

Chapter 12

Myanmar Country Report

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Chapter 12

Myanmar Country Report

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1. Background

The coronavirus disease (COVID-19) pandemic has brought with it economic and social problems. Vaccines will be available soon, but Myanmar will not be safe immediately. With the cessation of all international trade, large, small, and medium-sized enterprises have reduced their operations and trade has declined significantly. Businesses are adapting their operations and management to the new normal, but the virus has taken a toll on the economy and reversed development in just a few months. Declining demand has hit manufacturing and the jobs it created. This chapter uses the energy outlook business-as-usual (BAU) scenario to assess the pandemic's impact on energy demand. The COVID-19 scenario estimates how much energy demand is expected to decline in 2020 and how it will recover after 2020.

2. Macro Assumptions of the COVID-19 Scenario

The average annual gross domestic product (GDP) growth rate decreases from 6.9% in BAU to 2.0% in the COVID-19 scenario in 2020, returning to 5.7% in 2021, 6.2% in 2022, and 6.4% in 2023 (Table 12.1).

The average annual GDP growth rate in 2023–2030 is marginally higher than in BAU. In 2030–2040, the economic growth rate is 5.7 % and in 2040–2050 5.3%.

Table 12.1. Assumptions of Gross Domestic Product Annual Growth Rates, Business-as-Usual vs. COVID-19 Scenarios, 2018–2050

	2018	2019	2020	2021	2022	2023	2018–2023	2023–2030	2030–2040	2040–2050
BAU	7.00%	7.00%	6.90%	6.90%	6.90%	6.90%	6.90%	6.4%	5.5%	5.00%
COVID-19	6.40%	6.50%	2.00%	5.70%	6.20%	6.40%	5.30%	6.5%	5.7%	5.30%

BAU = business as usual, COVID-19 = coronavirus disease.

Source: Author, based on [International Monetary Fund](#) (2020) and [Institute of Energy Economics, Japan](#) (2020).

