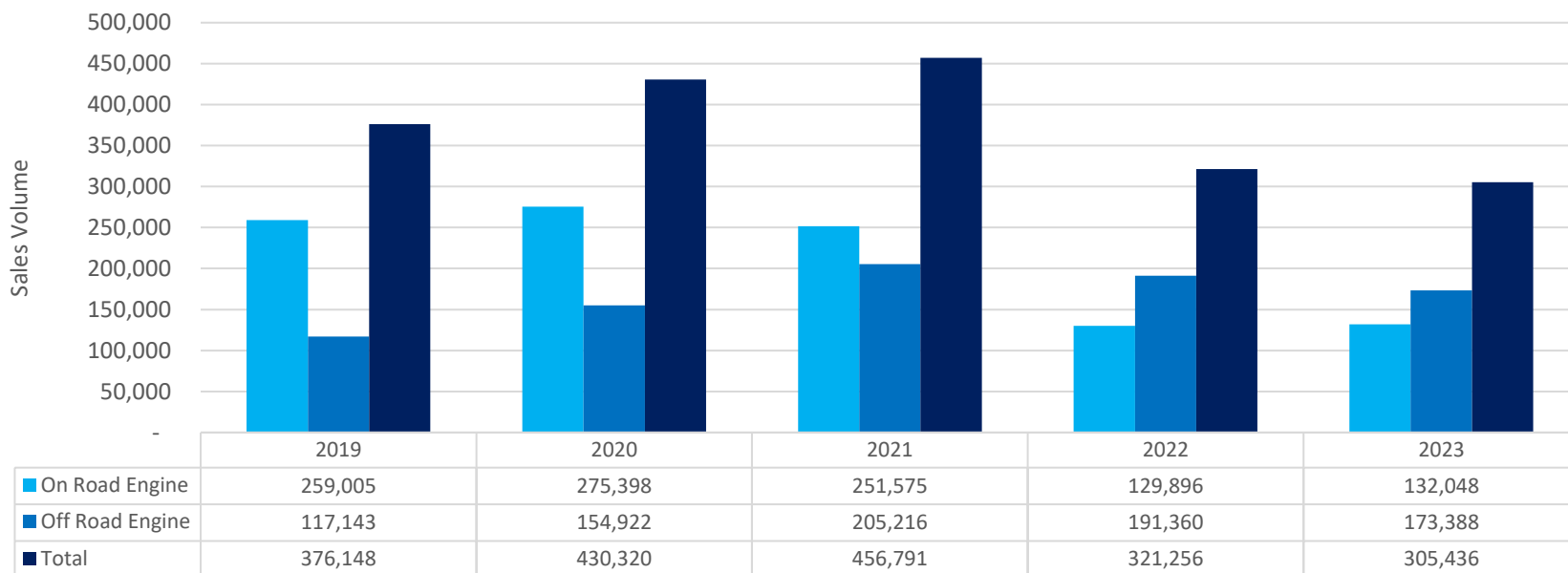
- China's economic growth
- Stringent emission standards
- Anti-overloading policies
- Urbanization / logistics networks
- Vehicle replacement cycle

China Bus Market Drivers

- Rapid expansion into rural areas
- Booming tourism
- Continued urbanization
- Growth in EV and Hybrid systems
- Demand affected by extensive high-speed rail network

Note: 2021 and 2022 results impacted by COVID restrictions

China Yuchai Unit Sales: 2019-2023



Emission standard in China

- On road National V emission standard was fully implemented from January 2018
- On road National VI-a emission standard was fully implemented from July 2021
- On road National VI-b emission standard implementation was fully implemented July 2023
- Off-road Tier-3 emission standards was fully implemented from December 2016
- Off-road machinery (below 560kW) Tier-4 emission standard implementation from December 2022

Note: 2021 and 2022 results impacted by COVID restrictions

1. Product Strategy

- **Ensure all products meet current stringent emission standards and be among the first engine manufacturers compliant with future emission standards**
- **Extend HD products into construction and mining applications**
- **Expand High Horsepower (“HHP”) products into marine and power generation markets**
- **Develop New Energy products for Full Electric, Hybrid Range-extenders, e-Axle Hybrid system and Fuel cell power systems**
- **Develop Alternative Fuels for Low Carbon emissions, including hydrogen, methanol and ammonia fuel combustion**
- **Extend product applications**

