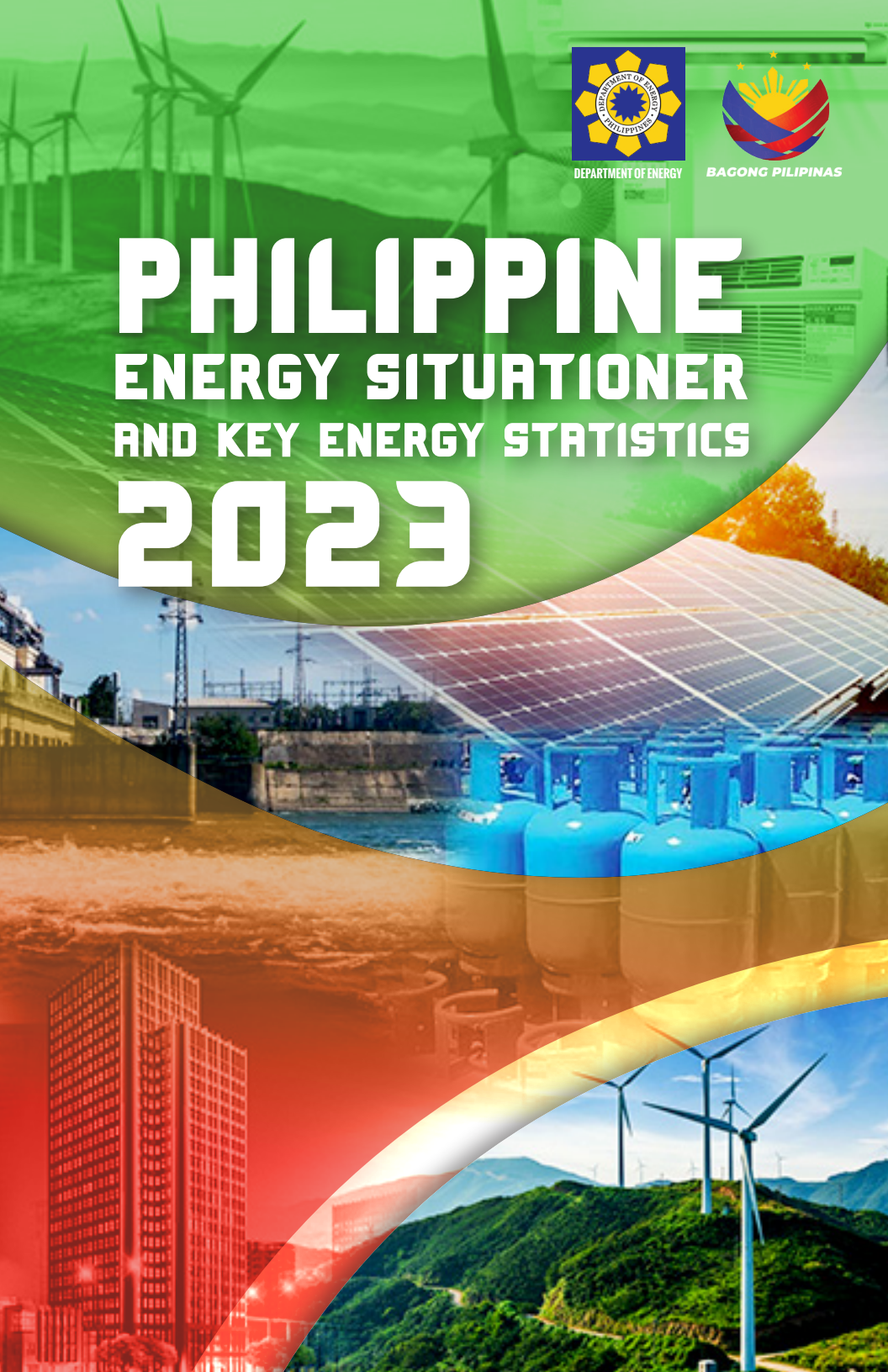
DEPARTMENT OF ENERGY

BAGONG PILIPINAS

PHILIPPINE ENERGY SITUATIONER AND KEY ENERGY STATISTICS 2023



2023 PHILIPPINE ENERGY SITUATIONER

This issue presents an analysis of energy supply and demand situation in the Philippines for 2023 vis-à-vis 2022. The energy data used herein are based on the Energy Balance Table (EBT) (as of 15 July 2024) as generated by the Policy Formulation and Research Division (PFRD) of the Energy Policy and Planning Bureau (EPPB), unless otherwise stated. Kindly note that Non-Energy Use is included in the discussion for Total Final Energy Consumption (TFEC) in this report.

Table of Contents

Abbreviations and Acronyms Used

BBL	Barrels
BSCF	Billion Standard Cubic Feet
DOTr	Department of Transportation
GDP	Gross Domestic Product
GHG	Greenhouse gas
GVA	Gross-value added
GWh	Gigawatt-Hour
GWP	Global Warming Potential
ktCO$_2$e	thousand tons of carbon dioxide equivalent
kTOE	Thousand tons of oil equivalent
kWh	Kilowatt-hour
LRT	Light Rail Transit
MB	Thousand Barrels
MLPY	Million Liter Per Year
MMB	Million Barrels
MMMT	Million Metric Tons
MMSCF	Million Standard Cubic Feet
MMT	Thousand Metric Tons
MRT	Metro Rail Transit
MtCO$_2$e	million tons of carbon dioxide equivalent
MTOE	Million tons of oil equivalent
MW	Megawatt
MWh	Megawatt-hour
ROM	Run of Mine
tCO$_2$e	tons of carbon dioxide equivalent
TFEC	Total Final Energy Consumption
TOE	Tons of oil equivalent
TPES	Total Primary Energy Supply
TWh	Terra-watt Hour

I. TOTAL FINAL ENERGY CONSUMPTION (TFEC)

The Philippine economy outpaced its peers as it registered a 5.5 percent expansion in gross domestic product (GDP), faster than that of Vietnam (5.0 percent) and Malaysia (3.8 percent) – which have been Asia's top performers in recent years[1]. The Philippines' economic expansion largely hinges on strong domestic consumption, a resilient services sector, and a vibrant investment climate. It was supported by a sustained increase in the country's total final energy consumption (TFEC) of 2.9 percent to 36.9 million tons of oil equivalent (MTOE) from its 2022 level of 35.9 MTOE.

The transport and household sectors were the top contributors to TFEC growth for 2023, with a combined share of 63.4 percent *(Figure 1)*. Aggregate energy consumption from all transport modalities expanded by 4.4 percent in 2023 backed by policies implemented for the modernization of public transportation, a vibrant domestic tourism landscape, and relatively stable gasoline and diesel prices that prevailed during the year *(Figure 1)*.

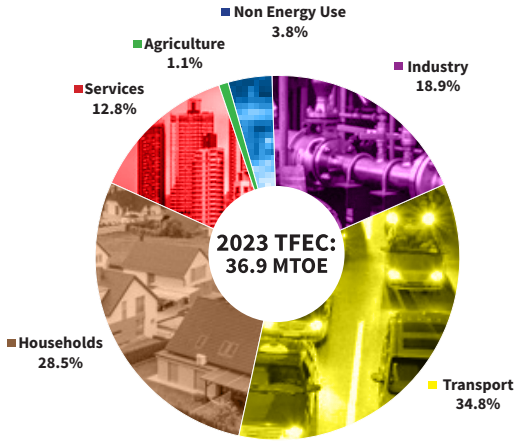


Figure 1. Sectoral Shares to TFEC, 2023: in Percent

Utilization of energy for household activities went up by 2.2 percent consistent with the improvements in energy access. Energy use in the services and agriculture sectors, with an aggregate share of 13.9 percent, accelerated by 6.4 and 6.1 percent, respectively. It supported the robust growth in their respective value-added for 2023.

On the other hand, efficiency improvements in production processes led to a 2.1 percent contraction in the industry's energy consumption despite a share of 18.9 percent to TFEC for 2023. Non-energy use of naphtha and other petroleum products, and coal as raw materials and feedstocks for industrial applications registered a double-digit hike of 10.1 percent during the same period.

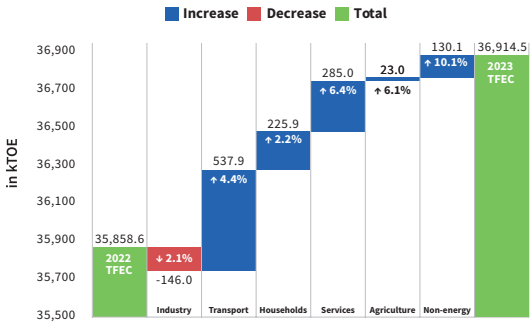


Figure 2. Changes in Energy Consumption, by Sector in kTOE, 2023

[1] https://www.dof.gov.ph/phs-full-year-2023-gdp-growth-strongest-among-major-asian-economies/

A. Total Final Energy Consumption, by Fuel

Oil remained the country's most consumed fuel group as it accounted for more than half (51.0 percent) of TFEC for 2023. Oil products' aggregate utilization stood at 18.8 MTOE or 3.0 percent more than its 2022 level of 18.3 MTOE *(Figure 3)*. Consumption of gasoline and diesel, primarily for road transportation, accounted for a hefty share of 85.8 percent, as each of these fuels registered increments of 7.6 percent and 2.5 percent respectively.

Electricity consumption reflected a 22.3 percent share in the TFEC for 2023. Its accumulated consumption across end-use sectors registered an increase of 4.9 percent to 8.2 MTOE in 2023 from its year-ago level of 7.9 MTOE. In the transport sector, electricity consumption surged remarkably by 36.1 percent which is attributed to the penetration of electric vehicles (EVs). For the household sector, electricity grew by 4.7 percent during the period, exceeding other sectors as reflected in its share of 38.6 percent to the total electricity consumption in 2023. Electricity use for lighting and space cooling from the service establishments and agriculture processes expanded by 8.0 percent and 7.3 percent, respectively. The industry sector posted the slowest growth of 2.2 percent vis-à-vis other end-use sectors albeit a share of 30.8 percent to the total electricity consumption.

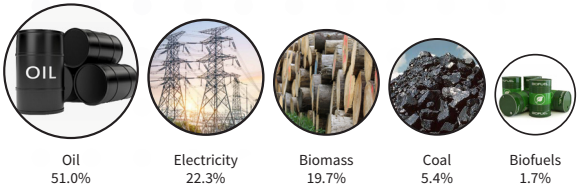


Figure 3. Fuel Shares to TFEC, 2023: in Percent

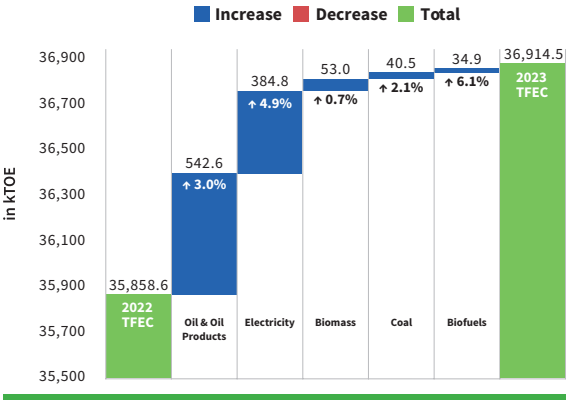


Figure 4. Changes in Energy Consumption, by Fuel in kTOE, 2023

Biomass (fuelwood, charcoal, and other biomass residues) for end-use applications grew sluggishly at a rate of 0.7 percent to reach 7.3 MTOE in 2023. While the household sector held the bulk of biomass demand at 82.6 percent share, its consumption for cooking and other household activities slowed down to 0.8 percent. The same trend of biomass demand level was exhibited by the service establishments (0.7 percent) and the food manufacturing industry (0.5 percent).

Industrial demand for coal as fuel to various production processes rebounded by 2.1 percent to 2.0 MTOE in 2023 from its year-ago downturn and contributed a 5.4 percent share to TFEC during the year. The significant hike in coal demand for food processing and other manufacturing industries offset the downtrend in the cement industry's level of coal utilization notwithstanding its 44.0 percent share of the total coal consumption in 2023.

The combined consumption of bioethanol and biodiesel reached 610.1 kTOE, up by 6.1 percent from last year's 575.2 kTOE. It is consistent with the sustained implementation and strict compliance of the biofuels blending schedules as mandated under the Biofuels Law.

B. Total Final Energy Consumption, by Fuel

1. Transport

Expanding infrastructure development consistent with the push for transport modernization has led to the completion of forty-two (42) airports and twenty-eight (28) ports across the country since July 2022 as part of continued efforts for a sustainable public mass transport system and greater urban mobility. These gains have translated to the 4.4 percent hike in the transport sector's energy consumption to 12.9 MTOE in 2023 from the previous year's level of 12.3 MTOE.

Road transport maintained its substantial share of 90.2 percent of the total transport demand as its energy consumption reached 11.6 MTOE in 2023, up by 5.1 percent from its year-ago level of 11.0 MTOE. *(Figure 5)*. Among the major factors that contributed to this uptrend is the influx of new vehicles on the road during the year, as evidenced by consolidated reports from the Chamber of Automotive Manufacturers of the Philippines, Inc. (CAMPI), Truck Manufacturers Association (TMA) and independent vehicle distributors showed an 18.9 percent jump in the number of vehicles sold in 2023 vis-à-vis 2022[2]. Energy demand for water transport descended further in 2023 by 5.5 percent to 888.0 kTOE from 940.0 kTOE in 2022 despite its 6.9 percent contribution to the total sector's consumption. This can be attributed to the weakened container traffic in the same year despite increases in ship calls, cargo throughout, passenger and roll-on roll-off (RoRo) traffic based on Philippine Ports Authority (PPA) reports.[3]

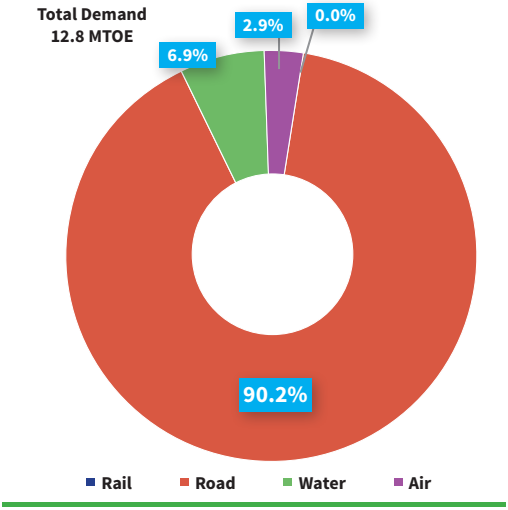


Figure 5. Transport Demand, by Sub-sector Shares (in Percent): 2023

Domestic aviation's energy use accounted for a 2.9 percent share of the total transport demand as its level reached 369.0 kTOE in 2023, a 7.6 percent surge from 342.9 kTOE in 2022. Fleet expansion efforts of low-cost carriers in the country, as well as technological advancements in the aviation industry bouyed the continued rise in domestic leisure travel and tourism activities. These developments have brought about the significant surges in aircraft (44.7 percent), passenger (33.1 percent), and cargo (22.4 percent) movements based on Civil Aviation Authority of the Philippines (CAAP) data for 2023[4].

[2] https://www.autoindustriya.com/features/philippine-auto-sales-2023-441-408-vehicles-sold-18-91-percent-growth.html
[3] https://www.ppa.com.ph/sites/default/files/qtr_stat/2023_Summary_Statistics05152024.pdf
[4] https://caap.gov.ph/wp-content/uploads/2024/07/AirpasscarANNUAL-2023.pdf

Combined ridership for the Metro Rail Transit (MRT) and Light Rail Transit Authority (LRTA) reached a record-high of more than 170 million passengers for 2023. This peak performance was attributed to their enhanced reliability and effective maintenance program that sustained their full operational capacities during the year[5] [6]. Meanwhile, the Philippine National Railways (PNR) continued to operate amidst ongoing rehabilitation and modernization efforts in 2023 and reported a double-digit increase in its ridership for the same year. These gains led to an 18.3 percent hike in the energy consumption for rail transport as it reached 11.9 kTOE in 2023 vis-à-vis 10.1 kTOE in the previous year.

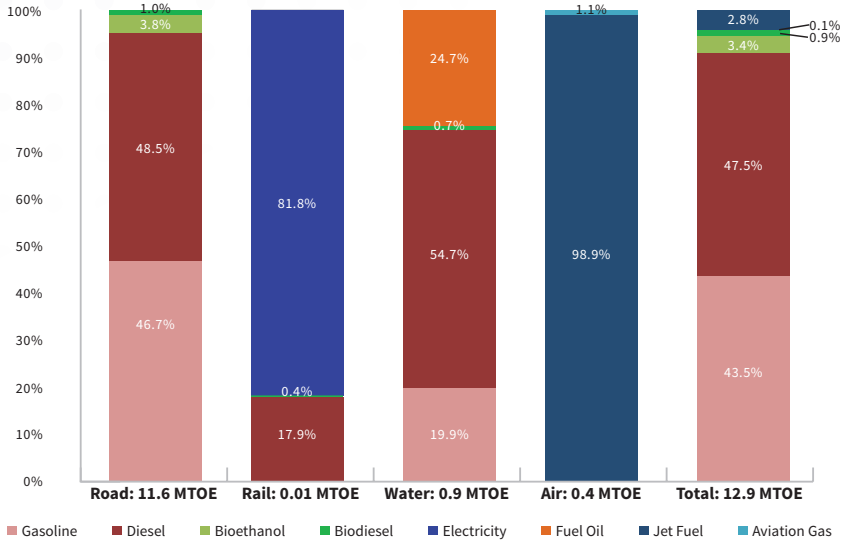


Figure 6: Transport Final Energy Consumption, By Fuel per Sector and Total (in percent), 2023

Gasoline and diesel maintain their dominant roles as transport fuels with their aggregate share of 91.0 percent in 2023. Improved road infrastructures pulled up gasoline and diesel consumption by 7.7 percent and 3.0 percent, respectively. Heightened domestic air traffic likewise led to a 7.6 percent increment in aviation fuels (aviation gasoline and jet fuel), while bioethanol and biodiesel demand went up by 7.5 percent and 3.0 percent, respectively, with the continued implementation of the mandated blending schedule. Reliable mass rail transport systems, along with the growing appreciation for the efficiency of EVs, catapulted electricity consumption in the transport sector by 36.1 percent to 12.5 kTOE in 2023 from the previous year's 9.2 kTOE. These uptrends offset the 31.9 percent slump in fuel oil due to the slowdown in the inter-island shipping market for the same period.

[5] https://www.dotrmrt3.gov.ph/news/mrt-3-ridership-surpasses-129-million-in-2023
[6] https://www.lrta.gov.ph/wp-content/uploads/2024/02/2023-Accomplishment-Report.pdf

2. Households

The total energy consumption in the household sector increased by 2.2 percent from 10.3 MTOE in 2022 to 10.5 MTOE in 2023. It is the second most energy-consuming sector after transport, with a share of 28.5 percent to TFEC for the same year.

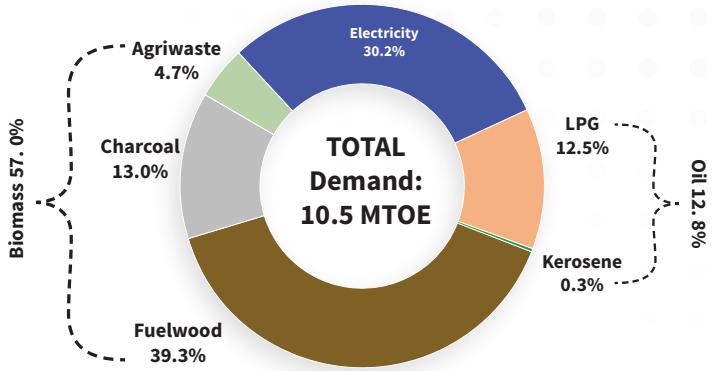


Figure 7: Energy Consumption of the Household Sector, By Fuel (in Percent), 2023

Biomass continued to provide for more than half (57.0 percent) of households' energy requirements. Fuelwood was the most popular biomass type as it is used for cooking and heating purposes, primarily among rural households. It accounted for a 39.3 percent share to total biomass demand. On the other hand, charcoal and agriwaste contributed the remaining 17.7 percent ***(Figure 7)***. Despite its substantial share in the total household energy demand, biomass consumption grew by a measly 0.8 percent from its year-ago level of 6.0 MTOE.

Meanwhile, electricity represented 30.2 percent of the household's energy demand mix in 2023. With more than a million additional households electrified vis-a-vis its 2022[7] level, electricity utilization for household activities increased by 4.7 percent to 3.2 MTOE in 2023. LPG and kerosene completed the household's energy requirements with the shares of 12.5 percent and 0.3 percent, respectively. Consistent with the drive for greater access to cleaner and more modern fuels for households, LPG consumption mirrored the uptrend in electricity utilization with its 4.1 percent expansion to 1.3 MTOE in 2023, while kerosene consumption decreased by 30.5 percent.