3. Short-term Impact (2018–2023)

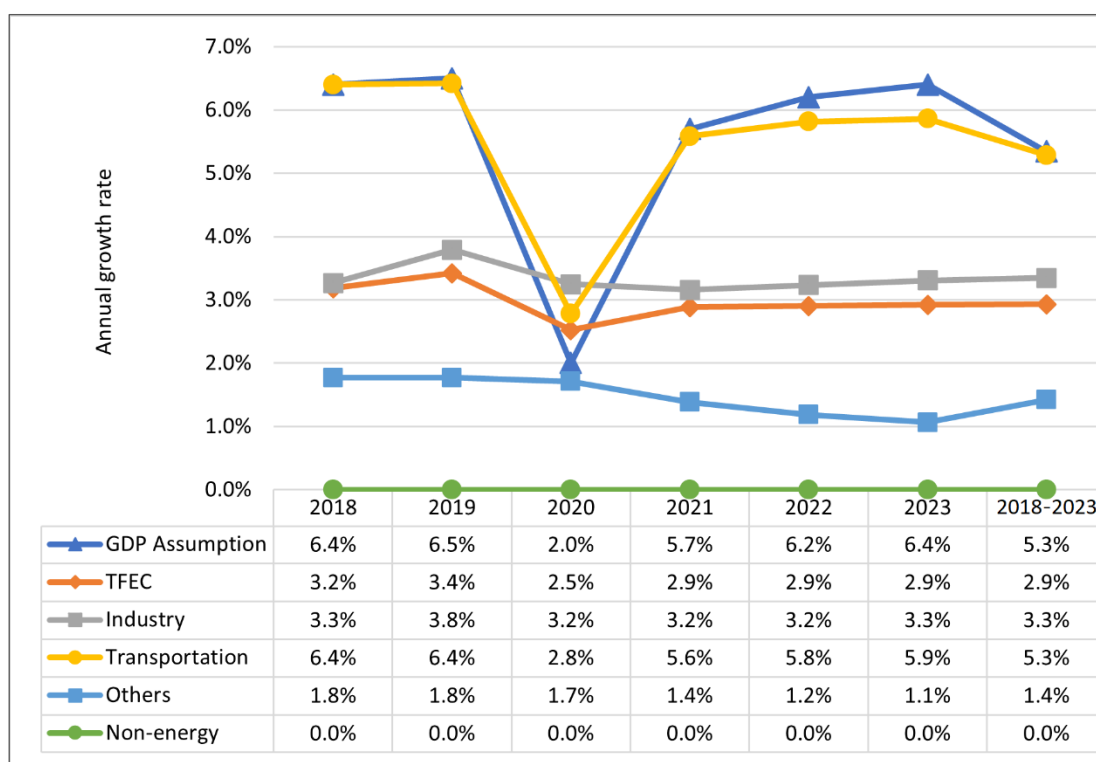
3.1. Final Energy Consumption

In the COVID-19 scenario (Figure 12.1), total final energy consumption (TFEC) steadily declines by an average of 2.9% per year in 2018–2023 (3.2% in BAU) because the pandemic

reduces the TFEC growth rate from 3.2% in BAU to 2.5% in 2020.

The transport energy consumption growth rate falls sharply to 2.8% in 2020 (6.5% in BAU) because people are required to work from home and is 5.3% per year in 2018–2030 (6.54% in BAU). Industry grows by 3.2% (3.35% in BAU) in 2020 and by 3.3% per year (3.45% in BAU) in 2018–2023. ‘Others’ (residential, commercial, agricultural sectors, amongst others) are the lowest at 1.7% in 2020 and 1.4% per year in 2018–2023 (4.59% in BAU), but not much different than the 1.8% in 2019 (Figure 12.1).

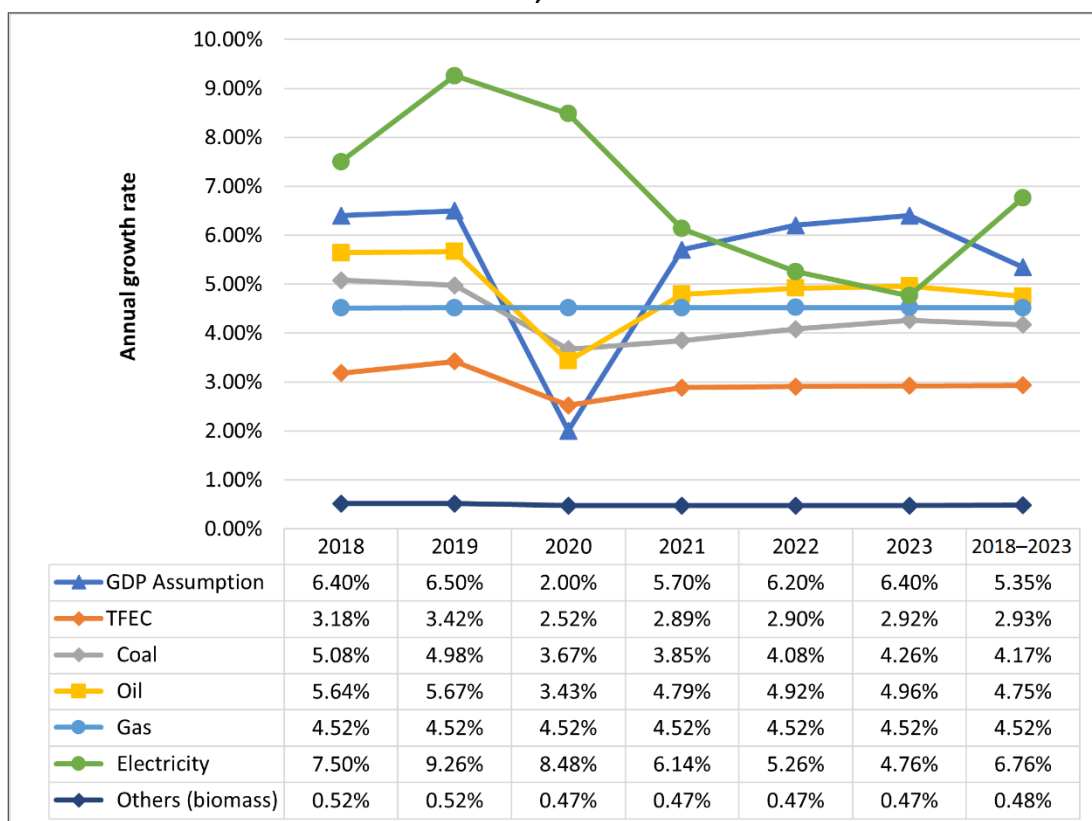
Figure 12.1. Annual Growth Rate of Final Energy Consumption, by Sector, COVID-19 Scenario, 2018–2023