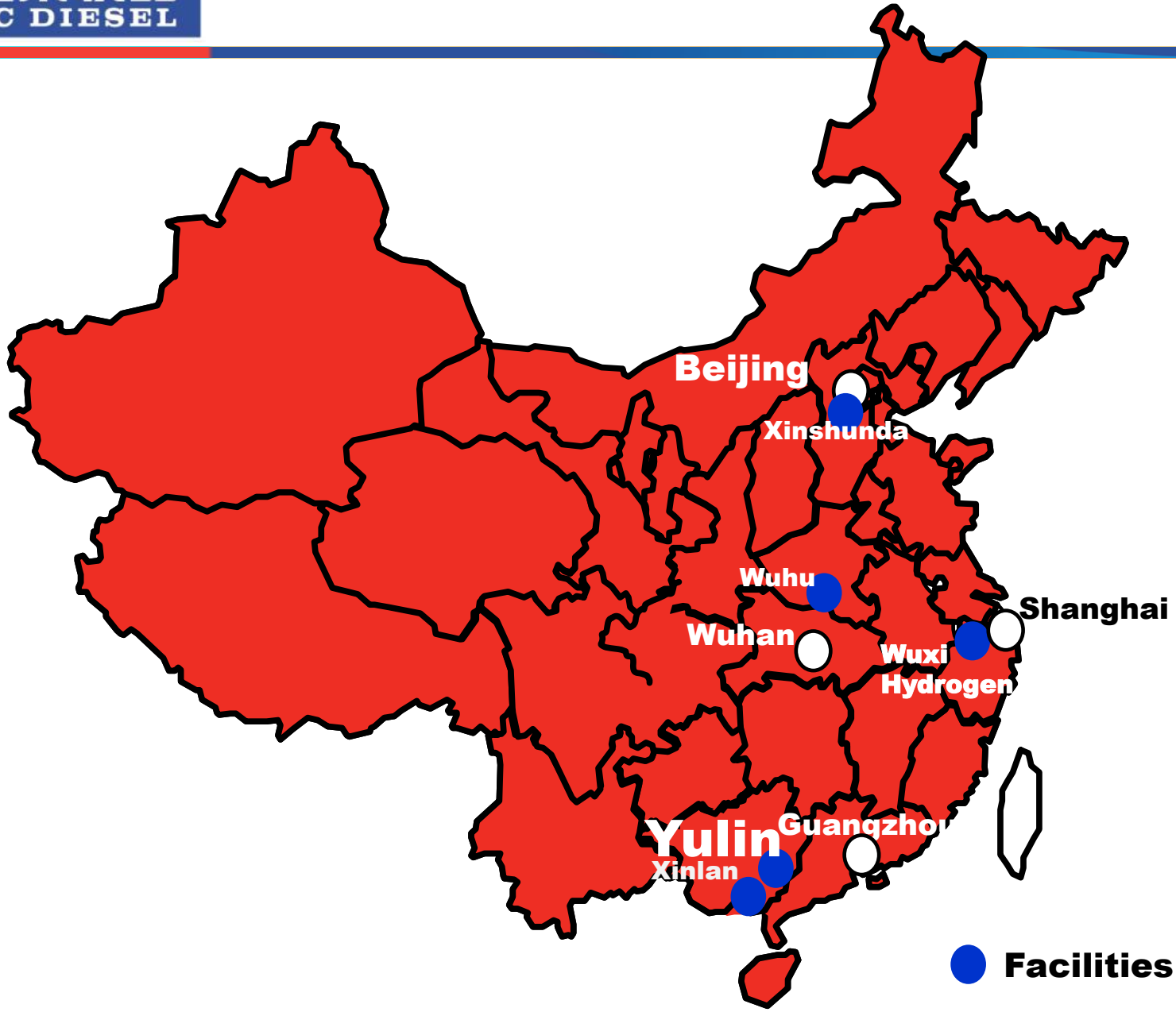
2. Business Strategy

- **Grow new markets with new products such as HHP engines for marine and power generation segments**
- **Extend off-road engine platforms for industrial, construction and mining machines**
- **Ramp up New Energy product sales for both on-and-off road applications**
- **Nurture strategic alliances with OEM customers**
- **Grow international business**
- **Implement cost reductions through Supply Chain and Manufacturing Process improvements**
- **Explore launching more production and assembly facilities to sustain future growth**

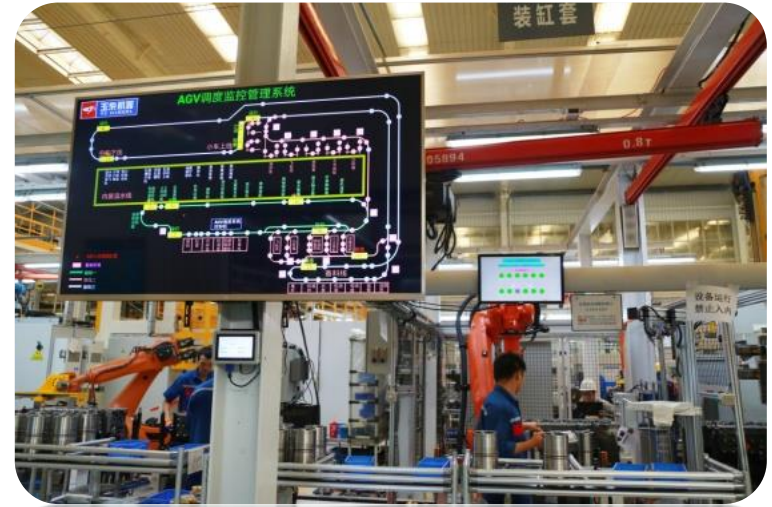
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Operational Overview



Manufacturing Capability Engine Assembly Plants



Manufacturing Capability Intelligent Digital Factory

Casting



Core making Robot



Molten Iron Pouring Robot



Automatic flashing and polishing of castings

Machining



Machining centre from International and Domestic Suppliers



Logistics + auxiliary tools are fully automated



Whole- process on-line detection + MES system

Assembly and Testing



Enclosed and constant temperature workshop



Robot + vision + full- axis automatic tooling



Intelligent data + SPS + on-line detection

Manufacturing Capability Fully Automated Machining Centre



Fully Automatic Machining Centre for National VI Engine Components
Final Machining Processes



Automatic core making center



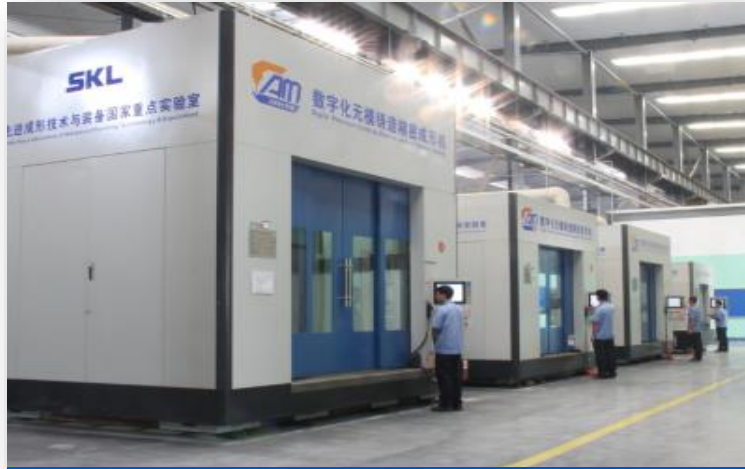
Automatic molten iron pouring



The world's first robot core setting

Manufacturing Capability

3D Printing for Trial Production



New Product Trial Production Centre



Additive printing technology application



Subtractive printing technology application

Engine Assembly Plant



微正压、恒温、恒湿车间
Micro-positive pressure, constant temperature and humidity workshop.