3. Industry

Growth in industrial value-added that contributed more than a fourth (29.1 percent) of the country's gross domestic product (GDP) in 2023, slowed down to 3.6 percent vis-à-vis 6.5 percent from the previous year. This was brought about by weak demand from overseas markets[8], as well as rising material and shipping costs. The decline in export sales also led to reduced jobs, particularly in the manufacturing sub-sector. Thus, aggregate energy consumption in the industry sector dropped by 2.1 percent to 7.0 MTOE in 2023.

[7] Electrification Level as of December 2023 was 92.7 with 1,134,105 additional households electrified in 2023 vis-à-vis 2022
[8] S & P Global Philippines Manufacturing PMI Report (December 2023)

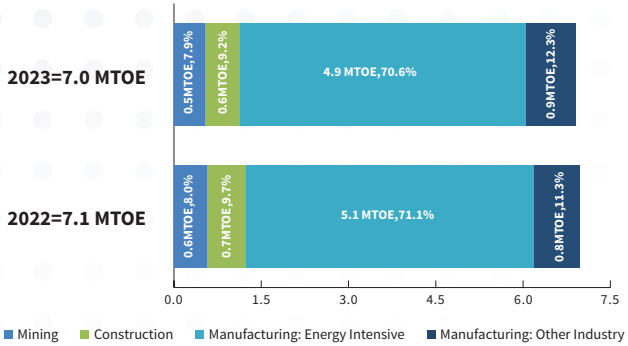


Figure 8: Energy Consumption of the Industrial Sector, By Sub-sector (in MTOE and Percent Shares), 2023

As most factories experienced excess capacities and cooling off in production activities, the manufacturing sector's energy requirement declined by 1.3 percent to 5.8 MTOE in 2023 from last year's level of 5.9 MTOE. Energy-intensive manufacturing sub-sectors recorded an accumulated 4.9 MTOE of energy utilization or 2.7 percent lower than its 2022 level of 5.1 MTOE. This was due to the reductions reported in cement (6.8 percent), basic metal (4.9 percent), and machinery/equipment (3.5 percent) which outweighed the 4.6 percent hike in energy consumption of the food processing sub-sector for the same period.

Mining and construction activities also decelerated in 2023 vis-à-vis 2022. Inflationary pressures and soaring interest rates challenged the construction sub-sector, particularly private construction, as building permits registered a 3.4 percent downturn in 2023, a turnaround from its previous year's 4.2 percent growth[9]. On the other hand, while the value of domestic metals benefitted from the rise in global prices, lower indigenous production of energy minerals (crude and petroleum, natural gas, and coal) in 2023 limited the expansion of the mining sector's gross value-added (GVA) to 2.0 percent or less than half of its 5.3 growth recorded in 2022. The lackluster performance of the mining and construction sub-sectors during the period translated to a 3.4 percent and 7.0 percent dip in their energy utilization to 548.0 kTOE and 639.9 kTOE, respectively.

Electricity dominated the industry sector's aggregate energy demand mix with its 36.4 percent share, up by 2.2 percent to 2.5 MTOE in 2023. While all sub-sectors registered higher electricity consumption during the year, the upturn was generally slower vis-à-vis 2022 level. Meanwhile, coal provided for more than a quarter (27.4 percent share) of energy required for industrial processes at 1.9 MTOE or 2.8 percent lower compared to the previous year.

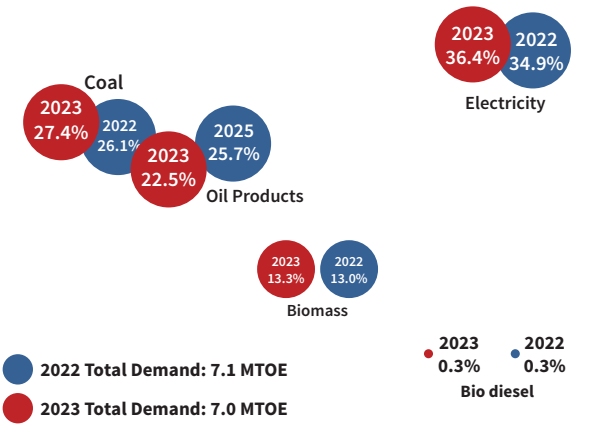


Figure 9. Industry Energy Demand, by Fuel Shares (In Percent): 2022 vs 2023

9 https://www.bworldonline.com/economy/2024/06/27/604735/building-permit-approvals-decline-in-2023/#:~:text=APPROVED%20building%20permits%20fell%203.4,square%20meters%20of%20floor%20area

Coal utilization continued to experience significant reductions in cement, non-metallic and basic metals, and pulp and paper manufacturing despite higher usage reported in other industries. Total consumption of oil products (22.5 percent share) shrank by 14.0 percent to 1.6 MTOE in 2023 from 1.8 MTOE in 2022. Kerosene utilization, despite its double-digit hike of 37.5 percent, was not enough to offset the decline in the sector's demand for diesel, fuel oil, and LPG which fell by 11.1 percent, 27.8 percent, and 5.8 percent, respectively, as weakened demand led to reduced machine-hours in most factories. Biomass consumption, with its 13.3 percent share, recorded a minimum growth of 0.5 percent as it reached 928.1 kTOE from its year-ago level of 923.6 kTOE. Compliance with the mandated blending schedule placed biodiesel demand at 21.1 kTOE or 11.1 percent less than its 2022 consumption level of 23.7 kTOE.

4. Services[10]

The services sector sustained the country's economic growth in 2023 with its robust 7.4 percent expansion in aggregate gross-value added (GVA). Domestic trade (wholesale and retail) remained vibrant with the country's return to normalcy and full resumption of commercial activities. More face-to-face events across the country also led to parallel revenue hikes among accommodation and food service establishments and the meetings, incentives, conferences, and exhibitions (MICE) segment. The volume of international visitor arrivals and receipts doubled in 2023 compared to 2022 and made the domestic tourism sector a catalyst of the country's economic resurgence[11]. Thus, the aggregate energy consumption of the services sub-sector accelerated the fastest vis-à-vis other end-use sectors at a rate of 6.4 percent, from its year-ago level of 4.5 MTOE to 4.7 MTOE in 2023.

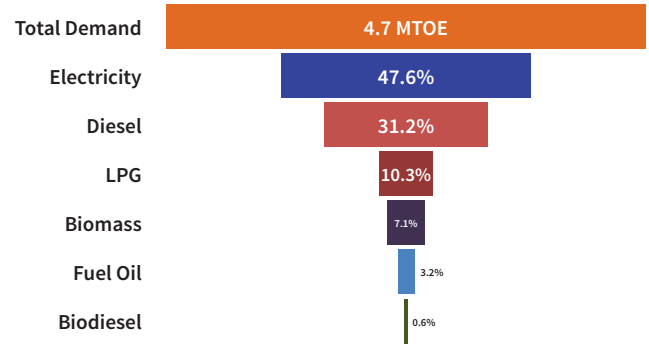


Figure 10. Services Energy Demand, by Fuel Shares (In Percent): 2023

Electricity was the major fuel utilized across various service establishments, particularly for lighting and space-cooling requirements. It accounted for close to half (47.6 percent share) of the sector's energy consumption and registered an 8.0 percent expansion to 2.3 MTOE in 2023. The country's entire information technology and business process management (IT-BPM), which uses a significant amount of electricity as it operates 24/7, was the main driver for office space demand as it posted a 9.0 percent hike in revenues for 2023 vis-à-vis 2022. Among oil products, diesel was the most utilized oil product with a share of 31.2 percent in the services sector's demand mix. Primarily used as fuel for backup generators of service establishments, its consumption went up by 12.3 percent to 1.5 MTOE in 2023, while biodiesel demand registered the same uptrend.

[10] Trade and services, excluding Transport
[11] https://business.inquirer.net/464370/psa-tourism-hit-highest-growth-at-47-9-in-2023

LPG utilization declined by 5.3 percent to 486.9 kTOE and contributed a 10.3 percent share to the sector's total energy consumption. The downtrend can be attributed to the shift towards electricity as a cooking fuel vis-à-vis LPG, coupled with successive increases in cooking gas prices during the third to fourth quarter of 2023[12]. Demand for fuel oil also contracted by 13.0 percent, while biomass utilization slightly went up by 0.7 percent.

5. Agriculture

Higher poultry and livestock production, increased fruit harvest, and record-high rice output in 2023 propelled the country's agriculture sector to a 1.2 percent expansion, or as much as twice its posted growth rate of 0.6 percent in 2022. This was supported by a 6.1 percent increment in the sector's energy consumption to 402.3 kTOE in 2023 from its year-ago level of 379.3 kTOE.

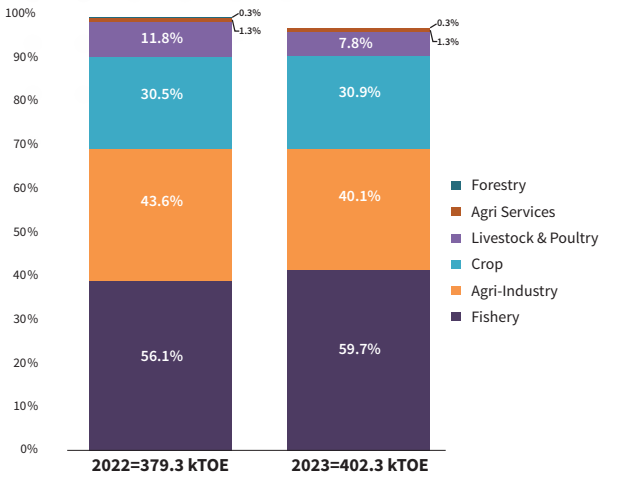


Figure 11: Energy Consumption of the Agriculture & Forestry, By Sub-Sector (in Percent Shares), 2022 vs 2023

The fishery subsector was the top contributor as it registered a significant upturn of 12.8 percent to 240.0 kTOE in 2023 and covered about three-fifths (59.7 percent) of the sector's total energy utilization. This was attributed to the hike in the production output from aquaculture or fish farming[13] despite volume losses in capture fisheries (commercial and municipal fishing)[14]. As the country's crops subsector reported peak palay production of 21 million metrics tons – its highest volume to date, around 124.4 kTOE of energy served as an important factor of production. Corollary to this fact, the subsector's energy consumption grew by 7.6 percent high, more than its 2022 level of 115.5 kTOE. The same uptrend was likewise observed in agricultural services, which include post-harvest crop activities and farm-to-market facilities, a 7.3 percent improvement in energy utilization for the same period. On the other hand, the livestock and poultry subsector trimmed down its diesel consumption in 2023 which led to a 29.8 percent dip in its overall energy consumption. Lastly, the reduction in major forest products, such as logs and veneer, in 2023 contributed to the 4.5 percent contraction in the energy demand of the forestry subsector.

Electricity provided for the bulk (63.4 percent share) of the sector's energy requirements. Its consumption increased by 7.3 percent to 255.1 kTOE during the period, driven by higher demand from the agri-industry and fishery subsectors. Diesel, primarily for the maintenance

[12] LPG Price Monitoring (DOE Website)
[13] Includes the farming of seaweed, milkfish, tilapia, shrimp, carp, oyster and mussel, among others
[14] https://www.bfar.da.gov.ph/2021-fisheries-industry-performance-1st-2nd-3rd-and-4th-quarter/

of fish farms across the country, contributed one-third (33.2 percent) of the energy demand mix as it increased by 10.6 percent to 133.4 kTOE in 2023. Biodiesel exhibited the same trajectory while the aggregate utilization of gasoline, fuel oil, and kerosene, which represented a 2.8 percent share of the demand mix, declined by 40.1 percent for the year.

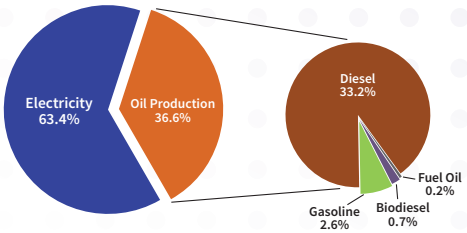


Figure 12: Energy Consumption of the Agriculture & Forestry Sector, By Fuel Shares (in percent), 2023

II. TRANSFORMATION

A. Oil Refining

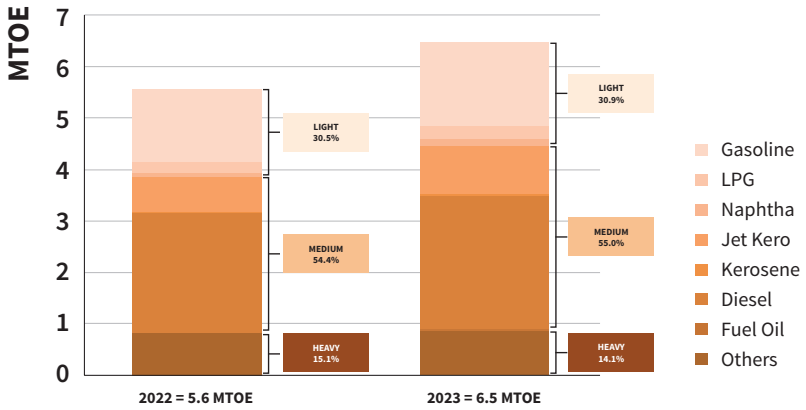


Figure 13: Refinery Production, by Fuel (in MTOE), 2022 vs 2023

The country's only operational refinery, the Petron Bataan Refinery (PBR), registered its production level of petroleum products at 6.5 MTOE (48.2 MMB) in 2023. This is higher by 16.4 percent from the previous year's level of 5.6 MTOE. Petron's continuous optimization of its assets and resources resulted in improved refinery operations[15] and contributed to the uptrend in its refinery output. With the capability of running 180,000 barrels per day (bpd), the refinery maintained its position as the largest network and leader in the Philippine oil industry. It supplied approximately 40 percent of the country's total fuel needs.

Sales for each type of marketable product went up in 2023, except for kerosene, which fell by 8.3 percent. Diesel accounted for the largest share of the total sales for the year at 40.0 percent while its volume increased by 11.3 percent to 2.6 MTOE from 2.3 MTOE in 2022. Gasoline accelerated by 16.4 percent to 1.6 MTOE in 2023 from the previous year's 1.4 MTOE. Significant production hikes were reported in fuel oil (562.4 percent), other petroleum

[15] https://www.petron.com/wp-content/uploads/2024/05/Petron-Corporation- percentE2 percent80 percentA2-Annual-Report-2023-ver-2.pdf

products (81.0 percent), and jet fuel (40.6 percent). These can be attributed to increased demand from industrial and manufacturing activities, as well as a resurgence of the country's tourism landscape[16] [17].

B. Power Generation and Fuel Input

Total generation output from all power plants in 2023 grew by 5.8 percent to 118.0 terawatt-hours (TWh) compared to the previous year's 111.5 TWh.

Power generation kept up with the rising demand[18] for electricity due to the strong and bustling economic activities and the reopening of businesses and industries. Coal-fired power plants remained as baseload sources with 62.5 percent of the total generation mix for 2023, as levels reached 73.7 TWh or 11.0 percent more than its 2022 level of 66.4 TWh (Figure 14). With declining Malampaya reserves, the share of natural gas declined by 2 percent, which accounted for 14.1 percent (16.7 TWh) compared to 16.0 percent (17.9 TWh) in the previous year. On the other hand, generation output from renewable sources was recorded at 26.3 TWh, representing 22.3 percent of the total generation mix. Geothermal and hydro accounted for 9.1 percent (10.7 TWh) and 8.7 percent (10.3 TWh) of the total, respectively. Other renewables such as solar, wind, and biomass accounted for a combined share of 4.7 percent, totaling 5.3 TWh. The country's generation mix was supplemented with 1.3 TWh of oil for a share of 1.1 percent of the 2023 total generation output.

Power plants' total fuel consumption rose by 11.3 percent to 36.4 MTOE in 2023 vis-a-vis 32.7 MTOE in the previous year *(Figure 15)*. Given their baseload characteristics, fossil fuels particularly coal took up the majority (65.2 percent) of the fuel input mix. The volume of natural gas input for power generation declined by 2.4 percent in 2023. After Ilijan's contract with Malampaya expired, the natural gas power plant situated in Batangas switched to the importation of liquefied natural gas (LNG) from Linseed Field Corporation[19] and resumed power dispatch to the grid on 01 June 2023. Oil consumed for power generation also decreased by 16.0 percent compared to the previous year's level. Consequently, coal consumption surged by 20.2 percent to 20.6 MTOE in 2023 from 17.1 MTOE in 2022 and offset the reduction of fossil fuels inputs from oil and natural gas.

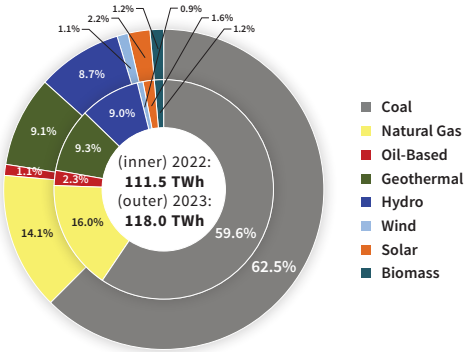


Figure 14: Gross Generation, by Fuel Shares (in Percent), 2022 vs 2023

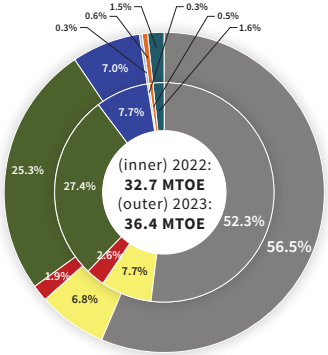


Figure 15: Input to Power Generation, by Fuel Shares (in Percent), 2022 vs 2023

[16] https://www.psa.gov.ph/content/tourism-posted-highest-growth-2023-contributing-86-percent-economy
[17] https://beta.tourism.gov.ph/news_and_updates/dot-chief-philippines-surpasses-yearend-target-with-5-45-million-intl-visitor-arrivals-in-2023-intl-visitor-receipts-surge-at-php482-54-billion/
[18] https://www.iemop.ph/news/iemop-observes-a-rise-in-electricity-demand-this-april-2023/
[19] https://doe.gov.ph/press-releases/doe-welcomes-completion-two-lng-facilities-country

On the other hand, the combined fuel input from renewable energy sources grew by 3.5 percent to 12.7 MTOE in 2023 from 12.2 MTOE in 2022. Geothermal and hydro continued to provide the bulk of RE fuel input with shares of 25.3 percent and 7.0 percent despite sluggish growths of 2.9 percent and 2.0 percent, respectively. The collective inputs from variable RE (solar and wind) and biomass stood at 0.9 MTOE, 1.5 percent more than their previous year's level. Such an increase is attributable to the 39.6 percent and 27.0 percent leap in solar and wind power generation, respectively.

III. TOTAL PRIMARY ENERGY SUPPLY

The level of total primary energy supply (TPES) in 2023 stood at 65.3 MTOE or 6.1 percent more than the previous year's level of 61.6 MTOE. Total net imported energy doubled its pace with a 12.6 percent expansion vis-à-vis 7.6 percent in 2022 and contributed 53.7 percent (35.1 MTOE) of 2023 TPES. Higher net energy imports compensated for the 0.5 percent reduction in the country's domestic energy supply, which translated to a share of 46.3 percent (30.3 MTOE) of TPES. These dynamics chipped off 3.1 percentage points in the country's energy self-sufficiency to 46.3 percent in 2023 from 49.4 percent in 2022 *(Figure 16)*.

Coal reclaimed its position as the country's top contributor to the TPES in 2023 with its 34.6 percent share or 22.6 MTOE level, up by 18.4 percent from the previous year at 19.1 MTOE (31.0 percent share). This was attributable to the double-digit upturn of 29.2 percent in net coal importation to 14.8 MTOE or twice as much as its domestic production of 7.8 MTOE for the reference year. Oil came in second to coal with a 30.1 percent contribution to the TPES, despite its lowered supply level of 0.8 percent from the previous year's 19.8 MTOE. Despite the boost from imported liquified natural gas (LNG) as it figured in the country's energy mix for the first time in 2023, natural gas supply levels dropped by 3.0 percent to 2.5 MTOE from last year's 2.6 MTOE.

Aggregate renewable energy resources (geothermal, hydro, solar, wind, and biomass, including biofuels) accounted for the remaining 32.6 percent share of the energy mix, its supply grew by 3.1 percent to reach 21.3 MTOE in 2023.

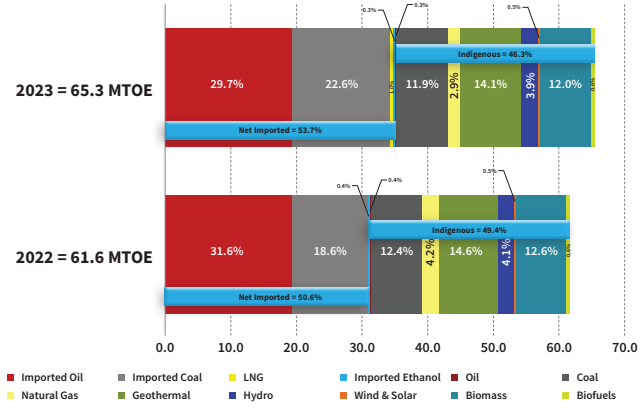


Figure 16. Total Primary Energy Mix, by Fuel (% Shares), 2022 vs 2023

A. Indigenous Energy

The aggregate share of domestic energy production to TPES descended further in 2023 driven by significant reductions in local oil and natural gas production of 25.6 percent and 28.1 percent, respectively, that overshadowed the increased output from renewable energy (RE) resources, specifically wind (27.0 percent) and solar (39.6 percent).

