

Renewables Review

Competitive Edge

Leading Asian renewable energy player with 9.8GW¹ of wind, solar and energy storage capacity globally

One of Asia's largest energy storage system (ESS) operators and dominant renewables player in Singapore with a full spectrum of solar capabilities including rooftop, ground-mounted and floating solar projects

Leveraging partnerships and capitalising on platforms to grow presence in focus markets

¹ As at December 31, 2022, including acquisitions pending completion

Performance Scorecard

Financial indicators (\$ million)

	2022	2021	Change (%)
Turnover ²	506	354	43
Earnings before interest, tax, depreciation and amortisation (EBITDA) ³	352	251	40
Share of results: associates and joint ventures, net of tax	62	27	130
Adjusted EBITDA ⁴	414	278	49
Net profit	132	56	136
– Net profit before exceptional item	140	56	150
– Exceptional item ⁵	(8)	–	NM
Return on equity before exceptional item (%)	10.2	4.6	122
Return on equity (%)	9.6	4.6	109

² Turnover figures are stated before inter-segment eliminations

³ EBITDA excludes major non-cash items such as the effects of fair value adjustments, re-measurements, impairments and write-offs

⁴ Adjusted EBITDA = Reported EBITDA + share of results from associates and joint ventures, net of tax

⁵ 2022 exceptional item pertained to the write-off of an investment in Vietnam for project expenses incurred by the company

Sembcorp's renewable energy portfolio comprises wind, solar and energy storage assets in China, India, Indonesia, Singapore, Vietnam and the UK.

New Energy and HYNE, as well as strong performance of the solar assets in Singapore.

Continued Traction in Growing Our Renewables Portfolio

Growth momentum for the Renewables segment remained strong in 2022. During the year, our portfolio grew to 9.8GW, including acquisitions pending completion.

We continued to pursue renewables opportunities in our countries of focus and established strategic collaborations to support the energy transition. In China, we originated quality partnerships for

Turnover for the Renewables segment was \$506 million, 43% higher compared to turnover of \$354 million in 2021, driven mainly by contribution from Shenzhen Huiyang New Energy (HYNE), which owns 658MW of operational wind and solar photovoltaic (PV) assets. Net profit before exceptional item increased by 150% year-on-year to \$140 million. The improved performance was attributed to contributions from SDIC

Key Developments

Increased presence in China with acquisitions of renewables portfolio totalling 1.7GW and organic growth of over 350MW

Broadened solar presence in India with acquisition of Vector Green and enhanced in-house engineering solutions to develop greenfield projects

551MWp of gross contracted solar capacity in Singapore, contributing to more than a third of the nation's 2025 target of 1.5GWp

Signed strategic partnerships with the Japanese government and various corporations to progress hydrogen and other decarbonisation initiatives

investments into renewables projects. In India, our in-house operations and maintenance as well as engineering capabilities were drivers of greenfield and brownfield growth. In Singapore, we cemented our position as a leading renewables provider with greenfield projects in solar and ESS.

In the UK, our ESS portfolio performed better on the back of increased demand for frequency services, particularly over summer.

Further diversification of renewables portfolio in China

Operational portfolio in China as of end 2022 was 4.3GW, compared to 725MW a year ago. We completed the acquisitions of a 35% interest in SDIC New Energy and a 98% interest in HYNE in the first half of 2022, as well as a 792MW portfolio held under 45.3%-owned

Hunan Xingling New Energy (Xingling New Energy) in December 2022. Electricity generated increased to 6.1TWh, almost quadruple the electricity generated in 2021.

During the year, we continued to pursue renewables growth in China. We announced the acquisitions of two quality renewables portfolios in November 2022. Beijing Energy Sembcorp, our 49%-owned entity, together with Beijing Energy International Investment will acquire the entire equity interest in three operational solar projects with a total capacity of 795MW. These solar assets are located in the south of Hebei Province, one of China's main energy demand centres. This acquisition increases the solar weightage of our China renewables portfolio, thereby reducing yield and earnings variability.

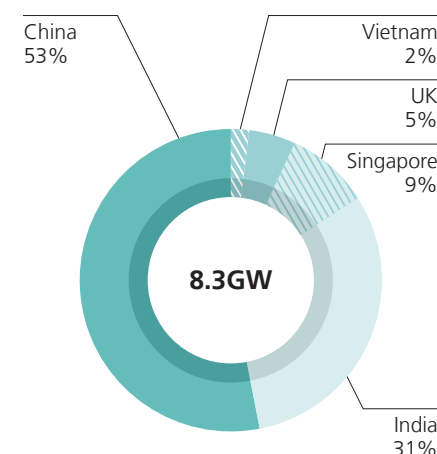
Operational Indicators⁶

	2022	2021
Gross renewables capacity (MW)	8,293	3,598
– Wind	5,553	2,599
– Solar	2,031	875
– Energy storage ⁷	709	124
Gross renewables capacity (MW)	8,293	3,598
– Installed	6,832	2,751
– Under development	1,461	847

