

Unity Group (1539 HK)

A diversified new energy play

- Company background.** Founded in 2008 and listed on HKEX in 2016, Unity Group (formerly: Synergy Group) is an integrated energy saving and management solutions provider based in Hong Kong. Unity has four major business lines: (1) lighting & cooling systems, (2) renewable energy, (3) Vanadium redox flow battery, and (4) green property. Unity mainly operates lighting and renewable energy projects under the Energy Management Contract (EMC) business model.
- Lighting systems: large-scale project pipeline ahead.** Unity specializes in the design and production of energy-efficient LED lighting device and system. In Mar 2022, Unity undertook a large-scale energy-saving project of Malaysian state government, targeting to install 6mn units of LED lights in Malaysia. As of 30 Sep 2022, Unity completed the installation of 10k units. The project will further extend to other five regions of Malaysia, with an additional installation of 10mn units (total LED installation pipeline in Malaysia: 16mn units).
- Renewable energy solutions.** Unity provides one-stop PV power generation projects, including rooftop systems and solar farms in Hong Kong, Mainland China, Malaysia and Africa, etc. In Dec 2022, Unity established a strategic cooperation relationship with a subsidiary of PowerChina (601669 CH) to co-develop renewable energy projects in Mainland China. The renewable energy systems project pipeline of total capacity is expected to reach ~2.6GW (estimated contract amount of RMB5.7bn for survey & design, equipment procurement & construction services).
- Tap into energy storage industry.** Vanadium redox flow battery (VFB) is one of the energy storage technologies. According to EVTank, China's newly installed capacity of VFB is expected to deliver a CAGR of 48% in 2021-2030E and China VFB market size is expected to reach RMB40.5bn in 2030E. In 2018, Unity strategically expanded to the industry by acquiring 23.6% equity interest in InVinity Energy Group, which is principally engaged in investing in mining and processing assets including exploration, mining and extraction as well as production of battery grade vanadium electrolyte (98% and 99.75% vanadium pentoxide (V₂O₅)). Unity gets access to a mine in Hunan Province, which contains 34,468 tons of high-grade V₂O₅ (a key compound of vanadium electrolyte) in reserve. InVinity Group also has a processing plant with annual production capacity of 3,000 tons of V₂O₅.

Earnings Summary

(YE Mar 31)	FY17A	FY18A	FY19A	FY20A	FY21A	FY22A
Revenue (HKD mn)	257	278	248	128	54	80
Change (YoY)	97.2%	8.4%	-10.8%	-48.5%	-57.9%	49.6%
Net Income (HKD mn)	74	125	40	(110)	(285)	(392)
EPS (HKD)	0.15	0.23	0.07	(0.20)	(0.46)	(0.23)
Change (YoY)	109%	54%	-68%	n/a	n/a	n/a
P/E (x)	1.0	0.6	2.0	n/a	n/a	n/a
P/B (x)	0.4	0.2	0.2	0.3	1.4	1.5
ROE (%)	0.04	0.05	0.01	(0.03)	(0.15)	(0.36)
Net gearing (%)	52.7	74.4	52.9	55.6	276.5	42.4

Source: Company data, CMBIGM

NOT RATED

Current Price

HK\$0.146

China New Energy

Research Team

research@cmbi.com.hk

Stock Data

Mkt Cap (HK\$ mn)	348
Avg 3 mths t/o (HK\$ mn)	0.60
52w High/Low (HK\$)	0.68/0.11
Total Issued Shares (mn)	2,385.67