Fossil Fuel

i. Oil

Total indigenous oil production, including condensate, decreased by 25.6 percent to 266.2 kTOE in 2023 vis-à-vis 357.6 kTOE in 2022. Due to the natural decline of oil reservoir pressure[20], the Galoc field offshore northwest of Palawan registered a 10.0 percent reduction in oil production. Meanwhile, the termination of the contract with China International Mining Petroleum Co. Ltd. (CIMP) in 2023 led to the suspension of operations in the Alegria oil field[21] which significantly diminished its production output to only 63.7 barrels during the year. Meanwhile, condensate from the Malampaya gas field, which is completely exported, declined by 29.6 percent.

ii. Coal

The country's coal production improved by 2.0 percent from its year-ago level of 7.6 MTOE (14.5 MMMT) to 7.8 MTOE (14.8 MMMT) in 2023.

The Semirara Mining and Power Corporation (SMPC) as the biggest coal producer in the country, contributed 97.6 percent share or 14.4 MMMT to the total domestic coal production. The coal mines in Cebu, Negros and Bicol reported massive hikes in output at 14.6 MMT production level, while new players from the Zamboanga, South Cotabato, Sarangani, and Sultan Kudarat gave an aggregate share of 1.6 percent or 243.0 MMT to the total coal production. Meanwhile, coal produced from small-scale mines shared 0.6 percent of the country's coal production, up by 43.5 percent during the period.

iii. Natural Gas

The volume of domestic natural gas production decreased by 28.1 percent to 1.9 MTOE (80.7 BSCF) in 2023. This is due to the continued decline in the Malampaya gas reserves that have prompted supply restrictions of power plants, such as in the case of First Gen Corporation's 414-megawatt San Gabriel plant that experienced shutdown in September and October 2024. Facility maintenance works that required the shutdown of the Malampaya platform also contributed to lower production output during the year.

20 https://opmc.com.ph/wp-content/uploads/2023-Annual-Report-Complete_compressed-1.pdf
21 https://www.pna.gov.ph/articles/1220878

Renewable Energy

i. Geothermal

Geothermal was the country's top RE resource with a 14.1 percent share of TPES in 2023. This was equivalent to 9.2 MTOE or 2.9 percent gain from the previous year's level of 9.0 MTOE. Since the passage of the RE Act of 2008, a total of 39 geothermal projects have been awarded by the end of 2023, which brought its total installed capacity to 1,951.7 megawatts (MW)[22]. At this level, the Philippines is positioned among the top geothermal countries in terms of capacity, next to the United States (3,900 MW) and Indonesia (2,418 MW).

ii. Biomass

Total biomass[23] supply increased steadily at 1.1 percent to reach 7.8 MTOE which translated to a share of 12.8 percent to the country's energy mix for 2023. More than 90 percent of the biomass supply was utilized for end-use consumption, while the remaining portion was used for power application. As of December 2023, around 76 biomass contracts have been awarded with a total capacity of 764.7 MW[24].

iii. Hydro

Hydropower provided 3.9 percent of the country's energy supply in 2023 while its level grew at a slower pace of 2.0 percent to 2.6 MTOE in 2023. While the El Niño phenomenon persisted during the last six (6) months of the year, hydro resources for power generation slightly improved to 3,799.5 MW[25] in 2023.

iv. Solar

Solar supply level continued to accelerate on the tailwinds of new reforms and liberalized energy market. Notwithstanding its meager share of 0.3 percent in the energy mix for 2023, solar supply posted a remarkable 39.6 percent expansion to 218.8 kTOE in 2023 compared to last year's 156.7 kTOE. Solar development in the Philippines remained on the uptrend, as installed capacity reached 1,653.3 MW[26], while the government green-lit 158 additional solar projects (commercial and own-use) as of 31 December 2023.

v. Wind

Wind energy rebounded with a substantial increase of 27.0 percent to reach 112.5 kTOE in 2023 from its previous year's level of 88.6 kTOE. This remarkable growth in supply levels led to a doubling of its share albeit minimal to the energy mix at 0.2 percent. Interests in wind energy development, specifically in offshore wind, remained upbeat, spurred by government strategies and policy directions. As of December 2023, 82 offshore wind energy service contracts with a total capacity of 63.36 GW have been awarded by the DOE. These projects are expected to expand the country's wind capacity from its current installed 426.9 MW.

[22] https://doe.gov.ph/sites/default/files/pdf/electric_power/LoEPP-Capacity-mix-installed-dependable-December-2023.PDF
[23] Includes charcoal, fuelwood, rice hull bagasse, agriculture, animal and municipal wastes
[24] https://doe.gov.ph/sites/default/files/pdf/electric_power/LoEPP-Capacity-mix-installed-dependable-December-2023.PDF
[25] https://doe.gov.ph/sites/default/files/pdf/electric_power/LoEPP-Capacity-mix-installed-dependable-December-2023.PDF
[26] https://doe.gov.ph/sites/default/files/pdf/electric_power/LoEPP-Capacity-mix-installed-dependable-December-2023.PDF

vi. Biofuels

Local production of biodiesel and bioethanol increased by 12.4 percent and 4.0 percent, respectively, consistent with an uptrend in demand for diesel and gasoline. Twelve (12) biodiesel producers with aggregate capacities of 677.9[27] MLPY were in operation during the year, while twelve (12) bioethanol facilities with 436.0 MLPY[28] ensured fuel availability in compliance with the mandated blending under the Biofuels Act.

B. Net Energy Imports[29]

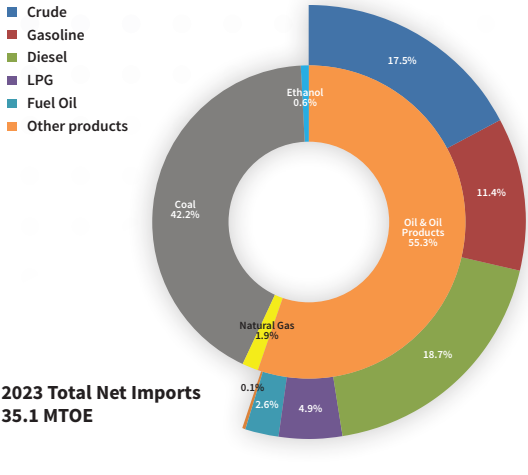


Figure 17. Net Energy Imports, by Fuel (% Shares), 2023

Aggregate net energy imports grew by 12.6 percent to 35.1 MTOE in 2023 from last year's 31.1 MTOE. It sustained the country's energy supply amidst the rise in energy requirements and lackluster domestic energy production during the year. Oil and oil products and coal constituted the bulk of the net import mix with shares of 55.3 percent and 42.2 percent, respectively. Liquified natural gas came into the mix for the first time in 2023 with a 1.9 percent share, while ethanol supplied the remaining volume with a share of 0.6 percent (Figure 17).

As global oil markets gradually recovered in 2023 post-COVID and the Russia-Ukraine war, the country's oil imports rose by 4.9 percent from its 2022 level of 21.3 MTOE to 22.3 MTOE in 2023. Of the total oil import volume, finished petroleum products took in 71.4 percent share, while crude oil accounted for the remaining share of 28.6 percent. Crude oil imports increased by 9.5 percent to reach the current level of 6.4 MTOE due to the easing in the benchmark price of Dubai crude vis-à-vis 2022[30]. The Middle East region held its position as the sole crude import market of the country, with Saudi Arabia's 50.8 percent share, followed by the UAE (30.7 percent) and Iraq (12.6 percent). Meanwhile, Kuwait, Oman, and Qatar accounted for the remaining share of 5.9 percent of the total crude imports. The sustained hike in finished petroleum products of 4.1 percent came as a result of efficient refinery operations for the last two (2) years. The Philippines continued to rely on Asia-Pacific neighbors for its finished product imports, of which China, South Korea, and Singapore garnered an aggregate share of 69.1 percent.

Oil exports posted a 5.0 percent increment to 776.6 kTOE in 2023 from last year's volume of 739.8 KTOE. With robust refinery output, the Philippines catered to external demand for finished oil products as export volume grew by 30.8 percent to 514.0 kTOE vis-à-vis 2022. Similar to oil importation, China, Singapore, and South Korea were the top destinations for finished oil. However, production cuts in domestic crude and Malampaya condensate led to a

[27] https://doe.gov.ph/sites/default/files/pdf/renewable_energy/ACCREDITED-BIODIESEL-FACILITIES-as-of-31-December-2023.pdf
[28] https://doe.gov.ph/sites/default/files/pdf/renewable_energy/ACCREDITED-BIOETHANOL-FACILITIES-as-of-31-December-2023.pdf
[29] This is derived as total primary energy supply (TPES) less indigenous production. Alternatively, it can also be calculated as the sum of imports and stock change (+/-) less exports and international bunkers (aviation and marine)

0.9 percent and 29.6 percent reduction in their export volume, which tapered off the increase in aggregate oil export volume for 2023.

Coal imports were recorded at 19.5 MTOE in 2023, up by 12.8 percent from its 2022 level of 17.3 MTOE brought about by its intensified utilization in power generation. Indonesia consistently dominated the country's coal imports with its 97.8 percent share, while the remaining 2.2 percent was sourced from Australia, Russia, Thailand, South Africa, China, and South Korea. On the other hand, strong domestic coal production and amplified demand from China for local coal elevated the volume of coal exports by 13.2 percent to 4.2 MTOE in 2023. China and South Korea, the top recipients of the country's coal exports, registered a significant 20.9 percent growth in their combined demand for Philippine coal.

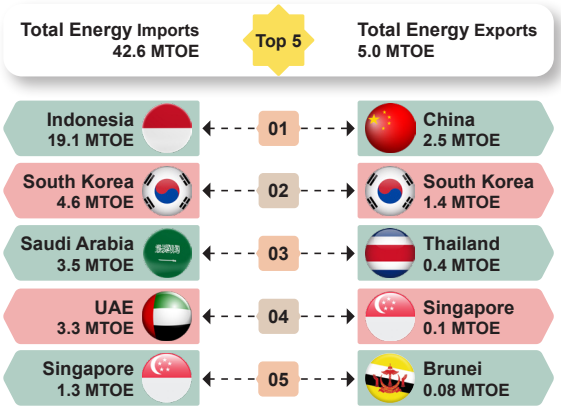


Figure 18. Top 5 Countries for Energy Imports and Exports, 2023

LNG imports entered the country's energy market in April 2023 and have since augmented domestic gas requirements. By the end of December 2023, the cumulative volume of LNG imports had reached 655.8 kTOE and outsourced from different partner countries, of which the bulk came from the United States (23.5 percent), Algeria (22.3 percent) and Malaysia (20.9 percent). Meanwhile, sufficient domestic production of bioethanol contributed to the 19.0 percent decline in its importation to 154.7 kTOE in 2023 from its 2022 level of 191.0 kTOE.

Trade in energy goods for 2023 showed that the country is a net energy importer with a trade balance of 36.0 MTOE. Of the 42.6 MTOE energy imports for 2023, Indonesia (44.9 percent), South Korea (10.7 percent), Saudi Arabia (8.3 percent), UAE (7.8 percent) and Singapore (3.0 percent) rounded up the top five (5) import trading partners for 2023, with combined shares of 74.8 percent of the 2023 total energy import volume. On the other hand, China was the top destination market for Philippine energy exports as it garnered almost half (49.8 percent) of the 5.1 MTOE total export volume in 2023. Coal constituted the majority of China's exports. South Korea also figured as an export market for coal, crude oil, and finished oil products with a share of 27.9 percent. The Philippines also provided for the coal and oil requirements of Thailand, Singapore, and Brunei with an aggregate share of 11.9 percent.

Consumption of jet fuel for international aviation climbed back to its pre-COVID levels at 1.6 MTOE, a significant hike of 34.7 percent from its year-ago level of 1.2 MTOE. International air travel remained on the uptrend, lifted by the steady rebound of international traffic and upgrades to major airports across the country. On the other hand, aggregate consumption of diesel and fuel oil among international marine bunkers dropped by as much as half (51.1 percent) to 52.5 kTOE. A combined volume of 844.3 kTOE composed of oil and oil products and coal was reported as stock build-up for 2023.

[30] https://ph.investing.com/commodities/dubai-crude-oil-platts-futures-historical-data

IV. ENVIRONMENTAL IMPACT

Total greenhouse gas (GHG) emissions for 2023 grew 11.0 percent more than the previous year's 135.7 million tons of CO_2 equivalent ($MtCO_2e$) to a level of 150.6 $MtCO_2e$ (Table 1).

Table 1: GHG Emission, by Sector: 2022 vs 2023

Sector	CO2 Emission ($MtCO_2e$)		Total NonCO_2 Emission ($MtCO_2e$)		Total GHG Emission*** ($MtCO_2e$)		Total GHG Emission (% Change)
	2022	2023	2022	2023	2022	2023	2022-2023
Electricity	75.98	89.10	0.30	0.36	76.28	89.46	17.27
Transport	35.18	36.62	0.24	0.26	35.42	36.87	4.10
Industry	12.88	12.28	0.07	0.07	12.94	12.35	(4.57)
Other Sectors*	9.81	10.28	0.06	0.07	9.88	10.35	4.76
Energy**	1.15	1.53	0.00	0.00	1.16	1.53	32.55
Total	135.00	149.81	0.68	0.75	135.68	150.56	10.97
% Distribution							Change in Distribution
Electricity	56.28	59.48	44.39	47.57	56.22	59.42	3.19
Transport	26.06	24.44	35.82	34.14	26.10	24.49	(1.61)
Industry	9.54	8.20	9.90	8.81	9.54	8.20	(1.34)
Other	7.27	6.86	9.39	8.85	7.28	6.87	(0.41)
Energy	0.85	1.02	0.50	0.63	0.85	1.02	0.17
Total	100.0	100.0	100.0	100.0	100.0	100.0	

**includes emissions from the services, households, and agriculture*
***includes losses incurred in oil refining*
**** Updated using GWP Values, Fifth Assessment Report(AR5), and EF based on 2006 IPCC Guidelines (Tier 1)*

With the same trend as the previous year, power generation continued to account for more than half (59.5 percent share) of the total GHG emissions for the year. The constantly increasing production of coal-fired power plants resulted in a 3.8 percent increase in GHG emissions to 89.1 $MtCO_2e$ from its previous year of 75.2 $MtCO_2e$. Among end-use economic sectors, transport still holds the biggest chunk with 24.5 percent of the total GHG emissions, an increase of 1.6 percent from the previous year. The sector's GHG emission increased by 4.1 percent to 36.9 $MtCO_2e$ in 2023 from its year-ago level of 35.4 $MtCO_2e$. In contrast to the transport sector's trend, industrial production declined by 4.6 percent posting a sectoral share of 8.2 percent to 12.4 $MtCO_2e$ in 2023 from 12.9 $MtCO_2e$ in 2022. On the other hand, the shares in energy consumption of the agriculture, services, and household sectors and their aggregate GHG emission remained almost the same with a 6.9 percent share, up by 4.8 percent from 9.9 $MtCO_2e$ in 2022 to 10.3 $MtCO_2e$ in 2023. Emissions from refinery production and own use of energy continued to rise from 1.2 $MtCO_2e$ in 2022 to 1.5 $MtCO_2e$ in 2023.

Table 2: GHG Emission, by Fuel: 2022 vs 2023

Sector	CO2 Emission ($MtCO_2e$)		Total NonCO_2 Emission ($MtCO_2e$)		Total GHG Emission*** ($MtCO_2e$)		Total GHG Emission (% Change)
	2022	2023	2022	2023	2022	2023	2022-2023
Oil	54.07	55.22	0.33	0.35	54.40	55.57	2.15
Coal	74.83	88.67	0.34	0.40	75.17	89.07	18.49
Gas	6.11	5.92	0.01	0.01	6.11	5.93	(2.99)
Total	135.00	149.81	0.68	0.75	135.68	150.56	10.97
% Distribution							Change in Distribution
Oil	40.05	36.86	49.33	46.42	40.09	36.91	(3.19)
Coal	55.43	59.19	49.78	52.81	55.40	59.16	3.76
Gas	4.52	3.95	0.88	0.77	4.50	3.94	(0.57)
Total	100.0	100.0	100.0	100.0	100.0	100.0	

**** GWP Values and EF based on the Fifth Assessment Report (AR5) and 2006 IPCC Guidelines (Tier 1), respectively*

By type of fuel, coal retained its rank as the biggest contributor of GHG emissions with 59.2 percent of the total GHG emission during the period. The demand for coal resources for power generation supported the 18.5 percent expansion in GHG emission from coal which recorded 89.1 $MtCO_2e$ in 2023 as compared to last year's level of 75.2 $MtCO_2e$ *(Table 2)*. The country's total oil and oil products utilization brought about a 2.1 percent increase in GHG emission from 54.4 $MtCO_2e$ in 2022 to 55.6 $MtCO_2e$ in 2023 which equates to a share of 36.9 percent of the total GHG emission during the same period. On the other hand, the continued downtrend in consumption of natural gas brought down the fuel's GHG emissions by 3.0 percent or 3.9 percent share in the country's total GHG emissions during the year.

The potential avoided emissions resulting from mitigation activities may reverse the decrease in the country's GHG avoidance of 6.5 percent which was recorded at 16.9 $MtCO_2e$ or 10.1 percent of the total hypothetical[31] GHG emission in 2023 as shown in *Figure 18* and *Table 3.* Combined increments in generation output from geothermal, hydro, biomass, and variable RE (wind and solar) pulled down avoided GHG emissions from the power generation sector by 13.0 percent from 4.5 $MtCO_2e$ (2.9 percent of total GHG avoidance) last year vis-à-vis 3.9 $MtCO_2e$ (2.3 percent of total GHG avoidance) during the period. In the same trend, GHG avoidance brought about by demand-side management measures went down by 4.4 percent to 13.0 $MtCO_2e$ (7.8 percent share to total avoidance), which contributed a 6.5 percent decrease in overall avoided GHG emissions for the year.

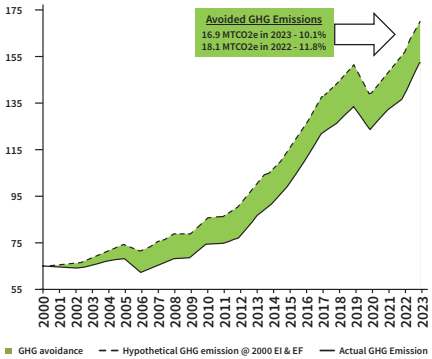


Figure 19. Actual GHG Emission, Hypothetical GHG Emission and GHG Avoidance: 2000 – 2023

Note: Hypothetical GHG Emission is equivalent to Actual GHG Emission plus GHG Emission Avoidance; GHG Base year is CY 2000 GHG Emission Level

[31] Refers to actual GHG emission plus total avoidance; or the level of GHG emission if there were no mitigation measures being adopted.

Table 3. CO_2 Avoidance from the Mitigation Measures (in $ktCO_2e$)

GHG Reduction Measures	2022	Reduction Impact* %	2023	Reduction Impact* %	% Change
Demand side	13,635.88	8.87	13,042.33	7.79	-4.35
Efficiency in Electricity Consumption (EEC)	3,868.25	2.52	3,865.98	2.31	-0.06
Efficiency in Fossil Fuel Consumption (EEF)	7,400.33	4.81	6,942.74	4.15	-6.18
Biofuel	2,367.29	1.54	2,233.62	1.33	-5.65
CNG/NG	0.00	0.00	0.00	0.00	-11.25
Supply side					
Fuel Diversification in Power Generation @ 2018 GDP & EF**	4,470.23	2.91	3,891.04	2.32	-12.96
Total Avoidance (Demand + Supply - EEC)	18,106.11	11.77	16,933.37	10.11	-6.48
Actual GHG Emission	135,679.36		150,563.31		10.97
Hypothetical GHG Emission (Actual + Total Avoidance)	153,785.47		167,496.68		8.92

**Refers to the percent reduced emission (Total Avoidance / Hypothetical GHG Emission x 100)*
*** Includes efficiency in Power Generation and EEC*

V. Energy – Economy and Environmental Indicators[32]

Despite a slower economic performance in 2023 vis-à-vis 2022, the Philippines registered a faster expansion of 5.5 percent that surpassed some major economies in Asia and exceeded or matched the forecasts of multilateral organizations and private analysts[33].