Engine Component Machining Plants





Our JV partner MTU

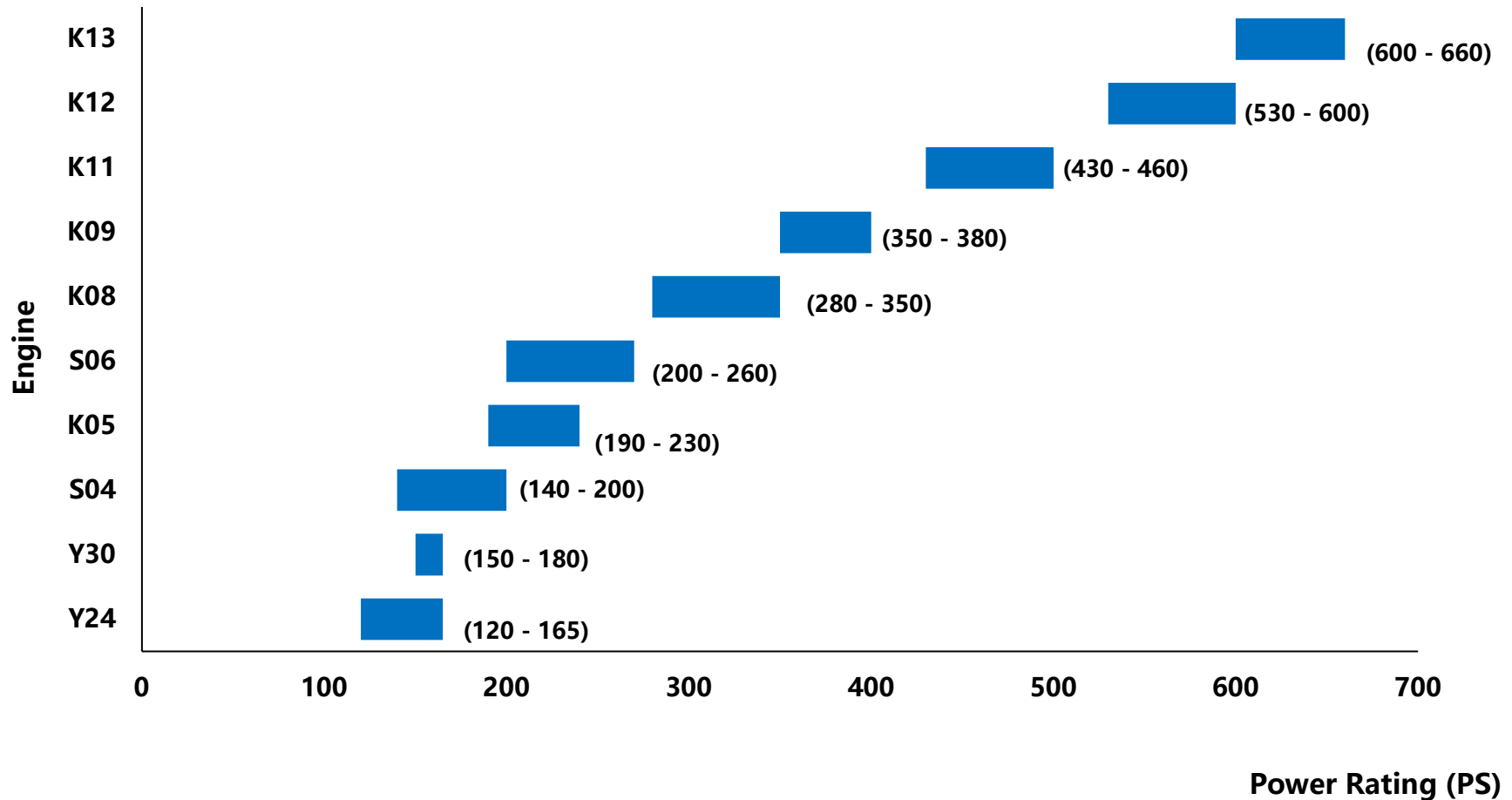
- ❑ A diesel engine manufacturer specializing in high-speed, large-rated diesel engines for power generation, oil & gas, railway, marine and mining applications
- ❑ MTU is a wholly owned subsidiary of Rolls-Royce Power Systems

The Joint Venture

- ❑ Operations profitable beginning in 2021
- ❑ The Joint Venture ownership of 50:50 between MTU and GYMCL
- ❑ Main manufacturing facility is located inside GYMCL factory in Yulin
- ❑ In 2023, total engine sales of 500+ units
- ❑ Since the beginning of operation, the Company has produced nearly 2,000 units of flagship MTU Series 4000 high-horsepower diesel engines by end 2023

Yuchai National VI-b Emission Standard Compliant Engines

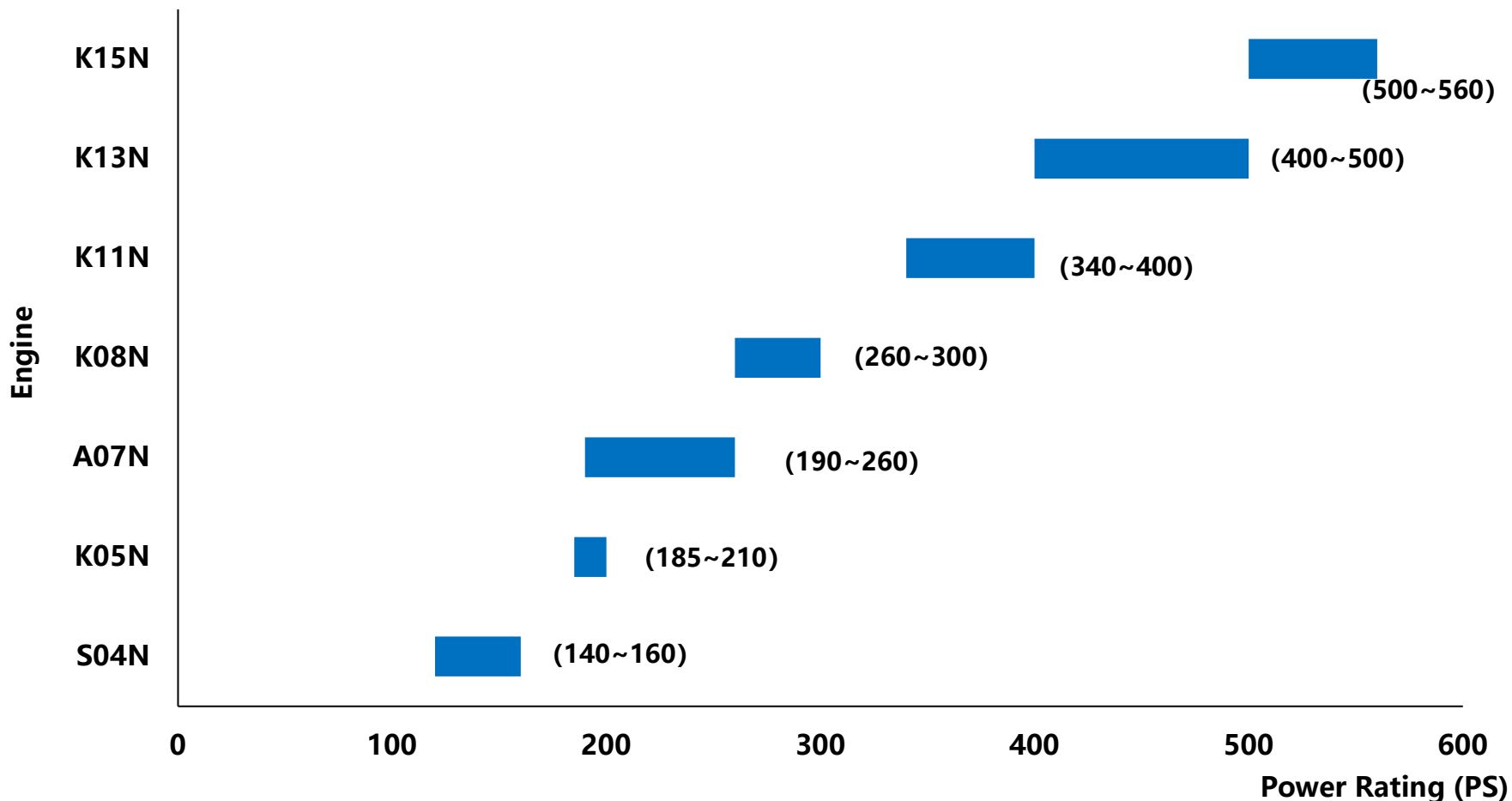
Yuchai National VI-b Emission Standard Compliant Engines



