Capgemini

WORLD ENERGY MARKETS OBSERVATORY

IN COLLABORATION WITH: vaasaETT Enerdata DE PARDIEU BROCAS MAFFEI AVOCATS

23rd Edition 2021

South East Asia

Consumption and Retail Prices / Residential Market / B2B Market

Nupur Sinha
Ankita Das

Electricity generation in most Southeast Asian countries has been reduced due to the impact of COVID-19

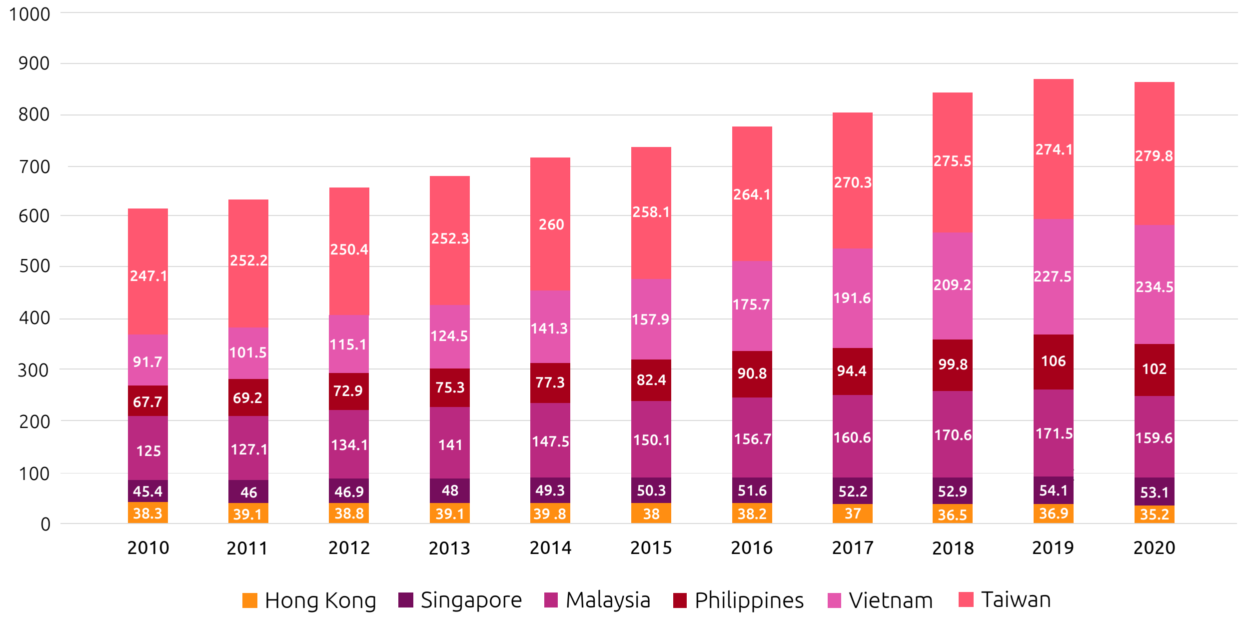
Southeast Asia is one of the fastest-growing regions in the world in terms of electricity demand. This is driven by the growing ownership of household appliances and air conditioners, as well as increasing consumption of goods and services.

- The economic impact of the COVID-19 pandemic in Southeast Asia has resulted in reduced electricity demand in Hong Kong, Singapore, Malaysia, and the Philippines.
- Vietnam and Taiwan increased their electricity generation in 2020.
- Southeast Asian countries have put forward ambitious regional development projects to support economic growth and the integration of higher shares of renewable energy in their electricity generation mix.

- **Vietnam's electricity generation increased by 3.1% in 2020 compared to 2019.**
    - That increase is low compared to the 8.7% increase in electricity generation from 2018 to 2019. The low percentage increase can be attributed to the impact of COVID-19.
- **Electricity generation in Taiwan increased by 2.1% in 2020 compared to 2019.**
    - Taiwan was the only region in Southeast Asia that experienced a decrease in electricity generation in 2019 compared to 2018.