Robust domestic demand and a resilient services sector drove the upturn in real GDP for 2023. Household consumption grew by 5.6 percent despite inflationary pressures on consumer goods and services, while investments in fixed capital formation (FCF) grew by 8.2 percent supported by increased public spending on major infrastructure projects. Meanwhile, the biggest contributors to the 7.1 percent climb in the GVA of the services sector were domestic trade, accommodation and food services, and transportation and storage. These sectors lifted the economy in 2023 despite the timid output from agriculture, fishery and forestry (AFF), and industry.

Energy-Economy Indicators

intensity. Energy-to-GDP intensity, measured in terms of tons of oil equivalent (TOE) per one million pesos of real GDP (MPhp) in 2023 posted a minimal increment of 0.6 percent from its previous year's level of 3.08 TOE/MPhp. The slight upward trajectory was likewise exhibited by electricity-to-GDP intensity as it increased by 0.3 percent to 5.6 watt-hours per peso (Wh/PhP). On the other hand, oil intensity went down by 5.6 percent to 7.6 barrels per peso (bbl/Php).

[32] GDP figures as based on the PSA National Accounts of the Philippines (NAP), as of April 2022 (rebased 2018)
[33] International Monetary Fund (IMF), the ASEAN+3 Macroeconomic Research Office (AMRO), and the World Bank (WB).

Energy use per unit of GVA in the industry and services sector went down by 5.2 percent and 2.5 percent, respectively, while the agriculture sector remained unchanged at 0.2 TOE/MPhp *(Figure 19)*.

These trends may be attributed to the sustained adjustments in the level of overall energy supply and electricity during the year compared to 2022 and implied that more was consumed to fuel economy-wide activities. Meanwhile, the slowdown in industrial activity effectively contributed to the decline in the sector's energy intensity, whereas energy efficient practices among services establishments translated to a reduced level of energy intensity during the year (Table 4).

[1] GDP figures as based on the PSA National Accounts of the Philippines (NAP), as of April 2022 (rebased 2018)
[1] International Monetary Fund (IMF), the ASEAN+3 Macroeconomic Research Office (AMRO), and the World Bank (WB).

Indicators	ENERGY	ELECTRICITY	Oil
Intensity	2022: 3.09 TOE/MPhp 2023: 3.10 TOE/MPhp	2022: 5.59 TOE/MPhp 2023: 5.61 TOE/MPhp	2022: 8.07 TOE/MPhp 2023: 7.62 TOE/MPhp
Elasticity	2022: 0.62 2023: 1.11	2022: 0.67 2023: 1.05	2022: 1.48 2023: 0.07
Per Capita	2022: 0.55 TOE 2023: 0.58 TOE	2022: 1,005.2 kWh 2023: 1,054.4 kWh	2022: 1.45 bbl 2023: 1.43 bbl

Table 4: Energy Indicators: 2022 vs 2023

Elasticity. As the country's demand levels moderately grew compared to the upturn in GDP, the income elasticity of energy (or energy-to-GDP elasticity) ratio went up to 1.1 in 2023 vis-à-vis 0.6 from the last year, while electricity-to-GDP went higher at 1.1 in 2023. This meant that changes in aggregate energy levels and that of electricity triggered a corresponding proportionate change in economic activity. On the other hand, oil-to-GDP fell to 0.7 units brought about by the contraction in the overall supply of oil and oil products during the year (Table 4).

Per Capita: Energy, electricity, and oil per capita values marginally improved this year and were recorded at 0.58 TOE, 1,054.4 kWh, and 1.43 bbl, respectively *(Table 4)*. Progress in energy per capita levels indicated that more Filipinos had access to these fuel resources during the year.

GHG Emission Indicators

GHG intensity of GDP stood at 0.72 tCO_2e for every Php100,000, while carbon intensity of TPES and electricity registered increments of 4.6 percent and 10.8 percent, respectively, given the increased share of fossil fuels, particularly coal, in the generation and energy mixes. Thus, GHG emission per capita mirrored the same climb as it went up by 10.6 percent *(Figure 19)*.

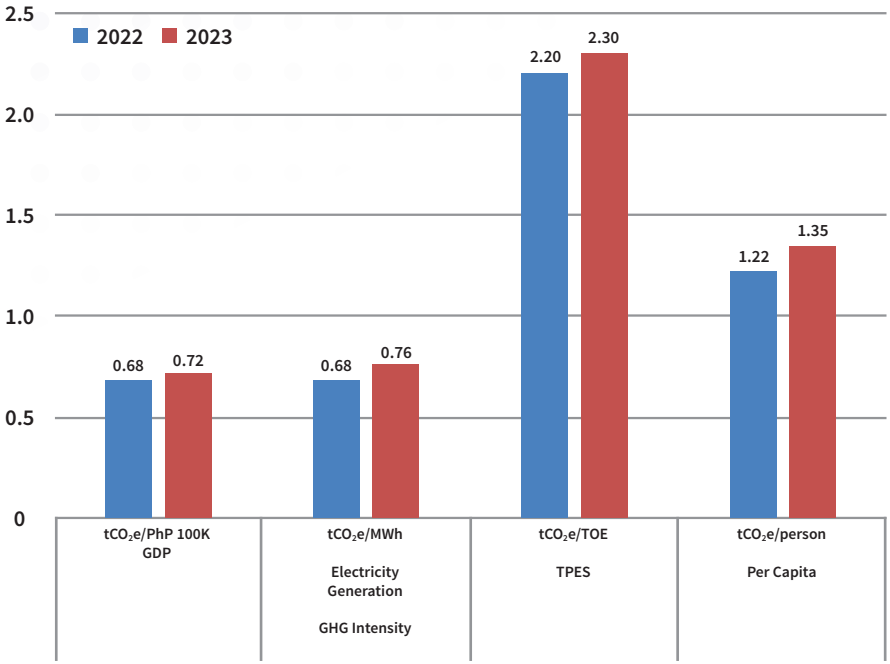


Figure 20. Environmental Emission Indicators: 2022 vs 2023

2022 ENERGY BALANCE TABLE *in thousand tons of oil equivalent (kTOE)*

	Coal	Natgas	Oil & Oil Products	Hydro	Geothermal	Solar	Wind	Biomass	Biodiesel	Bioethanol	Electricity	Total
Indigeneous	7,630.5	2,612.5	357.6	2,510.5	8,963.5	156.7	88.6	7,731.3	165.6	205.7	-	30,422.4
Imports (+)	17,256.9	-	21,250.9	-	-	-	-	-	-	154.7	-	38,662.5
Exports (-)	(3,744.4)	-	(739.8)	-	-	-	-	-	-	-	-	(4,484.2)
International Marine Bunkers (-)	-	-	(107.4)	-	-	-	-	-	-	-	-	(107.4)
International Civil Aviation (-)	-	-	(1,206.2)	-	-	-	-	-	-	-	-	(1,206.2)
Stock Change (+/-)	(2,067.8)	-	277.4	-	-	-	-	-	15.8	45.6	-	(1,729.0)
Total Primary Energy Supply	**19,075.3**	**2,612.5**	**19,832.4**	**2,510.5**	**8,963.5**	**156.7**	**88.6**	**7,731.3**	**181.3**	**406.1**	**-**	**61,558.2**
Refinery (Crude Run)	-	-	(329.1)	-	-	-	-	-	-	-	-	(329.1)
Power Generation (Fuel Input)	(17,129.2)	(2,528.5)	(823.9)	(2,510.5)	(8,963.5)	(156.7)	(88.6)	(514.3)	(12.2)	-	9,588.6	(23,138.6)
Transmission/Dist. Loss (-)	-	-	-	-	-	-	-	-	-	-	(919.5)	(919.5)
Energy Sector Use & Loss (-)	-	(84.0)	(314.9)	-	-	-	-	-	-	-	(816.0)	(1,214.8)
Net Domestic Supply	**1,946.1**	**-**	**18,364.6**	**-**	**-**	**-**	**-**	**7,217.0**	**169.2**	**406.1**	**7,853.2**	**35,956.1**
Statistical Difference												97.5
% Statistical Difference												0.3
Total Final Energy Consumption	**1,946.1**	**-**	**18,267.0**	**-**	**-**	**-**	**-**	**7,217.0**	**169.2**	**406.1**	**7,853.2**	**35,858.6**
Industry	1,855.3	-	1,824.0	-	-	-	-	923.6	23.7	-	2,480.1	7,106.7
Transport	-	-	11,789.7	-	-	-	-	-	117.1	406.1	9.2	12,322.0
Households	-	-	1,311.1	-	-	-	-	5,961.6	-	-	3,037.4	10,310.1
Services	-	-	2,004.9	-	-	-	-	331.8	26.0	-	2,088.9	4,451.5
Agriculture	-	-	139.3	-	-	-	-	-	2.4	-	237.6	379.3
Non-Energy Use	90.8	-	1,198.1	-	-	-	-	-	-	-	-	1,288.9
											Self-Sufficiency (%)	**49.42**

2023 ENERGY BALANCE TABLE *in thousand tons of oil equivalent (kTOE)*

	Coal	Natgas	Oil & Oil Products	Hydro	Geothermal	Solar	Wind	Biomass	Biodiesel	Bioethanol	Electricity	Total
Indigeneous	7,785.4	1,878.6	266.2	2,560.9	9,226.3	218.7	112.5	7,817.8	186.0	214.0	-	30,266.4
Imports (+)	19,471.7	655.8	22,290.0	-	-	-	-	-	-	191.0	-	42,608.5
Exports (-)	(4,238.4)	-	(776.6)	-	-	-	-	-	-	-	-	(5,015.0)
International Marine Bunkers (-)	-	-	(52.5)	-	-	-	-	-	-	-	-	(52.5)
International Civil Aviation (-)	-	-	(1,625.0)	-	-	-	-	-	-	-	-	(1,625.0)
Stock Change (+/-)	(442.8)	-	(428.2)	-	-	-	-	-	(5.0)	31.7	-	(844.3)
Total Primary Energy Supply	**22,575.9**	**2,534.3**	**19,673.8**	**2,560.9**	**9,226.3**	**218.7**	**112.5**	**7,817.8**	**181.1**	**436.7**	**-**	**65,338.1**
Refinery (Crude Run)	-	-	(375.1)	-	-	-	-	-	-	-	-	(375.1)
Power Generation (Fuel Input)	(20,589.2)	(2,466.6)	(697.1)	(2,560.9)	(9,226.3)	(218.7)	(112.5)	(547.8)	(7.6)	-	10,146.5	(26,280.3)
Transmission/Dist. Loss (-)	-	-	-	-	-	-	-	-	-	-	(1,014.0)	(1,014.0)
Energy Sector Use & Loss (-)	-	(67.7)	(450.8)	-	-	-	-	-	-	-	(894.5)	(1,413.1)
Net Domestic Supply	**1,986.7**	**0.0**	**18,150.8**	**-**	**-**	**-**	**-**	**7,270.0**	**173.5**	**436.7**	**8,238.0**	**36,255.7**
Statistical Difference												(658.8)
% Statistical Difference												(1.8)
Total Final Energy Consumption	**1,986.7**	**-**	**18,809.6**	**-**	**-**	**-**	**-**	**7,270.0**	**173.5**	**436.7**	**8,238.0**	**36,914.5**
Industry	1,906.6	-	1,569.0	-	-	-	-	928.1	21.0	-	2,535.9	6,960.7
Transport	-	-	12,290.2	-	-	-	-	-	120.6	436.7	12.5	12,859.9
Households	-	-	1,349.5	-	-	-	-	6,007.8	-	-	3,178.7	10,536.0
Services	-	-	2,117.3	-	-	-	-	334.1	29.2	-	2,255.9	4,736.5
Agriculture	-	-	144.6	-	-	-	-	-	2.6	-	255.1	402.3
Non-Energy Use	80.1	-	1,339.0	-	-	-	-	-	-	-	-	1,419.1
											Self-Sufficiency (%)	**46.32**

DEPARTMENT OF ENERGY

BAGONG PILIPINAS

KEY ENERGY STATISTICS

2023

Table of Contents

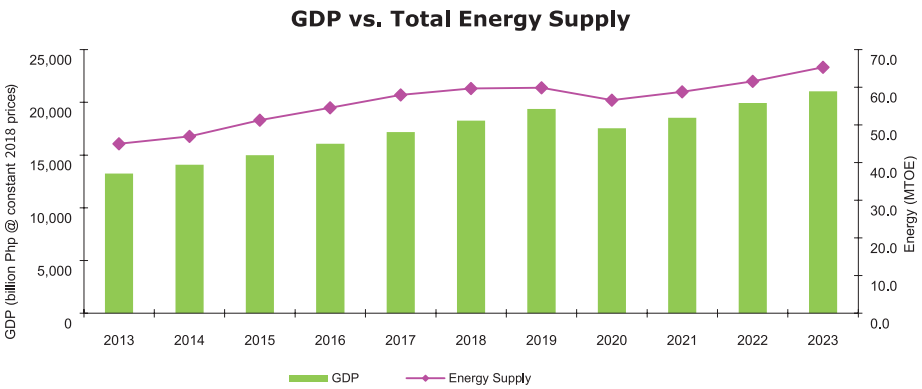
Energy and Economy

Energy and Economic Indicators

	2013	2014	2015	2016	2017	2018
GDP (in billion pesos: at constant 2018 prices)	13,254.6	14,096.0	14,990.9	16,062.7	17,176.0	18,265.2
Total Final Energy Consumption (in MTOE)	27.3	28.5	31.0	33.5	35.5	35.7
Total Primary Energy Supply (in MTOE)	45.0	47.0	51.3	54.6	58.0	59.7
Population (in million)	98.2	99.9	100.8	102.5	104.2	105.8
Forex (in Pesos/USD)	44.4	44.6	47.2	49.8	49.9	52.7
Average Crude Price (in USD / barrel)	105.0	97.0	50.9	42.2	54.2	69.4

	2019	2020	2021	2022	2023	AAGR*
GDP (in billion pesos: at constant 2018 prices)	19,382.8	17,537.8	18,540.1	19,945.6	21,051.8	4.7%
Total Final Energy Consumption (in MTOE)	36.3	32.6	35.0	35.9	36.9	3.1%
Total Primary Energy Supply (in MTOE)	59.9	56.6	58.8	61.6	65.3	3.8%
Population (in million)	107.3	109.2	110.1	110.9	111.9	1.3%
Forex (in Pesos/USD)	50.7	48.0	50.8	56.1	55.6	2.3%
Average Crude Price (in USD / barrel)	66.8	49.8	69.2	70.2	82.1	-2.4%

**AAGR - Average Annual Growth Rate*



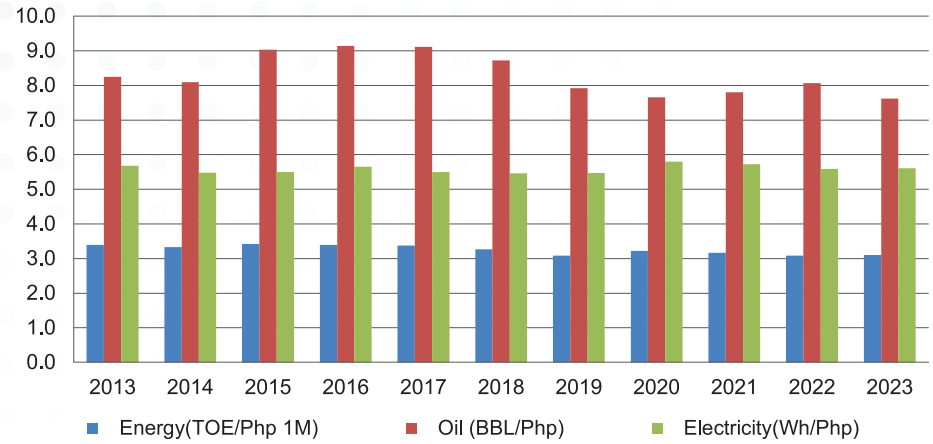
Sources:
Gross Domestic Product (GDP), Population -National Accounts, Philippine Statistical Authority (Rebased 2018)
Foreign Exchange Rate - Bangko Sentral ng Pilipinas (BSP)
Energy Supply - Policy Formulation and Research Division (PFRD), DOE
Crude Oil Price - Oil Industry Management Bureau (OIMB), DOE

Indicator	2013	2014	2015	2016	2017	2018
Intensity						
Energy to GDP** (TOE/Php1M)	3.39	3.33	3.42	3.40	3.37	3.27
Oil to GDP (BBL/Php)	8.25	8.09	9.03	9.14	9.11	8.73
Electricity to GDP (Wh/Php)	5.68	5.48	5.50	5.65	5.49	5.46
Elasticity						
Energy to GDP	0.50	0.70	1.44	0.90	0.89	0.48
Oil to GDP	0.31	0.68	2.95	1.17	0.96	0.29
Electricity to GDP	0.48	0.42	1.05	1.42	0.57	0.90
Energy Per Capita (TOE/person)	0.46	0.47	0.51	0.53	0.56	0.56

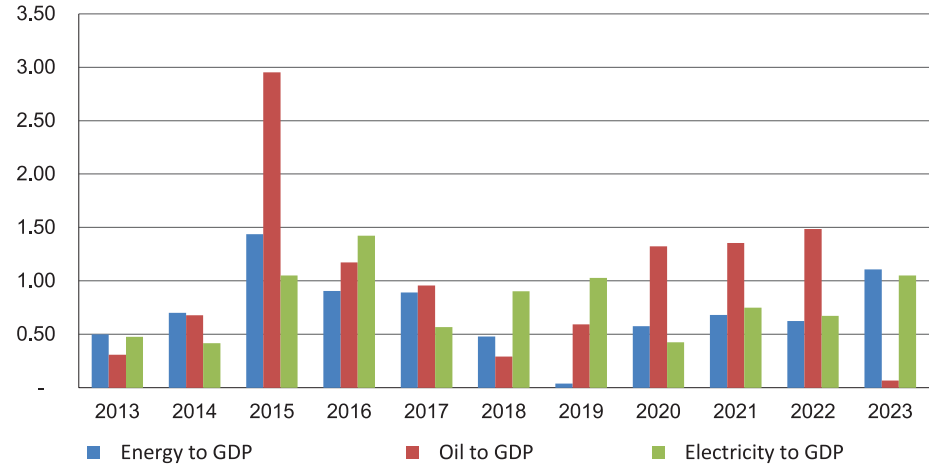
Indicator	2019	2020	2021	2022	2023	AAGR*
Intensity						
Energy to GDP** (TOE/Php1M)	3.09	3.23	3.17	3.09	3.10	-0.9%
Oil to GDP (BBL/Php)	7.93	7.66	7.80	8.07	7.62	-0.8%
Electricity to GDP (Wh/Php)	5.47	5.80	5.72	5.59	5.61	-0.1%
Elasticity						
Energy to GDP	0.04	0.57	0.68	0.62	1.11	8.3%
Oil to GDP	0.59	1.32	1.36	1.48	0.07	-14.1%
Electricity to GDP	1.03	0.42	0.75	0.67	1.05	8.2%
Energy Per Capita (TOE/person)	0.56	0.52	0.53	0.55	0.58	2.5%

**AAGR - Average Annual Growth Rate*
*'** GDP Rebased 2018 @ constant price*

Energy Intensity



Elasticity



Energy and Environment

GHG Emission by Sector and Activity

$MtCO_2e$[1]

Sector and Activity	2013	2014	2015	2016	2017	2018
Industry	12.36	12.88	13.20	15.29	16.63	14.22
Transport	25.48	26.45	30.60	33.11	34.19	35.38
Others[2]	6.31	7.15	7.06	8.59	10.16	10.63
Electricity Generation	40.69	43.63	47.49	51.61	59.00	64.60
Energy[3]	0.94	1.11	0.96	0.66	0.71	0.75
Total	85.78	91.22	99.30	109.25	120.69	125.58

Sector and Activity	2019	2020	2021	2022	2023	AAGR*
Industry	13.18	11.32	12.50	12.94	12.35	0.0%
Transport	36.63	28.16	31.53	35.42	36.87	3.8%
Others[2]	11.27	11.35	12.13	9.88	10.35	5.1%
Electricity Generation	70.32	70.95	73.88	76.28	89.46	8.2%
Energy[3]	1.05	0.79	0.40	1.16	1.53	5.0%
Total	132.45	122.58	130.45	135.68	150.56	5.8%

Notes:
(1) Million tons of CO_2 Equivalent ($MTCO_2e$)
(2) includes Household, Services and Agriculture Sectors
(3) includes Oil refining, Electricity and other Energy sector own use and losses

**average annual growth rate*

GHG Emission by Fuel Type

$MtCO_2e$

Fuel type	2013	2014	2015	2016	2017	2018
Liquid Fossils (Oil)	39.85	42.56	47.15	50.47	52.47	53.06
Solid Fossils (Coal)	39.18	41.56	45.48	51.13	60.67	64.10
Gaseous Fossil (Natural Gas)	6.75	7.10	6.68	7.65	7.55	8.42
Total	85.78	91.22	99.30	109.25	120.69	125.58

