Thailand: Natural Gas Industry

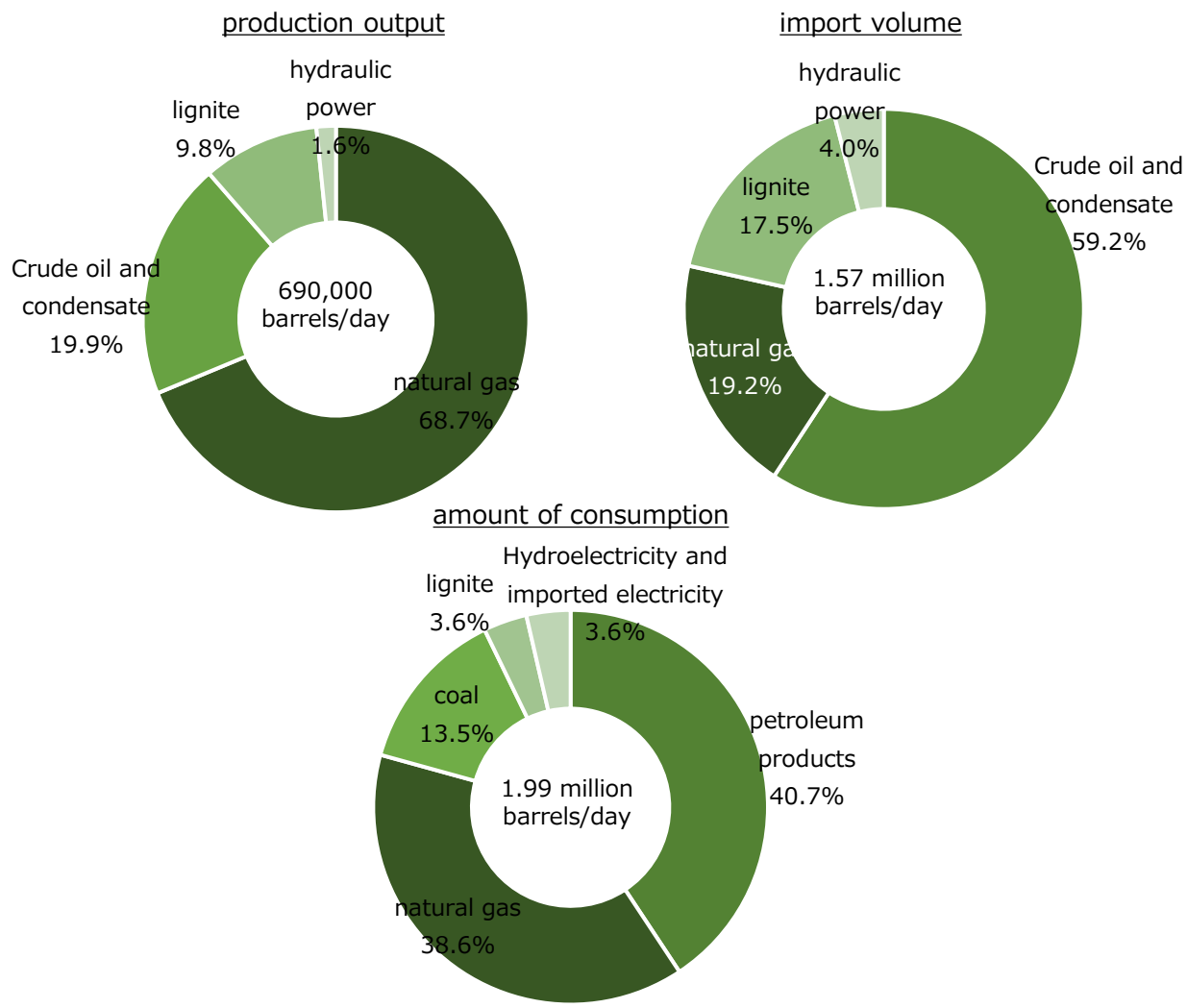
■ Summary: Dependence on natural gas also decreases domestic production, while LNG imports increase.

- Thailand is highly dependent on natural gas as a primary energy source. However, domestic natural gas production is on a downward trend, and concerns about resource depletion persist. Against this backdrop, imports of liquefied natural gas (LNG) have increased significantly as a means of procuring natural gas.

■ primary energy

- Natural gas accounts for nearly 70% of Thailand's domestic primary energy production in 2022, the largest share. In terms of imports, natural gas accounts for about 20%. In addition, natural gas accounts for about 40% of domestic consumption, making it comparable in size to the top petroleum product (Figure 1).