Source: Bloomberg

Shareholding Structure

Wong Man Fai	53.05%
Others	46.95%

Source: HKEx

Share Performance

	Absolute	Relative
1-mth	33.3%	41.5%
3-mth	-14.9%	-17.5%
6-mth	-73.1%	-74.7%

Source: Bloomberg

12-mth Price Performance

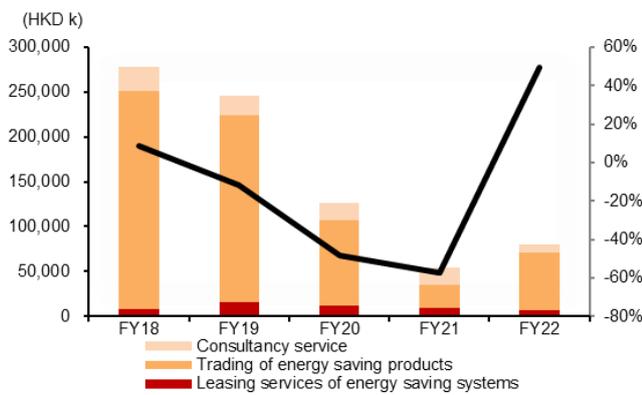


Source: Bloomberg

Auditor: BDO

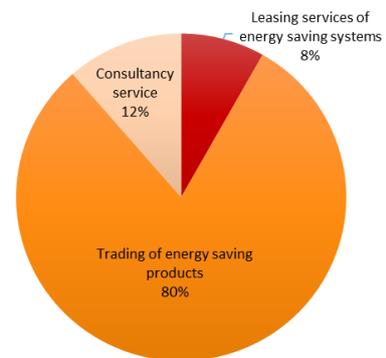
- **Green property.** Unity extended to green property field in May 2022. Green property solutions cover a series of applications of green building materials, green facades, solar energy devices, wind, airflow and rainwater recycling system. Meanwhile, Unity invested in a property in Kwai Chung (total area: 3k sq.m.), which is planned to be redeveloped into a green digital data center to support the green property business.
- **Carbon credits.** Since early 2022, Unity has been granted carbon credits through various energy-saving projects. As at end July 2022, Unity obtained carbon credits of 50k tons of carbon emissions (only ~7% of Unity’s total greenhouse gases (GHG) emission inventory) by CMA Testing and Certification Lab (CMA Testing) and Centre Testing International (CTI).

Figure 1: Unity’s core business revenue



Source: Company data, CMBIGM

Figure 2: Revenue breakdown (by segment)



Source: Company data, CMBIGM

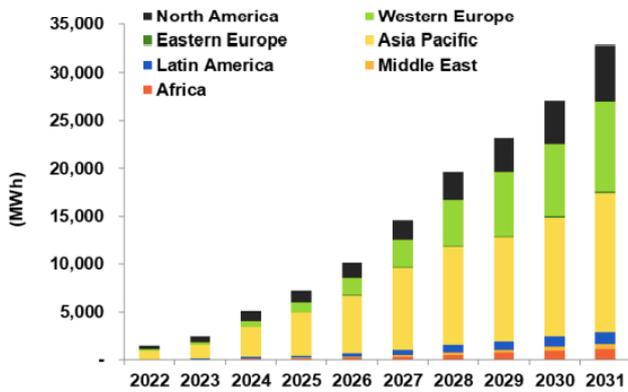
Vanadium redox flow battery

Vanadium redox flow battery (VFB), a type of rechargeable flow battery, is one of the energy storage technologies. VFB employs the nature of different oxidation states of vanadium ions in the electrolyte to store chemical energy and generate electricity through a redox reaction. Key advantages of VFBs include durable and recycling, long lifespan, operational safety and a low environmental impact in manufacturing.

According to Guidehouse Insights, global annual VFB installation is expected to reach 32.8GWh in 2031E (41% CAGR). Asia Pacific is expected to reach 14.5GWh in 2031E, which is mainly contributed by China. According to EVTank, China’s newly installed capacity is expected to deliver a CAGR of 48% in 2021-2030E and China VFB market size is expected to reach RMB40.5bn in 2030E.

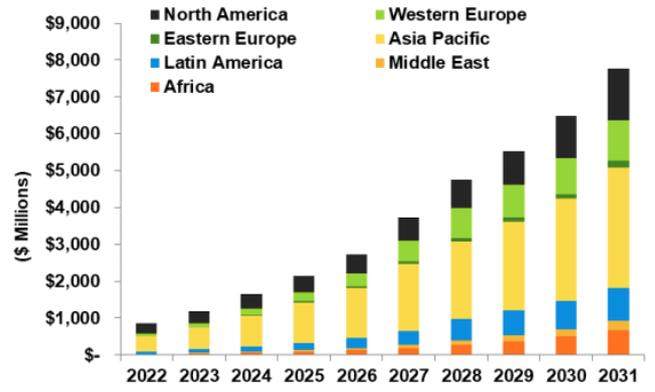
Vanadium electrolyte is one of the major components of VFBs, accounting for 30-55% of total cost of VFBs. Vanadium pentoxide (V₂O₅) is a compound of electrolyte for VFBs, which directly affect the purity of the electrolyte. The purity of the vanadium electrolyte is vital to the lifetime of VFBs, therefore battery grade refers to the ones with V₂O₅ level of 98% or above. It is expected that the rapid increase in VFB installation will drive the demand for vanadium electrolyte as a key material for VFBs.

