

Philippines: Electric Power Industry

- Summary: High dependence on coal, plans to introduce nuclear power to decarbonize
 - The Philippines is highly dependent on coal for power generation. Amid calls for decarbonization, the Philippine government has frozen the approval of new coal-fired power plants and encourage the early decommissioning of existing plants. The Philippines is moving toward the use of nuclear power as an alternative power source to coal.
- Installed capacity, power generation
 - The Philippines' installed power generation capacity is growing steadily; by the end of 2022, it was 5% higher than at the end of the previous year, continuing to reach record highs (Figure 1).
 - Electricity generation and consumption also maintained an increasing trend, except in 2020 at the beginning of the Corona epidemic. Both generation and consumption increased by about 5% year over year in 2022, exceeding the levels of 2019 before the corona disaster (Figure 2).

Figure 1: Power generation installed capacity

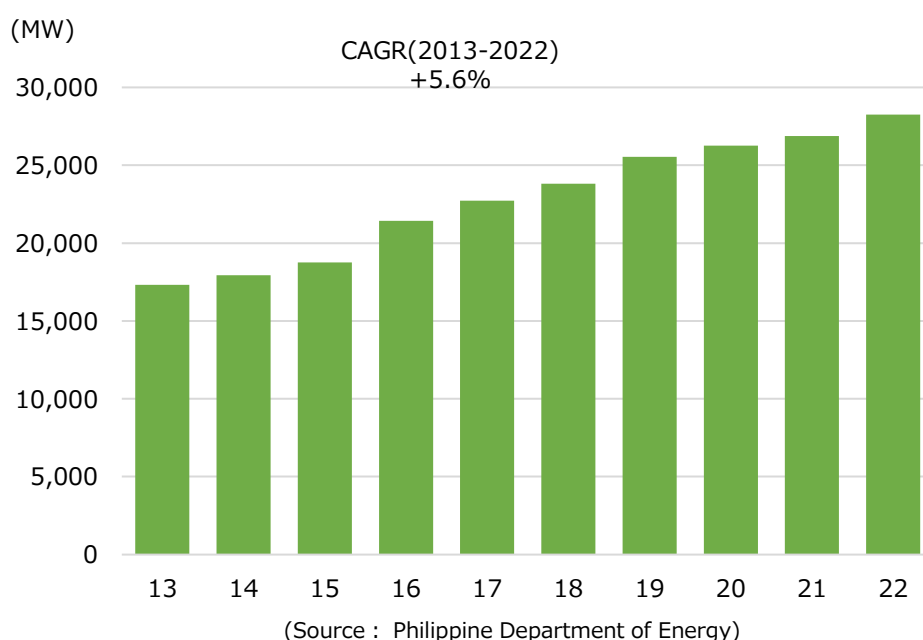
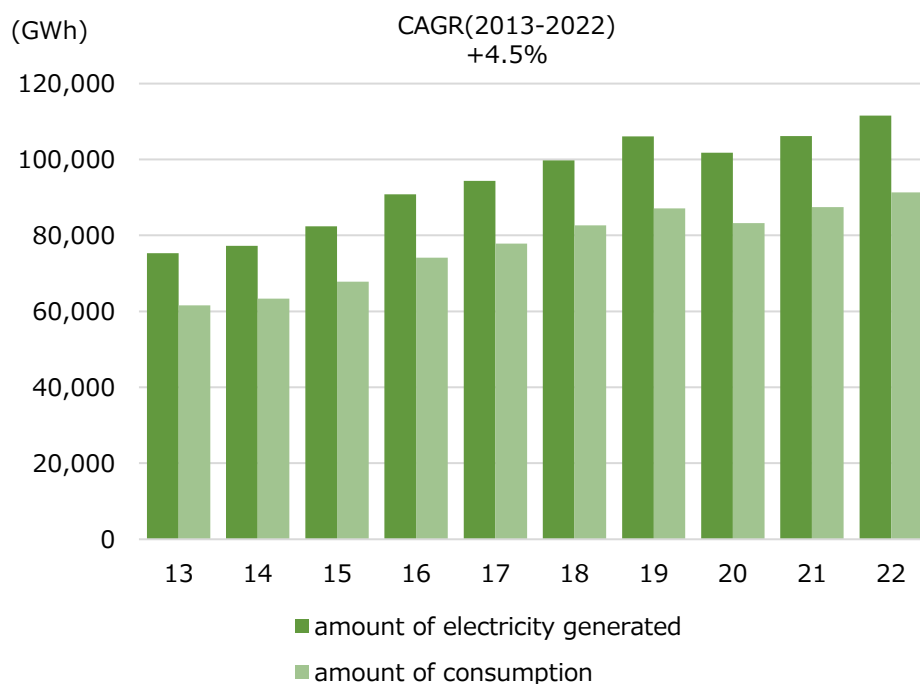


Figure 2: Electricity generation and consumption



■ Electricity Consumption by use

- The electricity consumption composition ratio expanded for residential use between 2020 and 2021, the year of the Corona disaster, while commercial use shrank. In 2022, when the Corona regulations were significantly relaxed, the share of residential use shrank, while commercial use expanded (Figure 3).

