Chapter 2

Energy Outlook of Brunei Darussalam

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CHAPTER 2

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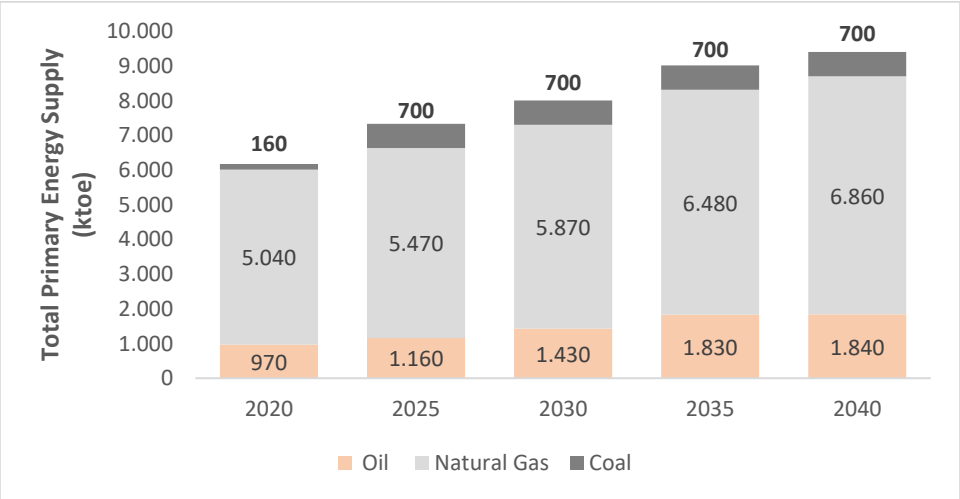
2.1. Total Primary Energy Supply

Under the business–as–usual scenario (BAU), total primary energy supply (TPES) is anticipated to reach 9,390 ktoe by 2040. Natural gas will remain the dominant source of energy supply, accounting for about 73%. This is followed by oil at 20%, and coal at 7%. Coal is expected to provide energy for the new large petrochemical complex in Pulau Muara Besar (Figure 2.1). Brunei Darussalam will continue to become a net energy exporter in the future (ERIA, 2019).

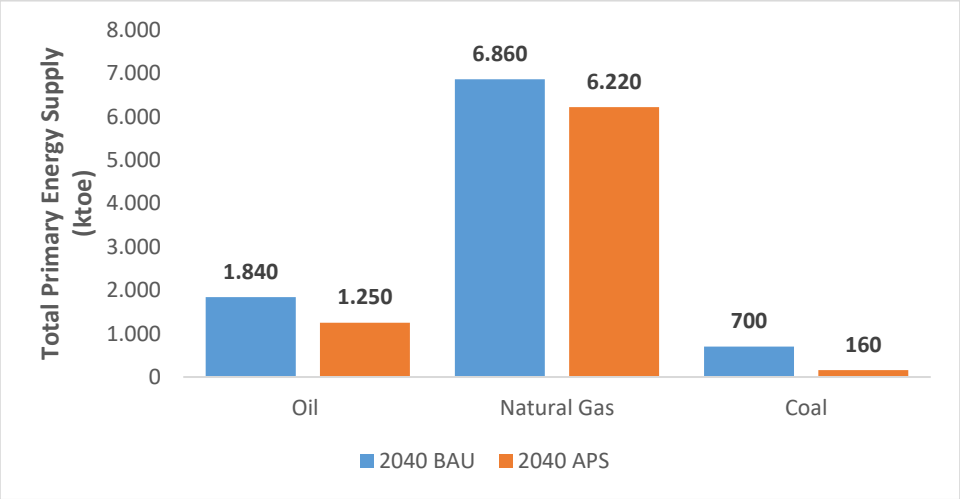
Figure 2.1:Total Primary Energy Supply, by Fuel Type, under BAU (2020–2040)



Source: ERIA (2019).

With the promotion of energy efficiency and conservation and renewable energy supply under the alternative policy scenario (APS), particularly from solar and waste-to-energy sources, alternatively, oil and natural gas will significantly drop in their TPESs against their BAU supplies. Oil supply is expected to decrease by 32.1%, whilst natural gas is expected to drop by 9.3%, and coal by 77.1% (Figure 2.2) (ERIA, 2019).

Figure 2.2: Comparison of TPES between BAU and APS (2040)

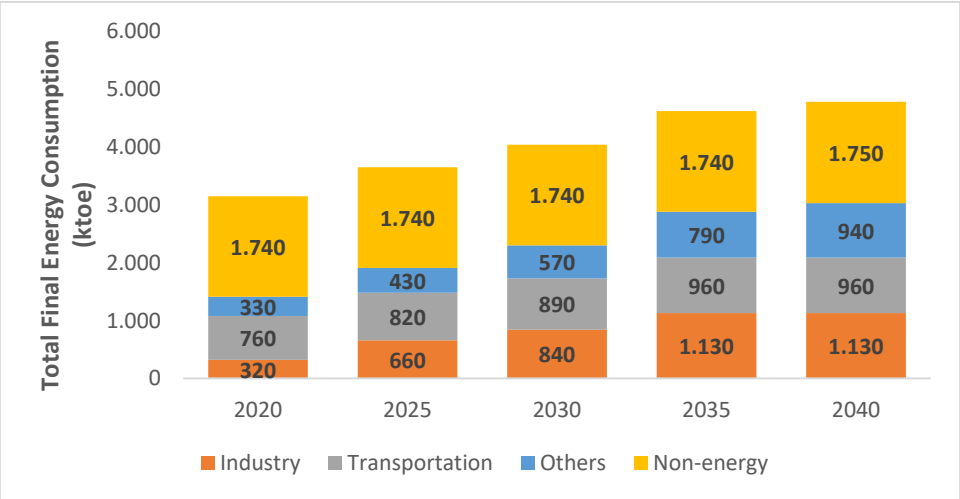


APS = alternative policy scenario, BAU = business-as-usual scenario, TPES = total primary energy supply.
Source: ERIA (2019).