COVID-19 = coronavirus disease, GDP = gross domestic product, TFEC = total final energy consumption.
Source: Author.

Coal energy consumption grows by 3.67% (5.15% in BAU) in 2020 and by 4.17% per year in 2018–2023 (5.11% in BAU). Electricity consumption grows by 8.48% (7.6% in BAU) in 2020, slightly decreasing to 6.76% (7.17% in BAU) in 2018–2023. In 2020, oil consumption significantly decreases by 3.43% (5.24% in BAU) and continues to decline by 4.75% per year in 2018–2023 (5.34% in BAU). Natural gas consumption growth rates are the same in the COVID-19 and BAU scenarios. ‘Others’ (mostly biomass) are hardly affected by COVID-19 because of the continuous shift from biomass to conventional fuels such as oil and electricity even in the pandemic (Figure 12.2).

Figure 12.2. Annual Growth Rate of Final Energy Consumption, by Fuel, COVID-19 Scenario, 2018–2023

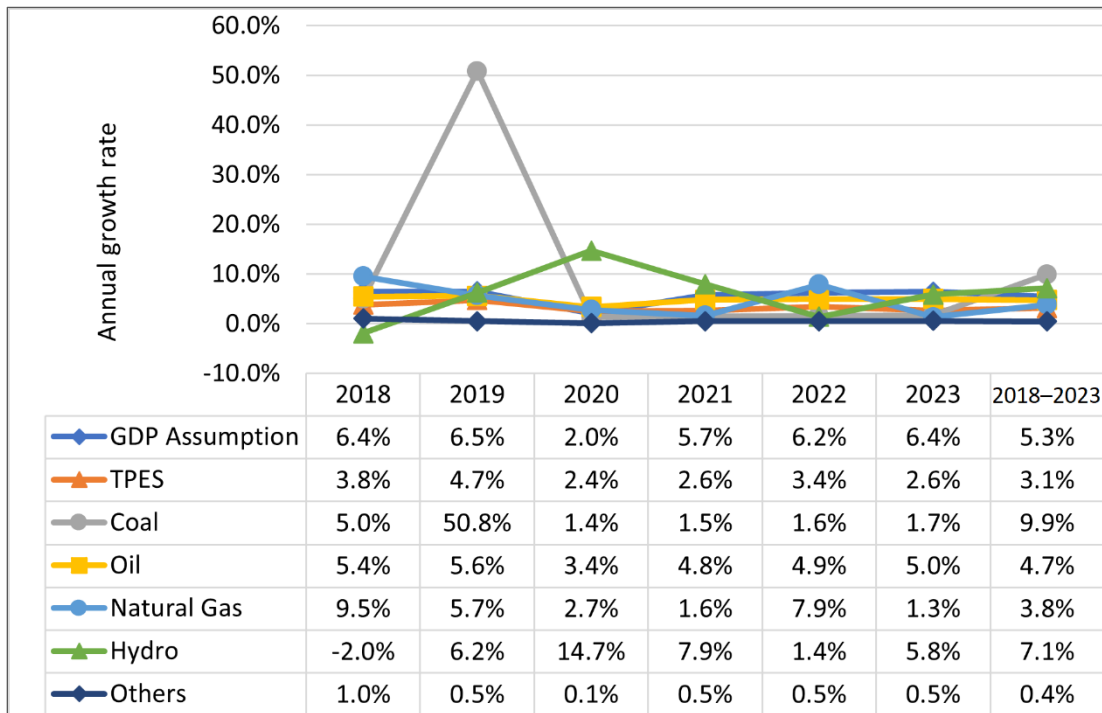


COVID-19 = coronavirus disease, GDP = gross domestic product, TFEC = total final energy consumption.
Source: Author.