Figure 3: Electricity Consumption by use

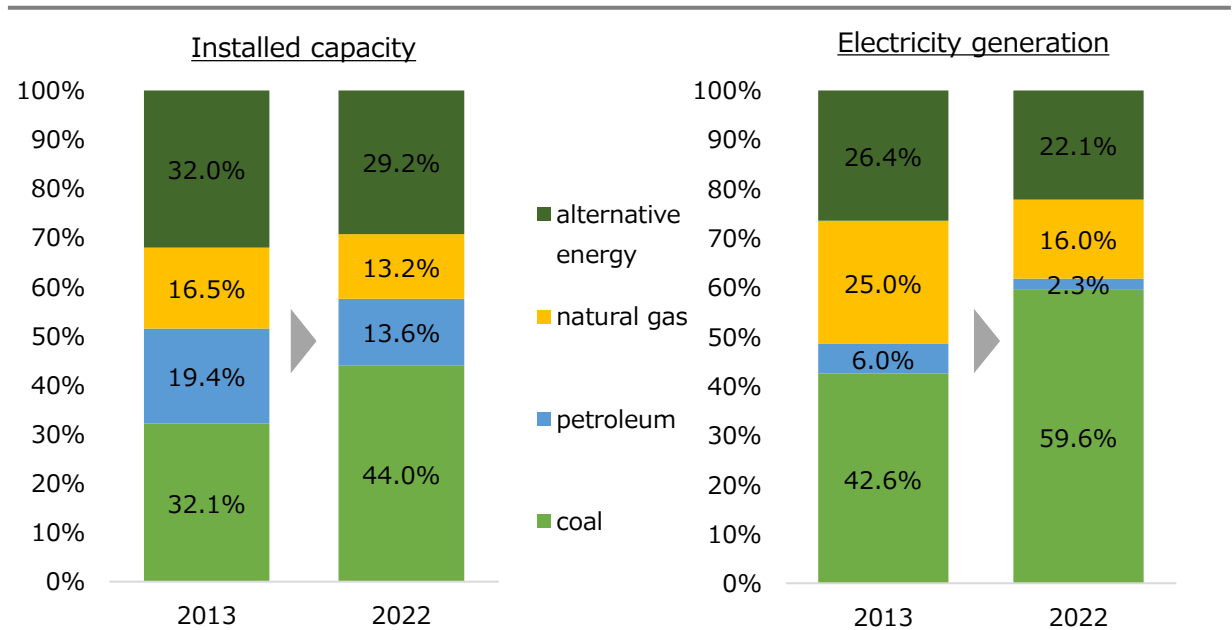
	Residential	Commercial	Industrial	Others
2018	34.2%	29.1%	33.4%	3.3%
2019	35.1%	29.2%	32.4%	3.3%
2020	41.2%	24.9%	30.7%	3.2%
2021	40.0%	24.2%	31.6%	4.2%
2022	38.7%	26.6%	31.6%	3.1%

(Source : Philippine Department of Energy)

■ Electricity Energy Composition

- The share of coal in the power source composition is expanding both on a generation capacity basis and on a generation volume basis. On a generation volume basis, the ratio expanded from over 40% in 2013 to nearly 60% in 2022 (Figure 4). Under these circumstances, the Philippine government has frozen the approval of new coal-fired power plants from 2020 as part of its efforts to decarbonize the country. At the same time, the Philippine government is encouraging the early decommissioning of existing coal-fired power plants.
- The government intends to utilize nuclear power as an alternative energy source for power generation in place of coal. The Philippine Energy Plan for 2023-2050 (PEP 2023-2050), which is currently being formulated, includes plans to introduce nuclear power generation. In November 2023, the Philippine government concluded an agreement with the U.S. government on the civilian use of nuclear energy. The government aims to introduce nuclear power generation with technical and other cooperation from the United States.

Figure 4: Electricity Energy Composition (2013 vs. 2022)



(Source : Philippine Department of Energy)

(Ashu Research: December 2023)