Fuel type	2019	2020	2021	2022	2023	AAGR*
Liquid Fossils (Oil)	55.31	46.26	49.81	54.40	55.57	3.4%
Solid Fossils (Coal)	68.66	68.63	74.05	75.17	89.07	8.6%
Gaseous Fossil (Natural Gas)	8.48	7.69	6.60	6.11	5.93	-1.3%
Total	132.45	122.58	130.45	135.68	150.56	5.8%

**AAGR - Average Annual Growth Rate*

Environment Emission Indicators

GHG emission is expressed in carbon dioxide equivalent (CO_2e) which accounts for the global warming potential (GWP) of CH_4 and N_2O, as prescribed by the Inter-governmental Panel on Climate Change (IPCC). GWP is the ratio of the warming resulting from the emission of one kilogram of a greenhouse gas to that of one kilogram emission of CO_2 over a fixed period of time (i.e. CH_2 and N_2O GWP is 21 times and 310 times the CO_2 emission, respectively)

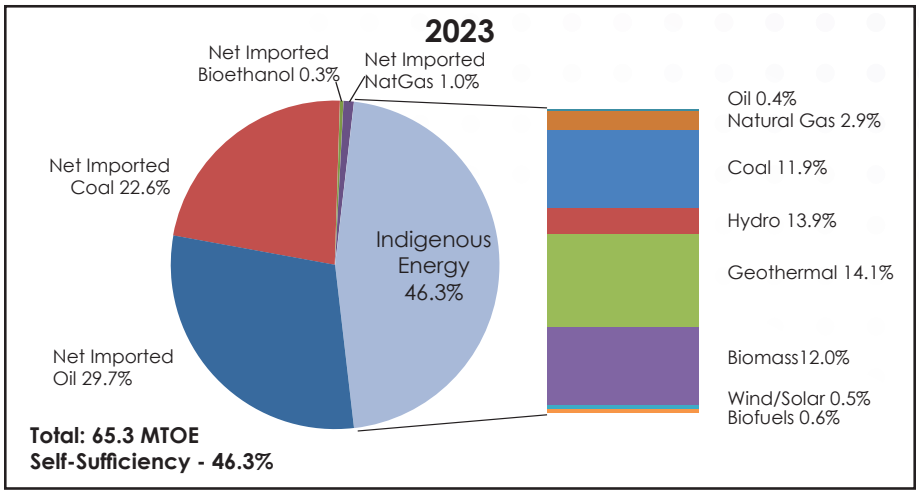
Indicator	2013	2014	2015	2016	2017	2018
GHG emission-to-GDP ratio						
(tCO_2e/PhP 100K, 2000=100)	0.65	0.65	0.66	0.68	0.70	0.69
GHG emission per capita						
(tCO_2e/person)	0.87	0.91	0.98	1.06	1.15	1.18
GHG emission per Electricity Generation						
(tCO_2e/MWh)	0.54	0.56	0.58	0.57	0.63	0.65
GHG emission per Oil consumption						
(tCO_2e/TOE)	2.65	2.65	2.48	2.51	2.51	2.54
GHG emission per TPES						
(tCO_2e/TOE)	1.91	1.94	1.94	2.00	2.08	2.10

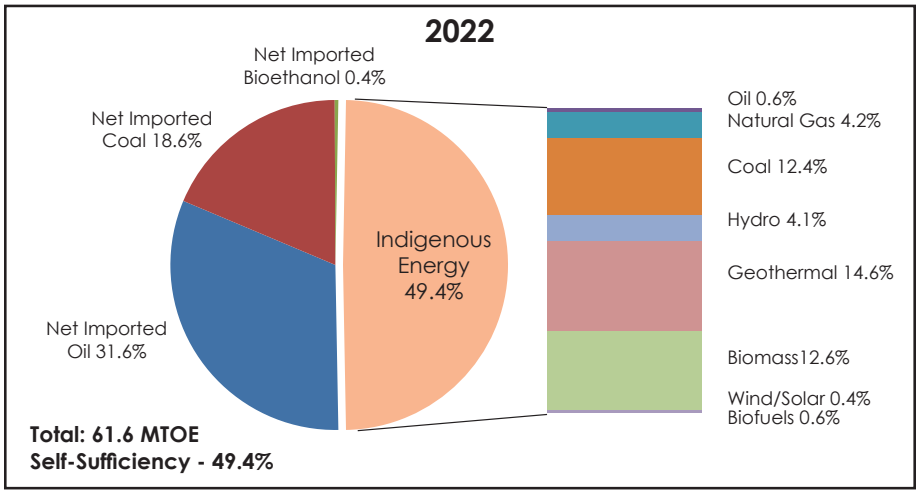
Indicator	2019	2020	2021	2022	2023	AAGR*
GHG emission-to-GDP ratio						
(tCO_2e/PhP 100K, 2000=100)	0.68	0.70	0.70	0.68	0.72	1.0%
GHG emission per capita						
(tCO_2e/person)	1.22	1.12	1.18	1.22	1.35	4.4%
GHG emission per Electricity Generation						
(tCO_2e/MWh)	0.66	0.70	0.70	0.68	0.76	3.4%
GHG emission per Oil consumption						
(tCO_2e/TOE)	2.77	2.71	2.75	2.61	2.71	0.2%
GHG emission per TPES						
(tCO_2e/TOE)	2.21	2.17	2.20	2.20	2.30	1.9%

**AAGR - Average Annual Growth Rate*

Energy Mix

Total Primary Energy Supply Mix





Total Energy and Self-Sufficiency Level

In kTOE

	2013	2014	2015	2016	2017	2018
Indigenous Energy	25,469	26,606	26,881	29,405	29,515	29,977
Oil	680	849	715	702	622	594
Natural Gas	2,887	3,036	2,854	3,270	3,226	3,601
Coal	3,747	4,012	3,894	5,917	6,298	6,204
Hydro	2,494	2,275	2,157	2,019	2,393	2,336
Geothermal	8,258	8,863	9,496	9,519	8,831	8,973
Biomass	7,237	7,356	7,431	7,494	7,651	7,725
Wind	6	13	64	84	94	99
Solar[a]	0	1	12	94	103	107
Biodiesel	125	134	164	178	167	168
Bioethanol	35	66	94	127	131	170
Imported Energy	19,520	20,384	24,393	25,185	28,444	29,739
Oil	13,075	13,571	16,496	17,844	19,048	19,400
Coal	6,255	6,630	7,721	7,169	9,177	10,145
Bioethanol	190	182	176	172	219	194
Total Energy	**44,989**	**46,990**	**51,274**	**54,590**	**57,958**	**59,717**
Rnewable Energy (RE)	18,345	18,891	19,594	19,687	19,588	19,772
Green Energy (RE + Natural Gas)	21,232	21,927	22,448	22,957	22,814	23,373
Self Sufficiency (%)	**57**	**57**	**52**	**54**	**51**	**50**

	2019	2020	2021	2022	2023	AAGR*
Indigenous Energy	30,906	29,676	29,838	30,422	30,266	1.7%
Oil	523	456	392	358	266	-8.9%
Natural Gas	3,626	3,288	2,820	2,612	1,879	-4.2%
Coal	7,258	6,836	7,414	7,631	7,785	7.6%
Hydro	1,998	1,790	2,287	2,510	2,561	0.3%
Geothermal	9,192	9,249	8,613	8,963	9,226	1.1%
Biomass	7,736	7,563	7,721	7,731	7,818	0.8%
Wind	90	88	109	89	112	34.9%
Solar[a]	107	118	126	157	219	43.9%
Biodiesel	178	131	157	166	186	4.1%
Bioethanol	199	155	200	206	214	19.7%
Imported Energy	28,946	26,902	28,943	31,136	35,072	6.0%
Oil	18,532	15,997	17,261	19,475	19,408	4.0%
Coal	10,224	10,710	11,499	11,445	14,791	9.0%
Bioethanol	190	194	183	216	218	1.4%
Natural Gas	-	-	-	-	656	-
Total Energy	**59,852**	**56,577**	**58,781**	**61,558**	**65,338**	**3.8%**
Rnewable Energy (RE)	19,690	19,290	19,395	20,038	20,554	1.1%
Green Energy (RE + Natural Gas)	23,316	22,578	22,215	22,650	23,088	0.8%
Self Sufficiency (%)	**52**	**52**	**51**	**49**	**46**	

**AAGR - Average Annual Growth Rate*

a) AAGR from 2015 to 2023

Energy Consumption

Total Final Energy Consumption, by Sector and Fuel Type*

In kTOE

	2013	2014	2015	2016	2017	2018
Industry	**6,312**	**6,529**	**6,750**	**7,449**	**7,925**	**7,523**
Coal	2,082	2,261	2,218	2,677	3,008	2,411
Natural Gas[(a)]	62	77	50	65	53	59
Oil	1,278	1,206	1,382	1,458	1,470	1,469
Diesel	655	535	587	656	750	693
Fuel Oil	497	527	637	653	613	578
LPG	111	128	141	130	85	196
Kerosene	15	16	18	19	22	2
Biomass	1,099	1,131	1,152	1,164	1,181	1,199
Ricehull	46	48	49	49	50	51
Fuelwood	168	170	172	173	176	179
Bagasse	474	489	499	504	511	519
Agriwaste	392	404	412	416	423	429
Animal Waste	20	20	21	21	21	21
Biodiesel	13	11	12	13	14	13
Electricity	1,778	1,843	1,936	2,074	2,199	2,372
Transport	**8,784**	**9,133**	**10,557**	**11,425**	**11,824**	**12,239**
Natural Gas***	0.8	0.1	-	-	-	-
Oil	8,459.9	8,781.9	10,151.0	10,986.1	11,351.8	11,752.7
Gasoline	3,101.6	3,180.8	3,651.5	4,019.7	4,369.6	4,504.0
Diesel	4,654.6	4,839.1	5,840.8	6,156.4	6,194.5	6,452.3
Fuel Oil	213.6	177.8	183.0	202.8	265.4	202.8
Auto LPG [(b)]	57.3	41.7	29.6	13.5	10.4	10.0
Aviation fuel	432.7	542.5	446.1	593.8	511.9	583.6
Biodiesel	91.8	95.6	116.3	121.0	122.6	126.6
Bioethanol	221.8	245.7	281.5	308.9	339.3	349.8
Electricity	9.7	9.6	8.5	9.0	10.0	10.0

	2013	2014	2015	2016	2017	2018
Households	**8,386**	**8,488**	**8,731**	**9,035**	**9,192**	**9,431**
Oil	880	862	973	1,122	1,159	1,255
LPG	776	769	888	1,043	1,083	1,176
Kerosene	104	93	85	79	75	79
Biomass	5,733	5,823	5,802	5,709	5,731	5,746
Fuelwood	4,246	4,290	4,259	4,131	4,119	4,107
Charcoal	899	946	973	1,027	1,067	1,110
Agriwaste	589	588	570	551	545	529
Electricity	1,772	1,803	1,956	2,204	2,303	2,430
Services	**3,038**	**3,397**	**3,370**	**3,865**	**4,404**	**4,668**
Oil	1,121	1,432	1,292	1,632	2,074	2,223
Diesel	776	1,053	843	1,058	1,397	1,568
Fuel Oil	116	113	138	201	146	148
LPG	228	266	310	374	532	507
Biomass	327	332	337	340	345	350
Ricehull	7	7	6	6	7	7
Charcoal	159	162	164	166	168	171
Fuelwood	161	164	166	168	170	173
Biodiesel	15	20	14	21	28	30
Electricity	1,574	1,613	1,727	1,872	1,958	2,065
Agriculture	**352**	**354**	**401**	**450**	**515**	**439**
Oil	189	172	194	229	290	208
Gasoline	2	5	8	7	12	7
Kerosene [c]	1	0	0	1	0	0
Diesel	182	165	182	212	270	200
Fuel Oil	4	2	3	8	7	1
Biodiesel	4	3	4	4	5	4
Electricity	160	178	203	218	220	227
Non-Energy Use	**428**	**605**	**1,179**	**1,306**	**1,613**	**1,423**
Oil	314	450	1,047	1,129	1,458	1,261
Coal	114	154	132	177	155	162
Total	**27,299**	**28,506**	**30,988**	**33,530**	**35,474**	**35,723**

	2019	2020	2021	2022	2023	AAGR**
Industry	**7,306**	**6,341**	**6,821**	**7,107**	**6,961**	**1.0%**
Coal	2,217	1,629	1,950	1,855	1,907	-0.9%
Natural Gas[(a)]	62	37	0	-	-	-47.7%
Oil	1,381	1,557	1,558	1,824	1,569	2.1%
Diesel	754	830	888	1,200	1,067	5.0%
Fuel Oil	453	532	450	411	296	-5.0%
LPG	173	178	200	202	191	5.6%
Kerosene	2	17	20	11	15	0.0%
Biomass	1,207	905	923	924	928	-1.7%
Ricehull	51	38	39	39	40	-1.6%
Fuelwood	180	135	137	135	135	-2.2%
Bagasse	522	392	400	401	404	-1.6%
Agriwaste	432	324	331	331	334	-1.6%
Animal Waste	22	16	17	17	17	-1.6%
Biodiesel	15	13	15	24	21	5.0%
Electricity	2,424	2,198	2,375	2,480	2,536	3.6%
Transport	**12,698**	**9,805**	**10,982**	**12,322**	**12,860**	**0.2%**
Natural Gas***	-	-	-	-	-	-89.9%
Oil	12,181	9,376	10,503	11,790	12,290	3.8%
Gasoline	4,870.4	4,145.2	4,714.0	5,188.5	5,590.5	6.1%
Diesel	6,479.4	4,913.5	5,401.1	5,935.8	6,111.3	2.8%
Fuel Oil	196.2	94.6	190.9	322.3	219.3	0.3%
Auto LPG [(b)]	8.8	4.4	2.8	0.2	-	-45.9%
Aviation fuel	626.3	218.7	194.1	342.9	369.0	-1.6%
Biodiesel	127	97	101	117	121	2.8%
Bioethanol	380	324	369	406	437	7.0%
Electricity	10	8	10	9	13	2.6%

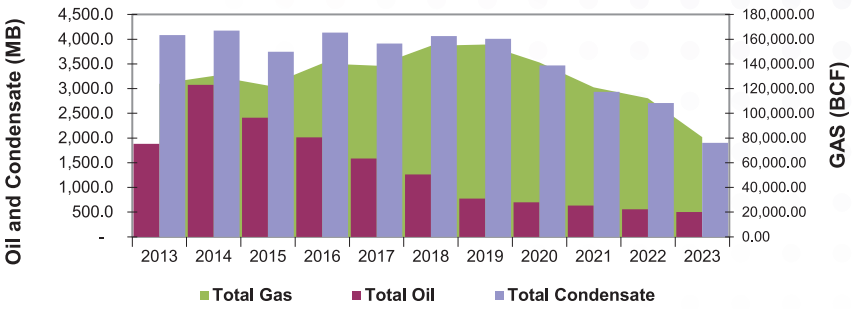
	2019	2020	2021	2022	2023	AAGR**
Households	**9,711**	**10,028**	**10,179**	**10,310**	**10,536**	**2.3%**
Oil	1,312	1,238	1,266	1,311	1,350	4.4%
LPG	1,240	1,187	1,215	1,265	1,318	5.4%
Kerosene	72	51	51	46	32	-11.2%
Biomass	5,772	5,842	5,904	5,962	6,008	0.5%
Fuelwood	4,100	4,121	4,136	4,145	4,145	-0.2%
Charcoal	1,157	1,209	1,263	1,317	1,372	4.3%
Agriwaste	515	512	506	500	491	-1.8%
Electricity	2,627	2,949	3,008	3,037	3,179	6.0%
Services	**4,936**	**4,611**	**4,848**	**4,452**	**4,736**	**4.5%**
Oil	2,360	2,467	2,662	2,005	2,117	6.6%
Diesel	1,706	1,877	2,027	1,318	1,480	6.7%
Fuel Oil	158	126	155	173	151	2.6%
LPG	495	464	480	514	487	7.9%
Biomass	353	325	330	332	334	0.2%
Ricehull	7	5	5	5	5	-4.2%
Charcoal	172	155	157	158	159	0.0%
Fuelwood	174	165	167	169	170	0.5%
Biodiesel	33	37	40	26	29	6.7%
Electricity	2,191	1,782	1,816	2,089	2,256	3.7%
Agriculture	**472**	**436**	**556**	**379**	**402**	**1.3%**
Oil	229	211	243	139	145	-2.6%
Gasoline	9	10	15	17	10	17.3%
Kerosene [c]	0	1	0	0	-	-18.7%
Diesel	218	198	226	121	133	-3.0%
Fuel Oil	2	2	2	1	1	-15.8%
Biodiesel	4	4	4	2	3	-3.0%
Electricity	239	221	308	238	255	4.8%
Non-Energy Use	**1,137**	**1,372**	**1,642**	**1,289**	**1,419**	**12.7%**
Oil	996	1,160	1,430	1,198	1,339	15.6%
Coal	141	212	213	91	80	-3.5%
Total	**36,260**	**32,593**	**35,028**	**35,859**	**36,914**	**3.1%**

** does not include energy for power application*
***average annual growth rate*
**** AAGR from 2013-2014*

a) AAGR from 2013 to 2021
b) AAGR from 2013 to 2022
c) AAGR from 2013 to 2022

OIL AND GAS

Oil and Gas Production, by Source



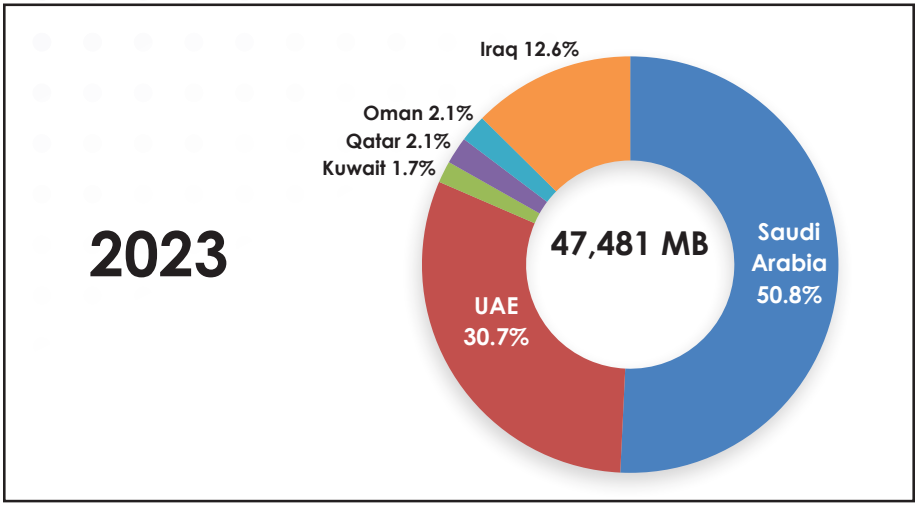
	2013	2014	2015	2016	2017	2018
In MB						
Total Oil	**1,883.83**	**3,078.68**	**2,409.75**	**2,013.56**	**1,586.61**	**1,263.53**
Nido[a]	84.46	79.11	71.15	53.65	56.16	51.74
Matinloc[b]	66.28	69.83	70.72	72.75	67.49	43.05
North Matinloc [c]	10.03	8.87	8.36	9.12	2.10	-
Galoc	1,723.06	2,920.88	2,259.52	1,878.04	1,460.85	1,166.76
Alegria[d]	-	-	-	-	-	1.98
Total Condensate	**4,083.71**	**4,172.73**	**3,746.41**	**4,136.17**	**3,913.67**	**4,061.46**
Malampaya Condensate	4,083.71	4,172.73	3,746.41	4,136.17	3,913.67	4,061.46
In MMSCF						
Total Gas	123,944	130,351	122,541	140,398	138,497	154,622
Libertad[e]	79	35	15	-	-	-
Malampaya Gas	123,866	130,316	122,527	140,398	138,497	154,622