3.2. Primary Energy Supply

In the COVID-19 scenario, total primary energy supply (TPES) steadily decreases by 2.4% (2.75% in BAU) in 2020 and continues to do so by 3.1% per year in 2018–2023 (3.41% in BAU) (Figure 12.3). In 2020, coal energy supply grows by 1.4% (1.93% in BAU) and decreases slightly by 0.4% in 2018–2023. Coal spiked in 2019 because a new coal power plant opened in Myanmar. Oil consumption, however, decreases by 3.4% (5.17% in BAU) in 2020. In 2018–2023, coal declines by 4.7% (5.31% in BAU). Natural gas grows by 2.7% in 2020 (1.97% in BAU) and by 3.8% per year in 2018–2023 (4.05% in BAU). ‘Others’ (mostly biomass) decrease by 0.1% in 2020 (0.48% in BAU) and by 0.4% per year in 2018–2023 (0.5% in BAU).

Figure 12.3. Annual Growth Rate of Primary Energy Supply, by Source, COVID-19 Scenario, 2018–2023

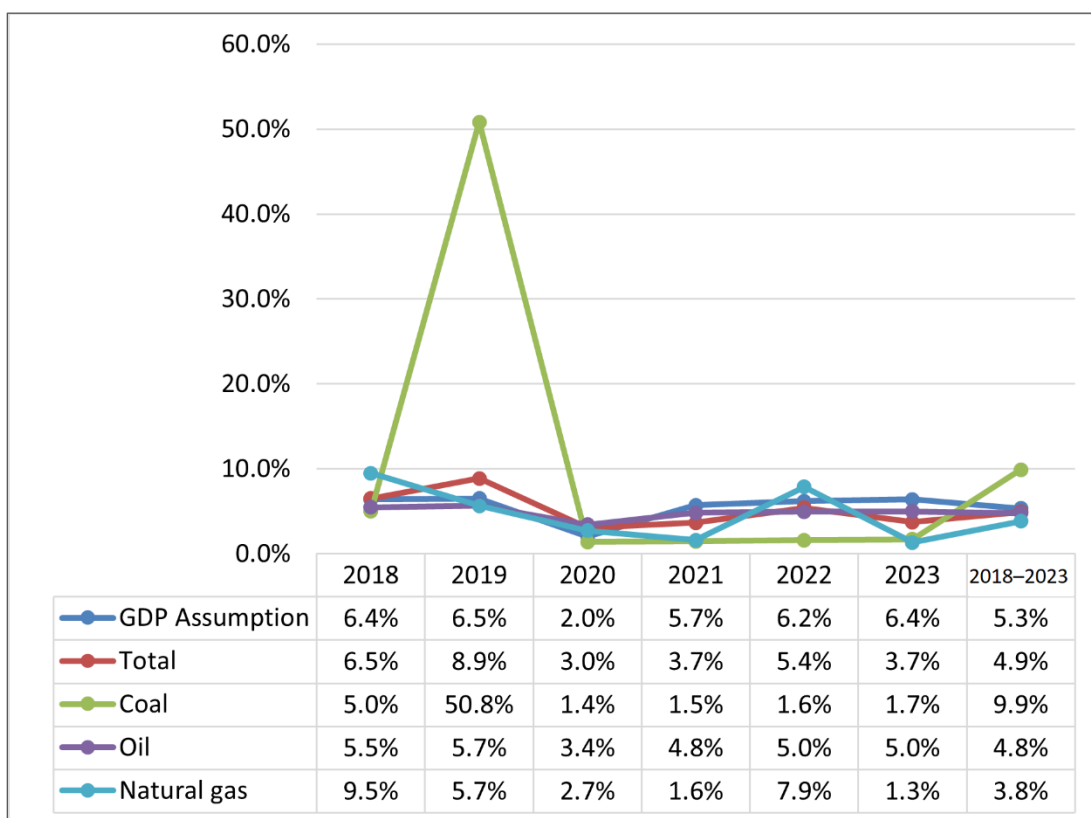


COVID-19 = coronavirus disease, GDP = gross domestic product, TPES = total primary energy supply.
Source: Author.