- Full implementation of National VI-a emission standards starting from July 1, 2021
- Full implementation of National VI-b emission standard will start from July 1, 2023

Yuchai National VI-b Emission Standard Compliant Natural Gas Engines

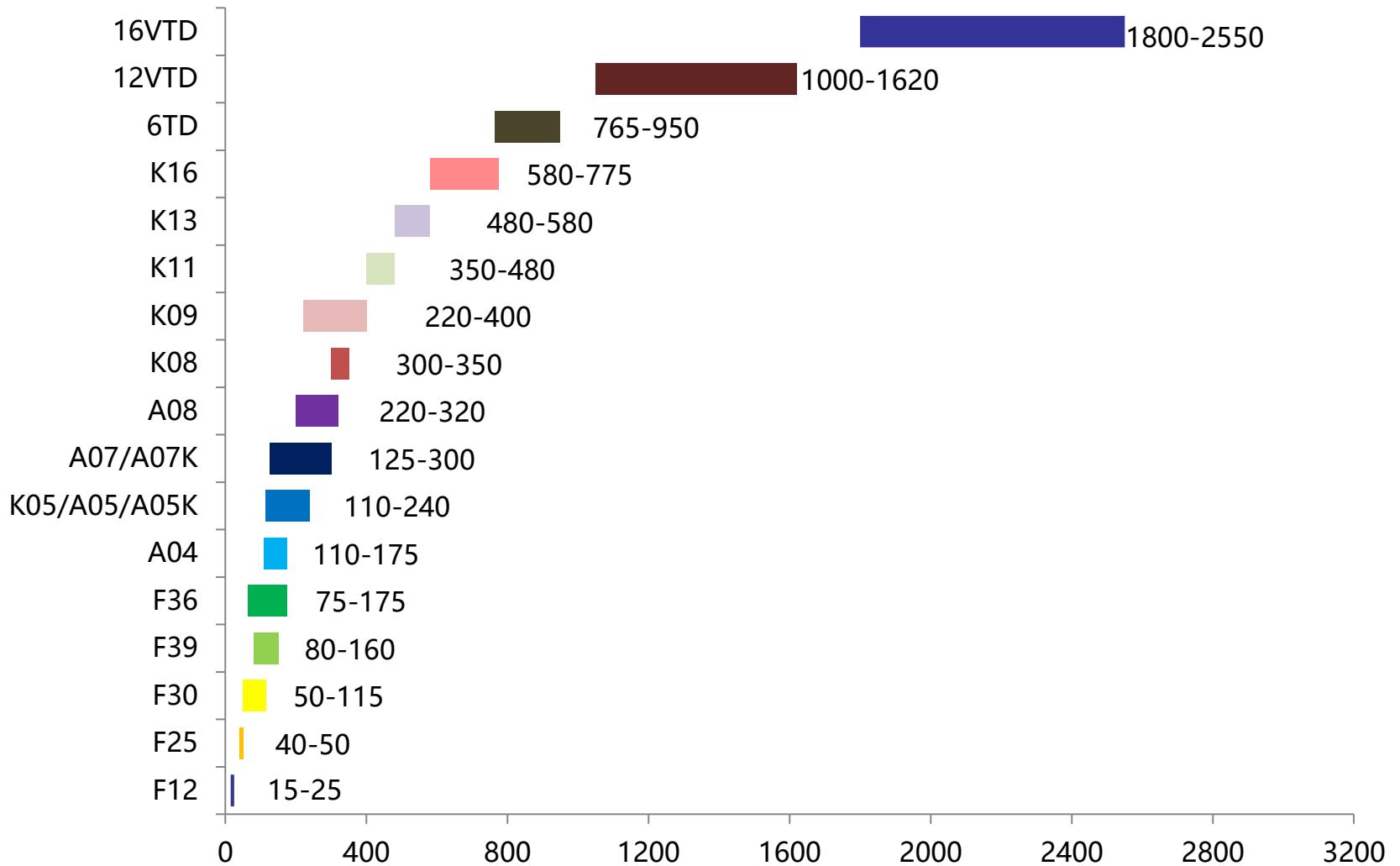
Yuchai National VI Emission Standard Compliant Gas Engines