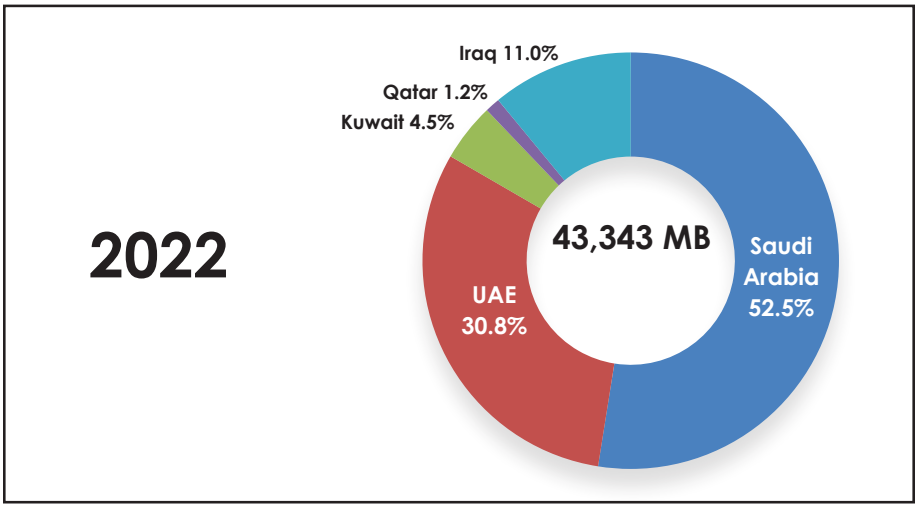
	2019	2020	2021	2022	2023	AAGR*
In MB						
Total Oil	**776.09**	**700.12**	**632.29**	**558.28**	**501.20**	**-12.4%**
Nido[a]	20.63	-	-	-	-	-20.9%
Matinloc[b]	1.54	-	-	-	-	-46.6%
North Matinloc [c]	-	-	-	-	-	-32.3%
Galoc	744.45	695.25	630.25	556.90	501.14	-11.6%
Alegria[d]	9.47	4.87	2.04	1.37	0.06	-49.7%
Total Condensate	**4,006.24**	**3,469.45**	**2,936.44**	**2,706.11**	**1,904.42**	**-7.3%**
Malampaya Condensate	4,006.24	3,469.45	2,936.44	2,706.11	1,904.42	-7.3%
In MMSCF						
Total Gas	155,690	141,191	121,089	112,172	80,660	-6.4%
Libertad[e]	-	-	-	-	-	-56.8%
Malampaya Gas	155,690	141,191	121,089	112,172	80,660	-4.2%

**average annual growth rate*

(a) average annual growth rate from 2013 to 2019
(b) average annual growth rate from 2013 to 2019
(c) average annual growth rate from 2013 to 2017
(d) average annual growth rate from 2018 to 2023
(e) average annual growth rate from 2013 to 2015

Crude Oil Importation, by Country of Source





In MB

Source	2013	2014	2015	2016	2017	2018
Middle East	42,727	49,086	67,855	68,537	69,345	74,555
Saudi Arabia	23,500	37,103	34,427	28,438	27,097	28,880
Kuwait [b]	-	-	16,877	26,448	24,475	22,589
UAE	10,737	6,403	9,087	10,507	13,549	17,759
Qatar	7,439	5,579	7,464	2,618	2,999	4,235
Oman[c]	-	-	-	524	1,225	1,091
Yemen[d]	1,050	-	-	-	-	-
Indonesia[e]	162	-	-	396	-	221
Malaysia [f]	1,023	3,583	5,025	4,160	916	3,215
Others**	12,273	12,194	5,031	5,544	7,255	7,669
Total	**56,186**	**64,862**	**77,911**	**78,637**	**77,516**	**85,660**

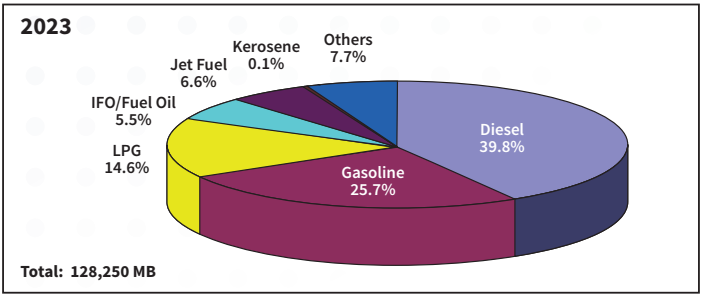
Source	2019	2020	2021	2022	2023	AAGR*
Middle East	41,521	24,040	28,411	43,343	47,481	1.1%
Saudi Arabia	15,498	15,044	19,059	22,760	24,102	0.3%
Iraq[a]	-	-	630	4,760	5,976	208.0%
Kuwait[b]	15,925	7,991	-	1,952	798	-31.7%
UAE	9,136	506	4,769	13,368	14,597	3.1%
Qatar	-	498	952	502	999	-18.2%
Oman[c]	961	-	3,002	-	1,009	9.8%
Indonesia[e]	-	-	-	-	-	6.4%
Malaysia [f]	4,085	629	-	-	-	-6.7%
Others**	15,061	8,273	1,277	-	-	-24.6%
Total	**60,666**	**32,942**	**29,689**	**43,343**	**47,481**	**-1.7%**

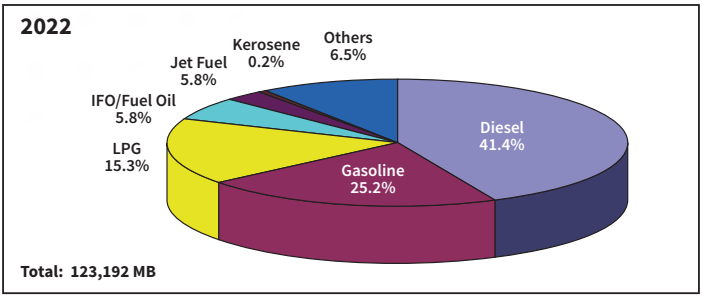
**average annual growth rate*

(a) AAGR from 2021 to 2023
(b) AAGR from 2015 to 2023
(c) average annual growth rate from 2016 to 2023
(d) only one (1) entry (2013)
(e) average annual growth rate from 2013 to 2018
(f) average annual growth rate from 2013 to 2020

***AAGR from 2013 to 2021 and includes Singapore, Brunei, Russia, Vietnam, Korea, Australia and other Asia and Pacific Region*

Petroleum Products Importation, by Type





In MB

Fuel	2013	2014	2015	2016	2017	2018
Diesel	26,464	30,343	28,375	35,345	40,105	38,784
Gasoline	14,599	14,828	15,148	15,705	17,162	19,004
LPG	9,074	9,299	9,691	11,613	13,910	15,224
IFO/Fuel Oil	2,685	4,901	10,129	7,162	6,921	5,244
Jet Fuel	6,449	6,579	5,722	6,837	8,928	9,331
Kerosene	1,490	430	199	252	317	265
Others**	1,756	3,279	8,670	9,194	10,073	9,721
Total	62,517	69,658	77,934	86,108	97,415	97,573

Fuel	2019	2020	2021	2022	2023	AAGR*
Diesel	49,462	41,977	50,655	50,976	51,071	6.8%
Gasoline	18,726	25,038	24,927	31,002	32,925	8.5%
LPG	15,957	17,109	19,723	18,797	18,722	7.5%
IFO/Fuel Oil	5,061	6,481	7,097	7,128	7,039	10.1%
Jet Fuel	11,708	3,408	3,331	7,128	8,405	2.7%
Kerosene	134	304	398	197	167	-19.7%
Others**	7,889	8,791	11,442	7,965	9,922	18.9%
Total	108,936	103,108	117,572	123,192	128,250	7.4%

**average annual growth rate*
***others include asphalt, solvents, naptha/reformate, condensate*

Petroleum Products Importation, by Country of source

MB

Source	2013	2014	2015	2016	2017	2018
Middle East	**2,449**	**1,966**	**1,678**	**6,280**	**5,272**	**11,521**
Bahrain	86	-	-	-	-	-
Iran	-	-	-	1	3	1
Iraq	-	-	-	-	-	163
KSA	843	551	1,085	1,402	1,081	1,204
Kuwait	504	406	228	692	1,150	443
Oman	251	-	135	-	90	3
Qatar	276	450	-	1,490	1,263	1,265
UAE	489	559	231	2,695	1,684	8,442
ASEAN	**17,312**	**16,523**	**19,979**	**19,556**	**19,732**	**18,321**
Brunei	-	-	-	-	-	-
Indonesia	97	697	228	1,610	1,186	539
Malaysia	1,835	1,758	7,523	4,572	7,557	7,661
Philippines	4,427	805	-	-	-	-
Singapore	7,547	9,982	10,323	12,147	10,273	7,910
Thailand	3,148	2,473	1,272	36	377	930
Vietnam	258	808	633	1,192	340	1,281
OTHER ASIA	**42,531**	**50,335**	**53,160**	**58,342**	**67,305**	**64,491**
China	8,117	10,504	10,938	24,997	32,460	29,421
Hong Kong	64	1	-	51	158	-
India	31	1,064	3,258	2,763	4,686	2,682
Japan	299	368	1,824	4,701	4,261	2,673
Russia	-	-	605	-	-	-
South Korea	14,875	21,229	17,886	16,233	22,521	28,083
Sri Lanka	-	-	-	-	-	271
Taiwan	19,145	16,993	17,674	9,204	2,216	1,028
Pakistan	-	177	975	393	1,002	333
OTHERS**	**224**	**834**	**3,117**	**1,930**	**5,106**	**3,240**
Total	**62,517**	**69,658**	**77,934**	**86,108**	**97,415**	**97,573**

Source	2019	2020	2021	2022	2023	AAGR*
Middle East	**8,436**	**8,492**	**7,695**	**3,727**	**5,287**	**8.0%**
Bahrain	-	-	4	-	5	
Iran	5	-	-	-	-	
Iraq	-	-	-	-	44	
KSA	1,242	1,407	2,438	116	1,092	
Kuwait	1,323	1,384	1,001	490	1,764	
Oman	176	-	-	-	-	
Qatar	657	1,868	1,202	2,293	1,790	
UAE	5,033	3,833	3,049	828	593	
ASEAN	**24,697**	**34,651**	**43,833**	**44,630**	**50,053**	**11.2%**
Brunei	222	4,293	5,660	4,245	3,408	
Indonesia	590	1,738	-	-	141	
Malaysia	9,161	9,338	13,429	11,723	16,049	
Philippines	-	-	-	-	-	
Singapore	12,551	18,188	20,361	27,437	27,323	
Thailand	266	409	3,647	1,110	2,521	
Vietnam	1,907	685	736	116	612	
OTHER ASIA	**73,156**	**55,327**	**61,344**	**72,837**	**71,140**	**5.3%**
China	45,472	32,247	35,279	18,974	31,470	
Hong Kong	0	20	0	-	-	
India	3,219	4,409	4,950	1,009	1,950	
Japan	1,373	518	2,323	7,722	4,137	
Russia	-	512	-	1,320	241	
South Korea	22,701	16,045	15,267	37,835	29,780	
Sri Lanka	-	-	-	-	-	
Taiwan	391	1,575	3,525	5,978	3,560	
Pakistan	-	-	-	-	-	
OTHERS**	**2,646**	**4,638**	**4,701**	**1,998**	**1,770**	**22.9%**
Total	**108,936**	**103,108**	**117,572**	**123,192**	**128,250**	**7.4%**

**average annual growth rate*
***Others include countries from Africa, Asia and Pacific, Europe and North America*

Petroleum Products Exportation, by Country of Destination

MB

Destination	2013	2014	2015	2016	2017	2018
MIDDLE EAST [a]	**-**	**-**	**-**	**-**	**122**	**-**
UAE	-	-	-	-	122	-
Iraq	-	-	-	-	-	-
ASEAN	**4,000**	**5,916**	**6,691**	**6,027**	**7,561**	**9,552**
Bangladesh	-	-	-	-	36	-
Indonesia	433	21	98	67	119	252
Malaysia	944	679	2,416	1,259	2,131	1,319
Singapore	2,279	3,704	3,066	2,711	2,849	4,812
Thailand	344	1,513	919	1,683	2,333	3,025
Vietnam	-	-	192	308	93	144
OTHER ASIA	**4,619**	**3,643**	**6,433**	**7,727**	**6,899**	**7,040**
China	473	717	1,441	1,897	2,670	3,986
Hong Kong	629	-	-	-	-	-
Japan	78	-	-	20	62	60
South Korea	2,806	2,284	3,453	3,385	2,645	1,911
Taiwan	632	643	1,539	2,424	1,523	1,083
OTHERS [b]	**0.61**	**1.69**	**864.37**	**17.61**	**47.94**	**159.94**
Total	**8,619**	**9,561**	**13,988**	**13,772**	**14,631**	**16,752**

Destination	2019	2020	2021	2022	2023	AAGR*
MIDDLE EAST	**-**	**-**	**298**	**-**	**11**	**-33.0%**
UAE	-	-	-	-	11	
Iraq	-	-	298	-	-	
ASEAN	**8,225**	**5,800**	**3,588**	**3,585**	**2,931**	**-3.1%**
Bangladesh	-	-	-	-	472	
Brunei	-	-	324	1,267	291	
Indonesia	19	-	95	90	96	
Malaysia	1,786	2,571	627	712	93	
Singapore	4,602	2,753	640	253	1,171	
Thailand	1,818	476	1,902	1,262	809	
Vietnam	347	111	141	113	-	
OTHER ASIA	**3,037**	**1,994**	**2,876**	**1,977**	**2,828**	**-5%**
China	1,802	903	1,259	1,287	1,492	
Hong Kong	-	306	-	-	-	
India	-	36	146	183	231	
Japan	-	130	-	11	32	
South Korea	907	21	789	246	966	
Taiwan	327	598	682	250	107	
OTHERS [b]	**67**	**0**	**77**	**-**	**-**	**72.7%**
Total	**11,329**	**7,794**	**6,839**	**5,562**	**5,770**	**-3.9%**

**average annual growth rate*

(a) average annual growth rate from 2017 to 2023

(b) average annual growth rate from 2014 to 2021

Others include Australia, Belgium, Guam, Egypt, Saipan and USA

Petroleum Products Consumption, by Sector and Fuel Type

MB

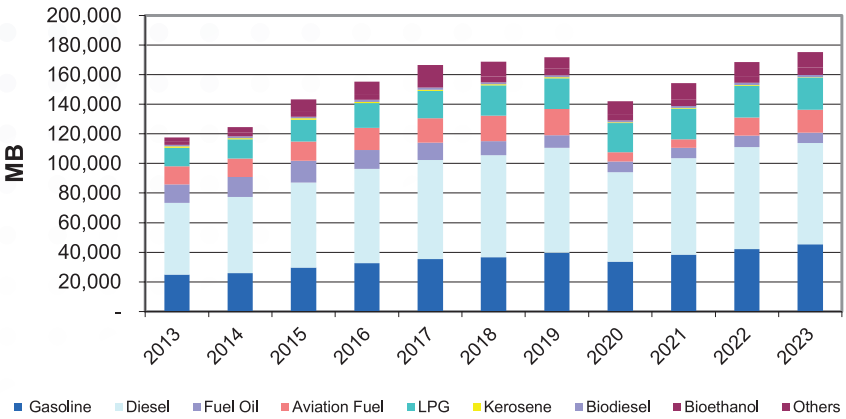
	2013	2014	2015	2016	2017	2018
Industry	**9,727**	**9,224**	**10,528**	**11,046**	**11,022**	**11,392**
Kerosene	120	126	139	148	170	16
LPG	1,203	1,387	1,528	1,412	924	2,129
Diesel	4,863	3,975	4,357	4,869	5,570	5,144
Fuel Oil	3,442	3,649	4,413	4,520	4,247	4,000
Biodiesel	99	86	92	97	111	103
Transport	**77,985**	**79,996**	**91,891**	**99,456**	**105,255**	**108,811**
Gasoline	24,940	25,795	29,601	32,568	35,411	36,516
Diesel	34,715	36,097	43,435	45,749	46,067	48,043
Fuel Oil	2,458	1,690	1,386	1,707	2,431	1,845
Aviation Fuel	12,049	12,463	13,086	14,879	16,474	17,390
LPG	621	453	321	146	112	108
Bioethanol	2,496	2,765	3,168	3,477	3,818	3,936
Biodiesel	705	734	893	929	942	972
Households	**9,233**	**9,074**	**10,301**	**11,938**	**12,342**	**13,373**
LPG	8,413	8,343	9,632	11,314	11,749	12,754
Kerosene	820	731	669	624	593	620
Services	**9,163**	**11,641**	**10,692**	**13,456**	**17,357**	**18,393**
LPG	2,477	2,890	3,360	4,054	5,767	5,495
Diesel	5,764	7,819	6,262	7,853	10,368	11,641
Fuel Oil	804	780	959	1,390	1,011	1,025
Biodiesel	118	151	111	158	212	233
Agriculture	**1,429**	**1,306**	**1,471**	**1,731**	**2,202**	**1,579**
Gasoline	17	37	66	61	98	58
Kerosene	7	3	3	5	3	3
Diesel	1,349	1,227	1,355	1,577	2,008	1,484
Fuel Oil	27	13	18	56	52	5
Biodiesel	28	26	29	32	41	30
Power Generation	**7,608**	**9,762**	**9,976**	**8,833**	**6,965**	**5,292**
Diesel	1,827	2,477	2,137	3,573	2,926	2,770
Fuel Oil	5,744	7,233	7,793	5,188	3,979	2,460
Biodiesel	37	52	45	72	60	62
Non-Energy Use	**2,345**	**3,501**	**8,368**	**8,954**	**11,397**	**9,964**
Total	**117,489**	**124,503**	**143,226**	**155,414**	**166,539**	**168,805**

MB

	2019	2020	2021	2022	2023	AAGR*
Industry	**10,732**	**12,015**	**12,149**	**14,216**	**12,322**	**2.4%**
Kerosene	15	131	157	87	120	0.0%
LPG	1,872	1,934	2,165	2,195	2,068	5.6%
Diesel	5,598	6,163	6,593	8,906	7,919	5.0%
Fuel Oil	3,136	3,686	3,115	2,845	2,053	-5.0%
Biodiesel	112	101	118	182	162	5.0%
Transport	**112,365**	**82,073**	**90,845**	**106,848**	**114,177**	**3.9%**
Gasoline	39,504	33,609	38,224	42,096	45,367	6.2%
Diesel	48,205	36,625	40,363	44,656	45,601	2.8%
Fuel Oil	1,637	1,215	1,565	2,426	1,667	-3.8%
Aviation Fuel	17,674	6,188	5,741	12,199	15,702	2.7%
LPG	95	48	30	2	0	-100.0%
Bioethanol	4,276	3,643	4,147	4,569	4,914	7.0%
Biodiesel	974	745	775	899	926	2.8%
Households	**14,014**	**13,272**	**13,583**	**14,084**	**14,542**	**4.6%**
LPG	13,445	12,870	13,178	13,723	14,291	5.4%
Kerosene	569	402	405	361	251	-11.2%
Services	**19,386**	**20,121**	**21,638**	**16,756**	**17,534**	**6.7%**
LPG	5,370	5,028	5,208	5,574	5,280	7.9%
Diesel	12,668	13,934	15,052	9,782	10,985	6.7%
Fuel Oil	1,095	874	1,071	1,200	1,044	2.6%
Biodiesel	253	284	307	200	224	6.7%
Agriculture	**1,741**	**1,602**	**1,851**	**1,065**	**1,101**	**-2.6%**
Gasoline	74	80	126	143	86	17.3%
Kerosene	3	4	4	1	0	-100.0%
Diesel	1,615	1,473	1,676	895	991	-3.0%
Fuel Oil	17	15	12	7	5	-15.8%
Biodiesel	32	30	34	18	20	-3.0%
Power Generation	**5,728**	**3,704**	**2,969**	**6,106**	**5,078**	**-4.0%**
Diesel	3,015	2,149	1,610	4,579	2,865	4.6%
Fuel Oil	2,646	1,512	1,282	1,434	2,155	-9.3%
Biodiesel	67	44	76	93	58	4.6%
Non-Energy Use	**7,851**	**9,228**	**11,387**	**9,496**	**10,679**	**16.4%**
Total	**171,817**	**142,017**	**154,422**	**168,571**	**175,434**	**4.1%**

**average annual growth rate*

Petroleum Products Consumption, by Sector and Fuel Type



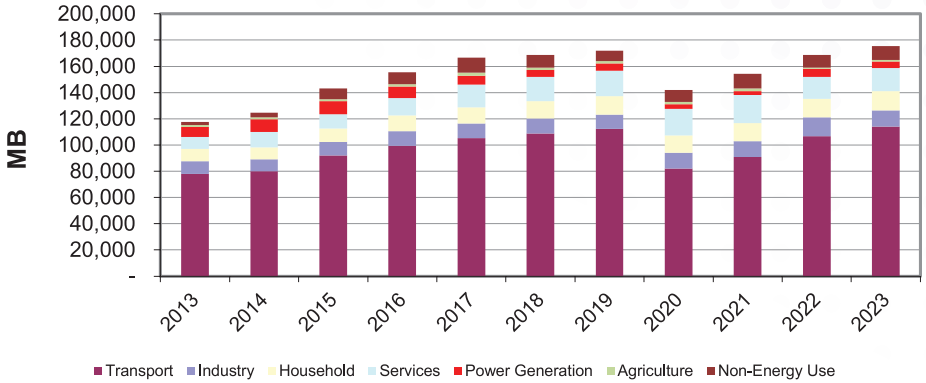
MB

	2013	2014	2015	2016	2017	2018
Gasoline	24,957	25,833	29,667	32,630	35,509	36,574
Diesel	48,518	51,595	57,545	63,622	66,939	69,082
Fuel Oil	12,475	13,364	14,568	12,862	11,719	9,335
Aviation Fuel	12,049	12,463	13,086	14,879	16,474	17,390
LPG	12,714	13,073	14,842	16,926	18,552	20,486
Kerosene	947	860	811	777	767	638
Biodiesel	987	1,049	1,171	1,289	1,364	1,400
Bioethanol	2,496	2,765	3,168	3,477	3,818	3,936
Others**	2,345	3,501	8,368	8,954	11,397	9,964
Total	**117,489**	**124,503**	**143,226**	**155,414**	**166,539**	**168,805**