3.3. CO₂ Emissions

In the COVID-19 scenario, greenhouse gas (GHG) emissions decrease by 3.0% in 2020 (4.03% in BAU) and steadily decrease by 4.9% per year in 2018–2023 (5.39% in BAU) (Figure 12.4). Oil-related GHG emissions decrease by 3.4% in 2020 (5.20% in BAU) and by 4.8% per year in 2018–2023 (5.35% in BAU). Natural gas and coal decrease, too, but not as much as oil. Coal emissions continue to decline by 1.4% in 2020 (1.93% in BAU) and by 9.9% in 2018–2023 (10.29% in BAU). Coal emissions spiked in 2019 for the same reason that TPES did. Natural gas emissions decrease slightly by 3.8% in 2018–2030 (4.05% in BAU) but grow steadily by 2.7% in 2020 (1.97% in BAU). CO₂ emissions decreased mainly because of the pandemic.

Figure 12.4. CO₂ Emissions, by Source, COVID-19 Scenario, 2018–2023



COVID-19 = coronavirus disease, GDP = gross domestic product.
Source: Author.

4. Long-term Impact (2023–2050)

4.1. Final Energy Consumption

In the COVID-19 scenario, TFEFC increases by an average growth rate of 2.84% per year in 2017–2050 (2.89% in BAU) because the economy recovers after the pandemic and grows by 5.7% (5.79% in BAU) (Table 12.2).

Table 12.2. Gross Domestic Product and Total Final Energy Consumption, Business-as-Usual vs. COVID-19 Scenarios, 2017–2050

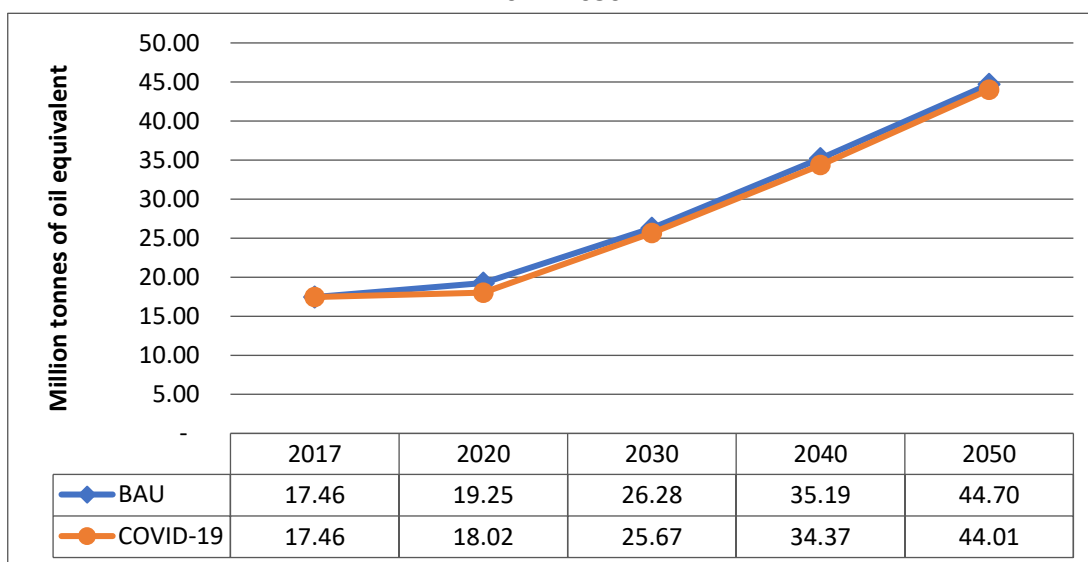
		2017	2023	2030	2040	2050	AAGR 2017–2050
GDP (constant US\$ billion, 2010)	BAU	79.50	97.29	183.29	312.67	509.31	5.79%
	COVID-19	79.50	91.88	170.54	295.75	495.69	5.70%
	COVID-19 vs. BAU	0.00%	-5.96%	-6.96%	-5.41%	-2.67%	-0.09%
TFEC (Mtoe)	BAU	17.46	19.25	26.28	35.19	44.70	2.89%
	COVID-19	17.46	19.10	25.67	34.37	44.01	2.84%
	COVID-19 vs. BAU	0.00%	-0.77%	-2.37%	-2.39%	-1.56%	-0.05%