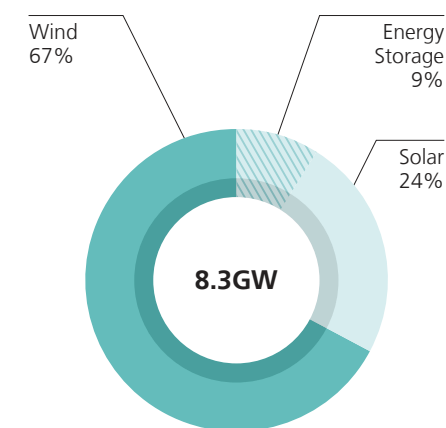
⁶ Figures refer to total gross renewables capacity as at December 31, 2022, and December 31, 2021. Including acquisitions pending completion, the Group has 9.8GW of gross renewables capacity installed and under development as at December 31, 2022

⁷ Energy storage capacity is in megawatt-hour (MWh)

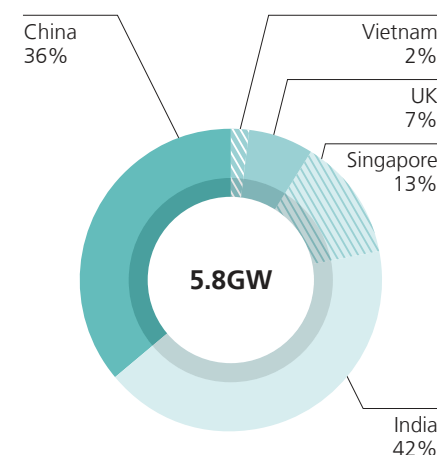
Gross Renewables Capacity by Country



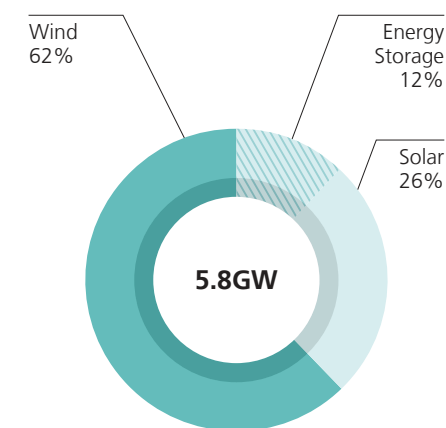
Gross Renewables Capacity by Technology Type



Attributable Renewables Capacity by Country



Attributable Renewables Capacity by Technology Type



As at December 31, 2022

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The assets are contracted to the State Grid Corporation of China and will contribute to earnings immediately upon completion of the acquisition.

We also partnered with Wuling Power, an affiliated company of State Power Investment Corporation (SPIC) to acquire a 45.3% stake in Xingling New Energy. Wuling Power holds the remaining 54.7% interest in Xingling New Energy. SPIC is the world's largest renewables player with over 80GW of installed wind and solar capacity and this is SPIC's first renewable energy joint venture with a foreign investor. Xingling New Energy completed the acquisition of 792MW of the 892MW

portfolio from Wuling Power in December 2022, and the remaining 100MW is expected to be completed in the first half of 2023. These projects, which are located in Central China, will further diversify our portfolio in terms of geography.

These acquisitions are in line with our strategy to leverage existing relationships and partnerships and scale up our renewables footprint in China. Our presence in renewables across Asia allows us to add value to the operations and management of these portfolios. Through these platforms, we will work with our partners to pursue more renewable energy projects.

Growing presence in India

Operational capacity as of end 2022 was 1.7GW and electricity generated was 3.9TWh, similar to 2021. While the market for renewable energy projects in India remained competitive, we were able to secure 195MW of renewables contracts during the year.

We also announced the acquisition of Vector Green in November 2022, adding 583MW of renewable assets to the portfolio. Vector Green is an independent power producer with renewable power generation assets across 13 Indian states. Its portfolio includes 495MW of solar capacity and 24MW of wind capacity in operation,

and a further 64MW of solar projects under development. This acquisition brings significant utility-scale solar capacity to our India business, which complements our existing wind portfolio. The acquisition, which was completed in January 2023, broadens and deepens our renewable energy presence across the states in India and positions us well for more green growth in the country. With our in-house technical capabilities and expertise, we will focus on improving the operations and maintenance of these assets, driving generation and enhancing the financing structure to lift returns of the portfolio. Renewables capacity in India is now at 3.1GW, with 2.3GW of installed capacity and 850MW under development. Our portfolio resource mix is more balanced with 2.0GW of wind capacity and 1.1GW of solar capacity, compared to 1.9GW of wind capacity and 465MW of solar capacity a year ago.

