

Building Sustainability

One of the fastest growing regions globally, Southeast Asia is expected to continue to see strong governmental support for the transition to renewable energy and an increased focus on sustainable solutions. Climate change is a key force shaping the world in which we live. JC&C is committed to doing our part to promote climate action and build sustainable business practices within our Southeast Asian portfolio.

Future growth led by renewables

Vietnam has been one of Southeast Asia's most vibrant markets in attracting investment in renewable energy. The country's tropical climate and diverse natural topography offers an abundance of renewable energy generation opportunities in segments such as solar, hydro and wind power. As at November 2021, Vietnam's installed capacity was about 75 gigawatts ("GW") and this is expected to double by 2030 as renewable energy plays a more important role in the country's power generation system going forward.



Since 2010, Refrigeration Electrical Engineering Corporation ("REE") has been participating in the investment and development of renewable, clean, and sustainable infrastructure and solutions. With its reputation, access and track record, REE is well-positioned to capitalise on the government mandate to increase the country's renewable energy capacity.

Currently, REE has interests in solar, hydro and wind energy, generating a combined equity-adjusted power generation capacity of over 700 megawatts ("MW"). REE aims to continue growing its renewables portfolio.

Renewable Energy	Equity-adjusted Generation Capacity (2021)
Hydro	488MW
Solar	138MW
Wind	88MW
Total	714MW

REE is the largest investor in rooftop solar in Vietnam. Its investment in solar increased from under 20MW to almost 140MW from 2019 to 2021.

Today, only about 4GW of wind power capacity has been installed in Vietnam. Located in a monsoonal climate with a 3,000 km coastline, Vietnam has great potential for wind energy. Tapping this growth potential, REE brought three wind plants with a total designed capacity of over 100MW to commercial operation in 2021. During the year, REE's new hydro project under one of its subsidiaries also achieved commercial operation with a capacity of over 220MW.



Decarbonising operations

Recognising its role in Indonesia's shift to a more sustainable future and low-carbon economy, Astra is currently developing its renewable energy roadmap to support the nation's energy transition. Presently, Astra has committed to installing rooftop solar at its manufacturing facilities. As part of efforts to decarbonise, the rooftop solar system will be used to partially power Astra's manufacturing activities going forward. This should provide over 60MW by 2024.

Astra is also looking to invest in hydro, wind and other solar projects in Indonesia, as well as collaborate with local partners to distribute and install solar energy. Astra is actively exploring opportunities as they

arise and is keen to continue supporting Indonesia's energy transition.

In 2021, Cycle & Carriage Bintang in Malaysia installed rooftop solar at two of its facilities, with plans for four more installations in 2022. Cycle & Carriage Singapore ("CCS") also supported the country's Green Plan with various collaborations. They include providing electric vehicles ("EVs") for the last-mile parcel deliveries of retail giant IKEA and facilitating DHL Express in expanding its fleet of sustainable delivery vehicles. CCS is also enabling small and medium enterprises ("SMEs") to experiment with EVs by leasing vans for trials and test-bedding, helping SMEs to adopt electric and reduce costs.

Green solutions for businesses

Some waste production is an inevitable byproduct of industry operations. However, with responsible waste management, hazardous and non-hazardous industrial waste can be converted to energy. This minimises landfills and reduces greenhouse gas emissions.

Siam City Cement ("SCCC") is supporting this movement through its green business arm, Ecocycle. Through this waste management solution, SCCC utilises the waste as

raw material and alternative fuels for its cement production in Thailand, Vietnam, Sri Lanka and Cambodia. This lowers production costs on top of reducing its carbon footprint.

Ecocycle offers sustainable solutions to a wide range of industries in both Southeast Asia and South Asia. It is one of Thailand's leading waste management providers, serving key sectors such as oil and gas, petrochemical and power generation.