AAGR = average annual growth rate, BAU = business as usual, COVID-19 = coronavirus disease, GDP = gross domestic product, Mtoe = million tonnes of oil equivalent, TFEC = total final energy consumption.

Source: Author.

The above calculation results show that TFEC in the COVID-19 scenario cannot catch up with TFEC in BAU by 2050 because GDP in the COVID-19 scenario is lower than in BAU. TFEC in the COVID-19 scenario, however, may catch up with BAU after 2050 because GDP rebounds in 2021–2050 (Figure 12.5).

Figure 12.5. Total Final Energy Consumption, Business-as-Usual vs. COVID-19 Scenarios, 2017–2050



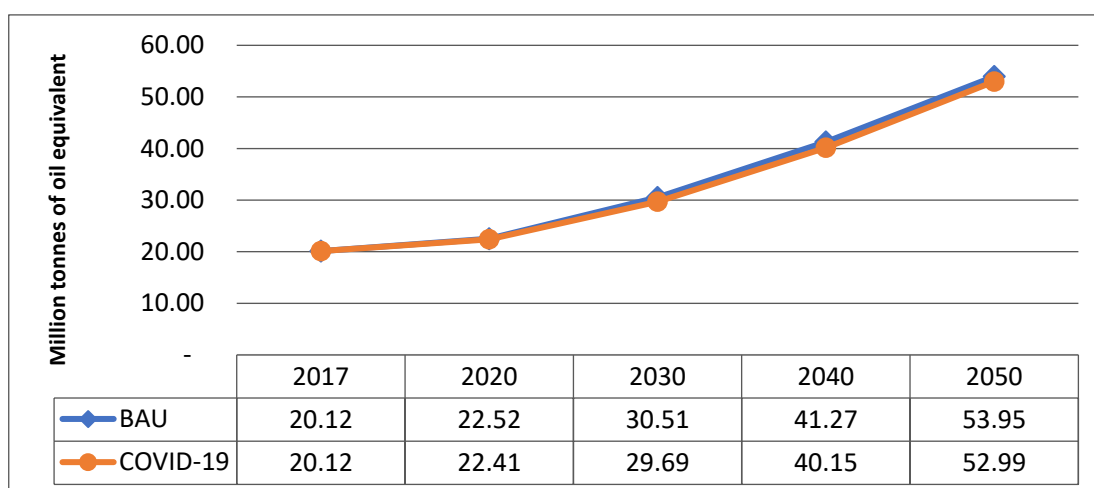
BAU = business as usual, COVID-19 = coronavirus disease, Mtoe = million tonnes of oil equivalent.

Source: Author.

4.2. Primary Energy Supply

In the COVID-19 scenario, TPES increases at an average growth rate of 3.0% per year in 2017–2050. Like TFEC, TPES in the COVID-19 scenario is the same as in BAU after 2030 because of GDP’s strong recovery in 2021–2030 (Figure 12.6).