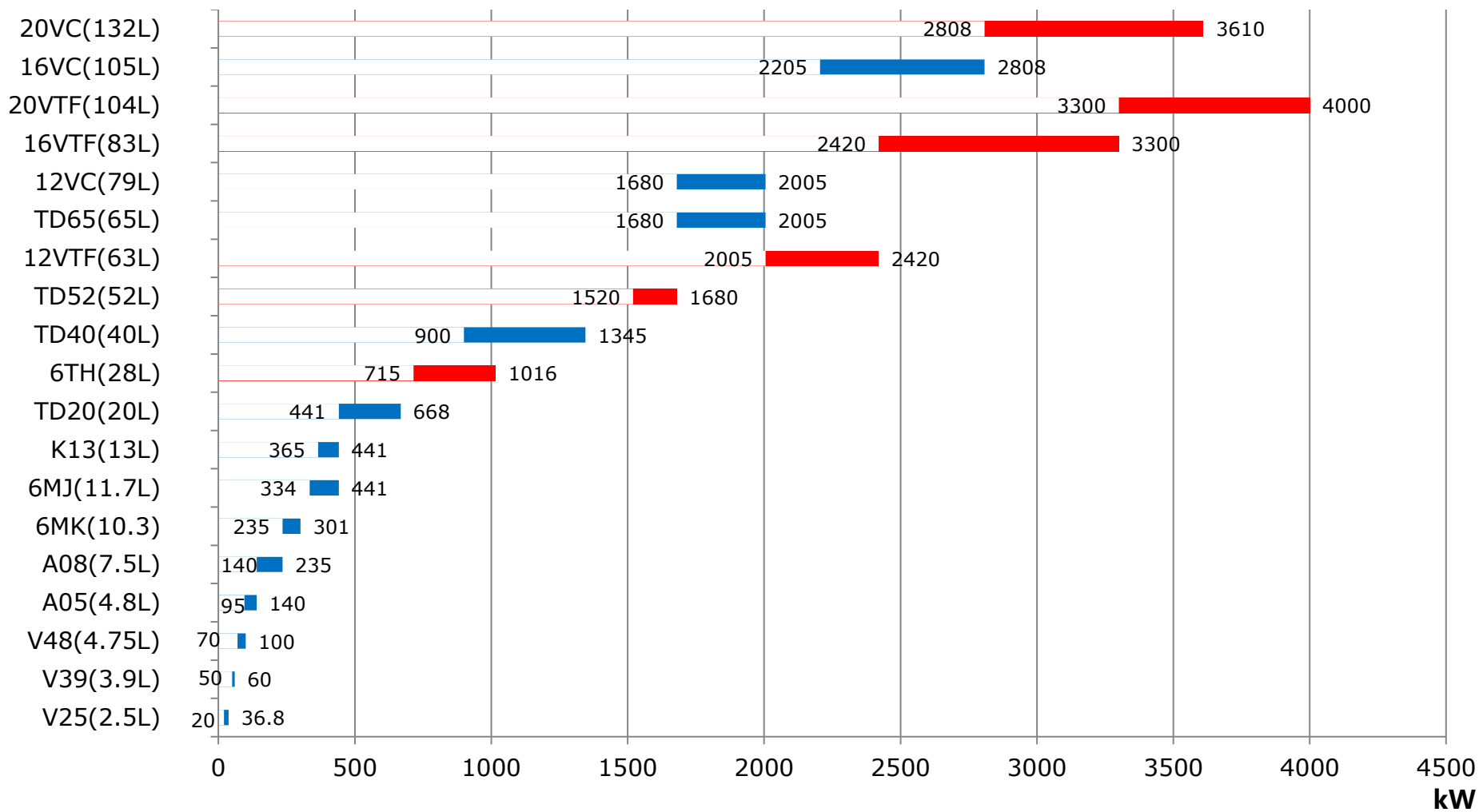
- Implementation of National VI-a emission standards for natural gas engine starting from July 1, 2019
- Implementation of National VI-b emission standards for natural gas engine starting from Jan. 1, 2021

Yuchai Tier-4 Emission Standard Compliant Off Road Engines

20 engine series with Power range: 15~2550 hp



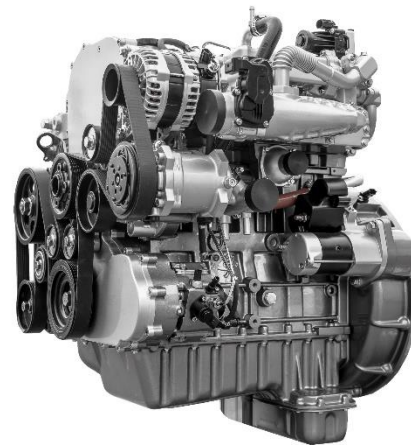
Marine and Power Generation Engine Platform (Tier 3 & 4)



LD and MD National VI Engines



Y24 – 120-165 PS



Y30 – 150-180 PS



S04 – 140-200 PS

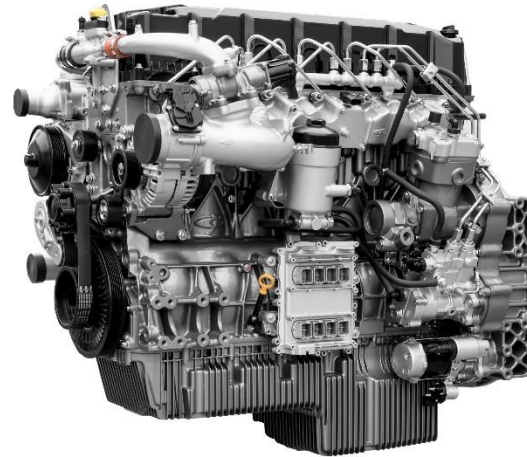


S06 – 200-260 PS

MD and HD National VI Engines



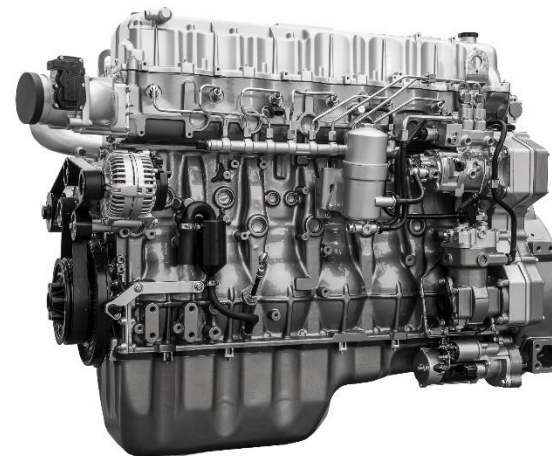
K05 – 190-230 PS



K08 – 260 - 300 PS



K09 – 360- 380 PS
K11 – 430-460 PS



K12 – 530-600 PS
K13 – 600-660 PS



YC12VTD



YC6C



YC12VC



YC16VC


- YC6T - 6 cylinders, 16/19.5L, with 360 - 600 Ps power rating
- YC6C/6CL - 6 cylinders, 40-54L, with 700 - 1200 Ps power rating
- YC8CL - 8 cylinders, 72.8L, rated at 692 - 1176 Ps power rating
- YC12VTD - 12 cylinders, 39L, rated at 900 - 1345 Ps power rating
- YC12VC - 12 cylinders, 80L, rated at 1120-1800 Ps power rating
- YC16VTD - 16 cylinders, 52L, rated 1520 to 1680 Ps power rating
- YC16VC - 16 cylinders, 108L, rated at 1960-2400 Ps power rating