Figure 3: Global newly installed capacity of VFB



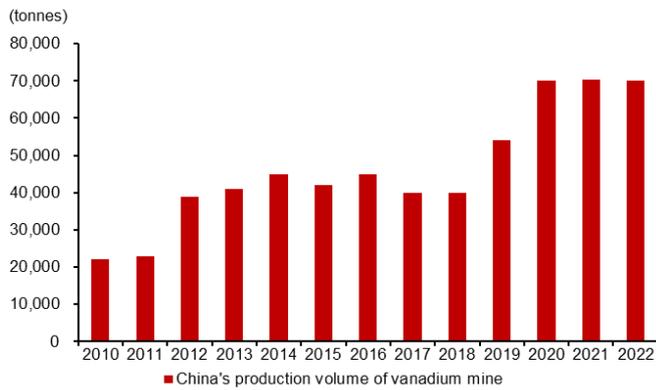
Source: Guidehouse Insights, CMBIGM

Figure 4: Market size of global VFB market by region



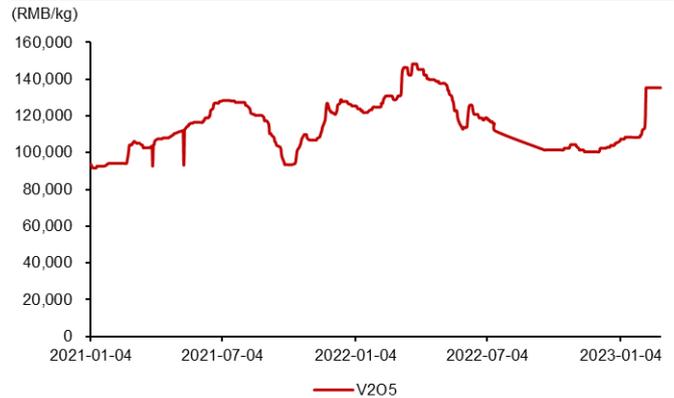
Source: Guidehouse Insights, CMBIGM

Figure 5: China's production volume of vanadium



Source: Wind, CMBIGM

Figure 6: Market price trend of V₂O₅



Source: Wind, CMBIGM

Disclosures & Disclaimers

Analyst Certification

The research analyst who is primary responsible for the content of this research report, in whole or in part, certifies that with respect to the securities or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about the subject securities or issuer; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific views expressed by that analyst in this report.

Besides, the analyst confirms that neither the analyst nor his/her associates (as defined in the code of conduct issued by The Hong Kong Securities and Futures Commission) (1) have dealt in or traded in the stock(s) covered in this research report within 30 calendar days prior to the date of issue of this report; (2) will deal in or trade in the stock(s) covered in this research report 3 business days after the date of issue of this report; (3) serve as an officer of any of the Hong Kong listed companies covered in this report; and (4) have any financial interests in the Hong Kong listed companies covered in this report.