Strengthening energy capabilities in Southeast Asia

Operational solar capacity in Singapore as of end 2022 was 310MWp, compared to 240MWp as of end 2021. Electricity generated increased to 331GWh from 205GWh in 2021. In 2022, we reached a new milestone for our solar portfolio with total capacity of 551MWp installed and under development. This gross contracted capacity fulfills a third of Singapore's 2025 solar target of 1.5GWp, cementing Sembcorp's position as the leading renewables player in Singapore. Contracts secured during the year included the SolarNova 7 project. The SolarNova programme is a whole-of-government effort led by Singapore's Economic Development Board and Housing Development Board to accelerate the deployment of solar PV systems in Singapore. During the year,



Sembcorp's solar farm in Tuas, Singapore's first solar farm with an integrated rainwater harvesting system



One of Sembcorp's wind energy assets in Henan, China

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Sembcorp is one of Asia's largest ESS operators with a battery storage portfolio of 501MW / 709MWh in Singapore and the UK

we also commissioned Singapore's first solar farm with an integrated rainwater harvesting system. Tapping Singapore's rainy weather, the facility is expected to collect and treat up to 170,000 cubic metres of rainwater annually to cool and clean solar panels for optimum performance.

Notably, we strengthened our renewable energy capabilities in Singapore, with the completion of Southeast Asia's largest ESS in Singapore. In June 2022, Sembcorp was appointed by the Energy Market Authority to build, own and operate an ESS on Jurong Island. The facility was commissioned in six months. With a maximum storage capacity of 285MWh, the ESS is the fastest in the world of its size to be deployed. This is a strong demonstration of our development capabilities in the energy storage segment. We expect

increasing demand for ESS, an essential technology, to support renewables deployment in the region.

In Vietnam, solar capacity installed and under development grew year-on-year from 108MWp to 251MWp as of end 2022. This includes the acquisition of a 49% stake in Bamboo Capital Group GAIA, Sembcorp's first utility-scale acquisition in Vietnam, with 141MWp of operational solar capacity located in Thanh Hoa district, Long An Province. We believe that our deep experience in Vietnam will put us in good stead to capitalise on opportunities when they arise.

Supporting energy transition in the UK

In the UK, a further 50MWh of our battery energy storage portfolio was commissioned in August 2022,

bringing our operational battery fleet to 120MWh. In addition, as part of a planned 360MW battery ESS to be constructed on Teesside, we commenced development on the first tranche of 150MW / 300MWh of battery storage, which has secured a 15-year capacity market contract starting in October 2025. These battery ESS are expected to be completed in the first half of 2024, which will further enhance our presence in the energy storage segment in the UK.

Battery ESS have the ability to supply power and other services to the national grid within a few milliseconds, providing a secure and stable energy system that will aid the UK's low-carbon transition. As a result of increased demand for frequency services, particularly over summer, we were able to capture higher rates for these services, translating to higher profitability.

Forging Partnerships for Decarbonisation Goals

In October 2022, we entered into strategic partnerships with the Japanese government and various corporations to progress hydrogen and other decarbonisation initiatives. The hydrogen supply chain will be the focal point across the partnerships and signifies an important focus for us as we drive towards decarbonisation.

These partnerships include a Memorandum of Understanding (MOU) with Japan Bank for International Cooperation to support projects developed by Sembcorp and Japanese companies, with a focus on green hydrogen and ammonia; an MOU with Sojitz Corporation to partner on new renewable energy projects, including green hydrogen production, ESS and carbon-neutral industrial parks in Asia Pacific;

as well as collaboration with IHI Corporation on an integrated green ammonia supply chain. Advancing the MOU with Mitsubishi Corporation and Chiyoda Corporation signed in October 2021, we commenced pre-FEED studies for the development of hydrogen imports via methylcyclohexane, a type of liquid organic hydrogen carrier. These collaborations will enable us to access and leverage Japan's highly advanced technology in hydrogen development and deployment.

As an extension of our commitment towards decarbonisation, we launched Sembcorp's carbon management solutions corporate venture, GoNetZero™ at the 27th United Nations Climate Change Conference (COP27), to support our customers and their corporate climate action plans. GoNetZero™ complements Sembcorp's offering as a leading renewable energy player by providing one-stop access to renewable energy and carbon management

solutions including renewable energy certificates and carbon credits.

Outlook

According to the International Energy Agency, the volatile global energy situation in 2022 has accelerated the growth in renewable energy. Renewable energy is expected to transform the global power mix through 2027 and become the largest source of electricity. The renewables growth is propelled by more ambitious expansionary policies in key markets, partly in response to the energy crisis.

Earnings of the Renewables segment will grow, as a result of contributions from acquisitions announced in 2022, as well as full-year contributions from the ESS in Singapore and the UK. As an established player in the renewables markets in Asia, coupled with our capabilities in ESS, we are well-placed to capitalise on growth opportunities. We will continue to innovate and build on our capabilities in renewable energy to be a leading provider of sustainable solutions.



GoNetZero™ was launched at the Singapore Pavilion at COP27 in Egypt