OUR SERVICE PRESENCE



239
Overseas
Service Agents
Appointed

17
Overseas
Offices

-  Guangxi Yuchai Machinery Company Limited
广西玉柴机器股份有限公司总部
-  47 regional offices
47个玉柴办事处
-  3,335 authorized domestic customer service stations
3,335家玉柴授权国内服务站

- **National VI Emission Standards (Equivalent to Euro VI)**
 - National VI-a emission standard for gas engine was implemented from July 1, 2019
 - National VI-b emission standard for gas engine was implemented from January 1, 2021
 - National VI-a standard for all engines was implemented from July 1, 2021
 - National VI-b standard nationally mandated on July 1, 2023
- **National Tier-3 and -4 Emission Standards for off-road applications**
 - Off-road Tier-3 emission regulation was implemented from Dec. 2016, Tier-3 engines are available for construction, agricultural and power generation markets, and export applications
 - GYMLC has launched Tier-4 engines for light- medium- and heavy-duty off-road applications into the agricultural, industrial, construction and power generation markets
- **Hybrid and Range Extender Power Train**
 - Established Yuchai Xin-Lan New Energy Power Technology Co., Ltd. (“Yuchai Xin-Lan”), for R&D to create new production capacity for new energy technologies
 - Introduced the new eCVT drivetrain on new generation hybrid systems
 - 65kW and 100kW Range Extender Power systems are installed in both truck and bus applications, with a Yuchai Nat VI-b engine and a high-speed motor generator, 300kW range extender introduced for mining dump trucks
 - Introduced first hydrogen combustible engine K05H for commercial vehicles in 2021; introduced new heavy-duty hydrogen engine K15H in 2022
 - Yuchai Xin-Lan produced over 8,000 units of new energy powered systems in 2023
- **Natural Gas (CNG, LNG) and Alternative Fuel combustion**
 - CNG / LNG fuel systems available for truck and bus, marine and power generation applications
 - Alternative fuel development includes hydrogen, methanol and ammonia combustion
 - Gas engine sales of 12,000 units in 2023

Lean Manufacturing

- Promote lean manufacturing across all machining and engine assembly plants
- Machining processes outsourced to reduce capital investment

Supply Chain Improvement

- Reduced number of suppliers through stringent vendor selection policy and establish long-term partnership program to achieve cost saving
- Improved component sourcing standard through total quality commitment program requiring stricter quality at component suppliers

Intelligent Manufacturing

- Implemented Intelligent Manufacturing SAP projects throughout all factories, foundry and testing centers
- Fully automated machining plants tailored for Nat VI-engine production
- 3D casting mould printing reduces development lead time
- SAP system was implemented in finance, supply chain, logistics and R&D departments
- Engine remote monitoring through ECU data communication

V Configuration for HHP engines

- VTF series engine (in 12V/16V/20V configurations) with power range between 2,000kW - 4,000kW for marine and power generation applications

R&D capability

- ❑ Approximately 650 engineers including PhDs and Master Degree holders
- ❑ Nearly 3,000 patents have been registered as of December 2023
- ❑ New Energy R&D and Production facilities were set up in Nanning R&D center

Powertrain innovations

- ❑ **Late 2018:** Model K08 engine was first domestic diesel engine to pass the National VI-b emission regulation
- ❑ Full suite China National VI (on road) compliant engines are available
- ❑ China Tier-4 (off-road) engines completed testing for commercial operation
- ❑ **2019:** Introduced NEV products – plug-in hybrid engine, EV powertrain, SG power generation powertrain, e-CVT power-split hybrid powertrain, Integrated electric drive axel powertrain and Fuel cell system
- ❑ **Mid-2020:** Commercially launched the 65kW/100kW range extender power systems
- ❑ **Mid-2021:** Commercially launched the 90kW fuel cell power system on buses
- ❑ **Late-2021:** First ignition of the YCK05 Hydrogen Combustion engine
- ❑ **Mid-2022:** Launched heavy-duty hydrogen combustion engine
- ❑ **2023:** Launched Nat VI, 2nd Generation engine platforms, delivered first batch of 90/120kW fuel cell systems to Beijing public transit operator

R&D Capability

- Self-established nationally–recognized engineering laboratory, an efficient, energy-saving and environmentally-friendly internal combustion engine testing laboratory in China, rated as top tier in Chinese Diesel Industry.
- Installation of 84 engine test benches and 16 parts & components test benches, comprising:

✓ Full Flow Sampling Emission Bench	✓ Plateau Simulation Bench
✓ Direct Sampling Dynamic Emission Bench	✓ Vehicle Test Bench
✓ Partial Flow Sampling Emission Bench	✓ Thermal Shock Test Bench
✓ Cold Start Bench	✓ Deep Thermal Shock Test Bench
✓ Semi-anechoic Room Test Bench	✓ PTO Bench
✓ Mobile Bench for Plateau Test	✓ Inclination Test Bench
- The measurement scope covers engines with displacement of 1~120L, and the overall R&D facilities reach the international advanced level.
- New Energy/Low Carbon Development and Production facility including:

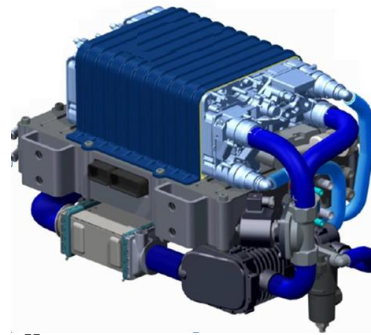
✓ High-Speed Motor Assembly and self developed MCU/BCU control
✓ Range Extender System Assembly up to 400kW rating
✓ eCVT Hybrid System Assembly
✓ Fuel Cell System Assembly / Fuel Stack development – 90/120/150 kW rating
✓ PEM hydrogen production equipment for energy storage
✓ Hydrogen-combustion engines in performance testing

New energy power



High-speed electric motor:

- High rotation speed: more than 15,000 rpm.
- High power density, and high torque density.