Figure 1: Thailand Primary Energy Production, Imports, and Consumption Breakdown (2022)

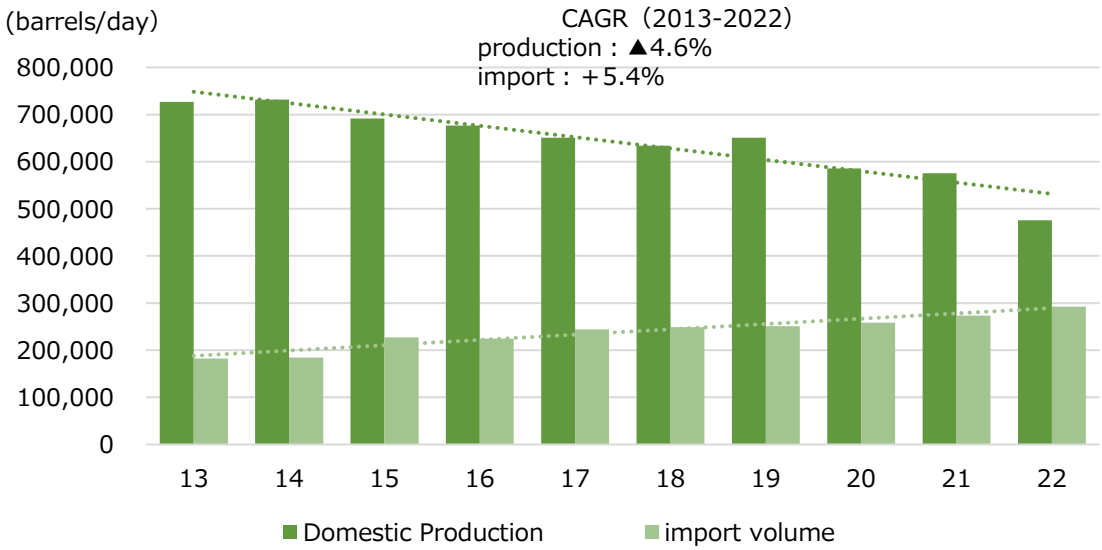


(Source: Thai Ministry of Energy)

■ Production volume, import volume

- Domestic production of natural gas is on a downward trend, falling nearly 20% in 2022 from the previous year. On the other hand, imports are on the rise, increasing 7% in 2022 from the previous year (Figure 2).

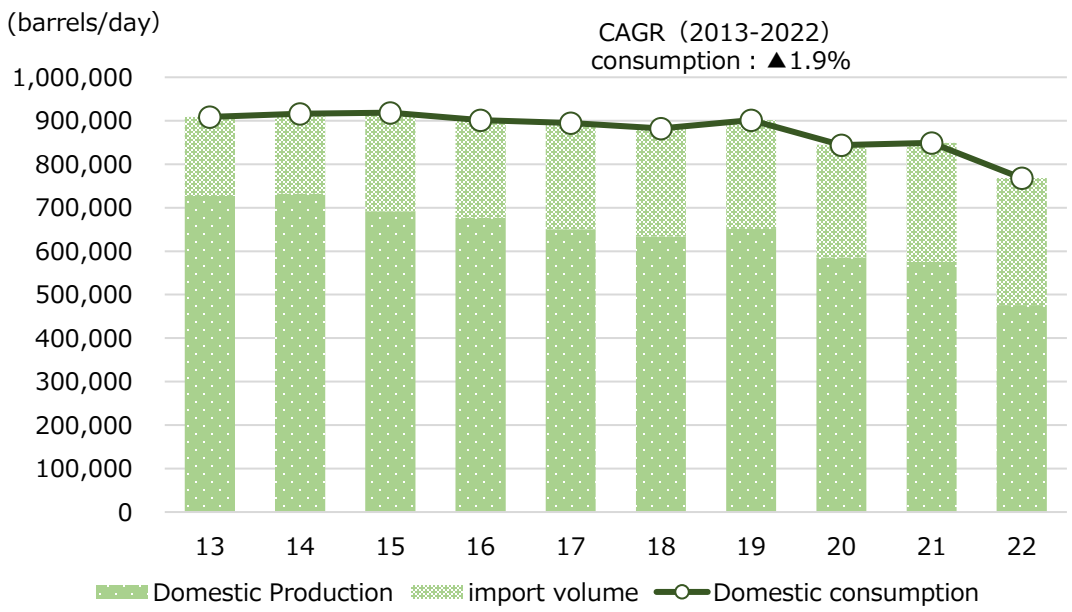
Figure 2: Thailand Domestic Natural Gas Production, Imports, and Consumption



■ amount of consumption

- Domestic consumption of natural gas had been on a modest decline, but the fall has accelerated recently: in 2022, it fell 10% from the previous year, the largest drop in the past decade (Figure 3).