	2019	2020	2021	2022	2023	AAGR*
Gasoline	39,578	33,688	38,349	42,238	45,453	6.2%
Diesel	71,101	60,345	65,294	68,819	68,360	3.5%
Fuel Oil	8,530	7,303	7,047	7,912	6,924	-5.7%
Aviation Fuel	17,674	6,188	5,741	12,199	15,702	2.7%
LPG	20,782	19,881	20,582	21,495	21,640	5.5%
Kerosene	587	537	565	450	371	-8.9%
Biodiesel	1,437	1,204	1,310	1,392	1,390	3.5%
Bioethanol	4,276	3,643	4,147	4,569	4,914	7.0%
Others**	7,851	9,228	11,387	9,496	10,679	16.4%
Total	**171,817**	**142,017**	**154,422**	**168,571**	**175,434**	**4.1%**

**average annual growth rate*
***includes asphalts, solvents, naphtha/reformate, condensate*

Petroleum Products Consumption, by Sector



MB

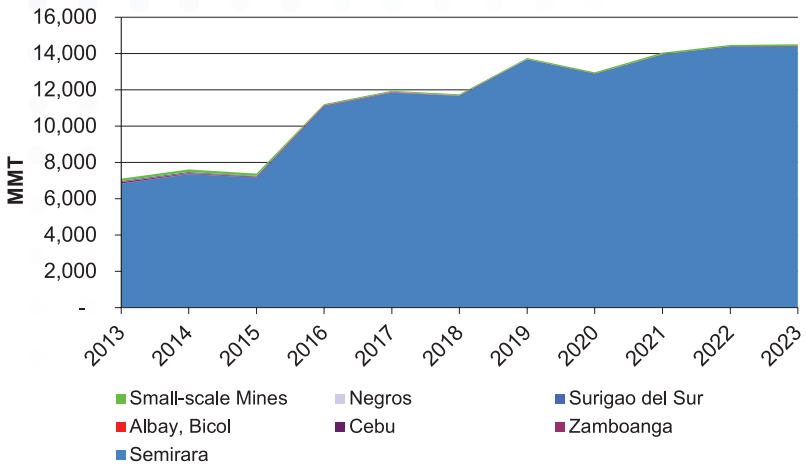
	2013	2014	2015	2016	2017	2018
Transport	77,985	79,996	91,891	99,456	105,255	108,811
Industry	9,727	9,224	10,528	11,046	11,022	11,392
Households	9,233	9,074	10,301	11,938	12,342	13,373
Services	9,163	11,641	10,692	13,456	17,357	18,393
Agriculture	1,429	1,306	1,471	1,731	2,202	1,579
Power Generation	7,608	9,762	9,976	8,833	6,965	5,292
Non-Energy Use	2,345	3,501	8,368	8,954	11,397	9,964
Total	**117,489**	**124,503**	**143,226**	**155,414**	**166,539**	**168,805**

	2019	2020	2021	2022	2023	AAGR*
Transport	112,365	82,073	90,845	106,848	114,177	3.9%
Industry	10,732	12,015	12,149	14,216	12,322	2.4%
Households	14,014	13,272	13,583	14,084	14,542	4.6%
Services	19,386	20,121	21,638	16,756	17,534	6.7%
Agriculture	1,741	1,602	1,851	1,065	1,101	-2.6%
Power Generation	5,728	3,704	2,969	6,106	5,078	-4.0%
Non-Energy Use	7,851	9,228	11,387	9,496	10,679	16.4%
Total	**171,817**	**142,017**	**154,422**	**168,571**	**175,434**	**4.1%**

**average annual growth rate*

Coal

Coal Production, by Source



in MMT at 10,000 BTU/lb

	2013	2014	2015	2016	2017	2018
Semirara	6,813	7,345	7,168	11,084	11,839	11,654
Zamboanga	30	15	5	0	-	-
Cebu	66	44	29	35	13	7
Albay, Bicol	23	21	28	16	12	13
Surigao del Sur [a]	52	50	28	21	23	26
Negros [b]	-	-	-	-	0.49	0.14
Small-scale Mines	116	127	119	54	44	55
Total	**7,100**	**7,601**	**7,378**	**11,211**	**11,932**	**11,755**
Run of Mine (MMT)	**7,859**	**8,419**	**8,173**	**12,087**	**13,264**	**13,054**

	2019	2020	2021	2022	2023	AAGR*
Semirara	13,670	12,880	13,957	14,387	14,398	7.8%
Zamboanga	-	-	-	-	0.91	-29.5%
Cebu	6	2	1	2	3	-25.6%
Albay, Bicol	9	13	8	2	10	-7.7%
Surigao del Sur [a]	-	-	-	-	-	-13.1%
Negros [b]	1	0	0	0	1	9.7%
South Cotabato [c]	-	-	-	-	242	
Small-scale Mines	65	57	82	66	95	-2.0%
Total Production	**13,751**	**12,951**	**14,048**	**14,457**	**14,751**	**7.6%**
Run of Mine (MMT)	**15,274**	**13,257**	**14,378**	**16,061**	**16,509**	**7.7%**

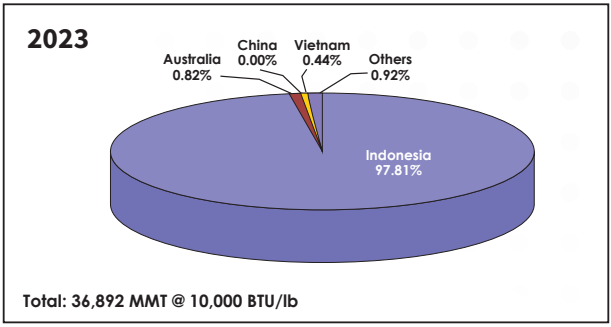
**average annual growth rate*

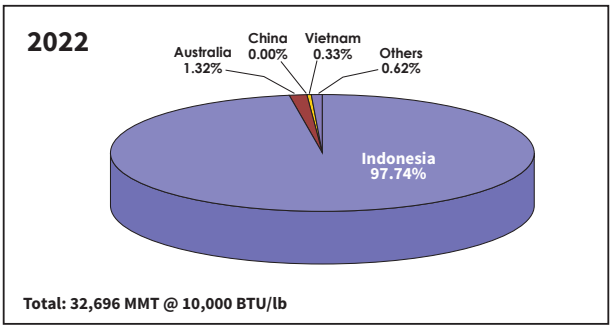
(a) average annual growth rate from 2013 to 2018

(b) average annual growth rate from 2017 to 2023

(c) only one entry

Coal Importation, by Country of Source





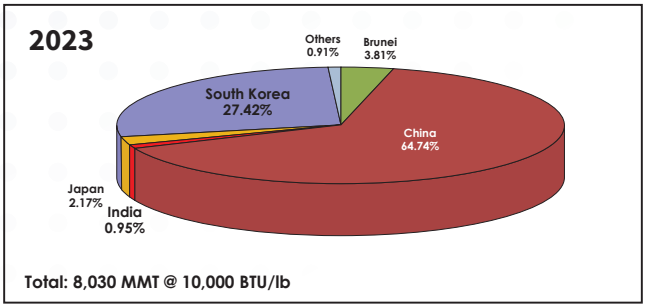
in MMT at 10,000 BTU/lb

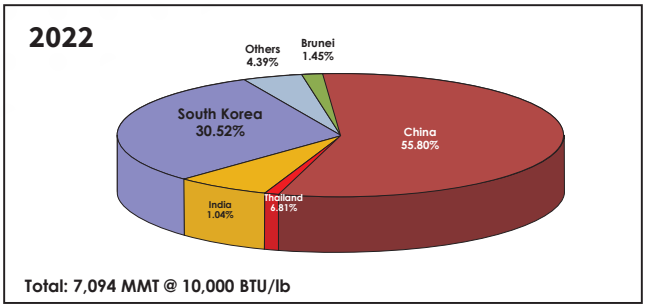
Country	2013	2014	2015	2016	2017	2018
Indonesia	13,964	14,975	16,673	17,988	19,663	23,285
Australia	201	-	306	1,310	1,401	1,249
China [a]	-	-	-	-	-	96
Vietnam	249.20	191.41	168.07	270.19	219.38	303.26
Others** [b]	-	15	132	462	984	1,368
Total	**14,415**	**15,182**	**17,279**	**20,030**	**22,268**	**26,301**

Country	2019	2020	2021	2022	2023	AAGR*
Indonesia	26,305	28,604	30,514	31,955	36,083	10.0%
Australia	711	538	242	433	304	4.2%
China[a]	1	-	0	0	0	-67.4%
Vietnam	182	103	297	106	164	-4.1%
Others** [b]	494	279	186	202	341	41.1%
Total	**27,692**	**29,524**	**31,239**	**32,696**	**36,892**	**9.9%**

**average annual growth rate*
(a) AAGR from 2018 to 2023
(b) AAGR from 2014 to 2023
***Imports from India, Malaysia, Peru, Russia, Taiwan, South Korea, South Africa and USA*

Coal Exportation, by Country of Destination





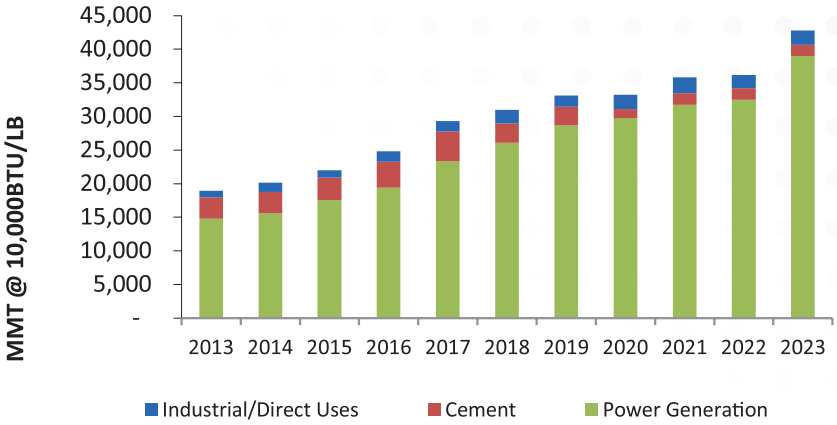
in MMT at 10,000 BTU/lb

Country	2013	2014	2015	2016	2017	2018
China	2,975	4,613	2,750	6,540	5,697	4,926
India[(a)]	-	55	-	47	158	55
Hongkong[(b)]	-	269	-	-	-	-
Thailand[(c)]	217	307	321	222	104	55
Taiwan[(d)]	196	78	-	-	189	-
S. Korea[(e)]	-	207	-	-	-	-
Others***[(f)]	-	217	23	-	-	-
Total	**3,388**	**5,745**	**3,094**	**6,809**	**6,149**	**5,035**

Country	2019	2020	2021	2022	2023	AAGR*
Brunei [(g)]	-	-	-	103	306	198.0%
China	9,629	7,247	8,809	3,959	5,198	5.7%
India [(a)]	54	50	-	74	76	3.7%
Thailand [(c)]	228	116	-	483	-	9.3%
Taiwan [(d)]	69	-	-	-	-	-15.9%
Japan [(h)]	-	-	-	-	174	
S. Korea [(e)]	-	76	379	2,165	2,202	30.1%
Others*** [(f)]	-	36	110	311	73	-11.3%
Total	**9,980**	**7,525**	**9,298**	**7,094**	**8,030**	**9.0%**

**average annual growth rate*
(a) average annual growth rate from 2014 to 2023
(b) only one (1) entry (2014)
(c) average annual growth rate from 2013 to 2022
(d) average annual growth rate from 2013 to 2019
(e) average annual growth rate from 2014 to 2023
(e) average annual growth rate from 2022 to 2023
(f) average annual growth rate from 2014 to 2023
(g) average annual growth rate from 2022 to 2023
(h) only one (1) entry (2023)
***includes Cambodia, Papua New Guinea, and Vietnam*

Coal Consumption, by Major Type of User



in MMT at 10,000 BTU/lb

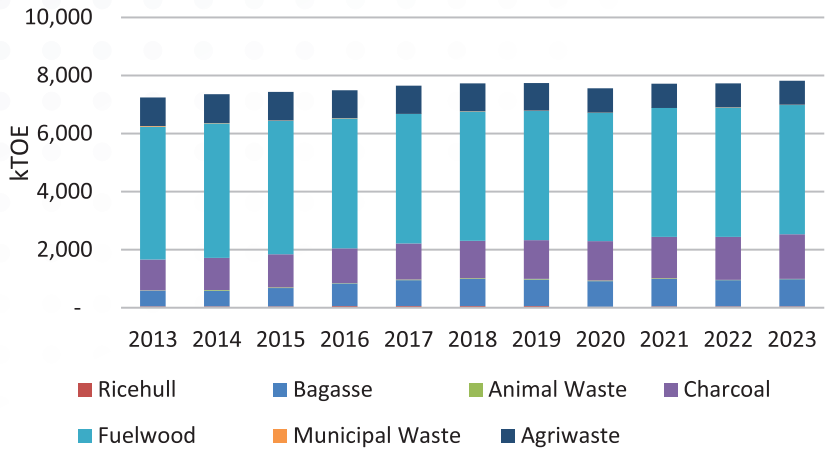
	2013	2014	2015	2016	2017	2018
Power Generation	14,791	15,587	17,554	19,386	23,327	26,101
Cement	3,156	3,203	3,348	3,893	4,423	2,848
Industrial/Direct Uses*	1,005	1,372	1,104	1,515	1,569	2,027
TOTAL	**18,952**	**20,163**	**22,006**	**24,794**	**29,320**	**30,976**

	2019	2020	2021	2022	2023	AAGR**
Power Generation	28,654	29,755	31,738	32,454	39,010	10.2%
Cement	2,754	1,312	1,697	1,755	1,638	-6.3%
Industrial/Direct Uses*	1,714	2,177	2,400	1,932	2,126	7.8%
TOTAL	**33,122**	**33,244**	**35,834**	**36,141**	**42,774**	**8.5%**

**non-energy use as raw materials*
***average annual growth rate*

Renewable Energy

Biomass Production, by Fuel Type



	2013	2014	2015	2016	2017	2018
Fuelwood	4,575	4,623	4,596	4,472	4,465	4,458
Charcoal	1,058	1,107	1,138	1,193	1,236	1,281
Agriwaste	980	992	982	967	968	958
Bagasse	533	540	627	780	899	942
Ricehull	54	55	55	56	57	58
Animal Waste	20	20	21	21	21	21
Municipal Waste	17	19	11	5	6	6
Total	**7,237**	**7,356**	**7,431**	**7,494**	**7,651**	**7,725**

	2019	2020	2021	2022	2023	AAGR*
Fuelwood	4,454	4,421	4,439	4,449	4,450	-0.3%
Charcoal	1,329	1,364	1,420	1,476	1,531	3.8%
Agriwaste	947	836	837	831	824	-1.7%
Bagasse	919	877	959	908	943	5.9%
Ricehull	58	43	44	44	44	-1.9%
Animal Waste	22	16	17	17	17	-1.6%
Municipal Waste	7	5	4	7	8	-7.1%
Total	**7,736**	**7,563**	**7,721**	**7,731**	**7,818**	**0.8%**

**average annual growth rate*

Geothermal

	2014	2015	2016	2017	2018
Installed Generating Capacity (MW)	1,918	1,917	1,916	1,916	1,944
Dependable Generating Capacity (MW)	1,607	1,601	1,689	1,752	1,770
Electricity Generation (GWh)	10,308	11,044	11,070	10,270	10,435

	2019	2020	2021	2022	2023
Installed Generating Capacity (MW)	1,928	1,928	1,928	1,952	1,952
Dependable Generating Capacity (MW)	1,792	1,753	1,753	1,763	1,708
Electricity Generation (GWh)	10,691	10,757	10,016	10,425	10,730

Hydropower

	2014	2015	2016	2017	2018
Installed Generating Capacity (MW)	3,543	3,600	3,618	3,627	3,701
Dependable Generating Capacity (MW)	2,982	3,073	3,181	3,269	3,473
Electricity Generation (GWh)	9,137	8,665	8,111	9,611	9,384

	2019	2020	2021	2022	2023
Installed Generating Capacity (MW)	3,760	3,779	3,752	3,745	3,799
Dependable Generating Capacity (MW)	3,508	3,527	3,500	3,444	3,499
Electricity Generation (GWh)	8,025	7,192	9,185	10,085	10,287

Wind

	2014	2015	2016	2017	2018
Installed Generating Capacity (MW)	283	427	427	427	427
Dependable Generating Capacity (MW)	103	379	383	383	427
Electricity Generation (GWh)	152	748	975	1,094	1,153

	2019	2020	2021	2022	2023
Installed Generating Capacity (MW)	427	443	427	427	427
Dependable Generating Capacity (MW)	427	443	427	412	412
Electricity Generation (GWh)	1,042	1,026	1,270	1,030	1,308

Solar

	2014	2015	2016	2017	2018
Installed Generating Capacity (MW)	23	165	765	885	896
Dependable Generating Capacity (MW)	17	125	594	700	740
Electricity Generation (GWh)	17	139	1,097	1,201	1,249

	2019	2020	2021	2022	2023
Installed Generating Capacity (MW)	921	1,019	1,317	1,530	1,653
Dependable Generating Capacity (MW)	737	817	1,034	1,150	1,249
Electricity Generation (GWh)	1,246	1,373	1,470	1,822	2,544

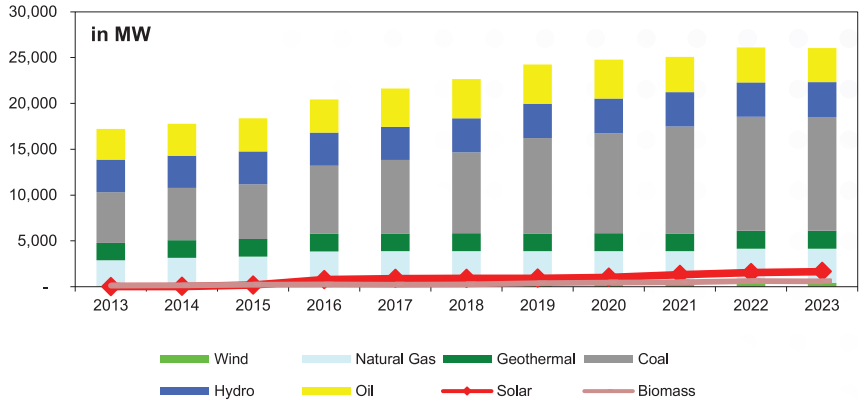
Biomass

	2014	2015	2016	2017	2018
Installed Generating Capacity (MW)	131	221	233	224	258
Dependable Generating Capacity (MW)	81	146	157	160	182
Electricity Generation (GWh)	196	367	726	1,013	1,105

	2019	2020	2021	2022	2023
Installed Generating Capacity (MW)	363	483	489	611	585
Dependable Generating Capacity (MW)	227	285	291	382	374
Electricity Generation (GWh)	1,040	1,261	1,445	1,322	1,409

Power

Installed Generating Capacity, by Source



	2013	2014	2015	2016	2017	2018
Total Installed Capacity	**17,325**	**17,944**	**18,765**	**21,423**	**22,728**	**23,815**
Coal	**5,568**	**5,708**	**5,963**	**7,419**	**8,049**	**8,844**
Oil	**3,353**	**3,476**	**3,610**	**3,616**	**4,153**	**4,292**
Natural Gas	**2,862**	**2,862**	**2,862**	**3,431**	**3,447**	**3,453**
Renewable Energy	**5,541**	**5,898**	**6,330**	**6,958**	**7,079**	**7,227**
Geothermal	1,868	1,918	1,917	1,916	1,916	1,944
Hydro	3,521	3,543	3,600	3,618	3,627	3,701
Wind	33	283	427	427	427	427
Solar [(a)]	1	23	165	765	885	896
Biomass	119	131	221	233	224	258

	2019	2020	2021	2022	2023	AAGR*
Total Installed Capacity	**25,531**	**26,250**	**26,882**	**28,258**	**28,291**	**5%**
Coal	**10,417**	**10,944**	**11,669**	**12,428**	**12,406**	**8%**
Oil	**4,262**	**4,237**	**3,847**	**3,834**	**3,737**	**1%**
Natural Gas	**3,453**	**3,453**	**3,453**	**3,732**	**3,732**	**3%**
Renewable Energy	**7,399**	**7,617**	**7,914**	**8,264**	**8,417**	**4%**
Geothermal	1,928	1,928	1,928	1,952	1,952	0%
Hydro	3,760	3,779	3,752	3,745	3,799	1%
Wind	427	443	427	427	427	29%
Solar [(a)]	921	1,019	1,317	1,530	1,653	33%
Biomass	363	447	489	611	585	17%