2.2. Total Final Energy Consumption

Total final energy consumption (TFEC) is projected to increase at 2.1% per year during 2020–2040 to 4,780 ktoe under BAU by 2040, with non-energy use being dominant at 37% share. The large increase of non-energy use, from 20 ktoe in 2015 to 1,740 ktoe in 2020, is due to the upcoming large fertiliser plant expected to operate in 2021. The industry sector's consumption will experience the highest growth rate, at 6.5% per year, followed by others (residential and commercial sectors) at 5.4%, and transport at 1.2% (ERIA, 2019) (Figure 2.3).

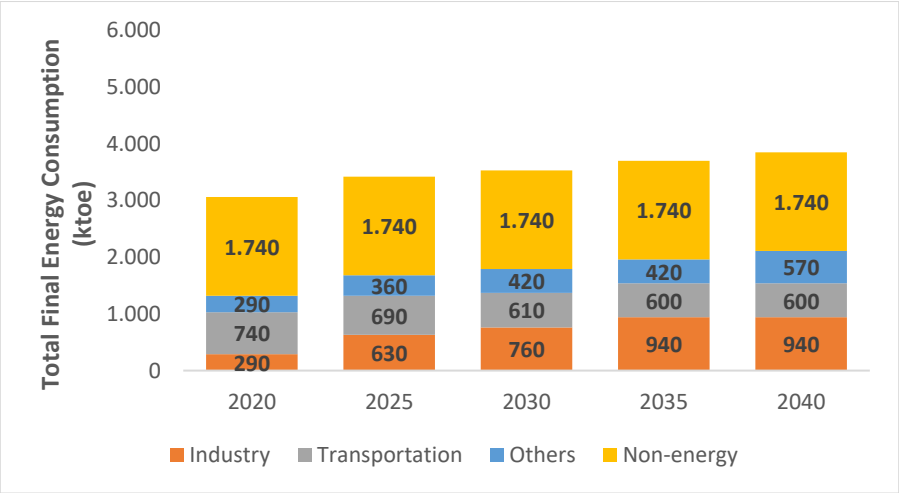
Figure 2.3: Total Final Energy Consumption, by Sector, under BAU (2020–2040)



BAU = business-as-usual scenario.
Source: ERIA (2019).

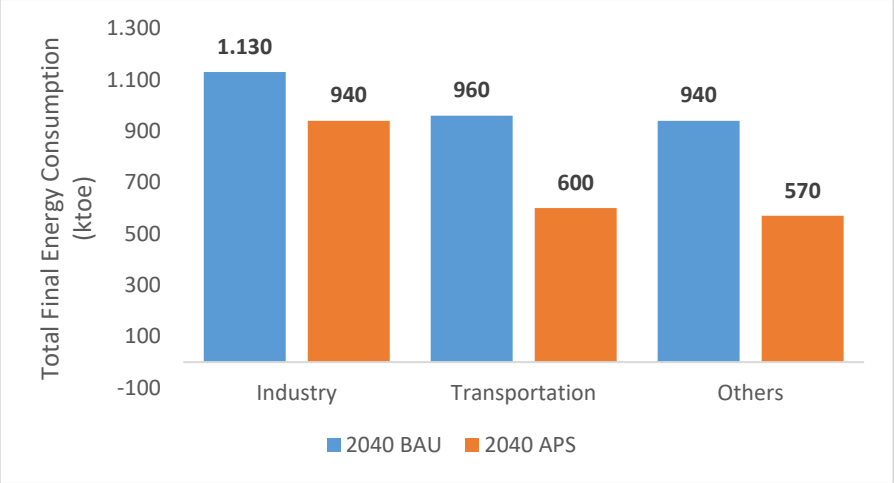
Under the APS, TFEC is expected to reach 3,850 ktoe by 2040 (Figure 2.4), which is a reduction of 19.5% from its BAU value. Both transport sector and others (residential and commercial sectors) are expected to have the biggest reduction in their BAU values, 39.4% and 37.5%, respectively (Figure 2.4). For transportation, this stems from the improvement in vehicle fuel efficiency in the future due to proposed fuel economy regulations. For the residential and commercial sectors, implementation of building guidelines on energy efficiency and conservation as well as standards and labelling scheme would be the main factors in TFEC reduction.

Figure 2.4: Total Final Energy Consumption, by Sector, under APS (2020–2040)



APS = alternative policy scenario.
Source: ERIA (2019).

Figure 2.5: Comparison of TFEC between BAU and APS (2040)



APS = alternative policy scenario, BAU = business-as-usual scenario, TFEC = total final energy consumption.
Source: ERIA (2019).