FIGURE 1

SEA~ Electricity generation by country (terawatt hours), 2010-2020



Source: BP Statistical Review of World Energy, 2021

Link: https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2021-full-report.pdf

Most of the Southeast Asian countries are focusing on creating a more competitive electricity market

Electricity market deregulation initiatives are underway in Vietnam, Singapore, and the Philippines which focus majorly on opening up the market for competition ns green energy.

- **Vietnam:** All segments of the electricity sector (generation, transmission and distribution) continue to be dominated by the state utility Vietnam Electricity (EVN) and its subsidiaries. However, power purchase agreement (PPA) are playing an increasingly important role in introducing private sector participants into the power sector and creating a more competitive electricity market.

- In 2017, Vietnam announced the development of a new pilot program that would allow commercial and industrial organizations to access renewable energy in the form of a direct power purchase agreement (PPA). In 2020, Prime Minister Nguyen Xuan Phuc reportedly asked for draft rules for implementation of this long-awaited PPA program.

    - The pilot program is a first-of-its-kind in Vietnam, which would expand the options for companies who are looking to procure renewable power to reach their goals in the country. Until now, purchasing energy attribute certificates (EACs), installing onsite solar and direct project investment were the only avenues to green power procurement in Vietnam. The new PPA model would, in theory, be a win-win for companies and the country.

    - For companies, it will increase competition in the wholesale energy market and be a direct avenue to satisfying renewable procurement targets in a historically restricted market.

    - Although energy market deregulation in Vietnam was already underway, this corporate pressure is directly shaping the programs.

- **Singapore:** Since 2001, Energy Market Authority (EMA) has progressively opened the retail electricity market to competition to allow business consumers more options to manage their energy cost. Instead of buying from SP Group at the regulated tariff, consumers can choose to buy from a retailer at a price plan that best meet their needs.. Since 1 November 2018, the Open Electricity Market was extended to all consumers across Singapore by zones. Close to half of all residential consumers have switched to buying electricity from a retailer since the electricity market in Singapore was fully liberalized two years ago, the Energy Market Authority said on May 2021.

- **Philippines:** The Philippine power sector underwent significant privatization following the passage of the Electric Power Industry Reform Act of 2001 ("EPIRA"), which now provides the principal regulatory framework for the Philippine electricity industry. It provides a good example of a developing economy whose power sector has transitioned (in the relatively recent past) from a largely state-operated model to a market-oriented model.

- **Taiwan:** Taiwan has a long history of state-owned power supply – Taipower was established in May 1946. The electricity sector has been regulated by Taipower for several decades, and the company's position as a monopoly maintains relatively low prices. In 2017, Taiwan's Electricity Act mainly focused on opening up the market for green energy. It was amended to allow the sale of renewable energy power direct to end users. Prior to the liberalisation of the energy market, only Taiwan Power Company (TPC) was permitted to be an electricity retailer. The CPPA market has seen significant growth since 2017, as underlined by the recent signing of the world's largest (920 MW) CPPA between Ørsted and Taiwan Semiconductor Manufacturing Company (TSMC) in July 2020.

- **Hong Kong:** Hong Kong has resisted the global trend toward electricity market restructuring and deregulation, and maintains two vertically integrated utility monopolies. However, the regulated market achieves impressive performances with relatively low tariffs, rare electricity disruptions, and quick service restoration following outages.

- **Malaysia:** The energy market in Malaysia and its participants are subject to a great deal of legislation governing the supply of electricity generally and the mining of energy resources. There are multiple regulatory authorities in Malaysia overseeing the various segments of the energy sector.

About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of 290,000 team members in nearly 50 countries. With its strong 50 year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2020 global revenues of €16 billion.

Visit us at

www.capgemini.com/WEMO