CMBIGM Ratings

BUY : Stock with potential return of over 15% over next 12 months
HOLD : Stock with potential return of +15% to -10% over next 12 months
SELL : Stock with potential loss of over 10% over next 12 months
NOT RATED : Stock is not rated by CMBIGM

OUTPERFORM : Industry expected to outperform the relevant broad market benchmark over next 12 months
MARKET-PERFORM : Industry expected to perform in-line with the relevant broad market benchmark over next 12 months
UNDERPERFORM : Industry expected to underperform the relevant broad market benchmark over next 12 months

CMB International Global Markets Limited

Address: 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

CMB International Global Markets Limited ("CMBIGM") is a wholly owned subsidiary of CMB International Capital Corporation Limited (a wholly owned subsidiary of China Merchants Bank)

Important Disclosures

There are risks involved in transacting in any securities. The information contained in this report may not be suitable for the purposes of all investors. CMBIGM does not provide individually tailored investment advice. This report has been prepared without regard to the individual investment objectives, financial position or special requirements. Past performance has no indication of future performance, and actual events may differ materially from that which is contained in the report. The value of, and returns from, any investments are uncertain and are not guaranteed and may fluctuate as a result of their dependence on the performance of underlying assets or other variable market factors. CMBIGM recommends that investors should independently evaluate particular investments and strategies, and encourages investors to consult with a professional financial advisor in order to make their own investment decisions.

This report or any information contained herein, have been prepared by the CMBIGM, solely for the purpose of supplying information to the clients of CMBIGM or its affiliate(s) to whom it is distributed. This report is not and should not be construed as an offer or solicitation to buy or sell any security or any interest in securities or enter into any transaction. Neither CMBIGM nor any of its affiliates, shareholders, agents, consultants, directors, officers or employees shall be liable for any loss, damage or expense whatsoever, whether direct or consequential, incurred in relying on the information contained in this report. Anyone making use of the information contained in this report does so entirely at their own risk.

The information and contents contained in this report are based on the analyses and interpretations of information believed to be publicly available and reliable. CMBIGM has exerted every effort in its capacity to ensure, but not to guarantee, their accuracy, completeness, timeliness or correctness. CMBIGM provides the information, advices and forecasts on an "AS IS" basis. The information and contents are subject to change without notice. CMBIGM may issue other publications having information and/ or conclusions different from this report. These publications reflect different assumption, point-of-view and analytical methods when compiling. CMBIGM may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

CMBIGM may have a position, make markets or act as principal or engage in transactions in securities of companies referred to in this report for itself and/or on behalf of its clients from time to time. Investors should assume that CMBIGM does or seeks to have investment banking or other business relationships with the companies in this report. As a result, recipients should be aware that CMBIGM may have a conflict of interest that could affect the objectivity of this report and CMBIGM will not assume any responsibility in respect thereof. This report is for the use of intended recipients only and this publication, may not be reproduced, reprinted, sold, redistributed or published in whole or in part for any purpose without prior written consent of CMBIGM.

Additional information on recommended securities is available upon request.

For recipients of this document in the United Kingdom

This report has been provided only to persons (I) falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended from time to time) ("The Order") or (II) are persons falling within Article 49(2) (a) to (d) ("High Net Worth Companies, Unincorporated Associations, etc.") of the Order, and may not be provided to any other person without the prior written consent of CMBIGM.

For recipients of this document in the United States

CMBIGM is not a registered broker-dealer in the United States. As a result, CMBIGM is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. The research analyst who is primary responsible for the content of this research report is not registered or qualified as a research analyst with the Financial Industry Regulatory Authority ("FINRA"). The analyst is not subject to applicable restrictions under FINRA Rules intended to ensure that the analyst is not affected by potential conflicts of interest that could bear upon the reliability of the research report. This report is intended for distribution in the United States solely to "major US institutional investors", as defined in Rule 15a-6 under the US, Securities Exchange Act of 1934, as amended, and may not be furnished to any other person in the United States. Each major US institutional investor that receives a copy of this report by its acceptance hereof represents and agrees that it shall not distribute or provide this report to any other person. Any U.S. recipient of this report wishing to effect any transaction to buy or sell securities based on the information provided in this report should do so only through a U.S.-registered broker-dealer.

For recipients of this document in Singapore

This report is distributed in Singapore by CMBI (Singapore) Pte. Limited (CMBISG) (Company Regn. No. 201731928D), an Exempt Financial Adviser as defined in the Financial Advisers Act (Cap. 110) of Singapore and regulated by the Monetary Authority of Singapore. CMBISG may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, as defined in the Securities and Futures Act (Cap. 289) of Singapore, CMBISG accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact CMBISG at +65 6350 4400 for matters arising from, or in connection with the report.