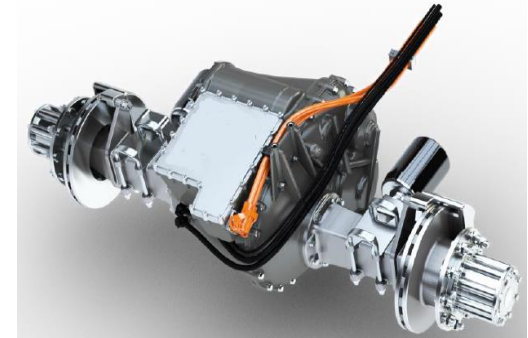
Fuel cell system:

- High efficiency: maximum efficiency > 70%
- High integration, high power density, and ultra-low starting temperature.
- Wide application fields.



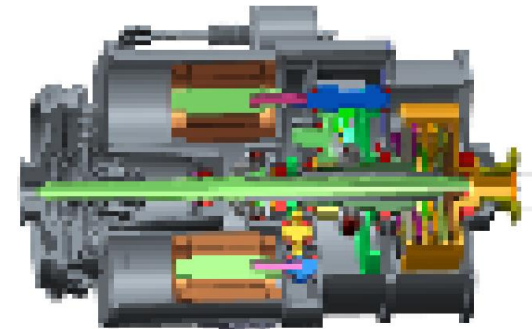
Integrated power generating engine power assembly system:

- The engine and motor are highly integrated, with compact structure.
- Uses flywheel integrated permanent magnet motor.



Integrated bridge system:

- Highly integrated motor, motor controller, TCU, oil pump and sensor.
- Reduces the vehicle total weight.



New generation hybrid power system:

- High saving rate of fuel consumption: the oil saving rate is over 65%.
- High integration, electromechanical coupling, and modular design.

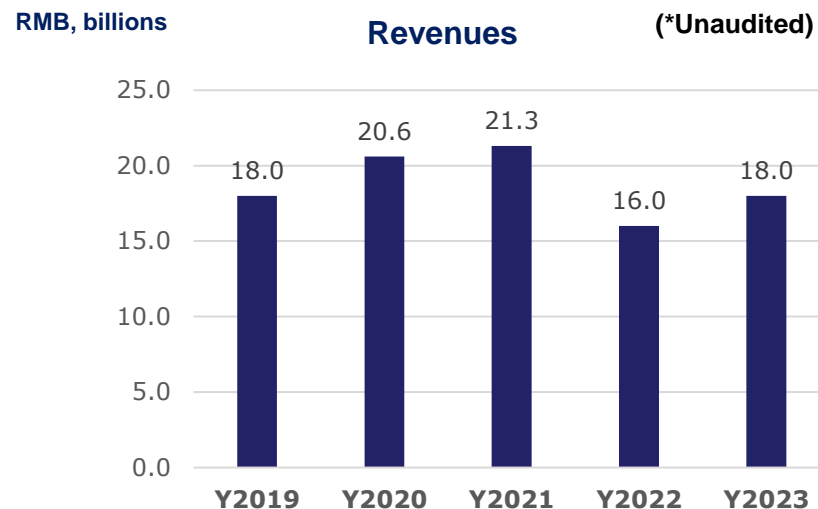
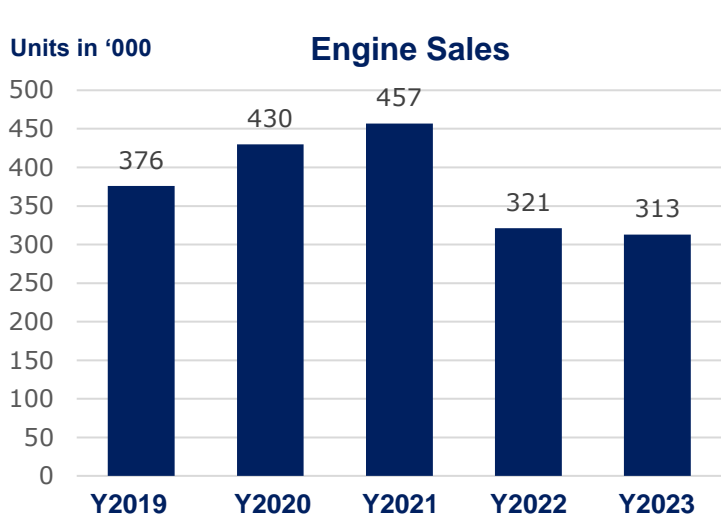
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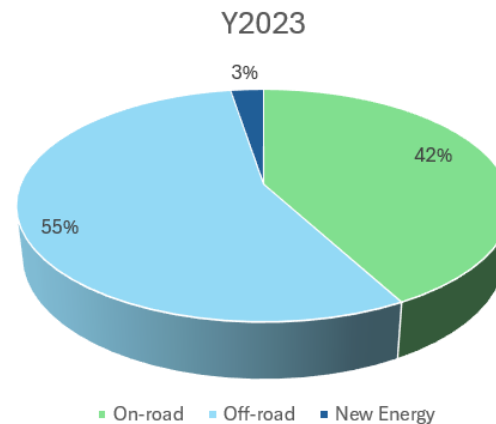
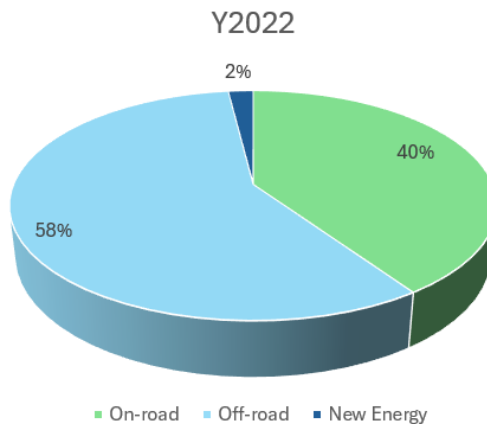
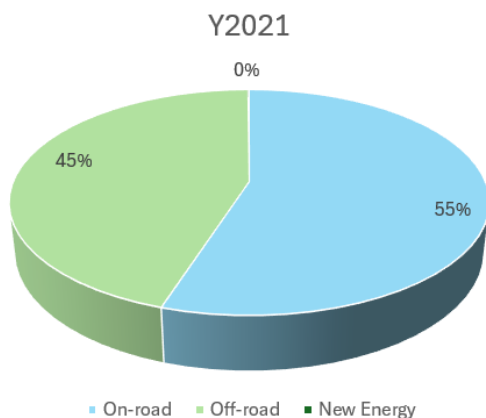
Business and Finance Overview