Figure 3: Thailand Natural Gas Consumption

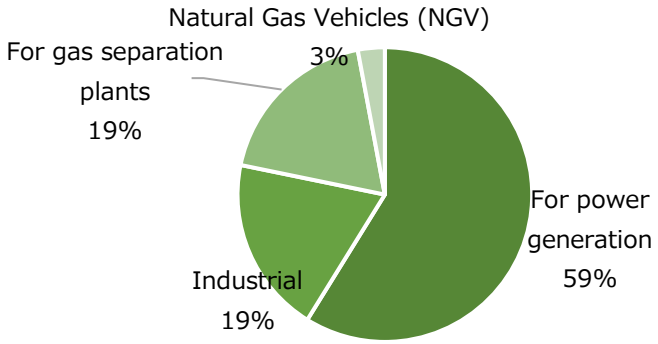


(Source: Thai Ministry of Energy)

■ Natural Gas Applications

- Nearly 60% of natural gas consumption in 2022 is used for power generation. In addition, nearly 20% each for industrial use and for gas separation plants. The share for natural gas vehicles (NGVs) is 3% (Figure 4).

Figure 4: Thailand Natural Gas Applications (Consumption basis, 2022)



(Source: Thai Ministry of Energy)

■ Proved reserves of natural gas

- One of the factors cited as contributing to the decline in domestic production is concern over resource depletion. Thailand's proven natural gas reserves have been decaying, declining from approximately 400 billion cubic meters in 2000 to approximately 100 billion cubic meters in 2020 (Figure 5).

Figure 5: Natural Gas Reserves by Country/Region

	2000	2010	2020	
	trillion cubic meters			World Share
Russia	33.2	34.1	**37.4**	19.9%
Iran	25.4	32.3	**32.1**	17.1%
Qatar	14.9	25.9	**24.7**	13.1%
China	1.4	2.7	**8.4**	4.5%
India	0.7	1.1	**1.3**	0.7%
Indonesia	2.7	3.0	**1.3**	0.7%
Malaysia	1.1	1.0	**0.9**	0.5%
Vietnam	0.2	0.6	**0.6**	0.3%
Myanmar	0.3	0.2	**0.4**	0.2%
Pakistan	0.5	0.6	**0.4**	0.2%
Thailand	0.4	0.3	**0.1**	0.1%

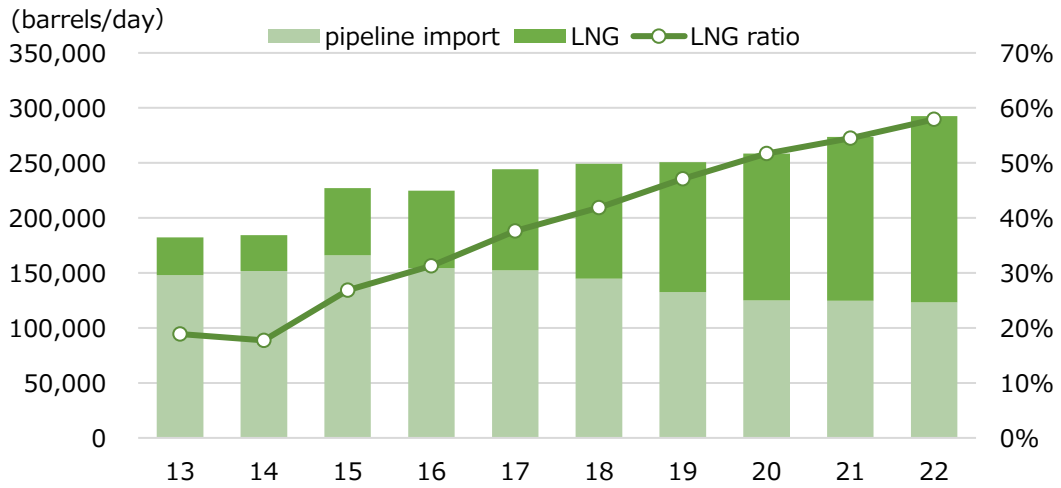
(Source: EI World Energy Statistics)

■ Natural gas imports

- As noted above, domestic production is declining while imports are growing. Liquefied natural gas (LNG) imports are driving up imports.
- Imports are divided into pipeline imports※ and liquefied natural gas (LNG) imports, and while pipeline imports are declining, LNG imports are increasing significantly (Figure 6) Although the global share of LNG imports is around 2%, the average annual growth rate from 2012 to 2022 is over 20%, a higher growth rate than other countries (Figure 7). As a result, the share of LNG in natural gas imports expands from 19% in 2013 to 58% in 2022.

*Mainly imported from neighboring Myanmar

Figure 6: Thailand Natural Gas Imports



(Source: Thai Ministry of Energy)

Figure 7: World Share of Natural Gas Imports by Country/Region in 2022, Average Annual Percent Change (2012-2022)

Country/Region	Global Share (2022)	CAGR of import volume (2012-2022)
Japan	18.1%	▲2.0%
China	17.2%	+16.6%
South Korea	11.8%	+2.6%
France	6.5%	+13.6%
Spain	5.3%	+3.0%
India	5.2%	+4.4%
Taiwan	5.1%	+4.8%
United Kingdom	4.7%	+6.2%
Turkey	2.8%	+7.1%
Italy	2.6%	+7.3%
Belgium	2.3%	+11.8%
Thailand	**2.1%**	**+23.7%**

(Source: EI World Energy Statistics)

(Ashu Research: October 2023)