**average annual growth rate*

(a) average annual growth rate from 2015 to 2023

Power Generation, by Source and Grid

in GWh

Luzon	2013	2014	2015	2016	2017	2018
Coal	25,756	27,346	29,680	33,143	33,953	37,362
Oil	1,601	2,342	1,845	2,562	2,379	2,188
Natural Gas	18,783	18,686	18,878	19,854	20,547	21,334
Renewable Energy	8,679	8,392	9,711	10,938	11,633	11,845
Geothermal	3,399	3,817	4,096	4,227	3,910	3,871
Hydro	5,156	4,357	4,769	5,011	5,730	5,945
Biomass	60	65	187	439	599	594
Solar [a]	-	-	66	495	496	503
Wind	66	152	592	767	899	931
Total	**54,820**	**56,766**	**60,113**	**66,498**	**68,512**	**72,728**

Luzon	2019	2020	2021	2022	2023	AAGR*
Coal	40,508	40,576	43,133	48,626	53,072	7%
Oil	2,674	1,804	996	1,507	708	-8%
Natural Gas	22,354	19,497	18,675	17,884	16,668	-1%
Renewable Energy	10,640	10,542	12,438	11,803	12,842	4%
Geothermal	3,647	3,808	4,503	3,921	4,286	2%
Hydro	5,084	4,510	5,412	5,239	5,080	-0.1%
Biomass	592	780	707	691	684	28%
Solar [a]	493	588	721	1,099	1,678	50%
Wind	824	855	1,095	854	1,114	33%
Total	**76,177**	**72,419**	**75,243**	**79,821**	**83,290**	**4%**

in GWh

Visayas	2013	2014	2015	2016	2017	2018
Coal	4,690	4,449	4,968	5,270	6,624	6,785
Oil	796	766	672	637	541	353
Natural Gas [a]	8	4	-	-	-	-
Renewable Energy	5,606	5,794	6,530	7,047	6,889	7,129
Geothermal	5,463	5,627	6,105	5,974	5,564	5,737
Hydro	37	35	38	64	90	73
Biomass	106	117	159	276	414	439
Solar [a]	-	15	71	525	627	658
Wind [c]	-	-	157	209	194	222
Total	**11,100**	**11,014**	**12,170**	**12,955**	**14,054**	**14,266**

Visayas	2019	2020	2021	2022	2023	AAGR*
Coal	7,962	7,696	8,999	8,501	10,401	8%
Oil	524	298	468	563	473	-5%
Natural Gas [a]	-	-	-	-	-	-45%
Renewable Energy	7,573	7,491	6,801	7,159	7,289	3%
Geothermal	6,278	6,205	5,535	5,813	5,740	0.5%
Hydro	57	65	89	39	141	14%
Biomass	356	374	350	517	488	17%
Solar [a]	665	676	652	614	727	54%
Wind [c]	218	171	174	176	194	3%
Total	**16,060**	**15,485**	**16,268**	**16,222**	**18,163**	**5%**

in GWh

Mindanao	2013	2014	2015	2016	2017	2018
Coal	1,635	1,258	2,038	4,890	6,271	7,785
Oil	2,094	2,599	3,369	2,462	867	633
Natural Gas	-	-	-	-	-	-
Renewable Energy	5,618	5,624	4,723	3,994	4,666	4,352
Geothermal	743	864	842	869	797	826
Hydro	4,827	4,745	3,858	3,036	3,791	3,366
Biomass	47	14	21	11	-	72
Solar [a]	1	1	2	77	78	88
Wind	0	-	-	-	-	-
Total	**9,347**	**9,481**	**10,130**	**11,345**	**11,804**	**12,770**

Mindanao	2019	2020	2021	2022	2023	AAGR*
Coal	9,420	9,904	9,920	9,303	10,281	20%
Oil	554	372	152	449	123	-25%
Natural Gas	-	-	-	-	-	-
Renewable Energy	3,831	3,576	4,532	5,721	6,147	0.9%
Geothermal	766	744	643	690	704	-0.5%
Hydro	2,885	2,617	3,684	4,807	5,067	0.5%
Biomass	93	107	107	114	237	18%
Solar [a]	87	108	97	110	139	9%
Wind	-	-	-	-	-	-
Total	**13,805**	**13,852**	**14,604**	**15,473**	**16,551**	**6%**

in GWh

Philippines	2013	2014	2015	2016	2017	2018
Coal	32,081	33,054	36,686	43,303	46,847	51,932
Oil	4,491	5,708	5,886	5,661	3,787	3,173
Natural Gas	18,791	18,690	18,878	19,854	20,547	21,334
Renewable Energy	19,903	19,810	20,963	21,979	23,189	23,326
Geothermal	9,605	10,308	11,044	11,070	10,270	10,435
Hydro	10,019	9,137	8,665	8,111	9,611	9,384
Biomass	212	196	367	726	1,013	1,105
Solar [a]	1	17	139	1,097	1,201	1,249
Wind	66	152	748	975	1,094	1,153
Total	**75,266**	**77,261**	**82,413**	**90,798**	**94,370**	**99,765**
Self-sufficiency level (%)	**56**	**53**	**53**	**51**	**54**	**51**

Philippines	2019	2020	2021	2022	2023	AAGR*
Coal	57,890	58,176	62,052	66,430	73,754	9%
Oil	3,752	2,474	1,616	2,519	1,304	-12%
Natural Gas	22,354	19,497	18,675	17,884	16,668	-1%
Renewable Energy	22,044	21,609	23,771	24,684	26,278	3%
Geothermal	10,691	10,757	10,681	10,425	10,730	1.1%
Hydro	8,025	7,192	9,185	10,085	10,287	0.3%
Biomass	1,040	1,261	1,165	1,322	1,409	21%
Solar [a]	1,246	1,373	1,470	1,822	2,544	44%
Wind	1,042	1,026	1,270	1,030	1,308	35%
Total	**106,041**	**101,756**	**106,115**	**111,516**	**118,004**	**5%**
Self-sufficiency level (%)	**47**	**47**	**45**	**43**	**42**	

**average annual growth rate*

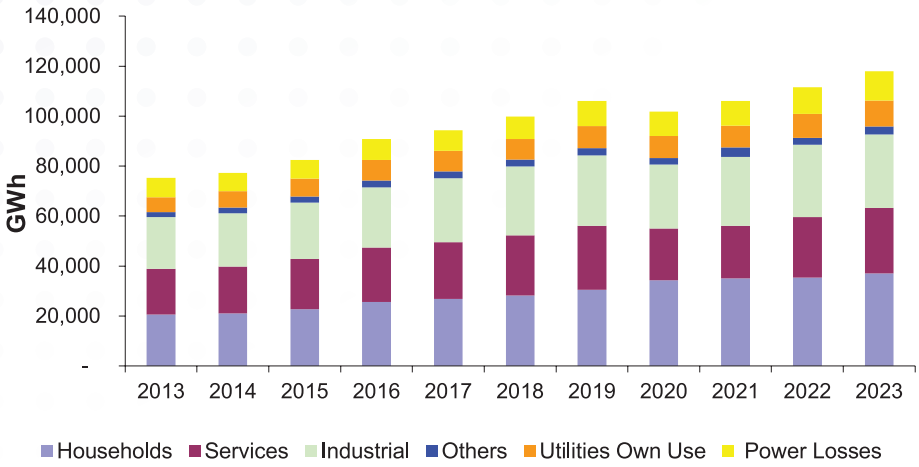
Luzon
(a) average annual growth rate from 2015 to 2023

Visayas
(a) average annual growth rate from 2013 to 2014
(b) average annual growth rate from 2014 to 2023
(c) average annual growth rate from 2015 to 2023

Mindanao
(a) average annual growth rate from 2016 to 2023

Philippines
(a) average annual growth rate from 2015 to 2023

Electricity Consumption, by Sector



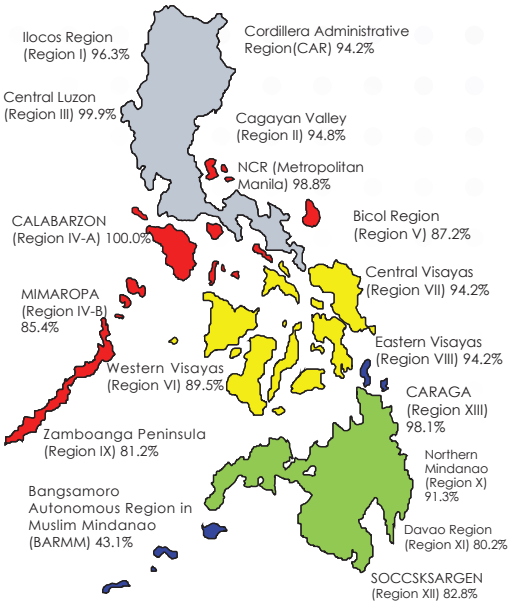
in GWh

Luzon	2013	2014	2015	2016	2017	2018
Households	20,614	20,969	22,747	25,631	26,782	28,261
Services	18,304	18,761	20,085	21,770	22,768	24,016
Industrial	20,677	21,429	22,514	24,117	25,573	27,587
Others*	1,971	2,186	2,462	2,634	2,670	2,753
Utilities Own Use	5,959	6,646	7,124	8,357	8,316	8,141
Power Losses	7,741	7,270	7,481	8,288	8,262	9,007
Total	**75,266**	**77,261**	**82,413**	**90,798**	**94,370**	**99,765**

	2019	2020	2021	2022	2023	AAGR**
Households	30,552	34,292	34,981	35,324	36,968	6.0%
Services	25,476	20,727	21,119	24,294	26,236	3.7%
Industrial	28,194	25,566	27,623	28,844	29,493	3.6%
Others*	2,897	2,658	3,695	2,871	3,112	4.7%
Utilities Own Use	8,929	8,771	8,729	9,490	10,403	5.7%
Power Losses	9,994	9,742	9,968	10,693	11,793	4.3%
Total	**106,041**	**101,756**	**106,115**	**111,516**	**118,004**	**4.6%**

** others includeTransport and AFF*
***average annual growth rate*

Regional Household Electrification Level



Region	Potential HH**	Served HH	Unserved HH (actual per DU)	Electrification Level (%)
CAR	454,301	427,771	26,530	94.2%
I	1,330,613	1,280,809	49,804	96.3%
II	938,396	889,285	49,111	94.8%
III	3,222,489	3,219,404	3,085	99.9%
IV-A	4,400,013	4,470,045	-70,032	100.0%
IV-B	819,856	700,023	119,833	85.4%
V	1,411,859	1,231,372	180,487	87.2%
NCR	3,837,668	3,792,218	45,450	98.8%
LUZON	**16,415,195**	**16,010,927**	**404,268**	**98%**
VI	2,012,724	1,802,111	210,613	89.5%
VII	2,030,014	1,911,970	118,044	94.2%
VIII	1,118,436	1,053,015	65,421	94.2%
VISAYAS	**5,161,174**	**4,767,096**	**394,078**	**92.4%**
IX	926,347	752,010	174,337	81.2%
X	1,215,035	1,108,743	106,292	91.3%
XI	1,384,958	1,110,821	274,137	80.2%
XII	1,151,198	952,935	198,263	82.8%
CARAGA	684,310	671,376	12,934	98.1%
BARMM	789,013	339,985	449,028	43.1%
MINDANAO	**6,150,861**	**4,935,870**	**1,214,991**	**80.2%**
PHILIPPINES	**27,727,230**	**25,713,893**	**2,013,337**	**92.7%**

**2023 Notes:*

a) %HH Electrification Formula = Served / Potential;

b) Potential HHs is based on the projected 2023 values of 2020 Census of Population;

c) Projections were agreed by NEA and NPC.

Transmission Profile

Transmission Lines (Circuit-Kilometers)	2008	2009	2010	2011	2012*	2013*	2014
Luzon	9,527	9,568	9,638	9,529	9,374	9,439	9,370
Visayas	4,745	4,600	4,680	4,918	4,971	4,840	4,821
Mindanao	5,506	5,257	5,258	5,257	5,145	5,146	5,272
Total Philippines	**19,778**	**19,425**	**19,576**	**19,704**	**19,490**	**19,425**	**19,463**

Transmission Lines (Circuit-Kilometers)	2015	2016	2017	2018	2019	2020	2021
Luzon	9,428	9,602	9,795	9,447	9,227	9,396	9,499
Visayas	4,813	4,476	4,973	5,379	5,299	5,299	5,379
Mindanao	5,832	6,081	6,081	5,679	5,553	5,824	5,855
Total Philippines	**20,073**	**20,159**	**20,849**	**20,505**	**20,079**	**20,519**	**20,732**

**There was a decrease in total transmission line length in circuit-km due to modification and divestment of various sub-transmission assets.*

Substation Capacity (In Million Volt-Amperes)	2008	2009	2010	2011	2012	2013	2014
Luzon	18,861	18,452	19,937	20,590	21,170	21,110	23,395
Visayas	3,154	3,161	3,263	3,414	3,414	3,504	3,734
Mindanao	2,200	2,260	2,643	2,793	3,142	3,318	3,478
Total Philippines	**24,215**	**23,873**	**25,843**	**26,796**	**27,726**	**27,932**	**30,607**

Substation Capacity (In Million Volt-Amperes)	2015	2016	2017	2018	2019	2020	2021
Luzon	23,785	25,900	25,887	26,598	28,021	27,955	29,976
Visayas	3,926	3,899	4,474	4,874	4,884	4,487	5,754
Mindanao	3,327	3,902	3,646	3,380	3,531	5,331	6,141
Total Philippines	**31,038**	**33,701**	**34,007**	**34,852**	**36,436**	**37,773**	**41,871**

Source: NGCP Transmission Development Plan 2022-2040 Consultation Draft Report as of March 2022 https://www.ngcp.ph/Attachment-Uploads/TDP%202016-2040%20Final%20Report%20Volume%201%20Major%20Network%20Development-2019-05-14-16-43-41.pdf

Glossary

Condensate	Liquid hydrocarbons separated from gas production.
Dependable Capacity	The capacity that can be relied upon to carry system load for a specified time interval and period, provide assumed reserve, and/or meet firm power obligations.
Electirifcation	Electrification is either done through grid or off-grid connection. When a barangay is provided with electricity through grid connection, it means that the distribution line has reached the barangay proper. It may also mean that almost 50.0 percent of potential households in the barangay are connected to a distribution utility (DU) (i.e. MERALCO) or at least one is connected to other DUs. Off-grid connection pertains to a barangay having about 20 to 30 households availing the connection.
Energy Intensity	Calculated as units of energy (million tons of oil equivalent, MTOE) per unit of GDP (in billion pesos).
Energy Per Capita	Amount of energy used per person. It is calculated as total primary energy demand (in MTOE) over population (in millions).
Energy Self Sufficiency	The ratio of the country's domestic energy supply to total supply; measures the degree at which domestic energy forms can support total energy demand.
Energy to GDP Elasticity	The percentage change in energy supply to achieve one per cent change in national GDP. Calculated as the ratio of growth of primary energy demand over GDP growth.
Gas (or Natural Gas)	A naturally occurring mixture of hydrocarbon and non-hydrocarbon gases in porous formations beneath the earth's surface, often in association with petroleum. The principal constituent is methane.

Geothermal Energy	Energy generated by heat stored in the earth, or the collection of absorbed heat derived from underground in the atmosphere and oceans.
Gross Domestic Product (GDP)	Total market value of all final goods and services produced within the country in a given period of time (usually a calendar year), or the sum of value added of all final goods and services produced within a country in a given period of time.
Gross National Product (GNP)	The value of all (final) goods and services produced in a country in one year, plus income earned by its citizens abroad, minus income earned by foreigners in the country.
Hydropower	"Also called hydraulic power or water power; derived from the force or energy of moving water, which may be harnessed for useful purposes."
Indigenous Energy	Refers to all energy forms produced/sourced from within the country's natural resources.
Installed Capacity	The total of the capacities shown on the nameplates of the generating units in a powerplant.
Renewable Energy	Energy generated from natural resources which are naturally replenished. It includes solar power, wind power, hydroelectricity, micro hydro, biomass and biofuels.
Run of Mine	Coal directly coming from the mine
Total Final Energy Consumption (TFEC)	The sum of all energy forms consumed/used by different economic sectors
Total Primary Energy Demand (TPED)	The sum of total final consumption, power generation, other energy sector (own use and losses).
Total Primary Energy Supply (TPES)	The sum of all energy derived from domestic sources (Indigenous, renewable), imported from outside the country, stock change (+/-) and export (-)

Units of Measurement

BCF	Billion Cubic Feet
BTu	British Thermal Units
Ckt-Km	Circuit-Kilometer
GWh	Gigawatt-Hour
KWh	Kilowatt-hour
kTOE	Thousand tonnes of oil equivalent
Lb	Pound
MB	Thousand Barrels
MMMT	Million Metric Tons
MMSCF	Million Standard Cubic Feet
MMT	Thousand Metric Tons
MVA	Megavolt Ampere
MW	Megawatt
Php	Philippine Peso
ROM	Run of Mine
USD	US Dollar

Conversion Table

Fuels	to KTOE
Coal (MT@10,000 btu/lb.)	0.000528
Natural Gas (MMSCF)	0.023290
Crude (MB)	0.134400
Condensate (NGL) (MB)	0.104400
Premium Gasoline (MB)	0.124500
Regular Gasoline (MB)	0.122300
Kerosene (MB)	0.127000
Diesel (MB)	0.134700
Fuel Oil (MB)	0.144400
LPG (MB)	0.092200
Jet (MB)	0.127000
Avgas (MB)	0.122400
Naphtha (MB)	0.123800
Asphalts (MB)	0.152100
Lubes & Greases (MB)	0.141200
Others (MB)	0.123300
Ricehull (MT)	0.000345
Charcoal (MT)	0.000600
Fuelwood (MT)	0.000329
Bagasse (MT)	0.000426
Agriwaste (MT)	0.000329
Animal Waste (MT)	0.000516
Ethanol (BBL)	0.000089
CME (BBL)	0.000130
Hydro (GWh)	0.086000
Geothermal (GWh)	0.860000
Wind (GWh)	0.860000
Solar (GWh)	0.860000

2025

Planner & Notes

January 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
			1 New Year's Day
5	6	7	8
12	13	14	15
19	20	21	22
26	27	28	29 Chinese New Year

THURSDAY	FRIDAY	SATURDAY
2	3	4
9	10	11
16	17	18
23	24	25
30	31	

February 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
2	3	4	5
9	10	11	12
16	17	18	19
23	24	25 Edsa People Power Revolution Anniversary	26

THURSDAY	FRIDAY	SATURDAY
		1
6	7	8
13	14	15
20	21	22
27	28	

March 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
2	3	4	5
9	10	11	12
16	17	18	19
23 30	24 31	25	26

THURSDAY	FRIDAY	SATURDAY
		1
6	7	8
13	14	15
20	21	22
27	28	29

April 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
		1	2
6	7	8	9 Araw ng Kagitigan
13	14	15	16
20 Easter Sunday	21	22	23
27	28	29	30

THURSDAY	FRIDAY	SATURDAY
3	4	5
10	11	12
17 Maundy Thursday	18 Good Friday	19 Black Saturday
24	25	26

May 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
4	5	6	7
11	12	13	14
18	19	20	21
25	26	27	28

THURSDAY	FRIDAY	SATURDAY
1 Labor Day	2	3
8	9	10
15	16	17
22	23	24
29	30	31

June 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
1	2	3	4
8	9	10	11
15	16	17	18
22	23	24	25
29	30		

THURSDAY	FRIDAY	SATURDAY
5	6	7
12 Independence Day	13	14
19	20	21
26	27	28

July 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
		1	2
6	7	8	9
13	14	15	16
20	21	22	23
27	28	29	30

THURSDAY	FRIDAY	SATURDAY
3	4	5
10	11	12
17	18	19
24	25	26
31		

August 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
3	4	5	6
10	11	12	13
17	18	19	20
24 / 31	25 National Heroes Day	26	27

THURSDAY	FRIDAY	SATURDAY
	1	2
7	8	9
14	15	16
21 Ninoy Aquino Day	22	23
28	29	30

September 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
	1	2	3
7	8	9	10
14	15	16	17
21	22	23	24
28	29	30	

THURSDAY	FRIDAY	SATURDAY
4	5	6
11	12	13
18	19	20
25	26	27

Ocotber 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
			1
5	6	7	8
12	13	14	15
19	20	21	22
26	27	28	29

THURSDAY	FRIDAY	SATURDAY
2	3	4
9	10	11
16	17	18
23	24	25
30	31	

November 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
2 All Souls' Day	3	4	5
9	10	11	12
16	17	18	19
23 Bonifacio Day 30	24	25	26

THURSDAY	FRIDAY	SATURDAY
		1 All Saints' Day
6	7	8
13	14	15
20	21	22
27	28	29

December 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
	1	2	3
7	8 Feast of Immaculate Conception of Mary	9	10
14	15	16	17
21	22	23	24 Christmas Eve
28	29	30 Rizal Day	31 Last Day of the Year

THURSDAY	FRIDAY	SATURDAY
4	5	6
11	12	13
18	19	20
25 Christmas Day	26	27

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