Financial Performance Review

	Y2019	Y2020	Y2021	Y2022	Y2023*
Units of engine sold (in thousands)	376	430	457	321	313
Revenue (in billion RMB)	18.0	20.6	21.3	16.0	18.0



Off-Road Engine Unit Growth



Profit Performance	Y2019	Y2020	Y2021	Y2022	*Y2023
Gross Profit %	17.2%	15.5%	13.9%	15.6%	16.2%
Operating Profit %	6.4%	5.7%	3.1%	3.2%	3.4%
EBITDA (RMB Billion)	1.4	1.5	1.2	1.0	1.2
Profit After Tax %	4.8%	3.8%	1.9%	2.1%	2.3%
Profit After Tax (RMB Billion)	0.9	0.8	0.4	0.3	0.4

- Profitability discipline to cope with the increased R&D spending year-on-year as well as heavily invested capital assets for product diversifications.

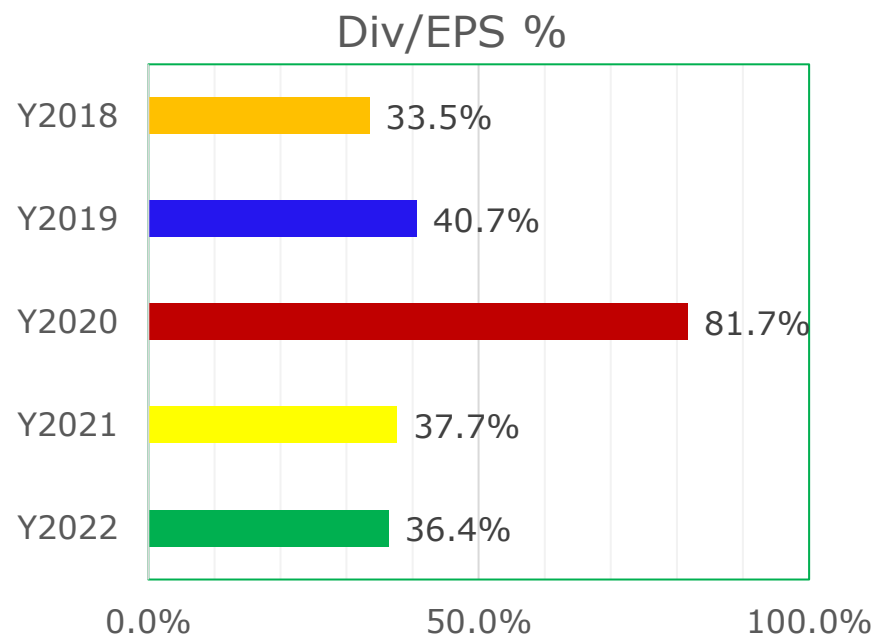
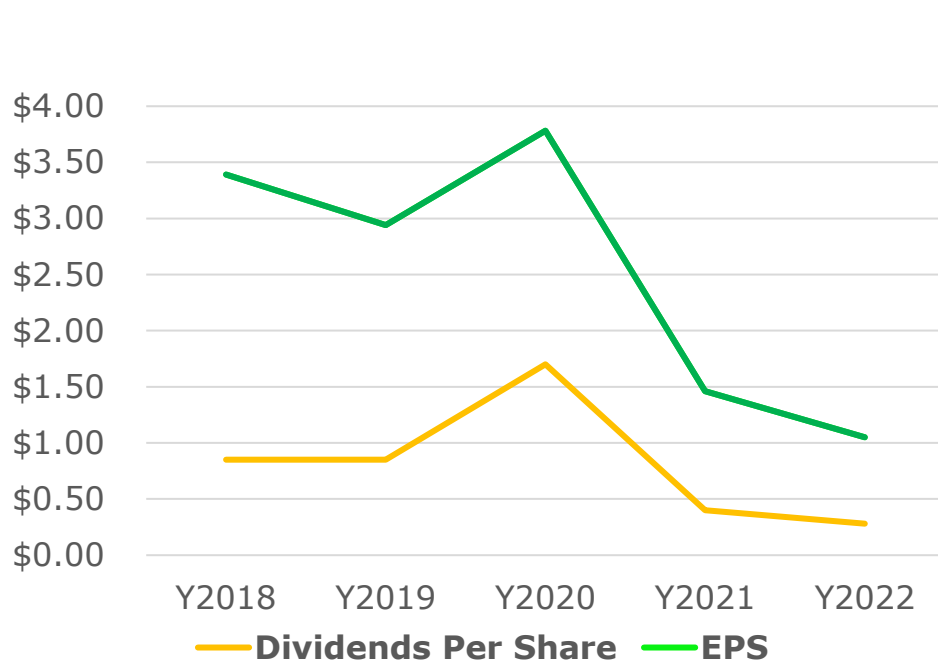
Key Balance Sheet Items	Y2019	Y2020	Y2021	Y2022	*Y2023
	RMB Billion	RMB Billion	RMB Billion	RMB Billion	RMB Billion
Cash & Bank Balance	6.3	6.3	5.2	4.8	6.0
Total Assets	23.9	26.3	25.1	24.1	25.8
Total Loans	2.1	2.3	2.2	2.4	2.6
Equity for CYD	8.8	9.0	8.9	9.0	9.2
Shareholders Equity	11.6	11.8	11.6	11.8	12.2

- Balance Sheet remains healthy and sound Operating Cash Flow.

(* Y2023 numbers are unaudited)

Financial Performance Review

	Y2018	Y2019	Y2020	Y2021	Y2022	*Y2023
Dividend per share (USD)	\$0.85	\$0.85	\$1.70	\$0.40	\$0.28	TBD
Earnings per share (USD)	\$2.54	\$2.09	\$2.08	\$1.06	\$0.77	\$0.99
Dividend / EPS, Ratio	33.5%	40.7%	81.7%	37.7%	36.4%	TBD



(*Y2023 numbers are unaudited)

Key Financial Ratios	Y2019	Y2020	Y2021	Y2022	*Y2023
Debt/Equity Ratio	18.3%	19.2%	19.3%	20.3%	21.3%
Current Ratio	1.55	1.48	1.42	1.52	1.59

➤ Financial Ratios remain strong

(*Y2023 numbers are unaudited)

China Yuchai International [NYSE: CYD]

Thank You