Figure 12.6. Total Primary Energy Consumption, Business-as-Usual vs. COVID-19 Scenarios, 2017–2050

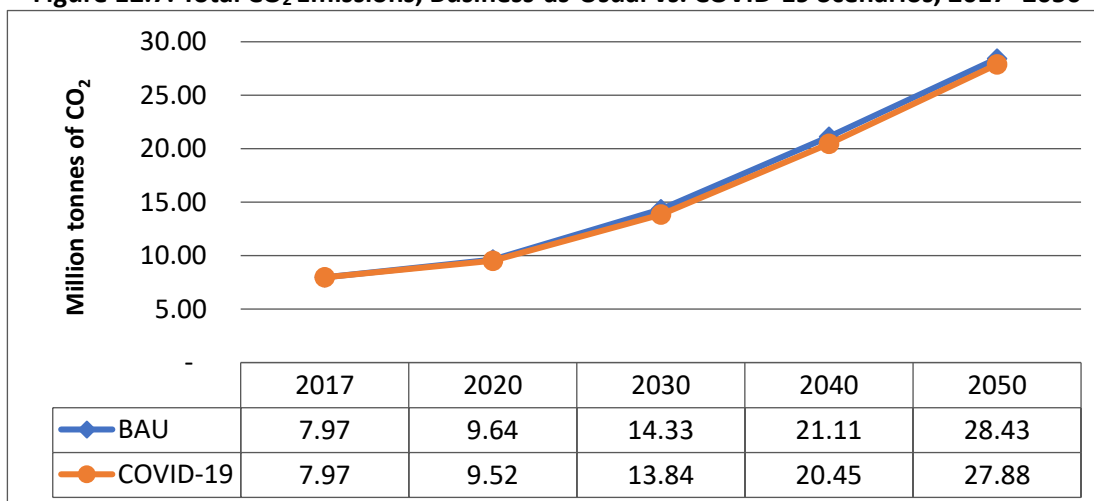


BAU = business as usual, COVID-19 = coronavirus disease, Mtoe = million tonnes of oil equivalent.
Source: Author.

4.3. CO₂ Emissions

In the BAU and COVID-19 scenarios, GHG emissions increase by 3.9% in 2017–2050. CO₂ emissions in the COVID-19 scenario are almost the same as in BAU after 2030 (Figure 12.7).

Figure 12.7. Total CO₂ Emissions, Business-as-Usual vs. COVID-19 Scenarios, 2017–2050



BAU = business as usual, COVID-19 = coronavirus disease.
Source: Author.

5. Implications and Policy Recommendations

Because of the COVID-19 pandemic, the economy slowed; businesses closed down; millions of workers were laid off; consumer confidence in the market plummeted; and GDP, exports, imports, and investment declined. The government is considering economic recovery packages to help revive local economies, restore decent jobs, and promote sustainable environment.

In 2020–2023, COVID-19 has a negative impact on TFEC, TPES, and CO₂ emissions but it differs across sectors. By 2050, TFEC in the COVID-19 scenario matches that in BAU.

Residential energy consumption increases because of restrictions on travel in cities and mandatory work from home, but energy consumption does not decline as a result of falling GDP. One reason is that biomass is the dominant residential energy source and not linked with economic growth. Residential electricity consumption increases, however, because of orders to stay home, which is why electricity consumption is not affected much in 2020.

The commercial sector ceased to exist during the pandemic. Commercial buildings such as shopping malls and restaurants are closed and hotels operate only as quarantine centres. Offices are open only half the time. Many commercial establishments such as restaurants still depend on biomass, however, mitigating the decline in energy consumption.

Transport energy consumption is significantly reduced because of less freight forwarding, fewer family trips during holidays, and suspension of highway operations. Food delivery services by bicycle and motorcycle emerged but only in cities.

While some small and medium-sized factories have been shut down, with negative impacts on energy consumption, the pandemic has not had much impact on industry. Myanmar has no heavy industry, only light industries such as textile and leather, food processing, printing, amongst others.

In the COVID-19 scenario, CO₂ emissions from energy consumption are not significantly reduced compared with BAU because of higher electricity demand in which generation mostly consumes gas. Thus, further mitigation measures need to be continued. The government should focus on providing a source of much-needed revenue and widening fiscal reform to restore financial stability while respecting the environment, biodiversity, and natural capital.

References

Economic Research Institute for ASEAN and East Asia (ERIA) (2019). *Energy Outlook and Energy Saving Potential in Potential in East Asia 2019*. Jakarta: ERIA.